Dorota Metera, Jörg Hoffmann, Tomasz Pezold

Study on the Impacts of the Common Agricultural Policy (CAP) on Protected Areas in chosen EU-Acceding Countries: Lithuania, Poland, Slovakia

Federal Agency for Nature Conservation

BfN - Skripten 100

2004

Study on the Impacts of the Common Agricultural Policy (CAP) on Protected Areas in chosen EU-Acceding Countries: Lithuania, Poland, Slovakia

Authors:

Dorota Metera
Jörg Hoffmann
Tomasz Pezold

Cover Picture: Agriculture in the Biebrza National Park, Poland (Author: Tomasz Pezold)

Authors address: IUCN Office for Central Europe
Ul. Wloska 4/2
00-777 Warsaw
Poland
Tel/Fax: 0048 22 841 07 57
E-mail: iucn@iucn-ce.org.pl

Editors: Division II 1.1 and II 1.3
Tel: +49-228-8491-199/242
Karin.Robinet@bfn.de or Barbara.Engels@bfn.de

This publication is included in the literature database “DNL-online” (www.dnl-online.de)

BfN-Skripten are not available in book trade.

Publisher: Bundesamt für Naturschutz (BfN)
Federal Agency for Nature Conservation
Konstantinstrasse 110
53179 Bonn, Germany
Tel.: +49 228/ 8491-0
Fax: +49 228/ 8491-200
URL: http://www.bfn.de

Printed by the printing office of the Federal Ministry of Environment, Nature Conservation and Nuclear Safety.

Printed on 100% recycled paper.

Bonn, Germany 2004

CONTENTS

This study has been compiled by the IUCN European Programme Office for Central Europe in Warsaw. Without the valuable input of our members and experts in Lithuania, Poland and Slovakia, the gathered results would have been distinctively less profound. We express our thanks and gratitude to:

- Pranas Mierauskas, Rasa Kryzeviciute, and Rimgaudas Treinys from the Lithuanian Fund for Nature for their input on Lithuanian protected areas.
- Eva Viestová, DAPHNE – Institute for Applied Ecology for adding information on the protected areas of Slovak Republic.
- Adam Sieńko, Director, and Helena Bartoszuk, Head of the Scientific Research and Monitoring Unit, Biebrza National Park, Poland.
- Zdzisław Szkiruć, Wigry National Park, Poland.
- Stanisław Kucharczyk from Bieszczady National Park and Anna Zajdel, Expert on Environmental Protection, for submitting information on the Landscape Parks in the Bieszczady Region[1].

[1] Ciśniańsko and Wetliński Landscape Parks

Preface

On the 1st of May 2004, all eyes will be on the EU and the additional 75 million people who will be joining. Although its undoubtedly for the benefit of all Europeans, what lies ahead is uncertain. Questions surrounding the long term challenge this presents for the rich natural heritage of the new member states remains unanswered.

Acceding countries are in a position to build environmental issues directly into their sectoral policies. In the new Member states there is a high level of biodiversity that occurs as the result of existing agricultural production methods. Therefore it is important to look in detail on the mechanism and premises of an integrated agricultural policy for the acceding countries, which will be enabled through the implementation of the Common Agricultural policy (CAP). At the moment we are talking about opportunities and threats and it was one task of the study to name chances and risks. The study focuses on different strategies in protected areas in three acceding countries: Poland, Slovakia and Lithuania. It shows not only opportunities but also gaps and limitations, which have to be overcome. Although the study's focus is agriculture, it is important to bear in mind that agricultural activities are only one part of an integrated rural development strategy.

The study identifies two important changes to agriculture that present a threat to nature conservation: 1) intensification of agriculture both within the protected areas and in surrounding areas with shared ecosystems and 2) abandonment of agricultural production and letting arable lands become fallow within the protected areas. A significant influence driving these changes is the low profitability of agricultural production. Therefore it is very important to recognize the importance of an integrated rural development strategy in order to prevent depopulation and land abandonment – both important causes for the loss of species-rich habitats. Strategies to improve rural development are also of vital importance for the social situation in acceding countries and for migration, both at domestic and international levels.

With regard to agricultural policy, the study recognizes as a positive result, that the new Member States will not copy old CAP direct payments but decoupled area payment will be introduced and anyone, who has been maintaining the land in "good agricultural condition" will be eligible for payment. It is hoped, that through these income possibilities farmers will maintain landscapes and a high agricultural biodiversity through maintaining extensive farming methods. Integrated rural development programmes of the EU may help.

From day 1 of the accession, a wide range of development measures will be co-financed by the EU (max. 80%) and will present a chance for nature conservation as well. Support for less favoured areas, agri-environmental programmes (AEP) and specific measure for semi-subsistence farms will help farmers to adapt to the new agricultural framework. For the AEP-implementation the study stresses "It is the farmers, who are indispensable in their effective implementation" and unfortunately in some protected areas the numbers of farmers are insignificant. This implicates that other forms of support for protected areas have to be sought.

Vividly the study stresses the need to simplify accession to the agricultural programmes, especially in the light of very low payments which are for example proposed in Poland. "If the level of "agri-environmental minimum" (requirements of the Code of Good Agricultural Practices) is unrealistic high (…) then participation in the programme may not be very popular among the farmers. Moreover, the programmes may be unrealistic, with may interested farmers being unable to meet the requirements, or with the programme only being applicable in a very limited geographical range"

The German Federal Agency for Nature Conservation has commissioned this study to IUCN as part of getting a better knowledge of the effects and complex interactions of the CAP-instruments in order to enhance the development of sustainable agricultural policy as it is required by the Treaty of Amsterdam, and the results represent a useful basis for further work in this sector.

Prof. Dr. Hartmut Vogtmann

Federal Agency for Nature Conservation (Bundesamt für Naturschutz)

1. Introduction

A look at the history of protected areas shows that they have developed significantly and continue to have a broad range of different uses. In many cases protected areas were first created as protected hunting territories, before later evolving into 'living laboratories', used for scientific research and education. Recently many have become appreciated as areas valuable for sustainable tourism. In addition, many local populations have continually relied on the resources of national parks as a base for their income, through activities such as collecting wild plants and mushrooms, forestry, or agricultural production.

Active nature conservation in protected areas today has to acknowledge and respect the needs of the people living close to and within these areas, since many species-rich, aesthetically pleasing semi-natural habitats can only be sustained if the traditional extensive methods of land use which led to their creation are maintained or replaced by other forms of site management.

Limiting the opportunities for the local people will generally impede the aims of nature protection. In particular a lack of income opportunities often results in migration to urban areas in search of employment. The consequently depopulation of extensively maintained rural areas will often change areas' characteristics that have been shaped over centuries and this can decrease both the areas' cultural and natural values.

Bieszczadzki National Park provides a useful example of the negative conservation consequences of depopulation. Here the Second World War and subsequent policies led to the forced migration of local populations and the disappearance of villages. The resulting cessation of agricultural activities on the slopes and valleys resulted in a loss of many species-rich habitats, with natural succession, and later planned afforestation, adding further damage to the former ecosystems.

Nowadays, much of the changes in landscapes are fundamentally caused by the poor income that is generated by farming activities. This particularly causes landscape change through land abandonment, and the cessation of extensive grazing or of harvesting of reeds in wetlands.

On the other hand, the trend towards modernisation of agriculture and market pressures are forcing many farmers and foresters to change their traditional practices and move towards intensification of agriculture and forestry in order to maintain or improve their incomes.

In the near future we will observe new trends caused by the implementation of the instruments of the Common Agriculture Policy of the EU in the 10 Central European countries. It is difficult to predict the long-term consequences of implementation of the CAP for agriculture or for protected areas, but some important positive and negative elements can be envisaged:

Positive influences:

- ensuring incomes of populations in rural areas;
- preventing migration of rural populations to cities and ensuring sustainable rural development;
- preventing further land abandonment;
- stimulating agri-environmental measures, especially organic farming; and
- increasing the significance of certification (and subsequently of organic agriculture and forestry) and agricultural animal welfare.

Negative influences:

- general intensification of agricultural production (harmful for biodiversity) due to land consolidation, early retirement and support for young farmers; and
- increased income encouraging farmers to purchase fertilizers (leading to worse water quality) and machinery (leading to soil damage).

The question of the effectiveness of the above-mentioned positive instruments as agri-environmental measures and compensation for 'areas with environmental restrictions' is very complex, because the application of these instruments depends not only on political will and availability of financial resources, but also on: acceptance of these instruments by farmers; the advisory systems; and the capacity of local administrations.

An evaluation of how CAP instruments (especially Pillar II measures) influence the protected areas (PAs) has to be based on an analysis of the current activities undertaken by the local population in order to be able to assess how changes in these activities might threaten nature conservation. An analysis of the long-term influences of activities undertaken in the buffer zones is especially necessary.

It is difficult to predict how CAP instruments will be applied in PAs, and especially how they will be accepted and chosen by farmers and what the impacts of the inevitable changes will be on sustainability. However, it is crucial to assess this in order to ensure that these changes work for rural people *and* for their environment.

1.1. The aim of this study

With the biggest yet enlargement of the European Union becoming reality on 1st May, 2004, the examples of 7 protected areas – national parks and biosphere reserves in Lithuania, Poland and Slovakia[2] – will provide insights into how different Acceding Countries are preparing for using the opportunities of the so-called *Pillar II* of the Common Agricultural Policy – as set out by the Rural Development Regulation (1257/99) and the Horizontal Regulation (1783/2003). For this purpose, from the seven areas of nature protection (national parks or biosphere reserves in Lithuania, Poland and Slovakia) data has been collected on agriculture and its impact on the protected environment and rural population.
This study aims to show how in the chosen countries the nature management regimes are preparing for strategically using funds from the agricultural budgets. It is hoped that as an immediate result of this initial study the level of understanding of protected areas' regimes can be increased. In particular it is hoped that further understanding about the potential for integrated management of agricultural landscapes will be beneficial to rural populations and the agri-biodiversity that is present on extensively managed agricultural lands.

The impact of the European Common Agricultural Policy (CAP) on protected sites for nature protection will be discussed, especially how the CAP will drive the development inside and around the chosen national parks and biosphere reserves, and which CAP instruments could lead to benefits for the areas of nature protection and a sustainable regional development at large. This study does not limit its perspective to the opportunities alone and it will identify the shortcomings and needs for further improvements where nature management is likely to face challenges and severe constraints resulting from agricultural activities following the change in the agricultural policy framework.

The study will present short information on the planned implementation of the CAP in Acceding Countries, using as examples Lithuania, Poland and Slovakia. The study will introduce the country plans for flat area payments (combined), the Rural Development Plan's objectives, and the use of Agri-Environmental Programmes (AEPs). Further, brief information will be presented on the system of protected areas in the relevant countries, with special focus on NATURA 2000 and the use of available funding instruments.

[2] Poland – Biebrza National Park, Bieszczady National Park, Wigry National Park
Slovakia – Malá Fatra National Park, Slovenský Raj National Park
Lithuania – Aukstaitija National Park, Zuvintas Biosphere Reserve

1.2. Methodology

To gather the results that are compiled in this paper, two different research tools have been used. To begin with, the study started as a literature survey based on screening relevant literature, including web sites. The National Rural Development Plan formed a background paper for all three countries presented in this work and the Polish national umbrella organisation for the management of the areas under nature protection, as well as the park administrations provided additional helpful data. The detailed sources of the screened texts for each country can be found in separate lists of references at the end of this study.
However, it very soon became clear that the need for information to achieve the topic's aims could not be met merely by screening literature, especially as statistical data was often either incomplete or not publicly available.
Contracting acknowledged experts in the field of nature management in Lithuania, Poland and Slovakia became a helpful supplement. Their judgements on future impacts and trends for development were gathered through a detailed questionnaire, which is attached to this study as Annex I. The 6 sections of the questionnaire inquired about the general background for nature protection on the relevant protected area, requested farming data, posed questions related to private ownership and territory planning, and specifically asked for the importance of the Rural Development Regulation for the protected area's management.
The reputation of the contracted institution and the personal integrity of the researchers helped to fill in gaps where too few hard facts could be found. This caveat should clearly indicate a need to overcome the data shortage in most of the Acceding Countries by a follow-up to this initial study.

In order to discover the connections between agricultural methods and nature values, the country experts identified in every country 2-3 national parks or biosphere reserves guided by the following criteria:

- Agriculture should have a high impact on the protected area (e.g. through a relatively high share of agricultural land inside the protected area).
- Agricultural activity in the protected area should provide an important source of income to the local population.
- The possibility to maintain the status of the protected area is influenced by agricultural use (e.g. through intensification, extensification, abandonment, etc.). Other threats to the protected area's nature value (e.g. industry, tourism, urbanization, traffic and depopulation) that can be influenced by the RDR should be mentioned.

- The chosen protected areas should be representative for the national system of protection, showing important geographical and biological landscape characters.

As the empirical basis for this study, the following (representative) national parks and biosphere reserves have been chosen by country experts:

- Poland – Biebrza National Park, Bieszczady National/Landscape Parks (Ciśniańsko – Wetliński Landscape Park and the San Valley Landscape Park), Wigry National Park
- Slovakia – Malá Fatra National Park, Slovenský Raj National Park
- Lithuania – Aukstaitija National Park, Zuvintas Biosphere Reserve

Information on the different protected areas was collected by the appointed experts on the country level and in few cases was supplemented by the team of editors' Internet research. The sources used are given in the list of references.

2. Lithuania

2.1. Introduction to the system of nature conservation and the selected protected areas in Lithuania

The Lithuanian Law on the Protected Areas[3] sets out a detailed system of protected areas that distinguishes different protection priorities:

a) *Areas of conservative protection priority* comprise strict nature reserves, nature reserves and objects of heritage and aim to maintain certain areas of important nature or cultural heritage value. These territories, where unique and typical complexes and objects, as well as biological diversity, of natural and/or cultural landscapes are preserved, regulate and restrict most activities and land uses.
b) *Areas of restorable protection priority*, the so-called recuperative and genetic territories, seek to restore habitats of certain threatened species in order to assure their survival and recuperation.
c) *Areas of ecological protection priority* aim to restore and maintain outstanding ecosystems through appropriate management. In so-called ecological protection zones activities are limited to prevent negative impacts on adjacent territories or objects and the environment in general.
d) *Areas of complex protection* are for example national parks or biosphere reserves. In the national park, different zones of functional priorities are singled out, and the park planning schemes provide for the landscape management zones. Inside the areas of complex protection all of the categories given above can occur, and the restrictions to land use and activities vary accordingly.

Although local governments also have the opportunity to create nature reserves, most protected areas in Lithuania are established and managed by the state and supervised by the State Protected Areas Service – an umbrella authority under control of the Lithuanian Ministry of Environment to co-ordinate the activities in the protected areas[4]. While for the practical territory management and co-operation with stakeholders the director of the protected area is held responsible, the strategic decisions on the management priorities are taken at the State Protected Areas Service.

The Lithuanian protected areas selected for this study belong to the categories ‘National Park’ and ‘Biosphere Reserve’ and are introduced in the following chapters.

[3] Amended version, as of 4th December 2001. State News No. IX-628. Vilnius. 2001.
[4] State Protected Areas Service, Juozapaviciaus 9, Vilnius, Lithuania. The director is Ms. Ruta Baskyte.

2.2. Aukstaitija National Park (ANP)

The Aukstaitija National Park (ANP) was established in 1974 as Lithuania's first national park. It is situated in Eastern Lithuania[5] and covers a total area of 40 570 hectares extending across three administrative regions – approximately 50 per cent of the park's area belong to the district of Ignalina; in the districts Utena and Svencionys 25 per cent of the park's territory are based. During the last 30 years effective institutional co-operation between the local governments and the park administration has developed.

The ANP is divided into a core area of 34 010 hectares, bordered by 6540 hectares of designated buffer zone area. 2714 inhabitants live in some 80 settlements and villages on 670 hectares – i.e. 1.7 per cent of the park's total area. Due to restrictions of land use in reserves and protection zones, the relation between park administration and landowners is not without conflicts. The dominant feature of ANP is woodlands – mostly pine stands and some small oak acreage, some of which are over 200 years old – which cover 67.5 per cent of the national Park's territory. These forests are mostly state-owned and the management focus is on maintaining their ecological value. This sometimes leads to conflicts with forest enterprises.

Scattered among the woods and hills are some 100 small and large lakes that are often interconnected by rivulets and streams. Within the park some thirty rivers and Lithuania's deepest lake – the 60.5 metre deep Tauragnas – can be found. The total water area of the National Park comprises 5880 hectares – 14.5 % of the total National Park area – of which Lake Dringis, the biggest of the water bodies, covers 721 hectares.

Table 1: Aukstaitija National Park –Protection zones

Aukstaitija National Park – Zones	**[ha]**	**[%]**	
Total Conservation area	***21 600***	***100***	**53.2**
of which are…			
Strict Reserves	***900***	***4.2***	2.2
- *Nature*	*850*		
- *Cultural*	*50*		
Managed Reserves	***20 700***	***95.8***	51.0
- *Nature*	*6490*		
- *Cultural*	*180*		
- *Landscape*	*14 030*		
Total area	**40 570 ha**	**100**	
Buffer zone outside the park	***6540***		

[5] The geographical location of the National Park's centre according to the 1997 UN List of Protected Areas is 55°21'N; 26°02'E.

Table 2: Aukstaitija National Park –Land use

Aukstaitija National Park – Land Use	[ha]	[%]
Woodland	27 390	67.5
Water	5880	14.5
Agriculture landed properties	5410	13.3
Marshes	1120	2.8
Settlement	670	1.7
Other[6]	100	0.2
Total area	**40 570 ha**	**100**

Source: own table, figures based on Lithuanian Protected Areas Database (2003)

2.2.1. Agricultural activities and their impact on the Aukstaitija National Park (ANP)

Within the Aukstaitija National Park (ANP), land under agricultural use accounts for 5410 hectares or 13.3 % of the total area. Woods and marshes cover 1120 hectares, 2.8 % of the area. The meadows and bogs of the ANP abound in rare plant species, including a number of protected plants and species that are included in the Red List of endangered species of Lithuania. These species' and their habitats come under further pressure where land use – especially agricultural activity – is intensifying.

The eastern part of Lithuania, where the ANP is situated, is characterised by a hilly relief, sandy soils and a naturally low fecundity (productivity) of the land. For most of the crops in this region the yield is up to 25-30% less than the Lithuanian average. Because forests and water cover 86% of the ANP territory and most of the area is unsuitable for agricultural land use, agriculture is not predominant. However, the protected area and its system of wetlands from a region that is sensitive to the chemical loads that come from areas adjacent to the ANP, where the current land use is described as medium intensive.

Today, most agricultural holdings are subsistence and semi-subsistence farms. Their produce is mostly intended to satisfy their own needs and only surpluses are marketed. These small-scale agricultural holdings show a diverse production pattern of field crops and dairy, as well as meat production. As yet the main income is generated through dairy production, cereals form the second agricultural produce of market significance, followed by potatoes. Vegetable and berries are mainly produced for on-the-farm consumption.

[6] The different land use categories add up to 40 470 ha – the difference of 100 ha may be explained by the existence of a road 4 meters wide and 2.5 km long.

Table 3: Agricultural produce in the region of Aukstaitjia National Park, 2001

Type of production	2001 year
Cereal	80 594 [tons]
Flax	66 [tons]
Sugar beet	1196 [tons]
Potatoes	54 480 [tons]
Meat production (carcass)	10 317 [tons]
Diary production	132 467 [tons]
Eggs	24.5 [mln]

Source: Lithuanian Protected Areas Database (2003)

Alternative activities that provide important sources of income for the local inhabitants are berry picking, mushroom collecting and amateur fishing. Recently rural tourism has been being developed.

2.2.2. Tendencies in agriculture in the region:

As in most rural areas in Lithuania, young people are leaving the rural areas to head for the towns or cities, which promise income perspectives and a decent living standard that the rural areas simply do not offer at this point of time. With only the oldest people staying in the region, the area around the Aukstaitija National Park faces a number of social as well as environmental changes.

Inside the ANP:

As the inhabitants are growing older and their numbers are declining, especially remote villages and granges are becoming deserted. Urban dwellers sometimes buy these places for recreational use on weekends and holidays, or these places remain unused. In both situations the rural society dies out and farming activities are suspended.

From a nature management perspective, the biggest problem connected with the demographic phenomenon of land abandonment is the decline in natural meadows and grazing lands in forests, lakeside or riverside – leading to a loss of biodiversity in the region.

With the low land productivity in the region of the ANP, extensive stockbreeding on grasslands and within forests is the only viable income and the dominating agricultural practice. By the same token, it becomes the main method for maintaining high nature value – low intensity stockbreeding is one of the most important survival factors for the rare plant species and habitats in the ANP. Due to the small patches of meadows and grazing land

amidst extensive woodland, and since the enlargement of farms on the ANP territory is regulated by law, the development of big and intensive stockbreeding farms is not a viable alternative to the extensive agricultural practices, as maintained by the aging rural farmers. If the extensive grazing and mowing are lost, the occurrence of these natural components will decrease dramatically.

Outside the ANP territory:

From most directions, the ANP territory is sheltered by neighbouring forests, which form an ecological buffer zone that protects the park from nutrient flow from surrounding agricultural land. Bordering the ANP in the Southwest is a regional park that also consists mostly of woodlands and in addition sets strict regulations on fertilizer use and other agricultural inputs thus helping to buffer the ANP from external impacts.
Bordering the ANP in the West and East-South-East are large open landscape areas under agricultural use. Since the ANP and these surrounding areas belong to the same water catchment area of the Zeimena River, much of the residues and pollutants that are washed from the agricultural lands enter the territory of the ANP. Intense farming activities in surrounding areas thus potentially have a negative impact on water quality and ecosystems conditions within the ANP.
During the last 10-12 years the amount of intensive agriculture (with large crop fields and intensive use of pesticides and fertilizers) has been declining. Currently many lands are lying fallow or are being used extensively, with positive effects for the ANP ecosystems. Since the impact of agricultural activities in the surrounding areas on the ANP's water quality is potentially negative, a low input of chemicals should be maintained.

Until now, neither the ANP administration, nor higher institutions responsible for biodiversity conservation in Lithuania's protected areas have given the maintenance of extensive agricultural techniques much attention. It is difficult to identify the reasons why no planning efforts have been made in this direction. However, the land use structure in which forests and waters dominate in the region, and the main conservation objectives' not being related to agri-ecosystems might partly explain the neglect of agricultural influences because the dominant forest habitats and their management are more affected by deforestation than the loss of extensive agricultural methods.

A main reason might also be the generally low priority attached to biodiversity conservation in the protected area, since the recreational function and tourism are valued higher. The lack

of institutional co-operation at the level of the different Ministries adds to this inadequate strategic approach.

2.2.3. Private ownership – involving important stakeholders

Until 1991, the ANP territory and bordering areas had been fully state-owned. Today, the process of restitution (re-privatisation) is nearly finished. Where grounds with existing land-use restrictions were handed over to private owners, the papers of ownership contained these restrictions unaltered and do not entitle the new landowner to compensation payments.

In the past, environmental conservation followed the principle of prohibition – if private landowners did not fully obey the restrictions set out then fines had to be paid for restitution measures. Regulating land use in the ANP territory was in practice achieved through limiting other activities, e.g. recreation or building. This management by prohibition was a mirror of the stakeholder structure in the past – given a complete state ownership, it was sufficient and effective in achieving the conservation aims of the ANP.

This model of land use and protection in protected areas under state ownership did not provide for any possibility of making agreements between landowners and the park administration. Today, there are still no agreements between private landowners and the ANP administration – be it by contract or on a voluntary basis.

The largest area of the ANP with existing land use restrictions (in strict reserves, reserves or protection zones) remains state owned. However, whether such agreements are still necessary will be made clear only after the establishment of Natura 2000 sites, when improving the quality of habitats becomes a clear objective for the ANP administration. Regulating the intensity of land use will become a key factor in maintaining and improving the habitats in and around the Aukstaitija National Park.

An active involvement of private owners in the protection of particular ANP objects – for example NATURA 2000 habitats or species – would improve environmental conditions. If the park administration would sign co-operation agreements with private landowners, this could be beneficial not only for the ANP, but also the rural community identifying with and profiting from the protected area. It must be underlined that unplanned and spontaneous involvement of owners may not lead to any sort of positive results. The efficiency of owners' involvement in the ANP depends not only on the number of participants, but also on the set priorities.

The ANP does not have dedicated funds to compensate landowners for activity restrictions or to pay third parties for doing more than what is legally required. Compensation payments do not occur in the park's financial budget, nor are they planned. Even if there are no compensation payments for environmental restrictions and management agreements to be paid in the ANP, a general procedure to set a payment level does exist in Lithuania: the Ministry of Agriculture and the National Paying Agency set this level by summing all costs of measures included in the agreement, then scaling costs to area size, where measures will be implemented, and then adding 10% for the first payment to begin the process. In some measures there is fixed sum of money paid for each hectare once a year.

2.2.4. Rural Development and how Pillar II measures can support the protected area

Measures within the Rural Development Directive are regarded as effective tools for supporting the management aims of the ANP. Potentially important measures to achieve the desired effects in agricultural development are:

1. Less-favoured areas (LFA) payments and imposition of environmental restrictions;
2. Agri-environmental programmes; and
3. Promoting the adaptation and development of rural areas.

In the park's territory, most of the land's fecundity (productivity) is very low so LFA payments could be obtained. However it is much more likely that the use of agri-environmental measures would make the payments from the RDP budget successful in the ANP as the wider conservation purposes and functions of the national park could be reflected in agri-environmental programmes. Within the Lithuanian agri-environmental programme, the following concrete measures/packages have been detected that could potentially meet the needs of the specific social and economic conditions and environmental management demands: extensive grazing; adjustments to mowing; and meadow overgrowth.
Less-favoured areas and areas of environmental restrictions, and promoting the adaptation and development of rural areas could also be applied to the ANP. However, the positive results depend strongly on a proper implementation of the existing RDR measures within park territory and outside. While in theory the measures mentioned above might bear positive results for the ANP, examples of how this has been achieved in concrete situations are currently lacking due to the present weak implementation.

Currently it is difficult to predict and evaluate the effects of RDR measures in the near future (ten years), because general social and economic factors with a high impact in the region may change significantly. The factors, like free movement of workers, perspectives of

agricultural production market, restructuring, tourism intensity in the PA, the variation of GDP and rural inhabitants' living standard level may destabilise the social and economic situation in the region, impacting also on the ANP. To organise a smooth-running process of implementing the Rural Development Measures will be difficult. It is hardly believed that 10 years would be a period in which the implemented RDR measures may lead to achieving nature management goals. Identifying potential effects would need a longer period than 10 years.

At the moment and in the past there were no projects on nature conservation and management, neither EU Pre-Accession Funds nor funds from other international projects have been made available for the PA. The only projects that do exist focus only on the development of the ANP's recreational infrastructure. However, the park administration is preparing to make use of EU Structural Funds.

2.3. The Zuvintas Biosphere Reserve (ZBR)

The Zuvintas Reserve was established in 1937 as a strict nature reserve in southern Lithuania, situated in the Alytus and Marijampole districts. The reason for their establishment was to preserve the unique flora and fauna of the Zuvintas Lake and that of the neighbouring bogs and swamps. In 2002, it was transferred and widened into a biosphere reserve and today comprises 18 490 hectares, of which 11 483 hectares are buffer zone area[7]. The Zuvintas Lake is the habitat of some 580 species of higher plants and 253 species of birds, 37 of which hatch in the lake. Every autumn the lake becomes a stopover site for up to 15 000 geese and the surrounding high bogs provide shelter for some 600 herons. The core part of the ZBR is listed in the UN List of Protected Areas, belonging to Category Ia of the IUCN Protected Area Management Categories[8].

The interaction between the park management and local authorities is quite satisfactory – no conflict areas have been identified. This is partly due to the very limited overlap of functions and interests between the biosphere reserve administration and local authorities.

[7] The geographical location of the Biosphere Reserve's centre according to 1997 UN List of Protected Areas is 54°27'N; 23°34'E

[8] http://www.unep-wcmc.org/protected_areas/data/un_97_list.html

In the main part of the ZBR, the strict protection since 1937 has prohibited any agricultural activities[9]. However, in the new buffering territories that were included into the biosphere reserve in 2002, the limitations and restrictions to agriculture are described as being minimal.

The 5442 hectares of the core area – the strict nature reserve area according to the Lithuanian Law on Protected Areas[10], Art. 6ff – consist mainly of floodplain marshes and raised bogs, which can be found on 4147.25 hectares or 76.2 per cent of the total core area. Water covers 987 hectares – equalling 18.1 per cent – and 286 hectares of woodlands constitute the third main landscape feature – 5.3 per cent of the core area's total size. The Agricultural landed properties account for 17.95 hectares – i.e. 0.33 per cent of the total core area. The soils inside the ZBR are mainly peat, and the peat layer in the marshland is up to 4.4m deep[11]. 1859 persons live on the territory of the biosphere reserve, their settlements covering an area of 0.75 hectares.

Despite the small percentage of agricultural land inside the biosphere reserve, agriculture has a strong impact on the conservation regime inside the reserve. The Zuvintas, a shallow lake with an area of about 980 ha, forms the key habitat for protection efforts in the park. It has many floating islets of matted vegetation; the river Bambena, Kiaulycia and Ruda flow into it, while the Dovine, a tributary of the Shimune River, is the main outflow. The Zuvintas Lake is sensitive towards changes in the nutrient balance and chemical loads of the inflowing water, which accumulates the flow of substances deriving from households and especially agricultural activities in the region surrounding the reserve.

Table 4: The Zuvintas Biosphere Reserve –Land use inside the core area

Zuvintas Biosphere Reserve – Land Use in core area	**[ha]**	**[%]**
Woodland	286	5.25
Water	987	18.14
Agricultural land	17.95	0.33
Marshes	4147.45	76.23
Other[12]	3.6	0.07
Total area	**5,442**	**100**

Source: own table, figures based on Lithuanian Protected Areas Database (2003)

[9] In the ZBR core area (5,442 ha of strict nature reserve) any activities are forbidden, except ice fishing with special license and picking cranberries by local people during set periods.
[10] Lithuanian State News, 2000, No. 58-1703
[11] http://www.unep-wcmc.org/protected_areas/data/sample/0985v.htm
[12] The different land use categories add up to 5442 ha, hence a difference of 100 ha occurs, which may be explained by the unmentioned transport infrastructure – the difference could be explained by the existence of a road 4 meters wide and 2.5 km long.

2.3.1. Agricultural activities and their impact on the Zuvintas Biosphere Reserve (ZBR)

Since most activities affecting the quality of the habitat are thus being conducted on a territory beyond the scope of direct management efforts undertaken by the biosphere reserve, this area becomes largely affected by land use changes and agricultural activities in the wider region[13], where in many wards agriculture constitutes the main form of land use – in Igliauka it occupies 80.2 % of the area, in Gudeliai 89.8 %, in Liudvinavas 95.9 %, in Krosna 82 %, and in the Simnas district 55 % of the territory is under agricultural use.

In the ZBR core area the ground is fully state owned and thus directly manageable by the ZBR authority, in Marijampolė County, in which part of the ZBR lies, more than half of the land is privately owned[14] with individual farmers managing 19 per cent and agricultural enterprises over 6 per cent of the land. Other physical and legal persons own about 16 % of the agricultural land, and the remainder belongs to gardener communities or remains unused.
In Alytus county, which contains the rest of the ZBR, 44 per cent of land is privately owned. Individual farming covers about 16 % and agricultural enterprises use about 4 %. Other physical and legal persons own an additional 16 % of farming lands.

The ZBR region is one of the most intensive cereal and technical crop growing regions in Lithuania. More than 75 % of the region is used for farming and there is four times more arable land than meadows and pastures. The mixed forests that are present in every region of Lithuania here cover only 10 per cent of the area, and the regional pattern of farm type specialisation, as given in the table below, shows the specialised and intense farming; although more than two thirds of farms still maintain mixed production. Here “mixed” means a variety of cereal, sugar beet, flax and rape production. This production method, where meat production is separated from crop production requires a high application of chemicals in the region, which has negative impacts on the ZBR.

[13] As stated in the UNEP-WCMC Database, management constraints for this protected area are “a great reduction in the bird population [that has] resulted from intensification of agriculture, drainage and natural resource utilization at the beginning of the 20th century”. http://www.unep-wcmc.org/protected_areas/data/sample/0985v.htm

[14] 53 per cent of the county’s land is private property.

Table 5: Overview of specialised farms in the Zuvintas Biosphere Reserve region, 2001.

Type of specialisation	Percentage of farms in the region
Mixed production	72 %
Cereal / grain	17 %
Sugar beet	5 %
Pork	3 %
Milk and cattle meat	2 %
Fruits and berries	0.5 %
Sheep and goats	0.5 %

Source: own table, figures based on Lithuanian Protected Areas Database (2003)

Indeed, the overall impact of agriculture on the ZBR can be said to be negative. Eutrophication in the ZBR poses forms a serious threat especially to the strictly protected core area of the biosphere reserve, since nutrients and pollutants enter the Zuvintas Lake even though this lies in the strict protection area. Intensive cultivation of arable land is the dominant farming practice with negative consequences for the species and habitats of wetland ecosystems.

Additionally, the absence of extensive farming methods in low-lying marshlands shows a strategic shortcoming of the Ministry of the Environment where the strict prohibition of agricultural practices in the ZBR core area means potentially beneficial farming methods cannot be applied. Grazing and hay mowing are not widely applied activities, and by abandoning these farming techniques, valuable meadow habitats around the lake have declined and are being lost. Thus, the overall impact of agriculture on the ZBR is leading to anthropogenic habitat degradation.

2.3.2. Tendencies in agriculture in the region

The ZBR region is likely to remain an area of high agricultural production.

In the near future (the next ten years), a further increase in intensive farming methods is likely. The number of specialised farms is expected to grow, as well as the average farm size, while the number of inhabitants of the region will decrease. Changes in agricultural production are not expected, since lands of high productivity are already today used for intense cereal and technical crops production and the good conditions for this production type will remain unaltered.

These changes might lead to an increase of the average farming productivity. Higher incomes might lead to higher living standards with higher consumption patterns of the local population as a consequence. As a result, the negative anthropogenic impact on ZBR will

most likely be higher, and the eutrophication and degradation of ZBR ecosystems might well increase.

The extensification of agriculture on those lands directly affecting the inflow basin of the ZBR could help to avoid these negative trends. So far, no extensive agriculture is practised in the region, but the Ministry of Environment and the ZBR administration make efforts to reduce the intensity of agricultural activities in the inflow region by promoting organic agricultural methods. The importance of the matter has been realised, and several projects have begun to initiate and develop organic farming, as well as to restore low-lying marshlands through hay mowing and grazing. These projects aim to involve private landowners from territories bordering the ZBR.
However, the high productivity of the land forms a strong constraint to extensification initiatives. With an agricultural yield significantly higher than the Lithuanian average, in the absence of additional payments, the most profitable choice for farmers will continue to be intensive agriculture.

2.3.3. Rural Development and how Pillar II measures can support the protected area

Financial support from the RDP (agricultural programmes) budget can be used to improve environmental protection in the ZBR. The main programme is agri-environmental protection. In this programme there are precise payments for private landowners, who will participate in the program implementation. This program and its measures correspond to the ZBR's strategic protection methods.

Positive results are expected in the long run. In the large region, where intensive agriculture dominates, the implementation of agri-environmental measures is a long and difficult process. It is realistic to plan to achieve goals in several decades. Firstly, stable and growing demands for organic products must appear in the market. That would then drive development of organic farming development. The involvement of farmers in organic farming will take time. Another stage is the decline of chemicals in the lake and surrounding ecosystems.

The problem is not in the RDP measures themselves, but that they are not effectively implemented. Effective environmental protection in the ZBR region will depend on the number of participants in the implementation of environmental measures. There is no need to change RDP measures, just to implement them effectively.

So far, there are two projects implemented in the Zuvintas Biosphere Reserve that are funded by international funds :

1. Biodiversity conservation in Lithuanian wetlands (GEF/UNDP/National budget). The goal of which is to preserve wetlands and the ZBR is one of the target sites.

2. Preparation of Dovine river basin integrated management plan for restoration and management of Natura 2000 sites (PIN-MATRA). The goal of which is to develop, but not implement, a management plan. The project will not cover the costs of its implementation and this is where RDR measures might be used.

2.3.4. Private ownership – involving important stakeholders

Currently there are no agreements with private landowners. As mentioned above, the main territory of ZBR is a strict nature reserve, established in 1937. The other areas are nature reserves and forests that are owned by the state. Private land is situated in agricultural and ecological protection zones, where there are no restrictions or compulsory activities (with compensation). The main area of the ZBR had the status of strict nature reserve (small part had the status of regulated protection) until November of 2002 and there were no agricultural activities.

A stronger involvement of private owners could help to solve problems related to ZBR quality and general value:

1. Water quality degradation and eutrophication – The Zuvintas Lake and wetlands occupy the biggest and most important part of the ZBR. The area of the lake basin is more than 300 km^2. In the basin, intensive agricultural land use is dominant. Nutrient leakage from fields has become the main reason for the eutrophication and degradation of the lake and wetlands. Involvement of many landowners in the implementation of agri-environmental measures could help to stop nutrient flow and habitat degradation.

2. The overgrowth of previously used fens. In the past local inhabitants used large areas of low-lying marshy places for grazing and mowing. When the strict nature reserve was established, the agricultural activities were prohibited and meadows started to become overgrown with shrubs. The involvement of local people could help to restore lost habitats but the level of restoration would depend upon the number of inhabitants involved.

It will be difficult to initiate and implement a reduction of land use intensity for the benefit of nature protection measures. Most of the private land under cultivation has the status of an "economic" zone with very limited restrictions to agriculture even in the buffer zone of the Zuvintas Biosphere Reserve (ZBR).

Compensation payments for existing land use restrictions are not paid to landowners. Any restrictions, regulated by laws and other documents are compulsory but in fact these land use restrictions are not strict. However, even though compensation payments for environmental restrictions and management agreements are not being paid, a general procedure to set a payment level does exist in Lithuania: the Ministry of Agriculture and the National Paying Agency set this level by summing all costs of measures included in the agreement, then scaling all these costs by the size of the area in which the measures will be implemented. An additional 10% was added in the first year for start-up costs. In some measures there is fixed sum of money paid for each hectare once a year.

There are several gaps and limitations connected with involving private owners in protection agreements: conservatism, education level, previous bad experiences (especially of land forfeiture during Soviet period), lack of information, aging rural population, etc. One of the main problems at the moment is the high potential for developing intensive agriculture in the region. Agricultural production per hectare of arable land in this region is up to 30 per cent higher then the average in Lithuania. Therefore the farmers in this region can produce competitive products.

Box 1: Gaps and Limitations to involving private landowners in Lithuania

The **gaps and limitations** connected with involving private owners via agreements in the protection regime of the national park may be divided into 6 groups:

1. **Demographic situation and consequent inactivity of private landowners** – In the ANP, as well as generally in Lithuania, rural areas contain an aging population. With many young people moving to urban areas, old people far outnumber the demographically active. Most old people do not keep farms, and are generally passive and unsupportive of change. Involving these seemingly inactive aged inhabitants of rural areas in the implementation of nature protection aims would be very difficult. Instead, involvement plans would do better to target the demographically active part of the population. This will only be successful, if they open up an economic incentive for living in the rural area of the ANP.
2. **Restitution** – the process of re-privatising land has not ended yet. If important conservation objects exist in areas where ownership is changing, a management agreement might be seriously delayed. However, this current gap will narrow in the

near future.

3. **Shared ownership rights** – Lithuanian law allows ownership rights to belong to several owners. If an estate/land parcel has several owners, the management agreement will have to be made with all of them. The probability of several owners agreeing to such is low.
4. **Unexploited holding** – Many landowners live in the cities or towns and their holdings are unexploited. In this case there is no possibilities/mechanisms to involve these grounds in active habitat management schemes.
5. **Unclear compensation frame** – Currently compensation schemes and financial issues have not been defined. This is surely the most crucial point for landowners. The payment system is crucial to the success or failure of a voluntary implementation of habitat management schemes.
6. **Lack of information** – Until now target groups, if identified at all, do not receive sufficient up-to-date information from the ANP authority. A communication strategy to systematically channel information to different stakeholders is needed.

2.4. Institutional co-operation between agriculture, territorial planning and protected area management in Lithuania

Generally, it is problematic to receive information from official cadastres on protected areas and their buffer zones. Where park administrations have no data on ownership structure, economic structure of the region and land uses, the necessary information is not easily obtained. Cadastres store and charge such information for every land parcel separately; hence it quickly becomes too costly and time consuming to collect data in such a way. However, for planning and evaluating management practices on agricultural grounds, such information might be crucial and therefore better institutional co-operation may be needed.

Although local authorities, the Parliament and the Government acknowledge the LCA, there is no cooperation between the Lithuanian Chamber of Agriculture (LCA)[15] or any other agriculture associations and the ANP and ZBR administrations. The LCA acts mainly at the national level.

[15] The Lithuanian Chamber of Agriculture (LCA) is an umbrella organisation; uniting agricultural and rural non-governmental organisations and thus represents the agricultural producers' self-governance. The LCA member organisations represent the interests of agricultural producers, processors, traders, providers of production and intellectual services to farmers and rural inhabitants and together they shape the position of the Chamber. The LCA contributes to the formulation of an agricultural and rural development strategy and draws the attention of governmental structures and society to the potential outcomes of their various decisions. The chamber thus functions as a mediator between agricultural producers and political decision-makers. Farmers from the ANP region are also represented in the LCA. Farmers from the ANP and ZBR region may be members of many Lithuanian agricultural associations, but small farmers organisations in this region are unknown.

3. Poland

3.1. Introduction to the system of nature conservation and the selected protected areas in Poland

According to Polish national ecological policy a cohesive ecosystem of protected areas is supposed to include over 30% of the territory of the country. Today protected areas occupy over 22% of the area of Poland.

The following forms of the environmental protection are applied in Poland:

- national parks
- nature reserves
- landscape parks
- protected landscape areas
- protection of plant and animal species
- nature monuments
- documentation stands
- ecological usage areas
- nature-landscape complexes

National parks, nature reserves, landscape parks and protected landscape areas are the spatial forms of nature preservation in Poland. There are new forms such as documentation stands, ecological usage areas, and nature-landscape complexes.

National Parks are protected areas of particular scientific, natural, social, cultural and educational value, of an area not smaller than 1000 ha, in which all the forms of nature and specific landscape characteristics are subject to protection. The major objective of a national park is cognition and preservation of all environmental systems of a given area with the conditions necessary for its functioning, as well as restoration of the vanishing and distorted links of indigenous nature. All the activities undertaken in the area of a national park are subject to environmental protection. On the border areas of the park a protection zone is delimited.

A nature reserve is an area containing ecosystems kept in their natural or almost-natural state, including natural habitats as well as certain plant and animal species, elements of inanimate nature of a particular scientific, natural, cultural or landscape value. On the border

areas a protection zone may be delimited, protecting the area against the harmful influence of external factors.

A landscape park is an area protected due to its natural, historical and cultural value; the aim of its formation is to preserve, popularize and spread these values under the conditions of sustainable development. The farming areas, the forests and other real estate within the landscape park are used for economic profit. On the border areas of the park a protection zone may be delimited.

A protected landscape area is an area protected due to its particular landscapes and diversified ecosystems, particularly valuable mainly due to possibility of meeting the needs of mass tourism, recreation, or due to the ecological corridors existing or being restored.

Protection of plant and animal species aims at protection of wild animals or plants, particularly of rare, endemic species that are endangered or subject to threats and protected on the basis of international agreements. It also aims at preserving genetic and species diversity.

Nature monuments are single examples of animate and inanimate nature or their complexes having a particular scientific, cultural, historical or landscape value and having individual traits distinguishing them from other formations, especially old and big trees and bushes, springs, waterfalls, rocks, erratic blocks and caves.

Documentation stands of inanimate nature are areas that are not distinguished on the surface or are impossible to render accessible for scientific and didactic purposes. They may be valuable places of geological formation appearance, fossil accumulation or mineral formations as well as fragments of inactive surface and underground excavations.

Ecological usage areas are ecosystem remains worth protecting due to unique genetic stocks and environment types which should be preserved such as: natural lakes, midfield and midforest ponds, concentrations of trees and bushes, swamps peat bogs, moors, dunes, unused vegetation areas, old river-beds, rock outcrops, slopes, stony areas, and stands of rare or protected plant or animal species, including their seasonal habitats or reproduction areas.

A nature-landscape complex is set up to protect natural and cultural landscape of special value to preserve its aesthetic qualities.

The main administrative body for environmental protection is the Minister of Environment. He performs actions of the main administrative body for environmental protection with the assistance of the Chief Nature Conservator (Article 7 section 1 of the Act On Nature Protection). The powers of the Environment Minister are as follows:

- preparing the national strategy of protection and sustainable use of biodiversity with the programme of actions;
- convening the National Council for Nature Protection, the opinion-advisory body operating at the ministry;
- appointing and dismissing directors of national parks;
- making decisions, through regulations, on detailed policies concerning: protection plans for national parks, nature reserves, landscape parks and national parks; projects of annual protection tasks for national parks, for which such plans are not made; protection zones for game in the protection zones of the national parks; and national park statutes;
- appointing national park councils and the advisory body of the national park director; and
- defining by regulations lists of wild animals and plants as well as the scope of protection (total or partial) and the bans as to those species.

The Minister for Environment coordinates and supervises the activity of national parks with assistance of the Board of National Parks [BNP].

The main tasks of the BNP are as follows:

- budget confirmation and preparation of statements on the national parks' activities;
- coordinating scientific and didactic activities of the national parks;
- giving necessary assistance to the national parks as to the matters requiring central authorities' decisions and international cooperation;
- supervising the national parks' activities; and
- performing activities that are funded by the budget ascribed to the national parks (Article 21 of the Act On Nature Protection).

National parks' activities are coordinated by the appropriate minister for environmental issues (Article 24a section 1 on nature protection). The national park is administered by the director of the national park (Article 16 section 1 of the Act On Nature Protection). The director takes administrative decisions as to the environmental protection on the area of the national park (Article 16 section 5 of the Act On Nature Protection). The park council acts as the advisory

body for the director (Article 16 sections 4, 4a of the Act On Nature Protection). The director performs actions and competences of the chair of the voivodeship ("county") – the "voivode" – that relate to nature protection within the park area as to the nature protection (Article 9 of the Act On Nature Protection).

The Act On Nature Protection of 16 October 1991 (with amendments) specifies that for national park areas the plans of protection are drawn and put in action for a period of 20 years (Articles 13a and 13b). The detailed instructions as to the preparation of protection projects are specified in the Regulation of the Minister of Environment of 15th April 2002 on the detailed policies as to the preparation of protection projects for national parks (Off. J. No 55 item 495). The programme contains data on the area, the location, the borders, the state of the environment, technical infrastructure of the area, land property forms, short characteristics of soil, ecosystems, habitats, species of wild plants and animals, landscape and cultural values, protection aims, the areas of total, partial and landscape protection, as well as protection programmes for those areas, threats to the nature of parks, means of their elimination, or decrease, selected areas and the ways of their accessibility for scientific, educational, tourist and recreational purposes, the decisions on spatial development plans, and the register of protection objectives for 20 years and the means of their realisation.

The government authority responsible for environmental protection at the county level is the chair of the voivodeship ("county") – the "voivode". The voivode performs its environmental protection activities with the assistance of the voivode nature conservator (Article 6, 8 section 1 of the Act On Nature Protection). The voivode creates nature reserves by regulations, designing their names, locations, particular protection objectives, prohibitions typical of the given reserve, and he may also design the protection zone. He may also call on the authority directly supervising the reserves (Article 23 of the Act 3 on nature protection), and he adopts, by regulation, protection programmes for nature reserves and landscape parks (Article 13a section 6 of the Act On Nature Protection).

Landscape parks are managed by landscape park directors (Article 24a section 2 of the Act On Nature Protection). His/Her responsibilities are in particular: nature protection, organisation of scientific, didactic, tourist and editorial activity on the park area and its protection zone, cooperation on environmental protection with organizational units, legal persons and physical persons (Article 24a section 7 of the Act On Nature Protection). The director is assisted by an advisory body - the park council (Article 24b of the Act On Nature Protection).

A landscape park is established by a regulation passed by a voivode regulation in accordance with the local bodies of the interested self-government units (Article 24 section 4 of the Act On Nature Protection). The voivode establishes the name of the park, the protection zone area, if created, and chooses the prohibitions necessary for the park, considering the need for environmental protection (Article 24 section 5 of the Act On Nature Protection). The voivode appoints and dismisses directors of landscape parks, having first consulted the county commission for nature protection (Article 4a section 3,4 of the Act On Nature Protection); the director establishes protection plans for landscape parks by regulations (Article 13a section 6 of the Act On Nature Protection).

Protected landscape areas, monuments of nature, documentation stands, ecological usage areas and nature-landscape complexes are established by a voivode by regulation, in which the name of the area or of the object, its location, protection zone if necessary, and the necessary prohibitions are laid out (Article 32 of the Act On Nature Protection). The above-mentioned forms may also be introduced by a community council if not introduced by a voivode (Article 34 section 1 of the Act On Nature Protection).

3.2. Biebrza National Park

The Biebrza National Park is the biggest of 23 national parks in Poland. With its area of 59 223 ha it constitutes almost 1/5 (19%) of the total area of national parks in Poland. It was founded in 1993 to protect the biggest and best-preserved valley peat bog complex in Central and Western Europe. The BNP with its protection zone extends over the valley of Biebrza. The valley of Biebrza River is a unique enclave for water and marsh birds on European scale. For the majority of them the Biebrza Swamps are an important refuge, e.g.:

- aquatic warbler (about 15% of the world population);
- grosbeak columbine (the only remaining breeding grounds in Central Europe);
- great snipe (*Capella media*) (the most important breeding grounds in Central Europe);
- black grouse, ruff, marsh harrier, spotted crake (*Porzana porzana*), marsh owl (the Biebrza populations are the biggest in Poland).

The refuge also has an important role as a feeding ground and resting place for migratory birds, especially during the spring passage.
The uniqueness of the Biebrza Swamps and their role in nature preservation has also been recognised on international grounds:

- in 1995 the Biebrza National Park was entered into the Ramsar Convention list of the wetland areas of particular importance especially for waterfowl;
- the valley of Biebrza was considered by BirdLife International to be an IBA (Important Bird Area) of world importance; and
- the whole park with the protection zone will be a part of the newly created Natura 2000 ecological network.

Preparations are also underway to submit the Biebrza National Park with the valley of Upper Narew River, the Narew National Park, and the Łomża Landscape Park of the Narew Valley to become a UNESCO Biosphere Reserve, and subsequently a World Heritage Site.

The management of the park is subject to:

1. The Act On Nature Protection (The Act on n.p.) of 16 October 1991 as amended (Off. J. of 2001 No.99 item 1079) of Article 9, 13a sections 1 to 5, 7 to 8, Article 13b sections 1, 4-5, Article 14,15,16 sections 1, 3 to 8, Article 17 section 1, Articles 18,

19, 23a sections 1-2, 4, Article 27, 27a, 27b, 27c, 35 section 1, Articles 35a, 36, 41-43, 45-45a, 48, 50 section 3, Article 51-53, 58-59, 62

2. Regulation of the Council of Ministers of 9 September 1993 on foundation of the Biebrza National Park (Off. J. of 1993, No.86 item 399) in § 4 and 5.

The Project of Protection Plan of the Biebrza National Park, being currently presented to the units of the local government to give opinion.

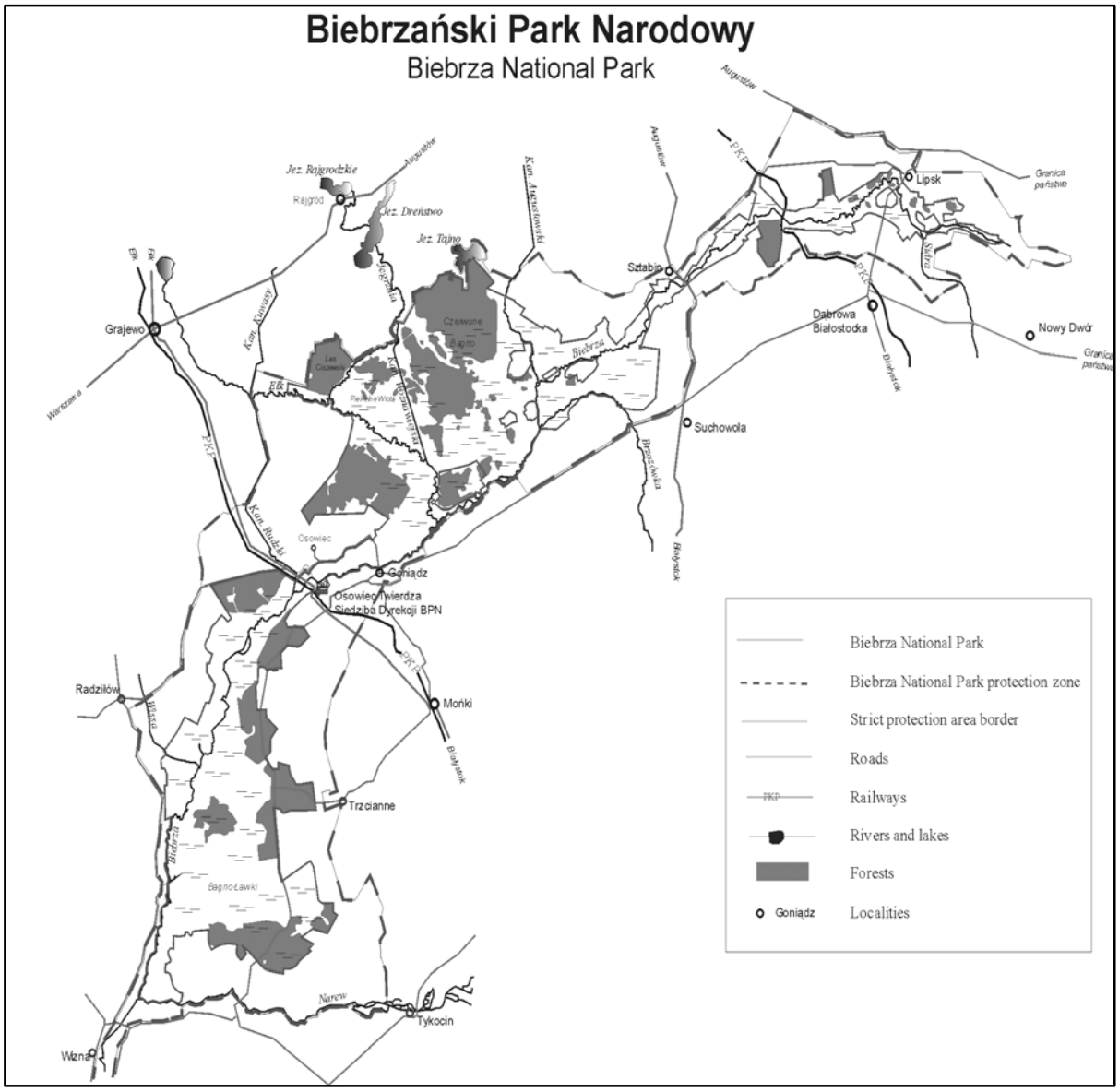

Figure 1: Map of the Biebrza National Park, Poland

3.2.1. Agricultural activities and their impact on the Biebrza National Park

Agriculture provides a livelihood for the majority of inhabitants of northeastern Poland. It constitutes the only, or the main, source of revenue for more than 70% of the rural population. Such a structure of employment results from the limited alternative employment possibilities. The valley of the Biebrza River is one of the least industrialised regions in the country; the service sector is also weakly developed. The majority of farms are traditional mixed farms with extensive production. Due to the large percentage of grasslands in the farms in the last few years, specialization may be observed in development of a specific production sector – dairy cows. In the land-use structure of BNP mostly undisturbed land constitutes about 46% of the area, agricultural land (of which 22.5% is grassland) constitutes 23% of the total area and forests constitute 26%. The majority of grasslands are meadows and pastures, which are wet during the majority of the growing season. This means haymaking can only take place once a year and the fodder obtained is not of very high quality or very profitable. The large distances between the farm and the pastures, as well as the large quantities of insects which irritate the cattle also make production difficult. Some of the land that is mostly undisturbed may be used for agricultural purposes if the water conditions permit or require such use.

Agricultural activities in the valley of the Biebrza River are impeded by: the low quality of the soils (soils of VI and V bonitation class prevail); the difficulty of access to the arable land situated in the swampy valley (no land-improvement and no access to the meadows), the dispersed property structure (more than 17 thousand private owners and many farms of the area having less than 2 ha of arable land); the remoteness from agricultural service centres, and the dwelling-places of their owners; the poverty of the rural population; the insufficient infrastructure in the farms; the lack of financial resources for investment and the lack of market for agricultural products. Moreover a gradual decrease in the number of farms in the area of the Biebrza National Park has been observed. In the early 1990s there were 66 private farms in four localities in the BNP area (Budy, Gugny, Sośnia, Budne). In 1996 in the mentioned localities there were only 22 functioning farms. The villages of Budy and Gugny, where only one farm was left, were almost totally depopulated and the majority of the area was adapted for holiday aims. In fact, the majority of landowners live outside the BNP, including many who live far away from the valley and this influences the usage of meadows and pastures. As a rule, their land is not used or is only used when the area is accessible and when fodder is required.

The extensive use of the valley in the past has effectively limited the succession of forest complexes and enabled preservation of valuable peat bog complexes – the habitat of many waterfowl species. However, worsening agricultural markets have caused gradual withdrawal of agriculture from the valley of the Biebrza River. Less and less peat bog areas are now mown and the areas left unmown begin to be covered with bushes and trees, mainly birch. Recently in dry years only around 11 thousand ha have been used, and in wet years only around 5 thousand ha.

The prevailing type of agricultural production in and around the areas of the BNP is cattle raising (Bołtromiuk 2001) half of which are milk cows. This is due to the high percentage of grasslands and mostly undisturbed land in the farming areas. Thus, milk production predominates. The percentage of arable lands producing mainly fodder is low. In the cultivation area, grain production predominates, constituting about ¾ of the cultivation area. Apart from this, potatoes constitute slightly more than 20% of the cultivation area. Fodder plants (mainly fodder beets) and industrial plants (mainly tobacco) take up small parts of the cultivation area, amounting to about 4% in the surveyed farms.

3.2.2. Tendencies in agriculture of the region

- In wet years – delayed mowing occurs once a year, in some places together with pasturage (mainly free) after the first mowing. This has positive effects on the natural values of the Park, as it limits succession of bushes and birch and maintains the habitats of waterfowl and the feeding grounds of birds of prey.
- In dry years – the first mowing occurs earlier and often there are two mowings. This still has a positive effect as above, however, mowing too early may cause a decrease in bird populations by preventing successful hatching or possibly by making it impossible to breed more than once.
- Machine mowing and haymaking, mowing mainly by rotation mowers (very low mowing and in decreasing spirals). The machines used by farmers are not appropriate for work on hydrogenic soils, thus in wet conditions they destroy the meadow turf and the soil. Low mowing by rotation mowers and mowing in a decreasing spiral path threatens many species of animals. Low mowing and fast haymaking causes changes to the species structure of the complexes. Fast haymaking limits the possibility of seed sowing.
- Not using fertilisers for meadows and pastures, as the floods provide natural manure; possibly, sporadic use of fertilizers for dry and used meadows. This has a positive effect on the natural environment of the Park.
- Pasturage of cattle and horses, free or quartered. The extensive pasturage used nowadays on mineral soils maintains important bird habitats - mainly of plover birds. Changes to this - either intensification or cessation would be disadvantageous.

Influences of agriculture on the National Park

The influence on the National Park should be analysed in two categories: positive and negative effects. The positive effects of agriculture on the Park environment are:

- meadow use of the dehydrated peat bogs which protects against birch succession causing their further dehydration and peat mineralisation; and
- extensive agriculture, which protects biodiversity in the rural areas.

The negative effects of agriculture on the Park environment are:

- impoverishment of agricultural species diversity by introduction of maize cultivations;
- contamination of subsoil waters, and, indirectly, of surface waters resulting from cases of unregulated waste management in farms;
- too early mowing and pasturage periods having a negative effect on birds' hatching success;
- using improper mowing techniques, such as low mowing or mowing in a decreasing spiral path causing hatch losses of birds and other animals,
- Repeated mowing (and possibly the use of fertilisers) causing a decrease in species diversity.

Tendencies in the next 10 years and RDP instruments

Due to the growing pressure of competition on the agricultural market and the decreasing profitability of production, which force further intensification of agriculture, the further development of agriculture in the region is confidently predicted to be: establishment of large-area farms; specialisation of production; increase in maize cultivation and silage production; abandonment and forestation of low-quality soils. That will lead to a decrease in employment in the agricultural sector. These trends will have a negative effect on environmental values in the entire region, whilst improving rural workers' incomes. Although it may be assumed that these trends will not be common in rural areas in the BNP or in its protection zone, due to low agricultural productivity of these areas, they will be much more intensive in regions of higher-quality soils. The local agri-environmental programmes aim at weakening those negative effects while maintaining or improving the farmers' situation.

The existing rural policies and the Rural Areas Development Plan did not specifically address rural activities within the national park. Thus, no financial means for national parks and their agriculture were provided. However, almost all the RDP instruments can have positive effects for the Park. Extensive farming has an important role in maintaining natural values of the region, thus all activities supporting it and not leading to its extinction or intensification have positive effects on the local environment. The most recommended activities are:

I. Investment in agricultural holdings;
IV. Less-favoured areas and areas of environmental restrictions;
V. Agri-environment;
VI. Improving processing and marketing; and
VIII. Promoting the adaptation and development of rural areas.

Agri-environmental programmes in the region may help to stop agricultural intensification by introducing compensation payments for losses emerging due to using techniques beneficial for flora and fauna preservation. In BNP in the majority of areas extensive agriculture methods are used. Maintaining these methods should be the aim of the future Rural Areas Development Programme, in particular of agri-environmental programmes.
Due to the large percentage of farmers living far away from their land, it would be advisable to introduce compensation payments for the use of distant arable lands. It would also be advisable to increase the amount of payments for the use of the moor-grass meadows. Currently these are not compensated for and currently proposed compensation only compensates for loss of revenue.

3.2.3. Institutional co-operation between agriculture and park management

In recent years, cooperation between the Park administration and community authorities has been satisfying. A good example of this cooperation is “The Biebrza System of Waste Management” programme, prepared by the Communal Union “Biebrza”, associating 15 communities from the region and the BNP. This system intends to unify the organisational and economic aspects of non-forest ecosystem protection with the management of communal waste from communities. The project assumes that using the non-forest ecosystems to process organic waste will result in economic demand growing for these ecosystems and will generate financial resources that can fund environmental protection of the BNP. The Park supports the activity of self-governments for environmental protection by helping them to gaining financial backing for their activities and by improving the state of the environment in the valley. Cooperation in promoting the region is also satisfying – joint events are organized to promote the region’s natural and cultural values (for example the annual event – “100 ideas for Biebrza” – and the Local Product Fair of the Biebrza Communities). The annual meetings of the “Biebrza Self-Government Forum” are an opportunity to get acquainted with the activity of the communities and the Park in the previous year, to share knowledge and experience and to plan future cooperation.

The Biebrza National Park has already concluded:

- 38 agreements with private land owners, in which they allowed for protection activities on their plots – bush removal, mowing and biomass removal in years 2001-2003;
- 28 work agreements for protection activities: bush removal from non-forest ecosystems by the owners of the plots;
- 2 agreements for bush removal and mowing of black grouse habitat; and
- an agreement with the authorities of Grajewo for granting BNP the authority to supervise forests which are not state-owned, and are located within the parties' scope of activities.

3.2.4. The gaps and limitations

- The biggest problem is lack of interest on the part of the landowners in continuing extensive use of the majority of swampy areas in the Park. In the past almost the whole valley was used extensively, mainly mown manually once a year to obtain litter for cattle or hay. This was, however, hard and time-consuming work. Nowadays, when the owners of swampy meadows in the Park possess also improved meadows in the neighbourhood of the valley or at its outskirts and use of swampy meadows in BNP is no longer economically justifiable.
- The Park's budget limitations make it impossible to pay compensation to farmers for implementing active protection of non-forest ecosystems, i.e. extensive farming. In addition, any engagement of farmers in particular projects financed by assistance funds limits the ability to engage them in other activities.
- Organisational difficulties are also caused by the high number of individual land-owners (more than 17 000 owners) and the distance of an average of 10-20 km from the meadows to the owners' places of residence (data for 66% of meadows in the Southern Basin and more than 30% in the Central and Northern Basins of the Valley). This increases farms' production costs. The type of habitats substantially limits possibilities of machine use, especially in wet years.
- Low awareness of the farmers as to the need for extensive use of their meadows within the Park about protection of many species, which are rare in other parts of the country and in Europe, as well as their habitats. The farmers do not see links between the land-use system and their own profit – only those who run an agro-tourism activities profit from natural and landscape values.

- A greater engagement in the use of the valley on the part of landowners could have a positive effect on the nature of the Park, as it could stop swamp complexes being immersed with bushes and trees. However, only extensive use of such habitats is advantageous for the Park environment, in particular mowing delays (for example from July, in order to enable more successful breeding of birds) and use of more appropriate mowing techniques and equipment which is adjusted to a given habitat type.

3.2.5. Private ownership – involving important stakeholders

Up to the present there have been no limitations on the use of private land within the borders of the Park and nearby. Thus, in the Park budget there have been no funds for compensation of private owners for restrictions in the land use. Limitations, specified in the Act On Nature Protection and the Regulation on establishment of the Biebrza National Park concerning the use of arable land within the borders of the Park do not apply to private land. Therefore, there were no significant institutional connections with farmers' unions.

This area of the county falls within the authority of the Podlasie Agricultural Chamber. It is a self-government elected by farmers, which has the status of a legal entity and may act independently. The Chamber represents people's agricultural interests, influences the character of rural policy and participates in its implementation. The bodies of government administration in the county and local self-governments ask for the opinion of the Chamber as to the projects of local legal regulations on agriculture, rural development and agricultural markets.

The national park is managed by the park's director (Article 16 section 1). This director takes administrative decisions as to nature protection on the national park area (Article 16 section 5). An advisory body of the director is the park council (Article 16 section 4, 4a). Within the park area the director performs actions and competences of the voivode as to the nature protection (Article 9).
The park cooperates with numerous external entities on the basis of agreements for realisation of particular objectives, including:

- With Communal Union (see 1.1) for preparation and realization of programmes "The Biebrza System of Waste Management" and "Our Communities protect the Wetlands". Under the latter, the bush removal from moss-grown areas and moss-and-sedge complexes in Lipsk community is in progress; the complexes are to be mown afterwards.

- In cooperation with the society Pracownia Architektury Żywej ["the Living Architecture Studio"] a project "Renaturalization of Jegrznia River" was prepared, financed by WWF. At present, the abovementioned institutions prepare the implementation project for renaturalization.
- Furthermore, BNP is cooperating with WWF on the "Biebrza" project aimed at popularising the traditional use of swampy meadows (manual mowing and stack-haymaking) through organizing National Championships in Swampy Meadow Mowing for Nature "the Biebrza Haymaking") and implementation (with the Biebrza Society) of the project "the Ruff Meadow".

It would be advantageous to improve and extend cooperation with private landowners and self-governments.

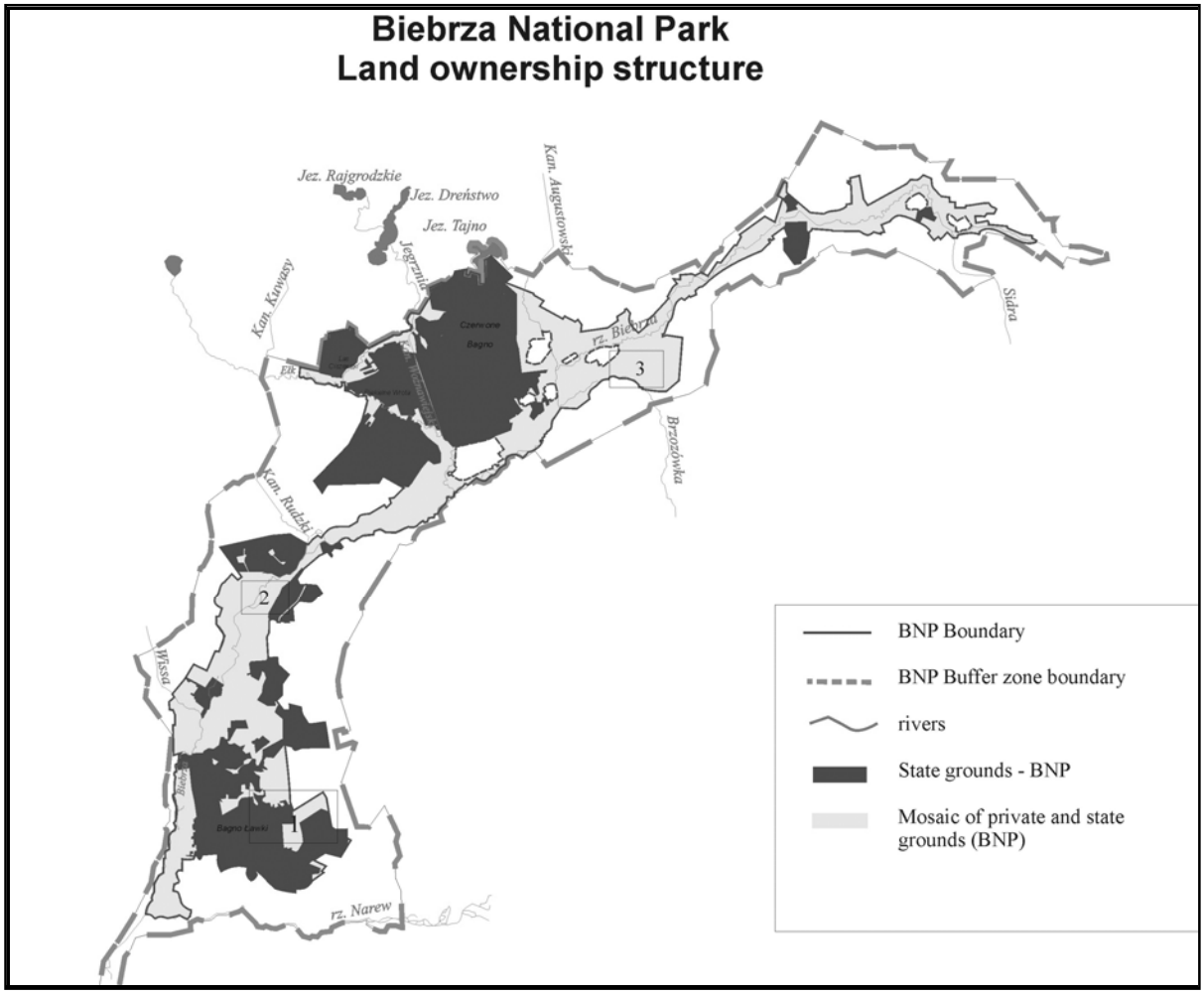

Figure 2: Land ownership structure in Biebrza National Park, Poland

3.2.6. Protection programme for BNP

- Due to the large area of the Park, the difficulties of accessing the area, time limitations, and in particular limitations in funds, the Project of National Park Protection for BNP was – in the case of many issues and environmental elements – prepared on the basis of the existing archive materials, as well as colour aerial pictures interpretation at a scale of 1:20 000, with limited field verification. The methods employed by the teams preparing the Protection Plan Project for BNP and methods of Park nature description did not present the real state of the park in all cases. Thus, there exist some discrepancies, for example between the non-forest ecosystem map of BNP prepared on the basis of interpretation of above-mentioned aerial photographs, the archive vegetation maps of 1960s and 1970s, and the actual state. The discrepancies also exist between the soil structure map and the actual state.
- The land register lacks data concerning property of some park areas (for the total area of about 100 ha).
- Discrepancies exist between the data on land use percentage structure and the actual state because the park's land-use register comes from 1960s. These discrepancies concern mainly the percentage of woodlands and bushes. As obtaining any of this data on land-use is expensive, the Park does not have the data concerning the Park protection zone. Moreover, Park data lacks certain information. In large mammal population management, cooperation of Park Management with hunters' associations is necessary. This cooperation meets some difficulties, e.g. in compensation for cultivation losses due to wild animals.
- Forest ecosystems used to be perceived by the authorities of the neighbouring forest inspectorates as a threat to tree-stands, due to insect gradation or fungus pathogens. There have been cases of forcing the Park Management to prevent excessive pathogen reproduction, or to eliminate pathogen hot spots.

The Park encounters some difficulties in adapting spatial development plans of communities when trying to align these with neighbouring communities' plans – something that is necessary for some investments.

3.2.7. Projects, programmes and funds

Pre-accession funds from the EU and/or other international programmes, accessible for the Park, are:

- the MATRA Fund/Programme International Nature Management sponsored by the Dutch Ministry of Agriculture, Nature Management and Fisheries and the Ministry of Foreign Affairs, which also financed the following research programmes:
  - "Assessment of the effect of changes in water management within the Central Biebrza Basin";
  - "Hydrological system analysis in the valley of the Biebrza River" (PIN-MATRA 99.B.2.99);
  - "Remote sensing techniques and geographic information systems for wetland conservation and management: Monitoring shrub-encroachment in the Biebrza National Park"; and
  - currently in progress "Man and Nature at Biebrza: Integration and dissemination of knowledge for sustainable nature management" (PIN-MATRA 2001/039).
- the PHARE programme: in the scope of the project PL 9507-01-01/21: "Assistance of the work groups dealing with harmonisation of agriculture law…" an expertise was financed: "The rules on pasture management for agri-environmental programmes, taking into account in particular the Biebrza-Narew area of pilot implementation" (the expertise was co-financed by WWF, "the Biebrza National Park" project);
- the Ramsar Small Grant Fund: BNP submitted projects twice, but received no response; and
- the LIFE programme: BNP did not submit any proposals.

3.3. The Bieszczady National Park and landscape parks: the Ciśniańsko – Wetliński Landscape Park and the San Valley Landscape Park.

The Bieszczady National Park

Within the borders of the Bieszczady National Park there is no private property or arable land. Several hundred hectares in the valleys are used as meadows or pastures but this has very little economic importance. In this respect the Bieszczady National Park is unique in the country and it is important to maintain the semi-natural plant communities, which give the park its specific character. The interesting aspect from an agricultural point of view is the

vicinity of landscape parks, mainly the Ciśniańsko – Wetliński Landscape Park and the San Valley Landscape Park (see below).

The Eastern Carpathians Biosphere Reserve

The area of the Bieszczady National Park joined the list of World Cultural and Natural Heritage sites (UNESCO) and constitutes a part of the biosphere reserve "Eastern Carpathians" shared by three countries. About 35% of the Podkarpacie district is covered with forests and more than 45% is protected by law. Two landscape parks (the Ciśniańsko – Wetliński and the San Valley Landscape Parks) cover a total area of 85 thousand hectares, which constitutes 40% of the area of Bieszczady. A characteristic feature of these parks is their enormous size (they stretch over an area of 5 poviats – "counties" – and 9 gminas – "communities") and their extensive woodland (they encompass 8 forest inspectorates). The percentage of the forests in these parks is one of the highest among 120 landscape parks in Poland. Their forestation is as follows:

- the Ciśniańsko – Wetliński Landscape Park – 83%,
- the San Valley Landscape Park – 82%.

The vast area of the Ciśniańsko – Wetliński and the San Valley Landscape Parks includes natural and relatively undisturbed ecosystems. The mountain ridges are covered with forest and the slopes, cut by numerous river and stream valleys, create a beautiful landscape.

A short sketch of the advantages and unique features of the landscape parks of Bieszczady cannot fail to mention that they belong to the international Biosphere Reserve "Eastern Carpathians", the only biosphere reserve in the world shared by three countries. The World Wildlife Fund recognized the Carpathians as one of the 200 most important areas in the world in respect of biodiversity.

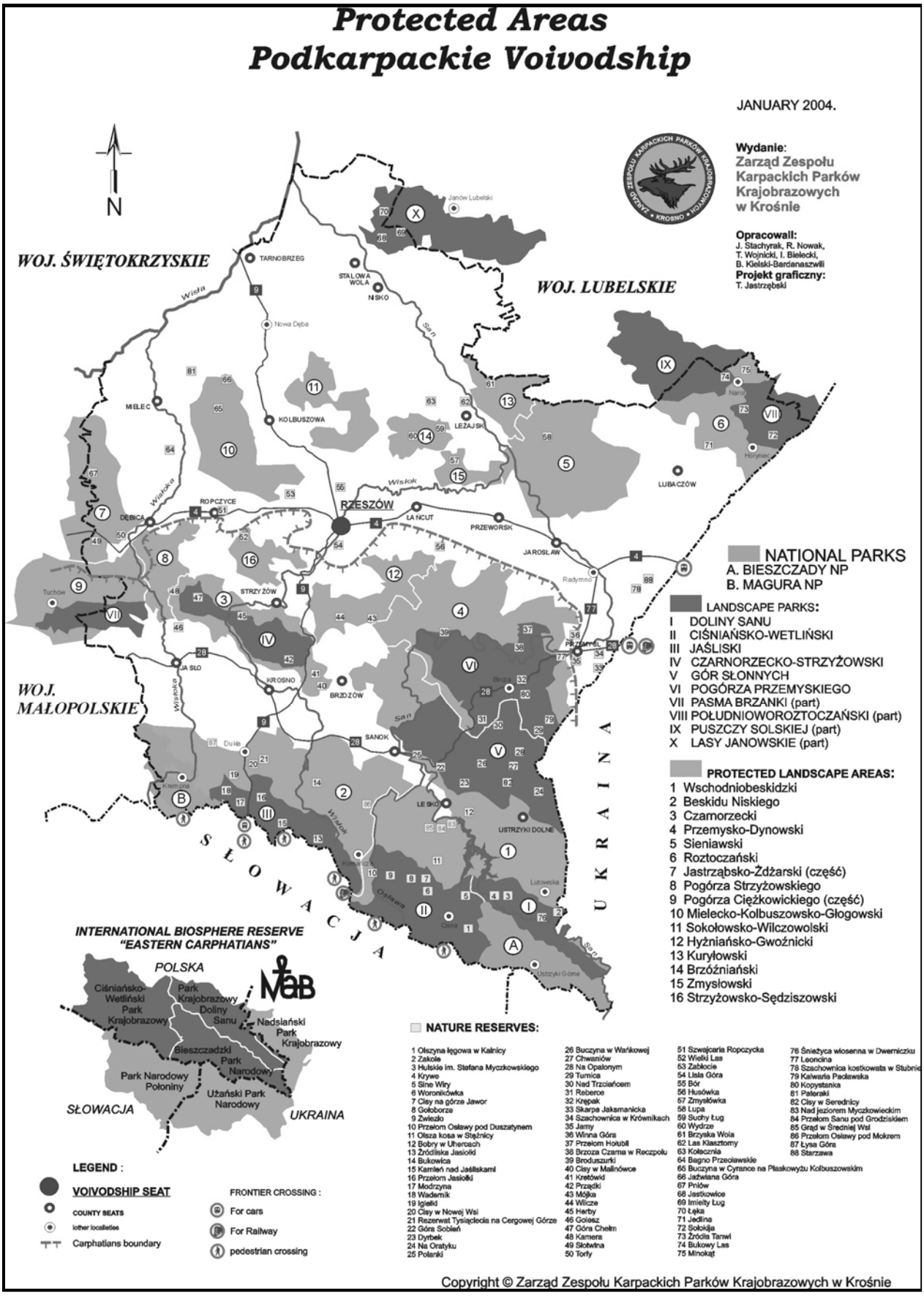

Figure 3: Protected Areas in the Podkarpacie district

3.3.1. Agricultural activities and their impact on the Landscape Parks

Agricultural production in the Landscape Parks in Bieszczady and Low Beskid is dependent on environmental conditions. Due to its vast extent, agriculture significantly influences the natural environment. In turn, environmental conditions limit the possibilities for agricultural production.

In fact, height above sea level, soil quality and unsuitable terrain result in largely unfavourable conditions for agricultural production. This situation is reflected by the agricultural land use in the three parks:

- Meadows and pastures constitute 8% of the parks' area, specifically:
  - the Jaśliński Landscape Park – 13% of the park area;
  - Ciśniańsko-Wetliński Landscape Park – 7% of the park area; and
  - the San Valley Landscape Park – 5% of the park area.
- Arable land constitutes 7% of the parks' area, specifically:
  - the Jaśliński Landscape Park – 16% of the park area;
  - the Ciśniańsko-Wetliński Landscape Park – 4% of the park area; and
  - the San Valley Landscape Park – 6% of the park area.

While analysing the number of individual farms in the gminas – "communities" – located within the parks, it should be noted that less than 5% of the total number of active farms within these gminas are situated within the parks' borders. Specifically:

- the Jaśliński Landscape Park – 95 farms
- the Ciśniańsko-Wetliński Landscape Park – 240 farms
- the San Valley Landscape Park – 56 farms

In comparison with lowland areas, the possibilities for agricultural production in these mountain areas are limited. The areas of natural and semi-natural grassland together with the limited choice of possible plants to cultivate, due to climatic reasons and the intensive erosion processes, result in a specific system of land utilisation. On the other hand, unused grassland suffers from degradation, which results in erosion and landscape devastation. This is highly significant from the point of view of environmental qualities, especially biodiversity.

The structure of crops reflects the subsistence character of plant production. The plants cultivated on arable land include grain and potatoes as well as fodder crops used as foodstuff for animals. For many years production has been falling on these arable lands whilst the percentage of permanent grasslands has been increasing.

Plant production:

- permanent grassland (pastures, meadows cultivated for hay and hay silage); and
- smaller areas of grain for fodder and potatoes for subsistence use, produced with reduced mineral fertilisation and plant protection application.

Within the parks, semi-extensive breeding of ruminants (cattle, sheep) is conducted, based around permanent grasslands.

Animal production:

- milk – 70%
- slaughter sheep – 20%
- slaughter cattle – 10%

The present obstacle preventing development of animal production on farms within the landscape parks is not restrictions caused by environmental protection regulations, but is mainly caused by economic factors. This situation means there is a need to search for other sources of income in the countryside besides agriculture. The largest opportunities for such income are associated with agro-tourism.

3.3.2. The influence of agriculture on the Bieszczady National Park

Agricultural production does not have a significant influence on the Bieszczady National Park's environment, especially if we consider the low percentage of arable lands in the land structure and the extensive character of agricultural production. Indeed, small farms (social ones), extensive production methods and the small scale of production do not pose a threat but just the opposite. They are environmentally friendly. Some negative influence is exerted by burning of grass and stubble fields (which is prohibited by law and the extension service) but a much more important factor is abandonment of agricultural production – especially in grasslands, which suffer degradation. The result of such abandonment is the destruction of plant and animal habitats.

Positive effects – such as low soil fertilisation (positive for water quality) and extensive production methods (positive for maintaining semi-natural habitats) – exist. Nevertheless, there are also negative phenomena such as improper storage of organic fertilisers in farms (resulting from a lack of funds to mow and plough the fields at the right time, and from inappropriate farming practices).

Those practices observed within the parks, which have a direct or indirect influence (either positive or negative) on biodiversity, are:

- the increase of individual farm sizes;
- dividing the large (although no longer numerous in Bieszczady) areas belonging to state-owned farms;
- dividing and selling land for building summer-houses;
- the increase of waste land areas (which, on the one hand, results in the enlargement of non-agricultural ecosystems but on the other hand, following overgrowth, causes the destruction of rare species and succession communities); and
- changes in the level of species diversity. A positive example is the large amount of bird-species living here (in the San Valley Landscape Park – 134 species, in the Ciśniańsko-Wetliński Landscape Park – 142 species, in the Jaśliński Landscape Park – 152 species).

Birds are a good indicator of the condition of the natural environment, and changes in the densities of bird populations are a useful barometer of changes, which are taking place in the natural environment. Analysing agriculture in the context of biodiversity, it should always be remembered that agricultural activities only cover a small portion of land utilisation in the studied parks.

Nevertheless it should be remembered that the rational use of natural resources and the existing space structure have a profound influence on increasing biodiversity.
An important task for protection services, including the service of the Carpathian Landscape Park Complex Administration beyond simple conservation protection is to consciously shape the natural environment, to make it resilient to potential future threats.
Indeed, the activities contributing to biodiversity protection should be more comprehensive than those traditionally used to achieve environmental protection. Special attention should be paid to those elements of biodiversity, which are rare and in different ways threatened with irreversible transformation. These activities are currently supported by agri-environmental programmes, which have been introduced in selected farms since 2001 as a pilot project for the development of rural areas.

3.3.3. Tendencies in agriculture of the region

A characteristic feature of this region is the large amount of very small farms that have resulted from the historical heritage system. The economic conditions in the 1990's forced farms to choose extensive production methods or to abandon production altogether. Small farms usually do not make much profit, and the small earning capacity of agricultural

production, especially in this region, which is far away from large markets, resulted in still less investment in farming. The obsolete machinery of these farms did not encourage the young generation to continue the farming and, as a result, agricultural production has been and is declining in many parts of the region. This is causing degradation of the natural environment and rural landscape.

The negative trends in Bieszczady could be stopped by:

- providing financial help for young farmers;
- supporting sustainable development of mountain areas; and
- providing sufficient finances for advisory system for farmers.

3.3.4. Tendencies in next 10 years and RDP instruments

The area of the Park is included in the scope of the Rural Development Plan – National Agri-environment Plan as a priority area (an Environmentally Sensitive Area of the Eastern Carpathians) and, as such, is included in the budget. The proposed activities of the plan are evaluated as positive for this region. Extensive agriculture plays an important role in maintaining the environmental qualities of this area; therefore all activities, which support such agriculture and prevent its decline are favourable for local nature. Positive characteristics of activities are:

I. Concentrating on less-favoured areas and areas of environmental restrictions
II. Supporting agri-environment schemes
III. Investing in agricultural holdings
VI. Supporting young farmers
V. Promoting early retirement
VI. Promoting appropriate afforestation

Many farmers are interested in taking part in programmes, which give additional income. Investment in farming will improve the production standards and will decrease the threats to the environment (for example construction of liquid manure tanks and stable manure sheets, introduction of activities aimed at preserving rural landscape, preventing the degradation of arable land or forest expansion in agricultural areas).

Through introducing the Rural Development Plan it is expected that from 2004:

- the number of ecological farms will rise;

- the number of farms participating in agri-environmental programmes, especially in programmes that introduce the “sustainable agriculture” package, will rise;
- the production of cattle and sheep for meat will develop; and
- the number of farms producing milk will decrease.

The supporting activities proposed by Rural Development Plan are evaluated as positive, but they have to be strengthened by more effective complementary activities, such as:

- supporting organic farming;
- producing biologically clean food for consumers;
- increasing farmers’ participation in agri-environmental programmes, which would be easier if farmers had access to as many programme packages as possible;
- supporting education activities in rural areas – increasing knowledge in rural populations about the threats to the natural environment;
- increasing access to preferential loans for the modernisation of low production farms;
- improving agricultural qualifications; and
- using assistance resources for farm investments.

Negative trends in the agriculture of this region could be stopped by the following means:

- providing financial assistance for young farmers;
- integrating land and creating conditions to improve the agrarian structure of rural areas; and
- activating the local and rural community.

3.3.5. Institutional co-operation between agriculture and park management

In the region of Podkarpacie there are the following agricultural organisations:

- The Polish Association of Simmental Cattle Breeders (cooperation with the HPI Foundation in the field of distributing farm animals for breeding);
- The Polish Association of Sheep Breeders (cooperation with the HPI Foundation in the field of distributing farm animals fro breeding, sale organisation of lambs and wool, farming works, paying subsidies for farm animal flocks for breeding and production);
- The Polish Bee-keepers Association (organisation of provision for apiaries, trainings); and
- The Agricultural Chamber of Podkarpacie (all problems of rural areas).

The above are consulting and opinion-forming bodies.

Local governments treat the existence of landscape parks as a threat to social and economic development. A park is “good” if it does not “hinder” the realisation of the community’s plans and it is “bad” if it constitutes a barrier to investment. On the one hand, local governments turn a blind eye to breaking of the regulations of environmental protection of landscape parks, and on the other they want to have a park in their area because it makes an attractive “sign-board” and is an attraction in itself, encouraging tourism, which is considered by communities as the motor of their development.

3.3.6. The gaps and limitations

The problems encountered in the administration of the Park include:

- insufficient financial means;
- disproportionate staffing in relation to the administered area of the Park (one post for the area of 161 km^2 - the highest rate in Poland);
- the fact that local governments treat the existence of the Park as a threat to the social and economic development of the gmina; and
- the unlimited rights of owners over their land-management activities, which can lead to a reduction of Park’s qualities.

3.3.7. Private ownership – involving important stakeholders

So far there have been no limitations on the use of private land within the borders of the Parks. As a result, no agreements were contracted with landowners about the protection of environmental qualities of the Park.

The park is administered by the president of the park complex administration with the help of employees who belong to the Landscape Parks Service. The president of the administration has an authorisation from the voivode – “district” – to introduce administration decisions.

Cooperation is conducted with other entities operating in the area of the Park. This cooperation is indispensable and productive. It would be desirable to enlarge the cooperation with private landowners and local governments.

3.3.8. Park Protection Plan

The valid legal act regulating the administration in the area of the Ciśniańsko – Wetliński Landscape Park is the enactment No. 17 of the Voivode – "district" – of Krosno of 27th March 1992 about the creation of the Ciśniańsko – Wetliński Landscape Park (Official Journal of the Voivode of Krosno No. 7, position 51, changes in Official Journal of the Voivode of Krosno of 1996, No. 21, position 108).
The valid legal act regulating the administration in the area of the San Valley Landscape Park is the enactment No. 18 of the Voivode of Krosno of 27th March 1992 about the creation of the San Valley Landscape Park (Official Journal of the Voivode of Krosno No. 7, position 52).

According to the bill of 16th October 1991 about the protection of the environment (Official Journal of 2001 No. 99, position 1079 with later modifications) the main planning document is the park protection plan.

- The Enactment of the Minister of the Environment of 15th April 2002 (Official Journal No. 55, position 497) defined a detailed way of creating a project of protection plan for landscape parks. According to the requirements of the quoted enactment, a project of protection plan for the Ciśniańsko – Wetliński Landscape Park was created, was positively evaluated by local governments of the gminas from the park area and has been sent to be made a voivode enactment. The protection plan is anticipated to enter into force in the first quarter of this year.
- The protection plan project for the San Valley Landscape Park was created according to the quoted enactment and presently is undergoing evaluation by local governments of the gminas from the park area. The protection plan is anticipated to enter into force in the first half of 2004.

3.3.9. Projects, programmes and funds

In the area of the Ciśniańsko-Wetliński Landscape Park, 15 farmers were given subsidies from the pilot project of rural areas development – agri-environmental programmes. The subsidies were used for the implementation of alternative farming practices that align it with the requirements of water protection, fertilisation, and the application of landscape protection. The paid subsidies were proportional to the loss of profit. Farmers were very interested in these kinds of subsidies and they are still willing to introduce voluntary restrictions in the use of land.

In the area of the San Valley Park, 5 farmers were given subsidies from the pilot project for the development of rural areas – agri-environmental programmes. The subsidies were used for the implementation of alternative farming practices that align farming with the requirements of water protection, fertilisation, and the application of landscape protection means.

No other programmes financed from national or foreign financial resources were introduced.

3.4. Wigry National Park

3.4.1. Agricultural activities and their impact on the Wigry National Park

Although agriculture forms a significant component of land-use within the Wigry National Park, it does not currently threaten the park's environment. Traditional extensive agriculture dominates within the WNP and for this reason, the means of production such as use of chemical fertilizers or pesticides, do not seriously threaten the park's environmental values. Production is mainly focused on cereals, milk and meat. Animal breeding concerns mainly small herds of milk cows and pigs. There are no specialised farms and only a few larger animal farms. However, one danger for the environment is potentially posed by inadequate manure management and a lack of protection against leakage into the water and soil. The low profitability of agriculture since the beginning of the '90s has resulted in insufficient funds being allocated for farming. For this reason, the most common farm equipment such as manure slabs and liquid manure containers, is currently insufficient (there is no equipment of this sort in smaller farms and in bigger ones it is often old, leaky and is unable to store manure for the necessary 6 months).

The existence of fragmented farms (numerous plots located far from each other) and their small area, as well as farms' low profitability means it is necessary to find new sources of income. The result of this is that the built up area within the Park expands as agricultural land is converted to urban land. Indeed, urbanisation of the area is considered a bigger threat than agriculture, especially to the landscape.

The area of the WNP surrounds Wigry lake. This lake is systematically fish-stocked by the Park Services with species such as European whitefish, lavaret, pike, tench, salmon trout and European catfish. There is a problem of poaching and on numerous occasions Park Guards have confiscated fish poachers' equipment from the lake.

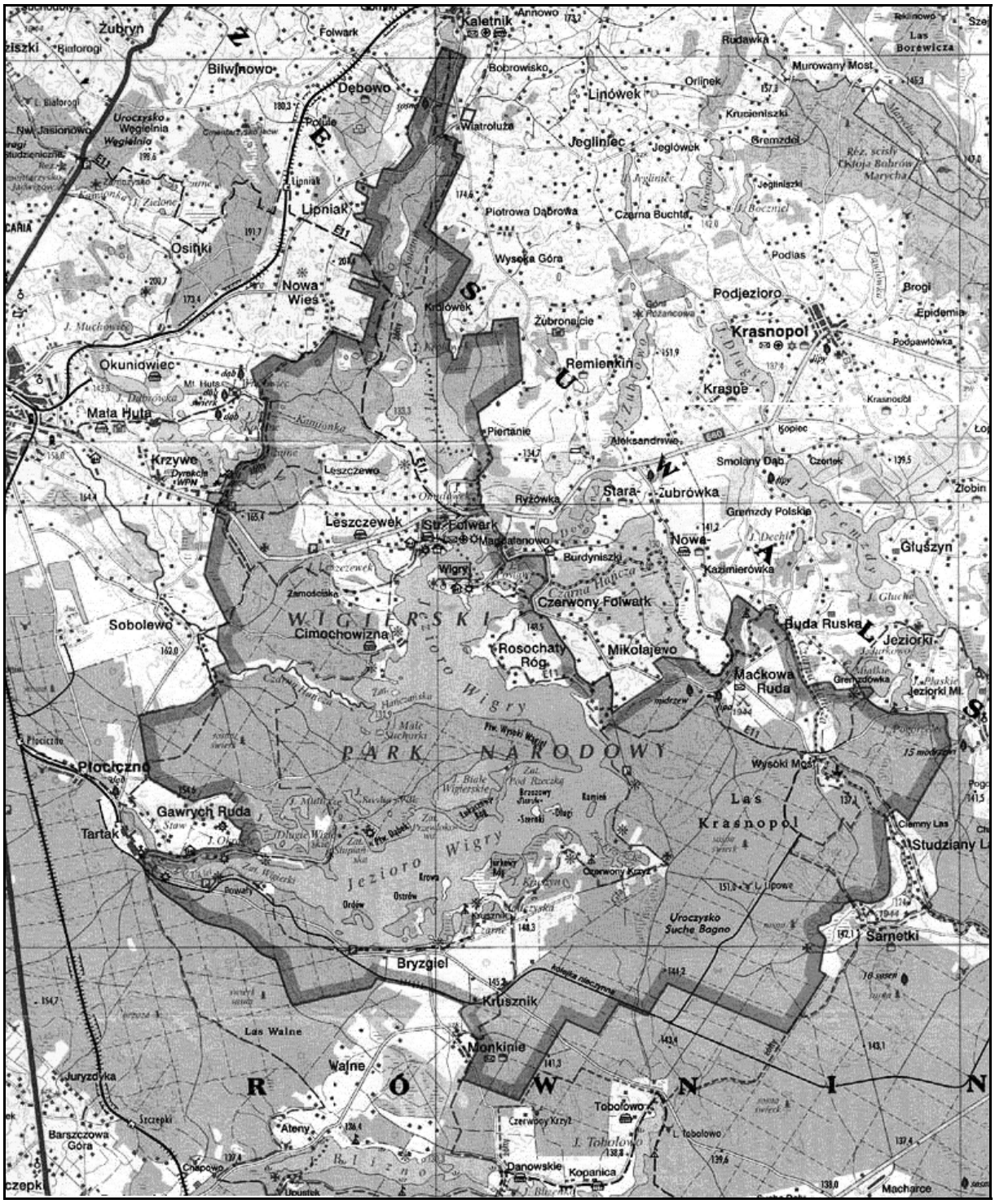

Figure 4: Wigry National Park, topographical map

3.4.2. Tendencies of agriculture in the region

Agricultural farms in the region are usually extensive. Small farms (and the average size is 8 ha) are usually unprofitable. Low profitability of agricultural production, as well as difficult climate conditions have resulted in ever-worsening under-investment in agricultural farms. Agriculture is still pursued in the region. However, the lack of modern production methods means it is not very profitable. The residents of the region therefore seek different sources of income, converting their agricultural farms into agro-tourism farms. Many young people migrate to the city to find employment. Due to high unemployment, local authorities look for chances for development besides agricultural activities. For example, the Suwałki Economic Zone has been established, where among others wooden pellets for furnace fuel are manufactured.

3.4.3. Tendencies in next 10 years and RDP instruments

As regards protection of ecological values, the Spatial Plan for the Podlasie Province establishes protection of the WNP in accordance with principles of the legal acts that founded the protected area. The lakeland area of the Province, where the WNP is located, has been designated for integrated and ecological agricultural development. Organic agriculture is also intended to be promoted within the areas covered by the Natura 2000 Programme (including the area of the WNP).

In the next 10 years, after Poland's EU accession, farmers will have a chance of obtaining a grant from the RDP and the SPO (Sectoral Operational Programme) funds, assigned for Polish agriculture development. The co-funded activities will include those of significant advantage for the region, such as:

- adjusting farms to EU standards;
- promoting agri-environmental programmes; and
- supporting low-production farms.

Advantageous tendencies are: preservation and financial support of extensive production, ecological agriculture, small processing and promoting creation of brand product manufacturers' societies. It might result in an increase in the number of organic farms, and a decrease in agricultural farms' pressure on natural environment. Supporting farmers through payments of agri-environmental programme after Poland's EU accession will facilitate the preservation of traditional use of land and spread good agricultural practice. Introduction of special labelling for regional products will increase the profitability of agricultural production.

Traditional farms shall also have the possibility of obtaining a grant for the investments that are required in order to meet the EU standards. After Poland's EU accession, the application for financial support will be submitted, regarding mainly diversification of agricultural population income, increase in renewable energy use and sewage management.

Development of agro-tourism is also taken into consideration as recently there has been a strong increase in the importance of agro-tourism farms within the Park. Although this encourages tourism development, it poses a potential threat to the environment (for instance through building cottages, creating campsites and producing waste).

It is important to include other supplementary measures in spatial plans, such as:

- limitation of urban pressure within the WPN;
- agro-tourism development on the basis of existing, traditional buildings;
- restitution of traditional professions; and
- breeding of indigenous species of animals.

Together with other measures, these can help preserve the WPN landscape.
Some measures have already been taken to create local and regional products. It is also expected that ISPA means will be used for water and sewage system construction in the villages located within the area of the WNP. Investment related to waste and sewage management could also significantly reduce pollution.

Maintaining high biodiversity will be supported by the Natura 2000 Programme, as well as agri-environmental programmes applicable to all forms of land property. Further development of organic farming and other methods based on the natural capacity of the environment to maintain or increase biodiversity, are also important for biodiversity preservation.

3.4.4. Institutional co-operation between agriculture and park management

Wigry National Park co-operates with the local government forum of Suwałki-Augustów Lake District and Sejny Land; it is the agreement of four districts in the North of Podlasie Province. The forum also co-operates with the Suwalki Chamber of Agriculture and Tourism and with communal governments. There are no particular agriculture organisations operating specifically within the area of the WPN.

However, there is co-operation between agrotourism farms supported by the Park and Suwałki Chamber of Agriculture and Tourism. There is also a Consultancy Service of the Agriculture Consultancy Centre. Some organic farms are associated with the Association of

Organic Producers EKOLAND. In their reports, Sejny District Authorities explain they wish to promote organic farming, regional products and small-scale processing.

3.4.5. The gaps and limitations

Holding back urban pressure is a main source of conflicts. In villages located within the buffer zone of the Park, there have been problems with the distance of new buildings from the border of the Park. However, data concerning conflicts is often not sufficient. Existing data concerns mainly communes and it is difficult to extract data for the WNP exclusively, from information on communes or districts. There is no accessible data relating to single villages.

3.4.6. Private ownership – involving important stakeholders

National law does not produce any limitations or obligations regarding agricultural production in protected areas. For this reason there is no compensation for land owners within the area of the WPN. Cropland within the area of the WPN is subject to nationally binding legal provisions. There are no other legal acts concerning agricultural production within the protected areas (with the exception of the list of plant pesticides forbidden in national parks). Some of the farmers lease land from the Park (meadows).

There have been no measures taken to preserve extensive production. Farmers do not intensify the production because of difficult climate conditions (long winter) and related expenses.

3.4.7. Protection plan of the Wigierski National Park (WNP)

A Protection Plan of the WNP has been drafted and the document is currently undergoing final reviews. It will come into force this year with the Regulation of the Minister of Environment.

In spatial planning, the following issues significant for the WNP shall be taken into consideration:

- The Spatial Plan for Podlasie Province;
- The Sejny District Development Strategy up to 2013; and
- The Environmental Protection Programme for the Augustów District for 2003-2007.

However, the activities of communes and districts, which are partly located within the area of the WNP, are most important. Ineffective action against urban pressure is a major issue.

Documents relating to spatial planning will be discussed with the WPN Director whose assessment is supported by a consultancy body – the Park Council. The Council is

composed of scientific and local government representatives. Commune plans are loosely related to planning and strategic documents of higher importance.

The Environmental Protection Programme for Augustów District for 2003-2007 relates to agri-environmental programmes, which shall be implemented in the parts of the District located within the Wigry and Biebrza National Parks. Other plans and strategies also refer to the planned network of the Natura 2000 Programme. There is an entry in the Programme for Augustów District, which relates to promoting the principles of Natura 2000 Programme and agri-environmental programmes.

3.4.8. Projects, programmes and funds

1. PHARE-CREDO Programme – implementation of the project “Sustainable Development of Polish and Lithuanian Protected Areas” (1999, 2000).
2. PHARE-STRUDER II Programme – implementation of the project “Active tourism within the WPN” (2000).
3. Leonardo da Vinci Programme – implementation of the project “Staff training in local environment management institutions, on the basis of sustainable development” (2001,2002).
4. PHARE Border Co-operation Programme, Eastern Border, Small Projects Fund – implementation of the project “European Forest Week” (05.2003).

4. Slovakia

4.1. Introduction to the system of nature conservation and the selected protected areas in Slovakia

For the Territorial Preservation of Slovakia's Nature and Landscape, five levels of protection have been defined and established. These set fourth of rules and restrictions, which are then applied to a specified territory. With each increasing protection level, the restrictions become stricter[16]:

Table 6: *The table shows those examples of restrictions in the different protection levels that have potential relevance to the aim of this study. The list is not intended to be exhaustive.*

Second level of protection (§ 13)

Forbidden actions:	Parking cars/carts etc outside urban areas, (…)
Approval required for:	Terrestrial application of chemicals and fertilisers and ensilage in agriculture, forestry and other activities in an integral area larger than 2 ha, (…)

Third level of protection (§ 14)

Forbidden actions[17]:	- Ski alpinism or other sports activities outside urban areas of municipalities, - Use of facilities causing light and noise effects, - Dissemination of non-native species of plants and animals, - Collecting plants including their fruits, - Common hunting, - (…)
Approval required for[20]:	- Illuminating running tracks, skiing tracks and sports areas outside buildings (…)

Forth level of protection (§ 15)

Forbidden actions[18]:	- Clear-cutting of forest, - Application of chemicals and fertilisers, - Ploughing existing permanent grasslands, cutting woods, - Fencing lands except for fencing forest nurseries/orchards/vineyards, - Placement of livestock enclosures, buildings or other facilities for protection of livestock animals, - Uncontrolled roaming of dogs except for dogs with special permission, - (…)
Approval required for:	- Grazing, watering, moving and staying overnight of livestock herds and also their stabling outside buildings and facilities if >30 head of cattle, - Construction, - (…)

Fifth level of protection (§ 16)

Forbidden actions[19]:	- Influencing forest vegetation and damaging vegetation and topsoil, - Constructing forest roads or logging roads, - Establishing hunting facilities or fish farms, - Illuminating running tracks, skiing tracks or sports areas, - Disturbing the area's tranquillity, - Trapping, killing or hunting animals, - Construction, - (…)
Approval required for:	- All activities specified above, - (…)

[16] Slovak National Council Act No. 543/2002 Coll. on Nature and Landscape Protection, § 11(2).
[17] If differing from obligations set forth in lower levels of protection.

[18] If differing from obligations set forth in lower levels of protection.
[19] If differing from obligations set forth in lower levels of protection.

The first level of protection applies to all the country's territory[20], whereas the stricter protection levels (2nd to 5th) demand the establishment of special nature and landscape protection areas, which together form a system of 7 different categories of protected areas and their protective zones[21]:

1. **Protected Landscape Area**[22] – an area usually larger than 1000 ha, with fragmented ecosystems which are significant for conservation of biological diversity and ecological stability, with characteristic landscape features or with specific forms of historical settlements. The second level of protection is valid.

2. **National Park**[23] – an area usually larger than 1000 ha, predominantly with ecosystems substantially unaffected by human activities, or with unique and natural landscape structures that form national bio-centres and the most significant natural heritage in which the nature protection is of higher priority than other activities. In the territory of a national park, the third level of protection is valid. Details of conditions for the protection of a national park and its protective zone, including territorial and time validity thereof and determination of its borders, are established by government decree.

3. **Protected Site**[24] – an area, usually smaller than 1000 ha with existence of natural habitats of European interest or natural habitats of national interest in which favourable status of these natural habitats depends on human economic activities[25]. In the territory of a protected site the third, fourth, or fifth levels of protection are valid.

4. **Nature Reserve**[26] – A locality, usually up to 1,000 ha representing predominantly original or those natural habitats of European or national interest or habitats of species of European or national interest which have not been significantly affected by human activities. The fourth or fifth levels of protection are valid.

5. **Nature Monument**[27] – Point, linear or other smaller ecosystems, their components or elements, generally not exceeding 50 ha in area, of scientific, cultural, ecological, aesthetic or landscape significance, may be designated as nature monuments. The fourth or fifth levels of protection are valid.

[20] Ibid. § 12.
[21] Ibid. § 17ff.
[22] Ibid. § 18.
[23] Ibid. § 19.
[24] Slovak National Council Act No. 543/2002 Coll. on Nature and Landscape Protection. § 21.
[25] Ibid. § 21 (2): An area with a stable population of protected species of animals, plants, (…) and selected parts of the nature cultivated by human activities may be also designated as a protected site.
[26] Ibid. § 22.
[27] Ibid. § 23.

6. **Protected Landscape Element**[28] – A significant landscape element fulfilling a function of a bio-centre, a bio-corridor or an interactive element, especially of local or regional interest. The second, third, fourth, or fifth levels of protection are valid in the territory of a protected landscape element.

7. **Protected Bird Area**[29] – Habitats of bird species of European interest and habitats of migratory bird species may be designated as protected bird areas for the purpose of ensuring their survival and reproduction. The Ministry produces a national list of proposed protected bird areas, which the Government approves by decree. Following its approval the Government sends the list of bird areas to the European Commission. In a protected bird area activities that may have negative impacts on the subject of its protection are prohibited.

The two chosen protected areas belong to the category of national parks – the National Park Malá Fatra was designated in 1988. In July 2003, it was included in the list of proposed SPAs[30] in Slovakia. The National Park Slovenský Raj was designated as a national park in 1988.

Administrative structure for nature and landscape protection

In the Slovak Republic (SR), the National Park administrations are subordinate to the State Nature Conservancy of the SR, which is supervised by the Ministry of Environment of the SR. The State Nature Conservancy (SNC) was established in June 2000, after restructuring the Slovak Environmental Agency, which was formerly responsible for nature conservation. The SNC is an umbrella organisation acting at the national level, with a total of 384 staff (September 2003). The Headquarters are situated in Banska Bystrica, in Central Slovakia. In addition to the main office, it has administration units distributed over Slovakia – the administrations of Slovakia's 9 national park and the administrations of 14 protected landscape areas and two regional nature conservation centres function to some extent as these local dependencies. The SNC also runs a Nature Conservation School in Varin, contributes to setting national environmental standards and policies, co-ordinates the protected area network, performs biodiversity monitoring and assessment, operates an information system on taxa and habitats, maintains information networks, and organises

[28] Ibid. § 25.
[29] Ibid. § 26.
[30] Special Protected Areas, referring to EU Council Directive 79/409/EEC.

environmental events. It contributes to the preparation of the 'State of the Environment' reports. The SNC is also involved in international co-operation at all levels. It performs duties of the scientific authority of CITES[31] and carries out the function of the authorised expert authority for the nature protection sector of environmental protection. In 2001, it was made formally responsible for implementing the NATURA 2000 network in the Slovak Republic.

The national park administrations have a very limited field of competence within the Slovakian administrative system. Although they have to ensure proper management and implementation of nature and landscape protection measures, the park authorities are not given enough competence to decide on the activities taking place on the park territories. Particularly on agriculture and agri-environmental activities, it is the Ministry of Agriculture and regional and district state administration bodies that have decisive competencies. The national park authorities can only give opinions although they have to be consulted on activities other sectors about which the other sectors make the final decisions.

In many cases, the co-operation between the different authorities is also not ideal due to the unstable structure of administrative bodies and continuous changes. In 2004 new agricultural and administrative bodies will be established for nature protection. Whether this will lead to an improvement of managing Slovakian nature assets or an increased competence struggle cannot be assessed yet. However, a reshaping of the hitherto sector-wise organised authority structure is certainly overdue.

4.2 Malá Fatra National Park

Malá Fatra National Park was established by the statutory order of the government of the Slovak Socialist Republic No 24/88 Statute on Malá Fatra National Park of January 1st, 1988.
It occupies - after High and Low Tatry - the highest cast mountain range with a rich and relatively preserved West Carpathians nature[32].

A diverse geological composition and the substantial height of the mountain range determine the existence of rich flora and fauna as well as a variety of relief forms. The highest point is the top of Fatransky Krivan at 1709 meters above sea level. Granite rocks form the core of the mountain range but in many parts of the region, weaker rocks, especially limestone and

[31] Convention on International Trade with Endangered Species of Fauna and Flora
[32] Geographical location of the National Park's center according to 1997 UN List of Protected Areas: 49°11'N; 19°02'E.

dolomite, form overlying envelope and sheet units. They have been weathered into diverse reliefs, resulting in today's characteristic rocks, gorges, and rocky towers[33] that attract many specialised plant species. Among the remarkable sights are the Crystal cave under Maly Rozsutec, the Sutovsky waterfalls and the Domasinsky meander of the Vah River.

About 83% of the land is covered with mainly mixed forests, with a majority being leafy timber species, especially beech. The geological foundation, segmented relief and large altitude range have resulted in a great floral richness. In the area of Malá Fatra, more than 900 species of higher plants have been found so far, of which 22 are West Carpathian endemic species, 14 Carpathian endemic species, 15 Carpathian subendemics and even one species that is unique to Malá Fatra (the Margittai´s rowan). On limestone and dolomites, protected species like daisy, *Gentiana clusilov*, *Dryas octopetala*, *Delphinium L.* and others can be found. The rich fauna comprises bear, lynx, otter, eagle, eagle owl, grouse, *Tetrao urogallus*, *Tixodroma muraria* and others.

The administration of the Malá Fatra National Park has its own director, forester, agricultural expert, botanist, zoologist, landscape manager, environmental education experts and several rangers.

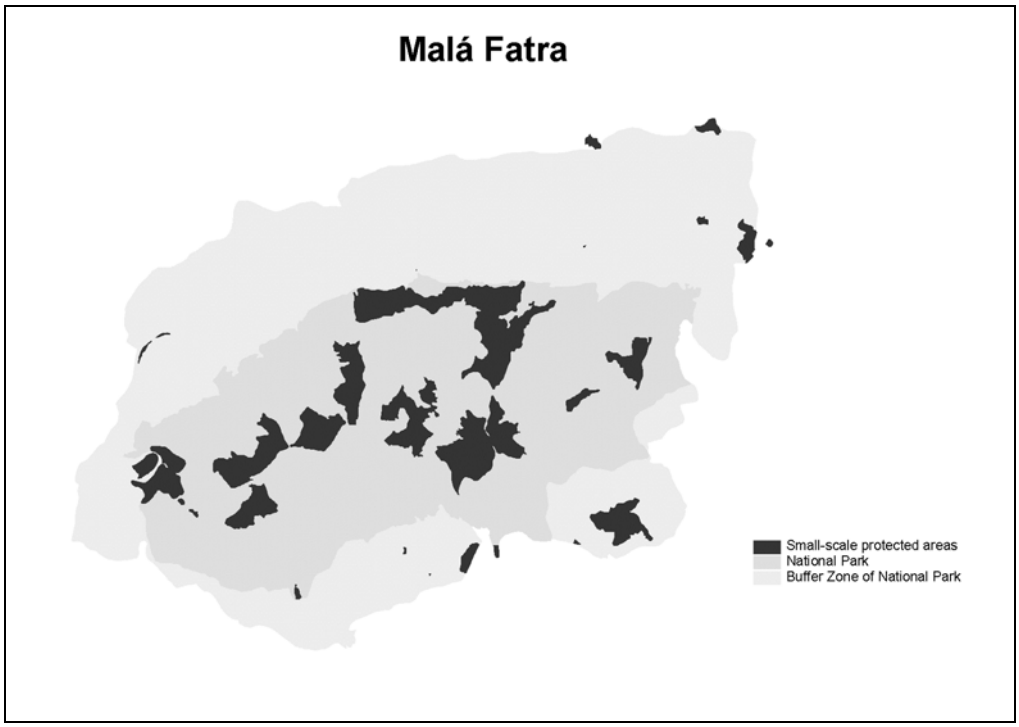

Figure 5: Malá Fatra National Park, Slovakia

[33] E.g. the complex of Rozsutce, Boboty and Sokolia, Vratna valley-Tiesnavy

4.3. Slovenský Raj National Park (SRNP)

Slovenský Raj National Park is situated in the West Carpathians, in the eastern part of Slovakia[34]. It has been protected since 1931 by the law regulating forestry in order to protect its natural beauty. In 1964 it was proclaimed a Protected Landscape Area and in 1988 re-categorised by a governmental imposition as a National Park. The park covers an area of 32 774 ha, of which 19 763 ha (60 %) are the protected core area of the park and 13 011 ha are the buffer zone[35].

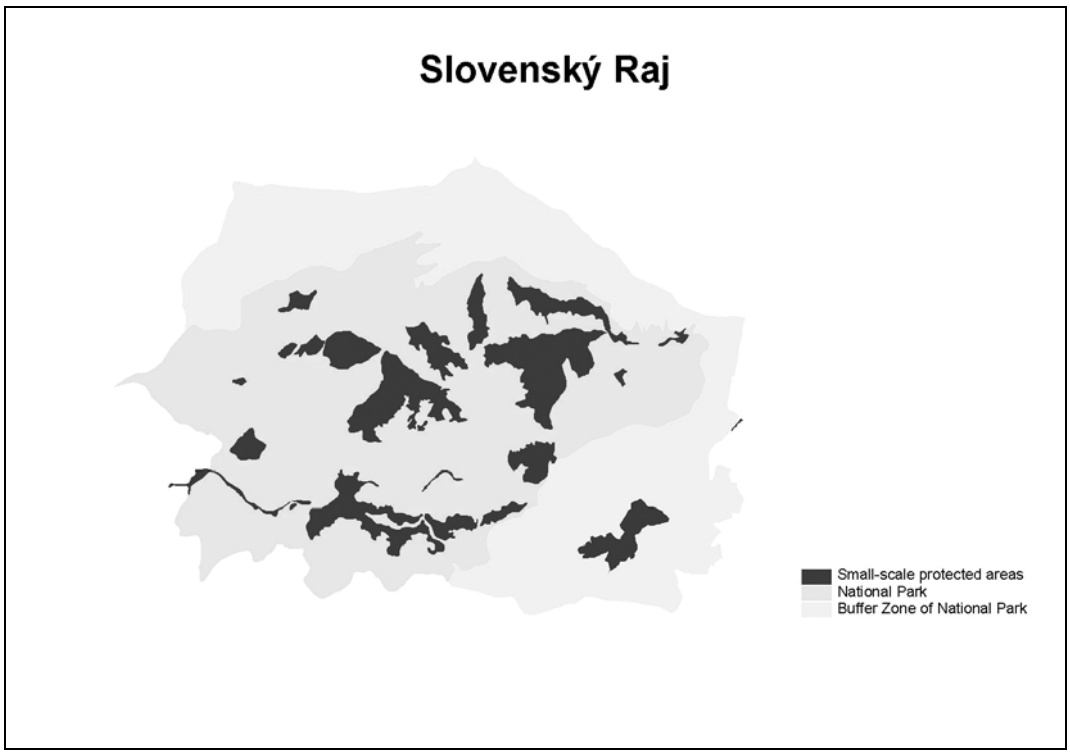

Figure 6: Slovenský Raj, National Park, Slovakia

Originally, the whole region of the National park was one large territory, later divided into several bigger and smaller plateaus (Glac, Geravy) by the rivers Hornád and Hnilec and their 120 to 300 meter deep canyons, the creeks Veľký Sokol (Big Falcon), Suchá Belá (Dry Belá), and Biely potok (White Creek). In the course of many millennia, the creeks cut through the rock and formed the gorges and waterfalls that are typical of the 'Slovenský Raj', which translated means 'Slovak Paradise'.

On the plateaus, a large spectrum of karst formations can be found – especially sinks, underground caves and holes, like Dobšinská Ladová Jaskyňa (Dobšinská Ice Cave),

[34] Geographical location of the National Park's center according to 1997 UN List of Protected Areas: 48°45'N; 20°20'E

[35] the national park is divided into three levels of protection – 2nd, 3rd and 5th.

Stratenská Jaskyňa (Stratenská Cave), Medvedia Jaskyňa (Bear Cave), and Čertova Diera (Devil´s Hole).

Forest ecosystems cover 90% of the Slovenský Raj territory – mostly mixed *Abies-Fagus* forests with some *Picea* –, Pastures and meadows account for nearly 10 % of the area. Characteristics of the region are *inter alia* temperature inversions, which create a unique plant cover – with thermophilic plants on the highest spots and high-mountain plants in deep valleys. The richness of fauna is particularly shown by the high number of butterfly species (2162 identified) as well as invertebrates (4000) and vertebrates (200). The extensive use of pastures and meadows, rich in plant varieties shapes the special character of many parts of the National Park.
About 24 776 inhabitants live within the National Park.

4.4. Agricultural activities and their impact on the Malá Fatra and Slovenský Raj National Parks (MFNP and SRNP)

Farmers in both regions are private farmers, large-scale agricultural landlords that have agreements with farmers on leasing their land, unions of private forest owners and big businesses. The agricultural landlords located in the NP are responsible for following several legal acts, and have to receive approval of most of their actions from the designated regional and district state administrative body, which is responsible for agriculture, forest and land management and is not connected to the national park administration.

In the past, farmers' associations worked closely with the district food production and agricultural chambers to obtain relevant and up-to-date information. Because of the present changes of all structures and the completely new agricultural support systems in Slovakia due to joining EU, most of the farmers are trying to work on their own and to somehow fulfil all the requirements and opportunities from the new Sectoral Operational Programmes and Rural Development Plans. After a long time of regular and stable ways of functioning, several agricultural landlords and farmers are not flexible enough to adapt to these new changes.

Where agricultural practices remain unaltered, they have a particularly positive influence on the species and habitat varieties in the grassland areas, where they remained unaltered. A large proportion of the old meadows have not been drained or re-cultivated yet. There are still localities within the NP where traditional patterns of mowing and pasturing result in a

desired habitat management, although this is mostly not done deliberately but is rather a fortunate consequence of business-as-usual farm management. A threat to the extensively managed grassland habitats is the decreasing number of cattle which is occurring due to the decreasing profitability of this agricultural production and because of this, the maintenance of many valuable old meadows is threatened. While in parts of the MFNP and SRNP ownership rights are still unclear, succession is continually increasing.
In MFNP, a plan to afforest the grasslands and convert them into forest habitats adds further urgency to this issue. Since forests cover most of the MFNP and only small areas of the park are used as arable land, this would result in a loss of nature value.

In SRNP, a positive result of current agricultural practices is that most of the grasslands have not been re-cultivated, drained or otherwise technically changed. Most of them are simply regularly mowed and pastured (mostly horse pasturing).

It has to be stated that neither the MFNP, nor the SRNP administration provides statistical data on farming activities and agriculture related subjects. Detailed research is needed to understand the impact of agriculture in more depth.

4.5. Tendencies in agriculture in the region of Malá Fatra National Park (MFNP) and Slovenský Raj National Park (SRNP)

The most important method in the MFNP is the planting of shrubs and afforestation, which is mainly undertaken by forest companies and unions of private owners of the forests. Meadows are used as pasture for cattle and sheep and for mowing.
With the on-going reallocation of land and the problem of insufficient agricultural data about the region, tendencies are difficult to predict. It can however be stated that both these problems will also seriously limit the ability to successfully manage habitats in the future.

Entry to the European single market for agricultural produce, however, is likely to be accompanied by a further decrease in the number of cattle and sheep since extensively produced milk and meat products will be less competitive. Consequently, the deserted grazing and mowing areas will successively be converted and since the soils, climatic conditions and sloping relief in the MFNP do not favour conversion to arable land, active afforestation or succession of shrubs and bushes will most likely occur, leading ultimately to extension of the park's forest habitats.

For the whole of Slovakia, the impact of the EU-like agricultural reforms will increase agricultural prices leading to an increase in food prices. They will also increase farmer's income, with the exact amount depending on the amount of direct payments granted to Slovak farmers. If we look at the MFNP region, most of the large farms will remain stable while some smaller ones may close. Co-operation between the PA administration and farmers should be assured thanks to the finances of the Rural Development Plan, which contains several agri-environmental schemes oriented towards nature protection.

The budget available to pay farmers for maintaining a favourable habitat status on parts of their land (assuming ownership is finally defined) as well as finances to compensate for restricting cultivation practises are not sufficient to prevent this trend towards extension of forest areas. Instead, combined efforts – with RDR measures being the funding component – are needed to conserve the MFNP's natural environment.

The NP administration does not have its own money for compensation payments for landowners. Instead, compensation payments come from the national level[36] and these are still insufficient. For farmers, one possibility to top up these payments will be to enter into the agri-environmental measures and obtain finances for extensive agricultural methods, and such schemes are included into the Rural Development Plan. Forest landowners are not eligible for such payments – the compensation has not been included in the RDP, and the payments devoted to forests as appointed by the Ministry of Environment are still insufficient (even now, after an increase from 10 mil. to 100 mil. SKK/year).

In the near future, , it will be obligatory for the park administration to discuss with all stakeholders possible nature protection methods when preparing management plans for Natura 2000 sites. Also a detailed description of farming in the region will have to be produced. Hopefully adequate data will soon be available to help develop a plan on how best to combine different schemes. The given possibilities for the region – e.g. developing organic farming, producing and labelling local environmentally friendly products and tourism – have not yet been compiled and evaluated in their ability to maintain environmentally beneficial farming. The Natura 2000 process gives the opportunity to make the farming community and park administration aware of the value the richness in species presents and that such value will only remain if potential funding sources can be accessed.

An effort to maintain existing extensive agricultural methods has begun with the GEF project "Central European Grasslands Conservation and Sustainable Use" and thanks the SAPARD

[36] from the Ministry of Environment of the SR, Department of Nature and Landscape Protection

programme and Rural Development Plan. Apart from this, however, neither the park administration nor the State Conservancy Agency of Slovak Republic seems to have given the topic sufficient consideration. Deep discussion will continue with farmers during the ongoing preparation of the management plans for Natura 2000 sites.

4.6. Private ownership – involving important stakeholders

The above-mentioned land reforms currently pose a challenge to the successful involvement of private owners in protection agreements. While land reform is still going on in Slovakia, there are still not clear all-private owners of the land. This process for the next few years. Involvement of private owners and farmers is thus extremely difficult.

On the other hand, private forest owners and mayors are strongly opposed to the nature protection aims in Malá Fatra (MFNP) as they see these as a barrier for strong tourism development. According to mayors of villages and tourism agencies the regional development should aim at producing large ski resorts inside the MFNP core zone. Conflicts therefore exist between the NP administration and the other stakeholders about the different ways of developing the area – i.e. strong tourism development or nature protection and eco-tourism.

In the SRNP, co-operation with private owners is beneficial for the PA, especially for the grassland areas. However, there are issues concerning the numerous Slovakian Roma societies living within and near the national park. Unemployment and a generally poor social situation lead to illegal woodcutting and poaching, which have a large negative influence on the proper management of the national park.

The importance of finding and ‘selling’ the opportunities of RDR and Natura 2000 to the private stakeholders is apparent but not sufficiently tackled by responsible administrations (at the MFNP and state levels).

The limited funding possibilities of the MFNP and SRNP are inadequate to compensate private owners for restrictions to activities that would ensure a favourable conservation status is maintained or is achieved. In any case, there is a problem with calculating compensation payments. It is very difficult to have exact measures of income foregone and there are several different methods for trying to calculate this. From previous experience we already know, that such arrangements are not always attractive for farmers and that in some cases, the best solution would be buying or purchasing the land by the NP or PLA administrations.

4.7. Rural Development and how Pillar II measures can support protected areas

Up to the present, park administrations have not been involved in Rural Development, since a sectoral approach still fully exists and protected areas are covered by the Ministry of Environment (without any influence on agricultural activities) and the RDP is covered by the Ministry of Agriculture.
The Rural Development Plan for 2004-2006 includes also the Natura 2000 network, so the protected areas will probably be more involved in agricultural activities.
SAPARD (The Special Assistance Program for Agriculture and Rural Development) has been applicable over the whole Slovakia up to now. It was based on the Rural Development Plan, which stems from the Rural Development Concept adopted by the Slovak Government in September 1998.

The budget for nature protection will be included in the Rural Development Plan for 2004-2006, in the Sectoral Operational Programme (SOP) Agriculture and Rural Development Plan for 2004-2006 and in the SOP Basic Infrastructure.

The agricultural experts of the MFNP and SRNP have so far not prepared a detailed plan of how to influence the allocation of these finances within the NP. Sometimes a clear idea does not even exist about how to apply the RDP.

For the region of the Malá Fatra NP and the Slovenský Raj NP, investments will be made in agricultural holdings, less-favoured areas, agri-environmental measures, forestry and promoting the adaptation and development of rural areas. The Slovak authorities have not approved other measures.

Fortunately, in the Malá Fatra NP and Slovenský Raj NP some projects devoted to the agricultural activities that influence the park have already started and measures under the RDP can be a positive follow-up on the good results achieved under SAPARD. Positive results might be expected within the next 10 years. A detailed management plan has to be made by the NP administrations for 9-year periods and so these plans must contain provisions covering management activities in all parts of the NPs, including extensive agricultural activities.

The MFNP and SRNP used pre-Accession funds to implement the following projects:

- LIFE – nature programme (from 2002),
- SAPARD – agri-environmental measures in 5 pilot areas (from August 2003),

- activities under the PHARE programme.

Also funding from several other international sources (Danish, Dutch and others) as well as funds from the annual budget of the State Nature Conservancy have been used. Structural Funds will also be available from May 2004.

Most of the projects have been aimed at helping the establishment of the Natura 2000 network in Slovakia and the results of some of the projects are available on the web site of the Ministry of Environment www.enviro.gov.sk, or the web site of the State Nature Conservancy www.sopsr.sk.

4.8. Gaps and limitations

The relative weakness of the national park administrations (in the MFNP, SRNP and others) due to their limited decision-making competences hinders effective nature management in Slovakia. The sectoral approach might be overcome by the administrative reform in 2004, but there is no information yet available about whether the new emerging bodies will link agriculture and environmental protection more systematically. For the time being, the national park authorities' influence is too limited, especially concerning agricultural activities in the NP territory.

The insufficient capacity (number) of rangers to combat poaching, illegal hunting and unauthorised visitors also forms a threat to effective park management.

Concerning nature protection as well as agriculture in the MFNP and SRNP, several gaps are present in the existing data; a lack of capacity for detailed mapping and technical equipment is the main reason for the gaps which occur in expert botanical and zoological data, and the ongoing restitution and land reforms are the reason for unclear data on land-types and implementation of extensive farming methods.

Ongoing reforms of land use and cadastre administration are an additional constraint to obtaining data. Currently the process of rewriting data and converting from paper maps to digital forms is being undertaken and it can take several months to obtain relevant information on cadastres. This was one of the reasons for postponing the process of preparing proper data for the Natura 2000 network.

The importance of finding and 'selling' the opportunities of RDR and Natura 2000 to private stakeholders is apparent but has not been sufficiently addressed by responsible administrations at the NP and state levels.

The finances available to contribute to maintaining or achieving a favourable conservation status on grounds that are currently privately owned are insufficient. Firstly, the agricultural experts in the protected areas have to have clear ideas about the possibilities offered by the RDP and its measures; with a proper and detailed plan the allocation of these finances into the area of the NP could be managed more actively.

5. Agriculture in selected protected areas (PAs) – possible future changes

5.1. Overview of planned CAP instruments that will be implemented in the time frame 2004-2006.

5.1.1. Area payments

Since the early 1990s, the process of European Integration has been the main driving force for changes made to the national agriculture policies in the Acceding Countries. The first important decisions were taken at the Copenhagen Summit on 13th December 2002. The Heads of State and Governments from the EU and ten candidate countries agreed on a formula for enlarging the EU to encompass ten new member states, starting from 2004. Following the decision of the Copenhagen Summit, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia will join the EU on 1 May 2004. Regarding agriculture it was agreed that the new member states would receive a rural development package that is specifically adapted to their requirements, with more favourable conditions than those applied in the present EU member states.

According to the EU decision makers the "immediate introduction of 100% direct payments would serve to freeze existing structures and to hamper modernisation." They therefore agreed on a gradual introduction of direct payments over a transition period of ten years. Direct aids for the new member states will be phased in over 10 years. They will thus receive 25% of the full EU rate in 2004, rising to 30% in 2005 and 35% in 2006. This level can be topped up by up to 55% in 2004, 60% in 2005 and 65% in 2006. Until 2006, the top-up payments can be co-financed by up to 40% of the EU-level from the new Member States' rural development funds. However the share of EU rural development funds used for the top-up cannot exceed 20% (or 25% in 2004, 20% in 2005 and 15% in 2006). The farmers from the new member states will have full and immediate access to the Common Agricultural Policy (CAP) market measures, such as export refunds and cereal, skimmed milk powder or butter intervention, which will contribute to stabilising their incomes.

The decisions of the Copenhagen Summit were generally welcomed, but especially on the agricultural agreement they have been repeatedly criticised by farmers unions, because of the unequal levels of direct payments for farmers in "old" and "new" EU Member States, and by environmental NGOs, because of the decision on topping-up direct payments using money from rural development funds.

In the opinion of environmental NGOs, which organised themselves in "platforms" and coalitions in order to support the reform process of the CAP, favouring direct payments was "against the stream" of the ongoing CAP reform process. A positive result was that the new

MS will not copy the old CAP direct payments, but will rather introduce a simplified system where decoupled area payments will be applied to the whole of the utilised agriculture area (UAA), with the result that all types of agricultural land that have been maintained in "good agricultural condition" (cultivated for last two years) will be eligible for payments. This decision was a great relief for everybody caring for nature because it would at least not give an immediate incentive for the new MS to turn a high percentage of UAA, formerly used by farmers as pastures or to extensively grow for example potatoes and oats, into uniform, highly productive maize or wheat fields.

5.1.2. Instruments of the Rural Development Regulation

In order to tackle structural problems in the rural areas of the new member states, the Copenhagen Summit enhanced the rural development strategy, broadened it in scope and, in comparison to the funds available for the existing EU countries, gave it more appropriate finances. From day 1 of accession, a wide range of rural development measures will be co-financed at a maximum rate of 80% by the EU. The Rural Development measures (max. 80% EU financed) are:

- early retirement of farmers;
- support for less favoured areas or areas with environmental restrictions;
- agri-environmental programmes;
- afforestation of agricultural land;
- specific measures for semi-subsistence farms;
- setting up of producer groups;
- technical assistance; and
- special aid to meet EU standards.

Additional rural development measures will be financed from the EAGGF Guidance sector of the Structural Funds.

Special measures are available to make semi-subsistence farms viable (farms which produce for their own consumption, but market the surplus of their production). In order to help to turn these into commercially viable units and to contribute additional income support while the farm is upgrading, specific funds of up to €1000 per year per semi-subsistence farm are offered.

5.2. Assessment of the applicability of Common Agricultural Policy instruments in and outside Protected Areas and their impact on the state of biodiversity, especially how far agri-environmental programmes will be used to finance nature protection measures.

The percentage of agriculture in the land-use structure of protected areas in the analysed parks is not high (from 0.01% in Bieszczady National Park to 23% in Biebrza National Park), but it is important also to analyse the impact of both the direct and indirect influence of agriculture outside protected areas. The indirect influence of agricultural methods depends both on the natural and geographical conditions as well as on the prevailing market conditions. In areas of low agricultural value (Bieszczady National Park, the ANP and the MFNP) agricultural production is either not pursued or it is very extensive and may be declining due to low profitability, the ageing of the rural population and the lack of young people. This may lead to further depopulation of these areas, abandonment of land and natural succession of shrubs and trees. As a result, open habitats such as swampy meadows; marshland and even lakes (which are already becoming overgrown with reeds) and mountain grasslands will be lost. This is undoubtedly a negative phenomenon, particularly from the point of view of landscape diversity and biodiversity. The latter is connected with the typical habitats of open areas that have been shaped by traditional extensive farming over the previous centuries.

On the other hand, in areas of greater agricultural usability, i.e. those offering better natural and geographical conditions, there is now a growing pressure to intensify agriculture (e.g. to implement the progressive changes in mowing techniques in Biebrza National Park and the intensive fertilization in the Zuvintas Biosphere Reserve) or to urbanize (e.g. in the Wigry National Park and the Zuvintas Biosphere Reserve). These areas, located close to lands of even greater agricultural usability, may be additionally exposed to polluted run-off both from agricultural land (the use of fertilizers, pesticides, inappropriate storage of manure), and from unregulated communal management.

The market situation exerts a strong influence on these phenomena and nowadays, in view of the difficult market situation, many farms have switched to the semi-subsistence mode. If, however, the market situation improved and it were easier to sell some agricultural products or if agricultural policy (such as through the present direct payments within the CAP) promoted production growth, a certain group of farmers would surely intensify production. Thus, the negative influence of agriculture on protected areas would further increase.

At this point, a positive assessment should be made concerning the decision taken at the Copenhagen Summit in December 2002 pertaining to the introduction of decoupled area

payments in Acceding Countries from 2004. This decision will keep in check a possible trend towards intensification of production, conversion in crop rotation from traditional crops to subsidized crops and – which would be most unfavourable – the conversion of grasslands (both alternating and permanent) to arable lands and their subsequent earmarking for cultivation of subsidised crops.

Due to this decision, more farmers will avail themselves of the area payments. If the instruments of the "old" CAP had been introduced, these farmers would not have a chance to make use of these payments (These farmers include those who own mainly grasslands, which are very important for agricultural biodiversity and typical of the areas of poor agricultural productivity, and also farmers who cultivate traditional plants, e.g. rye, oats and potatoes, which are typical of poor soils). If all the steps are taken to ensure the payments are received by all farmers entitled to submit applications, then their financial situation will improve and they will be able to continue production as before. Moreover, the rapid depopulation of regions that are agriculturally less usable should stop. It is of vital importance in view of both the social situation in the Acceding Countries and migration at both domestic and international levels.

Area payments in the form laid down at the Copenhagen Summit 2002 will be available to all farmers who are entitled to submit their applications (i.e. whose farms cover an area of at least 1 ha and whose land has been in good agriculture condition for two years) and may be supplemented by other forms of financial aid within the scope of Rural Development Plan. Not all of these forms of aid can be positively assessed considering the situation in protected areas. Among positively assessed initiatives are firstly agri-environmental programmes (upon which unreasonably good results are sometimes expected) that are aimed at production methods and involve actions, which are positive for the condition of the environment and especially for biodiversity. In second place comes support for less favoured areas. In the case of farms located in protected areas which are most often of lesser agricultural usability and literally less favoured biologically, climatically, geographically and which are situated far from the markets, such support will allow extensive agricultural production to continue and will prevent land abandonment and depopulation of rural areas. Specific measures for semi-subsistence farms have been assessed similarly.

Environmentalists assess less positively the early retirement of farmers, support of young farmers and setting up of producer groups. It is believed that the ultimate results of these actions will be intensification of agriculture; enlargement of farms due to transfer of land from the older to younger farmers; investments in farm-modernisation and concentration of production (which will certainly enable easier mechanisation in large farms); and introduction of more "modern" methods with intensive fertilisation and greater use of pesticides.

Activities such as afforestation of agricultural land or special aid to meet EU standards may have both negative and positive influences on agriculture in protected areas, depending on how they are carried out. As for afforestation, well-conducted afforestation, i.e. consisting of shifting the field-forest borders and creating corridors, may have an extremely positive impact on the migration of species. However, poorly implemented afforestation may, on the other hand, lead to the loss of some precious open habitats. Similarly, investing in farms in order to improve the conditions and meet EU standards, can be either environmentally positive (such as by constructing manure plates and containers for liquid manure), or quite on the contrary (such as purchasing special equipment to produce silage or ceasing cattle grazing resulting in reduction of permanent grasslands and loss of precious habitats).

Agri-environmental programmes would certainly be the most important RDP instrument in protected areas, if they were designed purposefully and according to the specific needs of particular protected areas. In the case of Biebrza National Park, agri-environmental programmes should promote mainly mowing and grazing, so that precious semi-natural grasslands are saved from being overgrown. Similar actions would also be recommended in the mountain pastures of the MFNP. In the areas with more intensive, market oriented agricultural production, however, where the percentage of arable land is greater, such as Wigry National Park, Zuvintas Biosphere Reserve or the landscape parks in the Bieszczady Mountains, it would be more advisable to implement other packages promoting specific production methods, e.g. sustainable agriculture and organic agriculture. On the other hand, in the areas with more intensive agriculture, where the polluted run-off containing communal waste as well as some chemical pollutants from agricultural sources poses a threat to the environment of protected areas, it would be advisable to implement packages promoting setting up of buffer zones and hedges. However, in general agri-environmental programme packages have not been planned with sufficient consultation of the protected areas' personnel. In Poland the choice of packages and priority zones was determined by the Ministry of Agriculture and Rural Development, which relied on the suggestions put forward by County Implementation Teams at Marshal Offices [Wojewódzkie Zespoły Wdrożeniowe przy Urzędach Marszałkowskich]. Representatives of nature conservation were also on the Teams. However, they had no direct influence on the decision-making process. One of the factors contributing to the poor preparation of agri-environmental programmes in Poland was the fact that after two years of preparations the implementation of agri-environmental programmes under SAPARD was abandoned altogether, even though in the subsequent year the environmental organisations, along with Chambers of Agriculture, conducted an active campaign for prompt implementation of these programmes.

The agri-environmental programmes could significantly improve the biodiversity of protected areas, but it is the farmers who are indispensable in their effective implementation. Meanwhile, the number of active farmers in the analysed protected areas is insignificant, particularly in Bieszczady National Park. In the areas where the number of farms is higher the implementation of agri-environmental programmes will depend on numerous factors. Here, the agri-environmental programmes would be effective if:

- farmers had a wider choice of packages and if they based their choice on the specific situation of their farm;
- the conditions upon which farmers accede to the programmes (i.e. "the agri-environmental minimum", which will be the greatest obstacle for the farmers) were simplified;
- as many as possible horizontal packages were introduced;
- farmers were provided with reliable information; and
- an effective and thoroughly prepared counselling system was set up.

In Poland, however, only 250 advisors in agricultural extension centres have been trained. Having completed a special cycle of trainings financed by the Ministry of Agriculture and Rural Development and conducted by a consortium of seven partners including IUCN, these advisors received certificates entitling them to approve the agri-environmental plans that are necessary for farmers to be able to enter into contracts for implementation of an agri-environmental programme. The certificates also entitle these advisors to approve farmers' payment-applications to the Agency for Restructuring and Modernisation of Agriculture. Personnel of the nature conservation and the environmental organisations could not participate in the trainings, even though they have extensive environmental knowledge and could potentially contribute greatly to the success of such a scheme's. If they were additionally educated and trained in the field of agricultural methods they could complement the advisory personnel and help the farmers that are interested in participating in agri-environmental programmes.

In the implementation process of agri-environmental programmes very low payments are proposed, especially in comparison to payments in other EU countries. If the level of "agri-environmental minimum" (requirements of the Code of Good Agricultural Practices) is unrealistically high (and it must be remembered that farms have suffered from underinvestment in the last 13 years and may lack awareness of environmental issues and experience of aid programmes) then participation in the programmes may not be very popular among the farmers. Moreover, the programmes may be unrealistic, with many interested farmers being unable to meet the requirements, or with the programme only being applicable in a very limited geographical range.

Although in all analysed countries it is often emphasised that organic agriculture would be the best option for small farms, it requires time for the farmers to shift to organic methods. The process to obtain the certificate for organic production takes two years and to acquire the necessary knowledge and experience and to find the market where they can sell their products with a profit margin is also a lengthy process. In the long run, a substantial demand for organic products must also arise in the market, which is not the case in any of the analysed countries, although Poland has a relatively well-developed market for such products (around 2000 farms and 300 shops but only 18 processing units in 2003).
As can be seen, there are many factors restricting the implementation of agri-environmental programmes and we will have to wait for at least ten years to see their effects on the natural environment. It is estimated that in all analysed countries the farmers are willing to avail themselves of additional payments. The requirements for participation are, however, very difficult.

5.3. Assessment of the applicability of compensation in "areas with environmental restrictions" (Art. 16 of RDR) in analysed countries.

Although special payments for the areas with environmental restrictions have been planned on the basis of Art. 16 of RDR, the conditions on which these payments will be made to the farmers and the actual amounts are still not clear. Consequently, no assessment of these payments' effectiveness can be made at the present time.

6. Conclusions

Having analysed the influence of agriculture on the selected protected areas (PAs) (national parks, biosphere reserves and landscape parks) in the chosen Acceding Countries (Lithuania, Poland and Slovakia), it can be stated that maintaining agriculture as a primary livelihood of local populations is important for nature conservation in PAs. The level of this importance, is related strongly to: 1) the category of the PA's protection and 2) the percentage of agriculture lands, including those that are privately owned, within the PA. For instance in national parks where the percentage of agriculture land is very low, the direct influence of agriculture may be less important. However, in biosphere reserves and landscape parks where fewer restrictions to agriculture occur concurrently with a higher percentage of agricultural land, the direct influence of agriculture may be much greater. Also indirect environmental influences of agriculture in lands surrounding PAs may be significant such as through polluting water in shared catchment areas. The two most important changes to agriculture that threaten nature conservation are: 1) intensification of agriculture both within the PA and in surrounding areas with shared ecosystems and 2) abandonment of agricultural production and letting arable lands become fallow within the PA. A significant influence driving these changes is the low profitability of agricultural production.

- It is considered that these environmental threats posed by agriculture will become more acute in the coming years, especially following accession, due to the expected polarisation of agricultural production. Intensification is expected to take place in areas where agriculture is most profitable and extensification or abandonment of agricultural production is expected to affect the areas of lower profitability.
- Introduction of certain CAP instruments in the form adopted at the Copenhagen Summit in 2002, i.e. area payments, could clearly be positive in this context. They are expected to enable slow progress to be made towards greater sustainability because all farmers that have possessed land "in good agricultural conditions" (land that has been cultivated) for the last two years can apply for decoupled area payments.
- All the activities within the scope of Rural Development Plans are significant, and this significance may be either positive or negative. Positive influences are to be expected especially from Agri-Environmental Programmes (AEPs); activities supporting Less Favoured Areas (LFAs); and compensation payments in areas with environmental restrictions. Negative consequences can arise especially from land consolidation, but also from early retirement schemes and mechanisms of support for young farmers, since it is likely that these will lead to intensification of agricultural production.
- Introduction of agri-environmental programmes and assurance of their long-term positive effects in protected areas depends mainly on: 1) successful engagement of

farmers in their implementation; 2) active promotion of the programmes by the public administration; and 3) the methods and amounts of proposed payments. Funding can also only be claimed, if there is significant capacity available by farmers to access relevant information and advisory services. On the other hand, information needs to be more efficiently distributed in an accessible form, which requires professional communication support.

- Present EU Member States tend to focus on biodiversity restoration rather than conservation of existing biodiversity. But in the new MS there is a high level of biodiversity that occurs as the result of existing extensive agricultural production methods. It is therefore essential that in the new Member States the emphasis of agri-environmental activities concentrate on preserving existing production methods that are conserving this biodiversity.
- AEPs should be more interconnected with the planned 'Natura 2000' network of European nature conservation sites. The level of payments should be attractive enough to compete with the possible economic returns from activities that aim to increase agricultural productivity, and, if possible, to also compete with other types of land development (e.g. possible extensions to ski resorts in Slovakia).
- It is not only integration of environmental protection policy with other key economic sectors – primarily agriculture – that is necessary. Also important is greater engagement of nature conservation personnel, local agricultural organisations and local administrations in order to prepare detailed plans for implementing nation-wide strategies at the local level. Involving local stakeholders, including conducting information and education campaigns (capacity building), is essential in order to make the right decisions that will have outcomes that are in the best interest of local populations – it must be remembered that conservation is vital for these societies. But in fact participatory methods are often an illusion. There is a clear lack of participation of both governmental and non-governmental nature conservation stakeholders in the process of designing and implementing agri-environmental measures. The reason for this is multifaceted and lies with both agricultural and environmental administrations. However, it is the agricultural administration which is the "owner" of the rural development portfolio and which therefore holds the key to improve cooperation.

7. Recommendations

In order to guarantee that CAP instruments will be implemented with the greatest benefits for agriculture and the local population:

- environmental awareness of farmers should be raised (in particular this requires work to train agricultural advisors);

- full stakeholder participation should be ensured (including through involving farmers and interest groups in all decision making processes); and

- cooperation between agricultural and environmental administrations should be improved.

8. List of References

8.1. Lithuania

- Conservation of Lithuanian Wetlands. GEF Project, Nature heritage Foundation, 2002.
- Lithuanian Protected Areas database. State Protected Areas Service, Vilnius, 2003.
- Law on the Protected Areas of the Republic of Lithuania, Lithuanian State News, 2000, No. 58-1703.

- UNEP-WCMC Database: http://www.unep-wcmc.org/protected_areas/data/un_97_list.html
http://www.unep-wcmc.org/protected_areas/data/sample/0985v.htm

- UN List of National Parks and Protected Areas, 2003.

8.2. Poland

- Biebrza National Park Headquarters
- The Board of Polish National Parks.
- Polish Official Statistics

8.3. Slovakia

- State Nature Conservancy of Slovakia, database 2003.
- Slovakian Act No. 543/2002 on Nature and Landscape Protection,
www.enviro.gov.sk
- the webpage of the Ministry of Agriculture (www.mpsr.sk).

http://www.terchovaregion.sk/np_mala_fatra.asp?lang=en
- UN List of National Parks and Protected Areas, 2003.

Annexes

Annex I: Questionnaire template, as sent out to the experts in Lithuania, Poland and Slovakia.

Annex II: Maps of the protected areas, attached separately on CD-ROM.

Annex I: Questionnaire template, as sent out to the experts in Lithuania, Poland and Slovakia.

Information on Protected Area (PA)	
Name of PA	
Country	
Contact Person	
E-mail	
Phone/Fax	

1. Background Information	
Is the interaction between different administrative bodies (e.g. local authorities and park management, other stakeholders) satisfactory? Why?	Task 1.1
How is the Rural Development Plan taking into account the PA and agricultural activity in its planned budget so far? Give a short description and figures under which sectoral operational programme budgets available for the PA and agriculture do exist.	Task 1.2
2. Private Ownership	
Describe and list ("compile") existing protection agreements between private owners of the land and authorities. Look up possible land use restrictions on grounds relevant to the PA in the Real Estate Register.	Task 2.1
Do you see gaps and limitations connected with involving private owners in protection agreements? Specify in short their nature.	Task 2.2
Is a stronger involvement of private owners beneficial for the PA?	Task 2.3
3. Farming	
List and submit relevant parts of legal acts/regulations/official decisions, which regulate the site management and especially agricultural activities on the PA. Give the sources of the most relevant articles in an easy-to-find way.	Task 3.1
List the type of agricultural production and its share on the PA (e.g. milk, meat, grains, vegetable, others)	Task 3.2
Describe the specific situation and problems of farming in the region, with special regard to their impact on the PA.	Task 3.3
Describe existing agricultural influences (positive/negative) on the nearer environment (*outside*) of the PA.	Task 3.4
List and describe important (predominant) applied agricultural methods with their relevance to the nature value of the PA.	Task 3.5
Describe, very shortly, how farmers in the region are organised (do they have representative bodies? Are they acknowledged by administration, and which competencies do they inhere?)	Task 3.6
In case such farmers' associations exist: do they run own support programmes, how are these funded and what is their aim?	Task 3.7
Try to extrapolate the future trends of agriculture for the coming 10 years (e.g. change of production methods, change in share of products, resulting effects on nature value of the PA in the region and wider effects in social/economic terms). Please refer to the specifics in your region.	Task 3.8
Which measures to support favourable trends of agriculture you could imagine? Which measures could help to stop negative trends? The question is posed in a broad sense, but concentrating on changes to agriculture and its implications.	Task 3.9

Is an effort to maintain existing extensive agricultural methods/methods that are beneficial for the PA visible?	Task 3.10

4. Protected Area (PA)	
Give a general introduction to the categories of protected areas in your country and how the chosen areas fit into it. Very short.	Task 4.1
Name the umbrella authority for all PA in the country and submit its address and competencies. Very short.	Task 4.2
Submit a detailed map of the protected area (PA) and its buffer zone in an adequate scaling, showing special landscape features, zones, land use structure, and ownership structure. If such a map is not available, please indicate the reasons why. The map shall be good enough to support and visualise the description of the PA done for this study!	Task 4.3
Give an overview of the authority structure managing the PA (who makes administrative decisions on which basis? Joint work/collaboration with external stakeholders required and practised?). Very short.	Task 4.4
Which planning documents for managing and preserving the areas have to exist according to (which) existing law, which data they comprise? (e.g. land use structure, zones, ownership, inhabitants, economic activities)	Task 4.5
If there is a gap between theoretically and actually existing data: why does it differ? Specify all practical reasons.	Task 4.6
Do you encounter problems obtaining data from official sources on the PA and its buffer zones, resulting in a lack of needed data (e.g. from land use registers, real estate registers, other cadastres)? If yes, specify which.	Task 4.7
Give examples, where in practice PA management faces difficulties with managing the PA *together with its adjoining areas that are outside* the direct PA regime.	Task 4.8
Is a compensation payment for existing land use restrictions on grounds inside (*and bordering*) the PA being paid to land owners? (Does the park have own budgets for this purpose, can these funds be topped-up by other sources, e.g. national agricultural budget?)	Task 4.9a
Have Pre-Accession Funds of the EU and/or Funds from other international projects been made available for the PA? On what targets the funds were spent? List the most important projects and submit a link to the project-reports in an electronic format.	Task 4.9b
If compensation payments are being paid: how would you judge their level in terms of covering income foregone and attracting private owners to enter a voluntary restriction scheme?	Task 4.10
5. Territory Planning Documents (TPD)	
Which Territory Planning Documents exists in the region, where are they kept, how is their accessibility? Which are the most relevant for the management of the PA? In short, give an introduction to the authority and document structure in spatial planning, as far as it should be relevant for the practical management of the PA.	Task 5.1
Do the institutions involved in Territory Planning and the documents they emanate show aspects of connectivity and good consultation, to support the management of the existing PA by linking it with other policies? (Agriculture, general economic development, Natura 2000 and others)	Task 5.2
Do the TPD make a special reference to areas under agricultural use within (and bordering) the PA?	Task 5.3
Do the TPD show reference to Natura 2000 and Pillar II of the CAP?	Task 5.4

6. Rural Development Regulation (EC 1257/99 and 1783/2003)	
Which RDR measures shall be applied in the region where the PA is based? Please specify measures with potentially high relevance to the PA. I. Investment in agricultural holdings II. Setting up of young farmers III. Early Retirement IV. Less-favoured areas and areas of environmental restrictions V. Agri-environment VI. Improving processing and marketing VII. Forestry VIII.Promoting the adaptation and development of rural areas	Task 6.1
In general, do you think the way measures under RDR are planned in the region will have positive results for the PA? within the next 10 years in the long run? Please explain your judgement shortly.	Task 6.2
How (if at all) the focus of planned measures under RDR should be shifted to better secure the protection aims of the PA? Please express desirable changes from your point of view.	Task 6.3