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Disclaimer:

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1 Introduction and background

The core of Europe's legislation in the field of nature conservation and biodiversity are the Bird Directive 2009/147/EC and the Habitats Directive 92/43/EEC, adopted in 1992. Based on this legal framework, the expanding Natura 2000 network contributes significantly to the protection of biodiversity in the European Union. Running and managing this network and simultaneously optimising the preservation of natural assets of this expanding network are important overall goals. The loss of biodiversity and diversity in habitats as well as species is an increasing threat, requiring concentrated interventions and actions. Assuming that the different partner countries are at different levels of the application of Directive 92/43/EEC and thus of the implementation Natura 2000 sites network, various challenges arise.

Be-Natur project aims at the better management and implementation of Natura 2000 sites in the SEE eco-regions. The exchange of knowledge and practices within the project consortium is the basis for the definition of a Transnational Joint Strategy, and the elaboration of Joint Transnational Action Plans for the conservation of species and habitats common to the project partners' areas. These steps comprise a crucial pillar in the advancement of concrete implementation status of the EU legislative framework. In the process of assessing the current status quo of the Natura 2000 sites in the different partner areas, an analysis of gaps was conducted in a first phase. This gap analysis was based on a comprehensive questionnaire capturing the actual stage of implementation in the legal sphere and procedures for the application of Directives in each of the partner countries. In addition, the preservation levels and individual ecological performances, as well as socioeconomic data associated with the Natura 2000 network were assessed. This questionnaire was answered by each project partner by gathering local and national experts in workshops and by analysis of related documents in each participating area. Besides the questionnaire, best and bad practice examples respectively were collected in a standardized form to enhance the exchange of experiences between project partners.

In the first chapter of this project report the methodology used is described in detail. As the assessment of gaps in the field legal procedures and institutional frameworks is of high significance for the further improvement of the network, these results comprise a second chapter. Gaps in the field of management and organisation are discussed in another section. The ecological assessment comprises the subsequent chapter. The important point of socioeconomics, in particular data on financing, capacity and tourism development concludes the analytical part, followed by a discussion and summary of findings.

1.1 Methodology

Managing conservation of biodiversity and natural resources effectively requires sound methods to assess data (Townsend Peterson and Kluza, 2003). An early technique for data assessment is gap analysis, an approach applicable to protected areas to ensure comprehensiveness of information bases and identification of gaps (Rodrigues et al., 2004). Since these gaps were traditionally linked to the conversational state of species or resources, also referred to as “conversation gaps” in the process of identifying biodiversity hotspots, the approach has been extended and revised (Jennings, 2001). In terms of conservation efforts, gap analyses can provide a basis for decisions on focus or direction and thus are not supposed to substitute other tools (Scott et al., 1993). Rather conducting a gap analysis is a first step or component for setting priorities regarding biological peculiarities and managerial challenges.

Within Be-Natur project framework, a broad approach of gap analysis was applied. The developed questionnaire was the main instrument for the definition of gaps. The appropriate and comprehensive completion has been of crucial importance for further project steps. The information, data, documents and practise examples given by each project partner are going to serve as a basis for the development of the Joint Strategy and for the identification of tools for the better management and implementation of Natura 2000 sites in all partner countries.

In the preliminary stages of the project implementation, it was apparent that the main difficulty was to decide upon the area covered in the gap analysis. Since it was not possible to answer the questions at a national level in many cases due to problems of insufficient or simply unavailable data or on the other hand due to an unmanageable data flood, most questionnaires were addressed at the regional level (i.e. level of federal state or province). In order to receive quantitative information for the gap analysis the partners had to select a representative number of sites for the assessment. According to a common decision, the number of sites for which data review and information collection was carried out was approximately 10. This was particularly important for assessing the numbers and percentages required in some of the questions.

For the technical preparation of the contents, research and collection of information and data a minimum of two to three workweeks were scheduled. At this stage of the project it was important and necessary to involve as much expertise on the topic of Natura 2000 as available. For this purpose, it was strongly recommended to organise a workshop inviting six to eight experts covering all fields of expertise. Aiming at the joint completion of the questionnaire, the ex-

change of knowledge and documentation of the materials as well as the cooperative working session per se were key ingredients of a successful meeting.

Referring to questions mentioning the designation procedure it has to be stated, that the approach of the designation of Natura 2000 sites differs significantly within the European member countries. Some entities mainly have nominated already existing protected areas. Others have carried out a screening on potential Natura 2000 sites based on expert opinions, while others have made a survey on data inventories. This procedure leads to different results regarding the size as well as representativeness of these Natura 2000 sites. Using only existing protected areas or relying only on experts opinions leads to gaps in the spatial distributions of the sites. This should be considered in the action plans and also be of importance in strategic programmes.

Basically, the questionnaire includes four parts, covering the following main topics of interest:

- I. Legal procedures for the application of directives
- II. management and organisational structures
- III. ecological assessment
- IV. socio-economic assessment

In the first part of the questionnaire the collection of data regarding the legal implementation status as well as information about organisational framing was the main interest. The status quo of different partner areas, regarding national progresses, problems, experiences and performances was assessed. Within the ecological part, the main stress was on indicators for the favourable conservation status as well as current methods and standards for monitoring. Management measures, in terms of tools and effectiveness played a significant role in this part of the analysis. Socio-economic data, in particular the current and needed costs were assessed in addition. Sources of funding and financing were of interest, especially the identification of differences in public and private financing possibilities. The sustainable utilization of protected areas is an important matter and thus questions particularly refer to regional economic and tourism development. Assessing the potential for ecotourism development is relevant in view of optimal size and capacity constraints of Natura 2000 sites.

Throughout the questionnaire, open questions as well as comment boxes were given to ensure the development of a comprehensive knowledge base. The provision of best and bad practices examples respectively complemented all parts. For this purpose, a specific template for best practise questions was provided.

The gap analysis questionnaires and best practice examples of the following 11 partners were analysed:

Table 1: List of Partners.

PP	Name of partner institution	Country
AREC	AREC Raumberg-Gumpenstein	Austria
CACAK	City of Cacak	Serbia
DDNI	Danube delta national institute for research and development	Romania
ETANAM	Development Agency for South Epirus - Amvrakikos	Greece
LBDCA	Lake Balaton Development Coordination Agency	Hungary
NIMFEA	Nimfea Nature Conservation Association	Hungary
PRA	Province of Ravenna	Italy
RVE	Veneto Region- Commission's Coordination Project Unit	Italy
STRANDJA	Strandja Nature park Directorate	Bulgaria
TIMIS	Timis County represented by Timis County Council	Romania
TORRE GUACETO	Consorzio di Gestione di Torre Guaceto	Italy

Actually, only a few partners are managers of a specific site. Most partners are regional administrations or actors. As it is the main task of the project to work out transnational action plans and strategic concepts, it is more relevant to extend the perspectives – reflected in the scope of the involved project partners – than to concentrate only on single sites. To answer the questions of the questionnaire, the partners consulted following additional experts:

Table 2: Involved experts

PP	Additional experts
AREC	Styrian League for Nature Conservation (Naturschutzbund Steiermark), managers of Natura 2000 sites (established by the government of the Province of Styria), research experts HBLFA Raumberg-Gumpenstein, Government of the Province of Styria, Government of the province Tyrol as Austrian support for Natura 2000

CACAK	Bird protection and study society of Serbia, Provincial Institute for Nature Conservation (Novi Sad)
DDNI	Project team from DDNI
ETANAM	Amvrakikos Management Body
LBDCA	Peter Szinai
NIMFEA	Molnár Attila, HNPĐ
PRA	-
RVE	Veneto Region - Commissions' Coordination Project Unit
STRANDJA	Colleagues from Strandja Nature park Directorate. Experts from Ministry of environment and water, from Bulgarian academy of science, from Bourgas association for eco end rural tourism. Public information inn official site for Natura 2000 in Bulgaria - http://natura2000bg.org/natura/eng/index1.php . Ivan Kamburov, chief expert in Strandja NPD has a experience as leader of terrestrial group in mapping and completing form and all necessary documentation for 28 Natura 2000 project-sites. I. Kamburov together with Milen Rashkov, also expert in Strandja NPD now are involved in I for Bulgaria prosecure for Monitirig and Mapping of Natura 2000 network in all Bulgarian Lots - Invertebrates, Fishes (as volunteer), Amphibians and Reptiles, Bats, Mammals, Vescular plants and mosses. These two experts of the partner are also members of Natura2000 network mailing list of Bulgarian NGOs. These experts (Be Natur project manager and coordinator for staff of Strandja NPD) had a lot of experience with the Natura 2000 regimes and legislation. These experts had critical role for preparing of more than 15 successful appeals to the Bulgarian court of improper investment decisions in contravention of the Natura 2000 site. Including participation in the preparation of three appeals to the European Commission for violations in the Natura 2000 site.
TIMIS	Banatului Museum-M. Kiss Andrei, Agricultural Sciences of Banat University - Ionel Samfira and Popescu Cosmin
TORRE	Apulia Region - Cartographic Information System

2 Results

The results are grouped according to the structure of the questionnaire:

1. Legal procedures for the application of directives
2. management and organisational structures
3. ecological assessment
4. socio-economic assessment

The best (and bad) practice examples are described in a separate chapter.

For the interpretation of results it has to be taken into consideration, that the project partner "City of Cacak" (CACAK) is located in Serbia. As Serbia is not an EU member at this time, the Natura 2000 network is not implemented there.

2.1 PART I: Legal and institutional frameworks for managing Natura 2000 sites

The term “Natura 2000 site” is defined in almost every country on a national level, Italy’s and Austria’s regional legislation also covers this term. Due to the federal character of Austria, there are 9 different Province laws about nature protection in each federal state, but there is no national, common law.

Sites of Community Importance (SCI) are sites of conservational relevance which are listed by each country and sent to the European Commission for evaluation. Member states are committed to declare these sites as Special Protected Areas (SPAs) / Special Areas of Conservation (SACs). In about 50 % of the EU-member states there are differences between SPA and SCI “Natura 2000 site” defined in the national legislation, whereas on a regional level there are only differences in Austria and Italy. It would be important to create a policy throughout all member states of the European Union to ensure a proper implementation of the FFH-guidelines.

The majority of the countries define their Natura 2000 sites in national laws, only Austria and Italy do this on a regional level.

The location and outline of Natura 2000 sites are given in all countries, as this has to be done when applying to the status of a protected area. On a regional level, an exact location of the Natura 2000 sites is given in Hungary, Greece, Italy, Bulgaria and Austria. Rumania does not have a list of parcels, but there is a list of coverage of the site for every commune (administrative unite in Romania, which is formed by a number of villages). The scale of range of maps has broad range from very detailed ones of 1:5000 up to rather rough resolution of 1:25000. In the Habitats Directive there is no standard given for the resolution of distribution maps of habitats or species, but the more accurate the maps are, the bigger is the benefit for further investigation and protection efforts.

All objects of protection have to be specified in the Habitats Directive as a basic requirement for designation as a Natura 2000 site, and all countries fulfil this requirement, but on different levels. For most of the countries there is a specification on federal level, except Greece where there is only one on national level. Data about population size or habitat quality are very expensive to assess, explaining that there are only 4 partners who state that there is a definition of these parameters.

2.1.1 Special regulations and limitations

Taking a closer look at special regulations and limitations determined in the law, Natura 2000 sites have to be treated individually from case to case. The majority of restrictions are defined on national level.

In Serbia there is no implementation of NATURA 2000 in any regulation, but there are regulations and limitations stipulated in nature conservation legislation (related to biodiversity protection) implemented in other sectors.

In many countries, Natura 2000 is also affecting the law of "Hunting and fishery" and "Spatial planning". Slightly more than half of the partners have reported, that Natura 2000 is also implemented in the laws concerning "Agriculture and forestry" or "Water management". In Austria Natura 2000 legislation is also implemented in several other thematic laws on the level of provinces (rural development, waste management, environmental protection).

Bulgaria has no special regulations for Natura 2000 sites, but there are recommendations that are transposed into national law. These recommendations do not have the character of regulations, because there are different preconditions on every specific site. Specific regulations can be determined for each specific site as a part of the designation order and into the management plan.

In Austria there are different laws implementing Natura 2000 for each federal state, which results in different regulations for each federal state. Styria e.g. has defined Natura 2000 sites in regional development concept which must be considered in rural development strategies & implementations, agriculture and forestry due to ÖPUL funding programme.

In Romania there are environmental protection agencies, administrators or custodians of protected areas (biosphere reserve, national/natural parks, Natura 2000 sites (SCI and SPA) at national level.

2.1.2 Natura 2000 impact assessments

Focussing on the authorities/institutions in place (e.g. responsible for the handling of Natura 2000 impact assessments of plans and projects), the results are manifold.

In most cases, the main responsibility handling impact assessments of plans and projects on a national level lies at the Ministry of Environment or a similar governmental department. On local level, there are only responsible authorities in Austria, Romania, Greece and Veneto Region in Italy. In Austria there are local authorities working for protected area management, which are directly coordi-

nated by the Styrian Province. There is a certain allocation to private companies but also cooperation with the district authorities such as the chamber for agriculture and forestry.

The results on the number of Impact Assessments according to Article 6 of the FFH-directive are very heterogeneous, so no clear pattern can be observed. Only few partners were able to provide exact data on this question. The number of impact assessments and their results would be very interesting for the Natura 2000 network on EU level, providing a good indicator on the threats to individual sites. Moreover they could help to develop reference decisions and an assessment methodology for certain impacts.

As the impact assessments are conducted by different institutions and decisions are made by various authorities, it is quite difficult to keep an overview on this data aspect.

The fact that the number of Impact Assessments in Hungary is 10 times higher on a regional level than on national level is surprising and inconsistent compared with the Bulgarian experience for instance. The high difference of numbers can be correlated with the different number and size of Natura 2000 sites, but also on different criteria that have to be fulfilled to carry out an impact assessment.

In Austria the management is implemented by technical bureaus on behalf of the province government or directly by province government's staff. A high variety of different authorities in Hungary makes it impossible to gain central information, but approximately some thousand impact assessments have been carried out on national level and a few hundred on regional level. This ratio is also valid for Italy and Romania. In Bulgaria there is a significantly higher number of 15.000 assessments.

Usually, the impact assessments are carried out by private consultants or evaluators who have been authorized by the government. It's a common problem in several EU-member states that impact assessments get positively assessed when the executive consultants are asserted under pressure to produce a certain result.

In Italy, there are only public authorities responsible for impact assessments. An "Impact Study" has to be carried out, financed by the applying company, as a basis for the "Impact Assessment", which has to be financed by the public authority. The situation in most of the other countries is similar, the costs for impact assessments have to be covered by the person/organisation that wants to implement a project or other activity that may have any negative effects on a Natura 2000 site. In Austria, private project solicitors have to carry the costs completely, whereas for projects of public interest there are several ways of EU-

funding such as: Life Nature, ELER, tw. INTERREG, province governments other special studies are financed also by the Federal Ministry of Agriculture, Forestry, Environment and Water Management, ÖPUL Funding (Austrian Environmental programme for Agriculture) with special programmes for the sustainable management of grassland.

The fact that the applying company has to finance and order an impact assessment in more or less all countries carries the risk that they are expecting a positive outcome, and my influence somehow the work of the executive agencies or authorities in charge.

2.1.3 Implementation of Natura 2000 in nature conservation law

In Austria Natura 2000 stipulations are rooted in the 9 federal laws on nature conservation. In nature conservation laws of some federal states (Burgenland, Wien, Vorarlberg) there is a special category of protected areas called "Europaschutzgebiet".

At the moment (2011) there have been 220 sites nominated as Natura 2000 sites, at least 148 of them have also been legally enacted. The majority of the sites have been enacted according to both the Habitats Directive and the Birds Directive.

Romania has already transposed the European directives (Bird and Habitat) to national legislation and started to implement the management system for Natura 2000.

The Italian Government issued two laws to acknowledge the directives and to delegate the Regions to detail the local application, according to the national guidelines. The Region Emilia-Romagna issued a regional law to regulate the manager of sites as well as the responsible for impact assessment and also issued some directives about the procedures for the impact assessment. In Emilia-Romagna the sites managers are the Parks Authorities inside parks and the Provinces outside parks or in other kind of protected areas (natural reserves, protected landscapes, ecological network). For projects, the regional law delegates the impact assessment to any public authority that approves each project; for plans, the regional law delegates the impact assessment to the public authority that draws up the plan. In Emilia-Romagna monitoring is prerogative only of the Region.

Besides the sites designation there are conservation measures for all SPAs, and the greater part of SCIs, which are also part of regional hunting law.

Additionally, a draft for a specific Natura 2000 regional law has been prepared, which is meant to represent a framework legislation on Natura 2000 and on Veneto parks. Although the draft was prepared in 2006, it has not been presented to the Regional Assembly yet.

In many cases the implementation of Natura 2000 related law followed a top down process. First regulations are made on a general (national) level to define the category of Natura 2000 sites. In the following steps, laws on regional or local level are defining the regulations on an operative level (management, impact assessment, special obligations on specific goals or restrictions).

The historically grown national legislation system aggravates the comparison of the different solutions of partner countries.

2.1.4 Recommended implementation strategies

There are recommendations on different levels of intervention made by the partners:

- Integration of impact assessment into legislation would improve the protection of sites and species.
- Involvement of all relevant stakeholders at national, regional and local levels is crucial for the development of the Natura 2000 network.
- Designation of Natura 2000 sites should be based on a comprehensive knowledge base on the overall distribution of habitats and species in each country.
- Subsidies for Natura 2000 adopted land management are needed.
- A group of independent experts and specialists on the different habitats and species should steer and control the Natura 2000 implementation process ideally.
- Economic instruments to support implementation of the Natura 2000 network, aimed at nature conservation and promotion of activities compatible with its protection.
- Environmental education to inform local stakeholders about their rights and limitations.

2.1.5 Experienced difficulties

Depending on the historical implementation process there are different difficulties reported:

- Austria: Missing national legislative competences lead to different implementations and regulations in the nine provinces.
- Serbia: The development process is centralized and local authorities, park managements and stakeholders are not involved effectively.
- Romania: Because of a lack of information on the distribution of habitats and species the selection of sites (location, size) has not been done in an optimal way.
- Greece: Local population was not included in the process in a participative way.
- Hungary: Ecosystem based management plans are missing for most of the sites and the missing compensation system leads to a negative reputation by local stakeholders.
- The designation process of sites was done by local authorities without having the adequate technical ecological and economic background knowledge.
- Italy: For projects, the regional law delegates the impact assessment to any public authority that approves each project. It would be better to identify one specific responsible for all the procedures (independent, more specific expertise on impact assessment).
- There is a lack of specialised persons on Natura 2000 management and on specific training and education in this field.
- Information in the standard data forms does not correspond to the actual situation.
- Competent, trained people to coordinate activities and knowledge exchange between different authorities that are responsible for Natura 2000 management are missing.

2.2 Part II: Management and organisational structures

It's rather unusual that all Natura 2000 sites within one area of responsibility have at least one person in charge for administration and management issues. In most countries there are just a few sites that are managed by one single person.

2.2.1 Management plans

For only about 20 % of Natura 2000 sites there is a management plan available, taking most of the partner regions into account. Only Austria's number of management plans for Natura 2000 sites is significantly higher with about 70 %.

A list of species and habitats is given in every management plan. Maps of habitats are also common information in management plans, whereas the range of scales is rather broad. Assessing information about the population size of species is very costly and thus most of the management plans do not include this quite important information. According to several partners it would be important to raise funds for gaining basic information about the protected species.

In addition, information about specific management measures and assessments of favourable conservation status are provided in every management plan. In Romania, Bulgaria, Hungary and Italy there are national guidelines for management plans. It is not clear whether the other partners do not have such national guidelines, or only can rely on them at a regional level. Specific indicators for evaluation are standardized components for the majority of the management plans of the partner sites.

2.2.2 Quality and effectiveness of the management plans

Management plans are developed by local authorities or managers of the protected area and usually assessed or at least approved by the Ministry of Environment or the responsible authority on province level. In most countries there are regional or national guidelines that ensure the quality of the management plans.

In Romania management plans are additionally advised by the Romanian Academy and developed in cooperation with all stakeholders. They can only be changed when the approving institutions agree explicitly. Urban development plans and management plans are going to be harmonized, but the provision of management plans take priority over any other development plan at the moment.

This approach can be described as sustainable because involvement of the stakeholders from the very beginning is a crucial prerequisite for a sound management of protected areas (Getzner et al., 2010).

In most of the countries there are no such mechanisms available to evaluate the effectiveness of management plans, either available or implemented. For some countries such as Romania and Italy there are some mechanisms available, but only at a regional or local level. National mechanisms are only available in Bulgaria.

At the moment there are no fully implemented management plans.

In Hungary, management plans have no legal background and also in Italy there is no legal obligation to implement them. In Austria, management plans have been established only recently and implementation probably will take much more time. In Bulgaria, there is a lack in financial resources and trained experts, and due to changes of the management plans by the government the motivation appears to be quite low.

2.2.3 Stakeholder involvement

Comparing the different degrees of involvement between the countries, it is apparent that the involvement of the stakeholder groups is the strongest in Italy, but in Greece and Austria this aspect also plays a certain role. In other countries participative strategies and stakeholder involvement is rather unusual and part of the government's responsibility. This is the particular case in Hungary, where according to annexes of habitats and species the designation process has not been a question of stakeholders' involvement. It has been considered as a strictly professional task according to these annexes of habitats and species.

In Italy the designation process usually didn't involve any stakeholder, but there have been participatory planning activities with stakeholders for the definition of regulations for compatible activities.

Due to the federal structure of Austria there are different focuses in each federal state. In some regions hunters are strongly involved, whereas in other regions farmers and foresters are involved.

Among the different stakeholder groups hunters, foresters and farmers seem to be involved into the management process for the most part, which is reasonable considering their role as the main actors in today's land use. Farmers, hunters and foresters wield a big influence on species composition and biodiversity of habitats due to their activities, which turns them into indispensable partners for a sound management of protected areas.

The approach to involve stakeholder groups that are directly concerned by any land use regulations within Natura 2000 sites into the management plans is very promising. In Austria stakeholders are involved in a way that there are subsidies available for ecological management of forest and agricultural land, which is also done by other EU-member states.

There is only one EU-member state that has carried out stakeholder acceptance assessments on all of its Natura 2000 sites. Even though there are some countries that already have concepts available but not yet implemented, most of them do not even have concepts, which is a worrying fact indeed.

2.2.4 Current governance structure

Austria: 9 provinces with 9 province laws. Provincial governments are responsible for the implementation of Natura 2000 sites management on site.

Romania: The government consists of 16 ministries and there are 42 counties, each county having its own prefecture (the government representative). The legal representative of the Ministry of Environment and Forests in each county is the Environmental Protection Agency and at regional level the Regional Environmental Protection Agency.

Hungary: The Ministry of Rural Development is responsible at the national level, while ten Environmental, Nature Conservation and Water Management Authorities (legal authorities) and ten National Park Directorates are the responsible bodies for nature conservation management at the regional level.

Italy: As foreseen in the DPR (Presidential Decree) n. 357/97, which implemented the Directive at national level, Italian regions are responsible for participating in the identification process of sites, for their management and monitoring (possibly delegating some of these tasks to other local authorities, e.g. the provinces). Regarding the Veneto territory, the regional administration is nowadays the only responsible body for management and monitoring of the sites (even if they are included in parks). There is a specific structure (Forestry and Parks Project Unit / Unità di Progetto Foreste e Parchi) responsible for the Natura 2000 dossier. Another structure is responsible for the most part of Impact Assessments carried out at regional level (Commissions' Coordination Project Unit - Environmental Planning Service / Unità di Progetto coordinamento commissioni - Servizio Pianificazione ambientale: four employees). These latter administrative responsibilities can change over time, due to the needs Regional Council (Giunta Regionale).

Bulgaria: According to Bulgarian legislation, stating the foundation of an authority for management of any Natura 2000 site is not obligatory. At this stage in the Natura 2000 site overlaps with a traditional protected area under national law (17% of the whole Natura 2000 sites surface), which has a management plan and its own Directorate (of National and Natural parks) for implementing that Plan, but is planned to combine both functions.

2.2.5 Applied management strategies to establish Natura 2000 sites

In Austria, the League of Nature protection, one of the most experienced NGOs in this field, owns over 1.100 ha of habitats with the perspective to gain even more properties to form a kind of network of “stepping stones” for endangered species and habitat types. In every federal state different topics are preferentially treated due to tradition and natural conditions.

In Romania the Ministry of Environment and Forests has developed the methodology for the award of administration of protected areas that require establishment of management structures. Moreover a methodology for awarding custody of protected natural areas that do not require the establishing management structures has been designed.

Greece has applied three main management strategies for protected areas. Hunting has been banned for the last two decades, fishing, fishing tools, seasonality and the ways of fishing have been regulated, and, only recently, there is an attempt to reduce the nitrate pollution.

In Hungary, professional advisory bodies were organised in the designation process by the coordination of the Ministry of Environment (NGOs, scientific institutes), but they worked inefficiently and provided only few useful data.

National park directorates had to carry out the designation themselves (rangers and internal experts) with the advisory bodies and GIS-support of State Geodetic Institute in the practical designation. Provided regional data was collected in the Ministry of Environment in accordance with other ministries. After this process the compliance with the responsible EU bodies has begun subsequently.

Additionally, a determination of the obtainable objectives has been carried out for each site. This approach would be a good base for further development plans in other countries too.

In Italy, regional parks and administrations are working on local and specific conservation measures.

Both of the greatest Bulgarian NGOs were asked to investigate potential sites and prepare a proposal to the Ministry of Environment. Due to a very strong public opposition, these proposals were revised by additional independent expertise of the Bulgarian Academy of Sciences. Final decisions on the scope of Natura 2000 network were taken by the Council of Ministers.

2.2.6 Experiences with designation and management strategies

Austria:

Problems:

- Inconsistent mapping without a comprehensive master plan
- Many different projects and initiatives without any quality management at all
- Every federal state has its own agencies for the development of management plans.
- The protection of areas is in charge of each federal state, which are partly unaware of certain peculiarities of this important topic
- In many cases, a sound management is only feasible on sites that are owned either by the public hand or by private NGOs (e.g. the Legacy for Nature Protection). Biggest opposition and problems can be found in the field of financing and the individual interests of the land owners
- Differing funding structures lead to different conditions in every federal state.

Goals:

- Uniform legislation for implementation of EU-guidelines and Natura 2000
- Standards for uniform development of management plans and quality management
- Adaption of legislative framework
- One central body responsible for data generation and implementation of the Natura 2000 guidelines
- Updating of the data set
- Establishing a Natura 2000 centre of excellence for every EU-member state with a transnational funding approach

Romania:

Some Natura 2000 sites completely or partially overlap protected areas (like Biosphere Reserves, National and Natural Parks) that already have an administration and a management plan. This is a favourable situation when the existing management plan only has to be adapted to meet the purpose of the Natura 2000 sites. Large and fragmented sites (especially the ones that are not overlapping large protected areas) are difficult to manage and thus finding and implementing a sustainable management strategy is usually quite difficult.

Bulgaria:

Due to the fact that Bulgaria has no experience with the implementation of management strategies at all, the sustainable development of Natura 2000 network and the specific sites has no priority for discussion and support of regional policy.

Italy:

One view is that it would not be suitable to establish different management strategies, since there are measures regarding all the existing sites, by taking into consideration a unique strategy and guidelines for elaborating management plans. Thus, at the regional level a unique strategy is needed. Every object of conservation is then protected according to its location and to its conservation status thus having a different management (although embedded in the same regional strategy). Conservation measures embedded in the regional regulation identify which sites need a management plan, so that a management plan is not available for all of the sites.

Hungary:

There were some difficulties regarding the deadlines and the allocation of the budget was not entirely effective. However, the designation was consequent and went smoothly.

A management strategy for every SAC was prepared. There was no common methodology and criteria written down regarding the way national parks should designate the sites.

2.2.7 Available information material

There is comprehensive information material about all aspects of the Natura 2000 sites (Number of assessed Natura 2000 sites, Purpose of Natura 2000, Maps & location, Description of site, Description of Species, Description of habitats) available online in most partner areas, except Greece and Serbia. In Hungary, only few information materials are available regionally. Basically, information materials are available at the official Hungarian Nature Protection website, but online description of species and habitats and thus the information base is not very comprehensive.

Information presented on boards in the field is only available for a small percentage of the Natura 2000 sites in Italy, Bulgaria, Romania and Austria. Some countries do not offer any kind of on-site information. The construction of information boards is costly and depends on funding (e.g. in a LIFE project).

The majority of partners state that there are printed materials dealing with the purpose of Natura 2000 sites available. Only in Italy and Bulgaria comprehensive brochures are available for all of their Natura 2000 sites, others only provide special booklets for specific sites. Again, the preparation of booklets is often depending on external funding.

Special booklets are available in Italy, Austria and Romania for at least some of their sites, whereas Hungary, Greece and Serbia do not provide any special booklets for single sites.

Interpretive trails are a widespread and well accepted way to transform complex matter into understandable information that can be used by a broad range of people, even though this is probably the most expensive approach for raising awareness and getting people familiar with Natura 2000 values. Guided tours and excursions also have a high educational value but they are costly, requiring expert knowledge. Leaflets and excursions are also understood as good ways to prepare and present information, rather than via media like TV or podcasts.

2.3 Part III: Ecological assessment

Most partners rely on interpretation manuals containing a national specification of the habitats and species on the national level. Only in Greece such a national specification of the habitats and species of the FFH Directive is missing.

The assessment of the favourable state is a quite complex task and should be based on specific indicators. It is very helpful, to break down these indicators on a national level or even better to a regional level. As this assessment of favourable state should be done for the development of management plans and for monitoring the development of species and habitats, it would be very useful to ensure that these manuals are available in the local language. Such guidelines and definitions are missing in Greece and Serbia.

Almost all countries have monitoring concepts for many of the species and habitat groups. Only Serbia, which is not an EU-member, has no monitoring concepts at the moment. In Greece concepts are only available for fish and birds, while even for invertebrate species of the FFH-directive monitoring concepts are available in all other countries.

This will give good opportunities to compare the different monitoring concepts for the selected species and habitat groups for the transnational action plans.

The monitoring concepts have already been implemented in almost all countries, except for Greece and Serbia. But only for some regions quantitative data is available. This rare data indicates that the monitoring concepts are actually implemented only in few sites.

Programmes on the national level to coordinate activities in Natura 2000 sites to improve the favourable state of species and habitats are required to develop concerted actions all over a country for specific species or habitats (e.g. the development of a national action plan for a certain species or habitat-type). Implementation of concrete protection measures will in turn be done at site level.

Currently, there are quite few programmes and projects on the national level reported by the partners in the questionnaire. There might be several reasons for that:

- There are simply no current national programmes and projects available.
- There are hardly any programmes and projects on the national level, maybe due to the fact that nature conservation is not the duty of national administrations but in the responsibility of the administration on province level.
- The access to information on the national level is limited, suggesting that national programmes and projects have not been successfully communicated to the regions and responsible site managements.

The results in terms of projects on site level are characterized by a very high variety among the different partners (from zero to more than hundred); probably due to the different stages of implementation of the Natura 2000 network. In some countries, administration is still in the process of nominating and designating sites by national law or developing first management plans. In this phase, hardly any projects dealing with concrete protection measures are implemented (Austria, Greece, Bulgaria). Other countries or provinces are one step ahead, having their management plans completed and already started implementing protection measures. Other countries or provinces have their management plans done and are already implementing protection measures.

The number of projects on site level also varies between the different species groups and habitat-types. Most of the projects are focussing on the protection of birds, followed by mammals (without bats). For amphibians and reptiles, invertebrates and bats only few projects are implemented.

This might be explained by the number of species included in the annex of the FFH- and birds directive and by the popularity of some species groups. The relative low number of projects dealing with habitat protection is surprising, as the protection of habitats is in most cases inevitable for the protection of species.

2.4 Part IV: Socioeconomic analysis

2.4.1 Introduction: Natura 2000 from an economic viewpoint

Planning, establishing and managing (operating) a Natura 2000 site can be considered to involve major economic costs and benefits. Assigning a certain plot of land for conserving biodiversity is, from an economic point of view, an allocation of property rights for land and land use. For instance, establishing a Natura 2000 site involves the restriction of economic uses, the change of current and future uses, and in the extreme perspective a complete loss of control over land property and land use.

The foregone benefits of land use alternatively to conservation (e.g. loss of hunting rights, agricultural or forest use) are defined as the opportunity costs of conservation. The benefits, on the other hand, can be assessed as the additional goods and services produced, for instance, ecological dynamics, species and ecosystem conservation, and external effects of conservation in the form of improving or securing ecosystem services beneficial for local communities.

The current gap analysis report does not take such a broad economic view of total economic costs and benefits of conservation but rather concentrates on policy-oriented dimensions of socioeconomic analysis. The following aspects will be covered in the current section 2.4:

1. Assessment of costs for establishing and managing Natura 2000 sites.
2. Comparison of actual expenditure and the level of expenditure needed to fulfil Natura 2000 objectives.
3. Financing structure of Natura 2000 sites.
4. Regional economic impact assessment of Natura 2000 sites in the countries (regions) of project partners.

These aspects clearly present only a selection of potentially interesting socio-economic questions around Natura 2000 sites. For general overviews on the economic costs and benefits of the Natura 2000 network, see Wätzold and Schwerdtner (2005), and Gantioler et al. (2010).

2.4.2 Costs of establishing and managing Natura 2000 sites in partner regions

Efficient site selection for nature conservation has been addressed in the scientific literature in manifold aspects; for instance, for each of the potential sites, a cost-benefit analysis might show whether economic costs are outweighed by economic benefits of conservation¹. The current gap analysis tries to focus on the necessary costs to establish an efficient Natura 2000 management in partner regions of the Be-Natur project. Therefore, the focus rather lies on the gap analysis regarding financial needs and actual expenditures, than exploring whether Natura 2000 sites were selected (or are currently selected) in an efficient and cost-effective way.

The survey in partner regions has generally exhibited a rather disillusioning picture regarding economic considerations in establishing and managing Natura 2000 sites. For instance, a number of partner regions indicated that

- the regional authorities could not produce or were not able to deliver relevant cost estimates for the establishment and management of Natura 2000 sites;
- relevant cost information is not yet available, or will only be available when concrete action/management plans will be in place;
- cost estimates or actual expenditure are only available on a national level in an aggregated database without the possibility to break down costs to regions or single sites;
- there are some costs/expenditure known for the production or implementation of single management plans or measures without the larger picture of costs for the whole region;
- cost/expenditure estimates prior to the establishment of Natura 2000 sites are not available or were not computed;
- more thorough planning including cost estimates would have led to a more efficient and effective Natura 2000 network;

¹ For optimal (efficient) reserve site selection, both from dynamic ecological as well as economic viewpoints, cf. e.g. Costello and Polasky (2004), Polasky et al. (2001), Önal (2004), Billionnet (2011), and Dissanayake and Önal (2011).

- there is a general lack of sufficient cost estimation and financing mechanisms and frameworks to assess and efficiently plan the establishment of Natura 2000 sites;
- site selection is based on studies or reports from earlier decisions regarding Natura 2000 site selection;
- a lack of stakeholder involvement or massive opposition of interest groups hindered the efficient and effective implementation of Natura 2000 regulations.

For single regions (countries), cost estimates have been reported. For instance, Romania has spent about EUR 30 million for the establishment of Natura 2000 sites (from 2003 to 2011), corresponding to EUR 3.82 per hectare, given a total area of Natura 2000 sites (SPA, SCI) of 7.8 million hectares. Compared to the following cost estimates of effective Natura 2000 sites, expenditure for establishing sites is extremely low.²

Contrary to statements regarding the lack of data, one of the Italian partners in the Be-Natur project (Province of Ravenna) indicated that the establishment of Natura 2000 sites could rather be calculated according to different expenditure categories (Table 3). The comparison of Table 3 and Table 4 highlights the very different efforts between countries to establish Natura 2000 sites and the expenditure subsequently. Costs of establishing Natura 2000 sites were estimated for Italy to amount to roughly EUR 1,650 per hectare, while cost estimates (only including financial out-of-pocket expenditure) amounts to below EUR 1 per hectare for Bulgaria. Even if income differentials were taken into account, the comparison stresses the need for internationally compatible cost assessments, and the financial resources needed in the different regions.

² Thus, it is no surprise that the European Commission has warned Romania due to the lack of fulfillment of the Birds Directive in 2008.

Table 3: Estimates of expenditure for the establishment of Natura 2000 sites in Italy

<i>Expenditure category</i>	<i>Expenditure (EUR per hectare)</i>
First check of feasibility / identification of possible sites of interest	50.00
Monitoring identified sites, studies for habitats and species according to the respective directives	100.00
Digitizing perimeters	1.00
Compiling data sheets	500.00
Meetings with stakeholders	1,000.00
Total costs of site selection and establishment	~ 1,650.00

Source: Be-Natur gap analysis survey, 2012.

Table 4: Estimates of personnel resources for the establishment of Natura 2000 sites in Bulgaria

<i>Expenditure category</i>	<i>Personnel resources (days)</i>
<i>Work for 130 sites, 2005</i>	
Field work for assessing suitable sites	3,200
Office work managing and submitting Standard Data forms	2,000
<i>Work for 225 sites (30% of the country's territory), 2003-2007</i>	
Field work	8,000
<i>Total financial expenditure (in addition to personnel costs)</i>	
Expenditure estimate	EUR 0.225 per hectare

Source: Be-Natur gap analysis survey, 2012.

Regarding a more differentiated picture of annual costs, only one partner region indicated that there is national data on annual costs available; four partners indicated that cost estimates exist on a regional level.

Regarding financial gap analysis, several partner regions reported substantial gaps in financing both annual establishment as well as investment costs.

Two partner regions substantiated the claim of financial gaps by quantifying needed and actual one-off expenditure (inventories, planning, and investment). Table 5 shows that even for the basic investigations on inventories, actual expenditure is – at best – only half of expenditure needed to fulfil basic Natura 2000 obligations regarding data collection.

Table 5: Financial gap analysis: annual (one-off) costs for inventories and investments

<i>Cost category</i>	<i>Needed expenditure (EUR/hectare**)</i>	<i>Actual expenditure (EUR/hectare**)</i>
Inventories	4-5	0-2
Planning	4-6	0-2
<i>Investments for</i>		
- Administration buildings*	0	0
- Equipment	0.3-0.5	0
- Movables	0	0
- Visitor centre**	550,000 to 1,000,000	0-250,000
- Other	n.a.	n.a.

* Zero under the assumption that Natura 2000 sites may also be managed by other authorities (e.g. national park administrations)

** For visitor centres: per centre or visitor facility.

Source: Be-Natur gap analysis survey, 2012.

Regarding running (operating) costs for newly established sites, only one partner (Province of Ravenna) was able to estimate costs for proposed sites. It becomes clear that a substantial financial gap exists for the establishment and management of new Natura 2000 sites (Table 6). For some regions, especially where sites have been established only recently, no experience and information regarding cost and expenditure is available.

A comparison of Table 6 with Table 7 indicates that there are basically no differences between needed costs for newly established and already existing Natura 2000 sites; a minor difference can be considered to be the slightly larger management expenditure for already existing sites which might be due to the unknown management costs of new sites, and the lack of management in place.

Partner regions also reported that for some categories of costs/expenditure, Natura 2000 sites are embedded in an already existing infrastructure. For instance, many Natura 2000 sites that have been nominated are located in protected areas underlying different legal frameworks. Several sites are part of nature conservation areas, national parks, or landscape conservation reserves. Thus, additional management costs for Natura 2000 sites might thus be lower for sites embedded in existing protected areas, while costs for newly established sites in areas that were not subject to conservation (protection) exhibit higher marginal costs. One partner region also stressed the fact that Natura 2000 management is located in already existing offices of national park authorities, however, much more office space and personnel would be needed for effectively managing the Natura 2000 sites with their specific conservation tasks (which might, of course, be different to other categories of protected areas).

Table 6: Financial gap analysis: establishment and management costs for proposed (newly established) Natura 2000 sites

<i>Cost category</i>	<i>Needed expenditure (EUR/hectare)</i>	<i>Actual expenditure (EUR/hectare)</i>
Management	50.00	0.00
Monitoring	10.00	0.00
Communication external	1.00	1.00
Communication internal	1.00	1.00
Personnel costs	10.00	5.00
Administration	5.00	2.50
Advertising, raising public awareness	10.00	0.00

Source: Be-Natur gap analysis survey, 2012.

Table 7: Financial gap analysis: management and operating costs for current (already established) Natura 2000 sites

<i>Cost category</i>	<i>Needed expenditure (EUR/hectare**)</i>	<i>Actual expenditure (EUR/hectare**)</i>
Management	50.00	5.00
Monitoring	10.00	0.00
Communication external	1.00	1.00
Communication internal	1.00	1.00
Personnel costs	10.00	5.00
Administration	5.00	2.50
Advertising, raising public awareness	10.00	0.00

Source: Be-Natur gap analysis survey, 2012.

2.4.3 Financing of Natura 2000 sites in partner regions

In general, financing protected areas has primarily been a public task. From an economic viewpoint, protected areas such as Natura 2000 sites, produce public goods such as biodiversity conservation, climate regulation, and the protection of water bodies. However, there are also mixed and private goods produced, such as information provision, recreation, and awareness rising (cf. with respect to financing protected areas, Miller and Kettunen, 2007; WCPA, 2000).

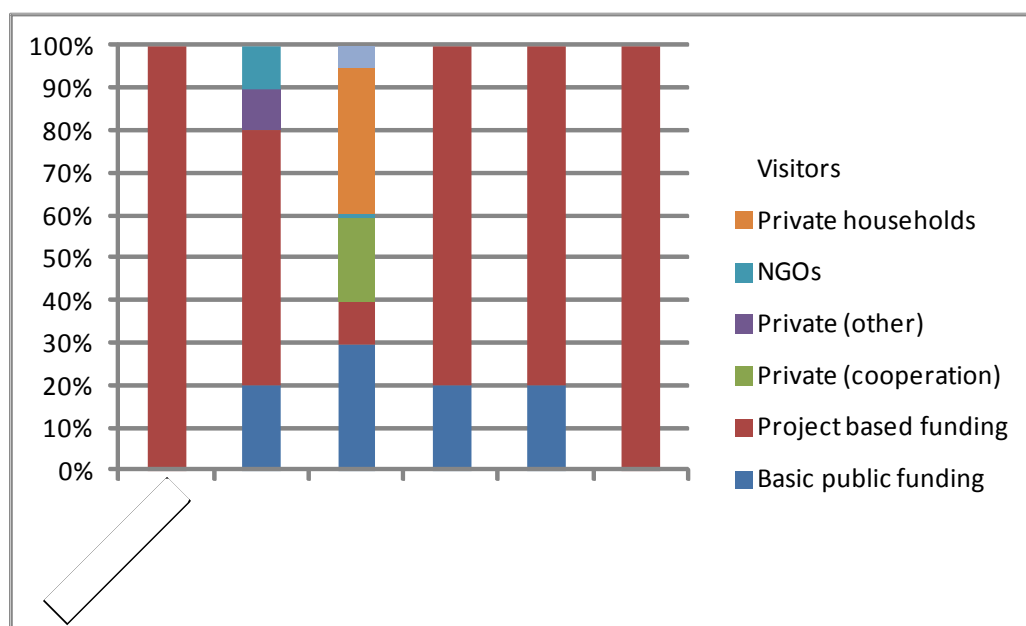
Usually, one would assume that the provision of public goods would be financed by public funds; during recent years, the debate centred on the question whether private funding sources may gain importance since the scarcity of public budgets might produce significant shortages in funds devoted to effective and efficient conservation.

The Be-Natur partner regions, first, indicated that a stable financing mechanism on a national level would exist only in one country, while two other regions referred to a funding scheme on the regional level. For the other partner regions, no data regarding the existence of funding programmes was submitted.

The extent to which basic public funding is secured for the establishment of Natura 2000 sites varies between 10 and 100%; however, in region where the public does not fully fund the establishment of Natura 2000 sites, project-based funding was implemented. As a general result, based on the gap analysis survey of the current project, financing is – with exceptions – mainly done by public sources, either by a basic funding independent of projects, or by project-based schemes. Other funding sources include NGOs which may contribute about 5% of funding for the establishment of Natura 2000 sites.

Regarding the operation and day-to-day management costs, financing is again very different between partner regions. Figure 1 suggests that in partner regions in Romania, Bulgaria, and Italy, project-based funding schemes are the major source of financing for Natura 2000 sites. Only Hungary seems to have a more differentiated financing scheme involving not only public funding but also private funds of households, companies, and NGOs.

Figure 1: Financing sources of Natura 2000 sites in partner regions (operation and management costs)



Source: Be-Natur gap analysis survey, 2012.

One potentially useful model for financing protected areas, especially Natura 2000 sites, might lie in the model of PPP (public private partnerships). In such a scheme, public authorities and private companies constitute a long-term cooperation agreement; basically, the role of the public is to define and monitor the

production of goods and services satisfying the public interests, while the private partner cares about the construction, establishment, maintenance, and operation (day-to-day production) for the goods and services to be delivered.

Some partner regions in the Be-Natur project indicated that there are many forms of cooperation between the public and the private sector. However, PPPs in a narrow sense have not yet been established. Cooperation is usually done with NGOs, for instance, the Austrian League for Nature Conservation, several other public bodies, or with research institutes.

The majority of partner regions did not indicate public-private cooperation programmes or schemes; PPPs in the sense of cooperative agreements between public authorities and private companies are not existent in the partner regions.

The financing structure of Natura 2000 sites was described by partners in the following way:

- Lack of specialized programmes or priorities in funding;
- Funding is based on several other regulations not specific to Natura 2000 (e.g. subsidies for sustainable agriculture, or conservation contracts);
- Complete lack of or unsustainable financing without major delays in planning, establishing and funding of Natura 2000 sites;
- Major reductions in available funds for Natura 2000 over the last few years;
- In some regions, the conservation goals of already existing and managed Natura 2000 are under serious stress since the lack of funds reduces resources devoted for managing and operating Natura 2000 sites;
- Financial plans that were drafted along with management plans have not been implemented;
- Project-based funding out of European Union (EU) sources is, for some regions, a major relief in financial pressure (while not able to compensate for the lack of national/regional funds).

All in all, the European Union estimates for efficient and effective management of the Natura 2000 network amounts to EUR 3.4 to 5.7 billion per year.

Regarding strengths and weaknesses of the existing funding mechanisms, the partner regions submitted the following statements:

- Weaknesses: lack of specific funds; existence of counter-productive subsidies; no reference to the causes of biodiversity loss (e.g. newly built infrastructure); unsatisfied demand for management plans due to lack of funds; red-tape and bureaucracy hinders effective Natura 2000 implementation; major delays in funding; funding is not continuous; lack of funding for monitoring.
- Strengths: Synergies between Natura 2000 sites and the protected area in which the site is embedded; some involvement of private initiatives and NGOs; EU funding in the frame of LIFE/LEADER projects; use of funding mechanisms of other sectors (agriculture, regional development).

Regarding funding by visitors at the Natura 2000 sites, only two partner regions indicated that visitors would have to pay for visiting the site. However, for future schemes on entry or use fees, regions had a differentiated picture about this funding source. The following dimensions are discussed in the partner regions:

- Entry fees should depend on the visitor programme offered; guided/special tours or education programmes might be funded by fees.
- Some tourist destinations offer regional visitor vouchers which could also be used as additional sources of funds.
- Voluntary services might also contribute resources to Natura 2000 sites.
- Entry fees would not be a good idea since there is already some public opposition against further nature conservation sites.
- Entry fees might be a good idea for famous and highly visited sites (threshold may lie at about 20 to 50 thsd. visitors per year). However, some Natura 2000 habitats might not be that attractive.

Regarding existing or newly planned visitor centres, 8 out of 10 partner regions indicated that visitor centres are already in place; additional visitor centres and facilities are planned in 6 partner regions. Visitors have to pay an entry fee in 3 out of 8 existing visitor centres, partially for special services such as guided tours, exhibitions, and entry to the visitor centre itself. However, in some visitor centres owned and operated by private companies, entry fees do not contribute to funding management and operating costs of the Natura 2000 site. In addition, entry fees might not cover even maintenance costs of the visitor centre.

Regarding the future development of entry fees, partner regions indicated that

- entry fees are generally not common but should be exploited for further financing of Natura 2000 sites, and could be combined with special packages or customer/tourist cards and schools;
- there is some hesitation towards levying an entry fee due to the already existing negative public opinion regarding Natura 2000 sites, and that free entry to the visitor centre would be enhancing public awareness and perception of the Natura 2000 site;
- entry fees could help Natura 2000 that are owned/operated by NGOs or other associations in order to fund visitor information and presentation activities;
- additional entry fees might lead to a decrease in the number of visitors;
- existing visitor centres are currently focused on the nature reserves, and that the Natura 2000 is only part of these reserves;
- entry fees might run contrary to the task of educating visitors.

Regarding merchandizing and shops, 3 out of 10 partner regions indicated that merchandizing exists around the Natura 2000 sites. Merchandizing is considered to be some addition to revenues of the Natura 2000 and might certainly help the funding of the reserves. However, opinions towards the funding potential of merchandizing and shops vary. Most importantly, additional revenue from visitors might be due to guided tours or some special programmes offered. It does not seem that partner regions believe that this could in general be a significant source of revenues to cover management and operating costs of the Natura 2000 reserve.

2.4.4 Regional economic impact analyses in partner regions

A final part of the Be-Natur gap analysis survey included some questions referring to the regional impact impacts of Natura 2000 sites. In an Austrian research study, Getzner and Jungmeier (2002) have discussed the potentially significant impacts of Natura 2000 sites in terms of additional local and regional production (income) and employment.

Regarding available statistics with an emphasis of employment in partner regions, data provided indicates a rather disillusioning picture of data availability and statistics. Only 3 out of 10 partner regions have a national inventory of jobs in the Natura 2000 sector, with 5 out 10 regions with regional statistics.

In the federal state of Styria (Austria), 8 employees of the provincial government are currently working on the management of Natura 2000 sites.

In the Province of Ravenna (Italy), in total 13 persons work in several Natura 2000 sites mainly concerned with the management of visitor centres, and with the administration and management of the sites.

Table 8: Personnel needed for the management and operation of Natura 2000 sites (No. of full-time jobs)

<i>Tasks</i>	<i>Per site (fixed)</i>	<i>Per 1,000 hectares</i>
Management	0.15-1.0	n.a.
Administration	0.11	n.a.
Visitor centres	0.23-5.0	5.00
Others	n.a.	n.a.

Source: Be-Natur gap analysis survey, 2012.

From the viewpoint of tourism as a potentially significant determinant of regional economic development, the partner regions expressed a broad range of viewpoints on tourism and its impacts on the region:

- Tourism as an important strategy in regional development: Partner regions in Austria, Italy, and Romania reported that there are diverse programmes for tourists emphasizing both the Natura 2000 site, and its characteristics, as well as different special offers (e.g. school kids, guided tours). In these regions, nature conservation certainly serves as a significant contribution with visitor numbers over 50,000 per year and site.
- Developing tourism: In some partner regions, for instance, Bulgaria and Hungary, tourism numbers are currently increasing; however, for many tourist destinations, the connection with the Natura 2000 network is not clear, and there is no strong connection made between tourism and nature conservation.

- In some regions, even in those countries with significant tourism, there are many sites that do not attract visitors, or where visitors do not stay overnight.

All in all, it seems that Natura 2000 sites alone may not be able to attract tourist numbers sufficient to contribute significantly to regional development. Rather, Natura 2000 sites integrated in other categories of protected areas (e.g. national park, state parks, and nature reserves) may be beneficial for the local economy.

Referring to local acceptance and public awareness of Natura 2000 sites, partner regions addressed a number of interesting dimensions:

- In some regions, there is a clearly positive public attitude towards the establishment and operation of Natura 2000 sites. It seems that cooperation between the management of the site and the local stakeholders (municipalities, business networks, and schools) increases public awareness significantly.
- Positive public attitudes towards the regional Natura 2000 sites also depend on “good governance” involving all stakeholders; however, this kind of participatory planning and management needs specific resources which are not available in several regions.
- Information about the meaning of Natura 2000 also seems to hinder public awareness and acceptance. Some regions reported that even the simplest understanding of the Natura 2000 concept is nonexistent among the local and regional population.
- Acceptance and public attitudes towards Natura 2000 sites and the network may change over time; for instance, one region reported an acceptance rate of over 70% when the sites were established, subject to change in the case of hindered investment or development opportunities.

2.4.5 “Optimal” size of a Natura 2000 site from a socio-economic viewpoint

Responses from the gap analysis survey in partner regions suggest that there might not be any “optimal” size of Natura 2000 sites. Planning and management of Natura 2000 sites may basically be determined by scientific evidence (habitat extension, habitat characteristics, species distribution) rather than by economic considerations or influence of stakeholder groups (cf. Louette, 2011; Selman,

2009; Cantarello and Newton, 2008). Opinions were diverse among partner regions:

- Size of Natura 2000 sites, of course, varies considerably between 0.1 and 50,000 hectares, depending, for instance, on the natural (conservation) good to be protected.
- Current budgets are not “optimal” in the sense of an efficient and effective Natura 2000 management already in place. Thus, it is not feasible to assess what the “optimal” size would be.
- As the fulfilment of the obligations of the Habitat and Birds Directives are at the centre of Natura 2000 management tasks, the “optimal” size based on economic costs (and benefits) is not an appropriate approach.

2.5 Analysis of best and bad practice examples

A focus of the project is the exchange of experiences and knowledge regarding Natura 2000 sites. Thus best practises and bad practises respectively are of high significance and an important source of information. In particular practises examples in terms of stakeholder involvement and educational activities, monitoring experiences, management strategies and examples on financing cases as well as tourism development are of interest for the analysis. The following table provides an overview of the delivered best practises example.

Table 9: Overview on best practices

Project partner	Country	Field of experience	Reason for best practice
Agricultural Research and Education Centre Raumberg-Gumpenstein/ AREC	Austria/ Styria	Educational activities	Successful stakeholder cooperation, environmental activities
Danube Delta National Institute for research and development/ DDNI	Romania	Management strategies	Implementation of water management model
		Management strategies	Significant progresses in designation
		Stakeholder involvement	Development of compensation payment scheme and habitat manual
		Educational activities	Biodiversity guide on legal provisions and practical steps
		Educational activities	inventory of vegetation and several animal groups improved knowledge base
		Monitoring	European Mink Handbook
		Monitoring	Protection of juvenile White-tailed Eagle population
		Financing cases	Cooperation of industry, economic efficiency improvements
Timis county represented by Timis County Council/ TIMIS	Romania/ Timis County	Management strategies	Regulations, waste water collections system
Development Agency for South Epirus –	Greece	Stakeholder involvement	local participation, awareness

Amvrakikos/ ETANAM			
Lake Balaton Development Coordination Agency/ LBDCA	Hungary	Management strategies	Contractor system with management guidelines; increase of managed area
		Management strategies	Significant increase of managed area
Nimfea Environment and Nature Conservation Association/ NIMFEA	Hungary	Monitoring	Development of National Biodiversity Monitoring System
		Management strategies	Management of grassland habitats
Province of Ravenna	Italy/ Province of Ravenna	Management strategies	Restoration of habitats in Padana Plain
		Educational activities	Educational experiences for children and adults
		Monitoring	Monitoring system for birds in Po Delta
Veneto Region - Commission's Coordination Project Unit Veneto Region	Italy/ Veneto Region	Management strategies	mitigation of the impact of human pressure on biodiversity
		Management strategies	Elaboration of strategy for the conservation of a bog complex
		Stakeholder involvement	Comprehensive and systematic consultations of stakeholders
		Educational activities	Development of specific training courses
		Monitoring	cross-border monitoring of flora-vegetation and fauna
		Tourism development	Eco-tourism in Somadida forest
		Tourism development	Integration of environmental values and mass tourism in Natural Park
Consortium of Management of Torre Guaceto/ Torre Guaceto	Italy/ Apulia Region	Management strategies	restoration of coastal lagoons
		Financing cases	revenues generated within park guarantee park's economic independence
Strandja Nature Park/ Strandja	Bulgaria/Burgas district	Stakeholder involvement	Development of preliminary action plan
		Educational activities	Training of mountain guides
		Tourism development	Eco-tourism development

2.5.1 Management strategies

DDNI (Danube Delta National Institute for research and development, Romania) provided a good example of efficient management for a species breeding site with quantifiable (and also) positive results in the framework of the LIFE project "Save the Dalmatian pelican in the Danube Delta" (LIFE05NAT/RO/000169; project duration 2005-2009; budget € 656 928). **DDBRA** (Danube Delta Biosphere Reserve Authority) was the coordinator of the project, while the Romanian Ornithological Society and the Romania Royal Society for the Protection of Birds were associated partners. The Dalmatian Pelican is considered vulnerable and the global breeding population is estimated between 4000-5000 pairs. The European population is vital for the survival of the species as the two major subpopulations (ca.700 pairs in Greece and ca. 400 pairs in Danube Delta Biosphere Reserve-Romania) are the last remaining strongholds of the species outside the former Soviet Union where a large decline has been noted in recent decades. The population of the Danube Delta targeted by the project represents 33.5-36.5% of the European population outside the former Soviet Union. The main threats to the species at its breeding sites are disturbances and degradation of the natural habitats. The specific results of the project were a stabilised breeding population in three sites and an increased breeding population in two sites (Rosca-Buhaiova and Ceaplace). With an increase of 28% on population size compared to the prior to the interventions, the highest number of breeding pairs was recorded for the late decade on the Ceaplace Island in 2009. Another important outcome was the designation of all breeding sites as Natura 2000 network SPAs as well as the designation of all breeding sites as core areas within the Danube Delta Biosphere Reserve. Additional breeding units were created by installing artificial structures (e.g. underwater wood protection wall, 350 m² fix platform, mobile platforms, fences and warning signs, 150 markers on electric lines); at the end of the project a total of 47 of the planned 50 units were built. The number of breeding pairs on the island, which were not exposed to human disturbance increased significantly.

A second best practise example by the Romanian project partner **DDNI** was the LIFE project "Development of an Integrated Basin Management System in order to correlate water quality and quantity analysis with socio-economical analysis, using Open-Geographical Information Systems (GIS)" (LIFE03 ENV_RO_000539; project duration 2003-2006; budget € 728032), a cooperation of the National Institute of Hydrology and Water Management, the National Institute of Meteorology, Hydrology and Water Management, the National Administration Apele Romane–Siret Waters Directorate and the French partner Sisyphe Centre. The development of an integrated information system for water management for

Bistrita river basin was at the core of the project. The Bistrita catchment basin is highly sensitive to human activities and is one of the most polluted basins of the Danube Basin. A Romanian Waters Annual Report on water quality revealed a high concentration of ammonium, nitrates, and organic matter. The overall anthropic pressure has led to a decrease in drinking water resources.

The water management system thus should help to preserve and enhance the water quality by the observation and measurement of the quality of river and aquifers. The creation of an Open-GIS system integrating the available database, model outputs and water prices aimed at the development of water quality models to analyse pollution levels and impact scenarios. The project team managed to establish the location of the pollutants near Bacau city and position the cross-section and hydrometric surveys vertically using GPS technology. It was also feasible to locate "observation wells", "exploitation wells", and "monitoring wells" using a combination of GPS and piezometric (pressure) level measurements.

For the related monitoring work, "in situ" measurements for improving and updating the existing database were performed continuously. Several parameters such as plankton biomass, ammonium and nitrate concentration in the surface water were carried out by portable multi-sensors in addition to a series of laboratory analyses. Emissions monitoring was carried out by sensor stations. The project developed three mathematical models:

- The surface water model "Riverstrahler" captures nutrient cycling and ecological functioning in river catchments. The model couples a hydrological model (Hydrostrahler) with an ecological model (Rive). The outputs include the seasonal and geographical variations of the main water variables: discharge, oxygen, phytoplankton biomass, nitrates, ammonium, total phosphorus, and suspended matter.
- Modcou model, which combined a hydrological model with meteorological conditions to analyse the piezometric variations and discharges in both surface and groundwaters over a ten-day period
- Newsam, which predict nitrate circulation and evolution as a result of nitrate pollution of surface and ground waters.

The main project output was an adjustable model- users can modify the model inputs and process spatial data for specific computations and then integrate the multi-source processed information in decision-analysis matrices in order to better understand the impact of the pollution on humans and the environment. The system allows for an upgrade of the result within a decision-analysis common-access space on the GIS Server. Calculating the environmental costs, assessing

the cost-effectiveness of different measures and thus produce appropriate short- and long-term data to support decision making is feasible. All the partners and end users can access the system using a common web browser, such as Internet Explorer, to store, display, analyse and retrieve information.

Another insightful case of **DDNI** for the successful development of management measures with the objective to ensure and increase the favourable state of habitat for species is the LIFE project "Branta ruficollis Techirghiol -Improving wintering conditions for Branta ruficollis at Techirghiol" (LIFE04 NAT/RO/000220; project duration 2004-2007) coordinated by the National Administration of Romanian Department of Water Dobrogea Litoral, supported by the project partners Romanian Ornithological Society and Techirghiol Mayorality. The project aimed to maintain and protect the Branta ruficollis population at Lake Techirghiol and its vicinity, including the designation of the lake as a Special Protection Area. The brackish water conditions at this lake are of vital importance for geese during the coldest months of the winter because it is the only wetland area in the region that does not freeze. The population is particularly vulnerable in the wintering area and the main threats that required urgent action were hunting and disturbance from other human activities at roosting sites and feeding grounds, deterioration of the key roosting sites and poor availability of food resources during the coldest winter months. As a result, safe feeding conditions by farming of 27.7 ha purchased land were ensured and the degradation of roosting habitats was stopped. The project's overall goal of ensuring maximum protected status for Branta ruficollis and its habitats was achieved with the designation of Lake Techirghiol and the surrounding area as a Ramsar site and SPA. A new management plan was also put in place for the species and habitats.

NIMFEA (Nimfea Environment and Nature Conservation Association, Hungary) also listed a LIFE project (LIFE02NAT/H/8634; project duration 2002-2005) regarding the restoration of pannonic steppes and marshes of Hortobágy National Park carried out by the national park's directorate as a best practise management example. The project aimed at restoring the pannonic salt steppe habitats (Natura 2000 code: 1530) of Hortobágy, in particular their hydrological conditions (restoration of cut catchments and beds with the elimination of abandoned channels and dikes). The background was that the early 20th century canalisation badly affected at least 1/3 of the grasslands of the Hortobágy national park. During the project about 500 km of canals were back filled, which affected 10.000 ha. After the ground works, some selected areas were seeded with locally harvested native grass-seeds, mainly with Festuca pseudovina. The main result was that the alkaline soils and the healthy surrounding vegetation provide

very good self-regeneration abilities and thus the step of the seeding was not mandatory. Problems occurred when authorities required extensive archaeological explorations prior to every tillage, causing questions regarding efficiency and immense expenditures. This example also serves as an illustrative case for conserving EU's grassland habitats at the first LIFE Nature 'best practice' conference (Brussels, 17-19 November 2008).

LBDCA (Lake Balaton Development Coordination Agency, Hungary) also refers to a LIFE project (LIFE06 NAT/H/000102; project duration 2007-2009) "Restoration and grassland management of Felso-Kongó meadows" within a 455 ha part of the Tapolca Basin Natura 2000 site (HUBF20028). The focus was on the *Molinia* meadows, the repression of invasive goldenrod and bushes (*Frangula alnus*) by developing adequate management strategies primarily by mechanical cutting. The elaboration of a functioning nature conservation management programme and the improvement of the water supply of the area as well as the elevation of the groundwater level with the help of locks and canals were important project tasks.

The target area of the project included the following habitats: *Molinia* meadows (6410), Alluvial meadows (6440) of river valleys of the *Cnidion dubii*, Lowland hay meadows (6510; *Alopecurus pratensis*, *Sanguisorba officinalis*). Tapolca Basin is in the direct neighbourhood of Lake Balaton. On the rich peat soils, developed during the Holocene, when the water level of the Balaton had been higher and thus a shallow lake had covered this area, rich-fens and meadows flourished. Despite of the fact that the draining processes in the area have already begun in the second half of 19th century, the Tapolca Basin is still one of the most valuable fen complexes in Hungary today. The Tapolca Basin is an environmentally sensitive area and the natural vegetation and habitats of the basin play a significant role in the improvement of the water quality of creeks running through the basin and into the lake.

Invasive species (e.g. *Solidago gigantea*) that threatened parts of the site were confined, the growth of shrubs was prevented successfully and the areas suitable for mowing were enlarged. With the established canals it was possible to ensure the appropriate groundwater-level. At the end of the project the habitat structure and the total area of grasses suitable for mowing transformed significantly and increased by about 30 %. The process and the impact of the interventions were monitored continuously as the changes occurring to the populations of the selected species and the habitats were surveyed. In addition the ex-

change of information and experiences with the public and the local farmers (field visits, presentations) was encouraged.

Another example of **LBDCA** (Lake Balaton Development Coordination Agency, Hungary) is an ongoing project (project start 2004) for the increase of proper management sphere for the Natura 2000 site Kis-Balaton (HUBF 30003). The Directorate has managed 1736 ha grassland state property at the Kis-Balaton (HUBF30003) site, but unfortunately a large proportion of these areas has been managed inappropriately due to the changes of the economic and farming structure in Hungary in the years of the political transformation. In a result, the proportion of invasive species and bushes has grown. The main problem has been caused by the following species: *Solidago gigantea*, *Amorpha fruticosa*, *Acer negundo*, *Fraxinus pennsylvanica*. To counteract these threats the Directorate has operated extensive farming centres in the area where native Hungarian domestic animal breeds (Hungarian Grey Cattle, Water Buffalo) are kept and bred. Besides these breeds are also of high interest for touristic and educational purposes. The development of the centres and the stock as well as the increasing of the adjacent grazing lands and pastures have had a strong positive effect on the rehabilitation of the valuable grassland habitats. Due to the limited machine stock and workforce, the management of such a large area can only be ensured with the cooperation of contractors. The project has also been supported by "blue collar" workforce within the framework of the annual public working project. Moreover a part of the grasslands (782 ha) are let on lease by contracts of tenancy. These contracts include the proper management guidelines for the sites, which are mandatory for the contractors managing these sites. The lease of the Natura 2000 grasslands resulted in the rehabilitation of the habitats and in the improvement of the relationship between official nature conservation and the local farming sector. The grassland management in connection with the maintaining of the animal stock has not only contributed to the improvement of the habitats but also ensured the preservation of the gene pool of Hungarian native animal breeds.

Veneto Region (Veneto Region - Commission's Coordination Project Unit, Italy) was involved in another LIFE project "LITORALE VENETO - concerted action for biodiversity on the Veneto coast" (LIFE03 NAT/IT/000141; project duration 2004-2006; budget € 1 350 000) carried out in a cooperation of Azienda Regionale Veneto Agricoltura and Veneto Region Forestry Services. A network of 13 Natura 2000 sites along the Venetian coast comprises a range of vegetation types from pioneer plant communities on the seashore to several types of dune habitats, humid depressions behind the dunes, permanent wet grasslands, as

well as pine and oak forests. The beaches of these sites are a summer vacation destination of tourists from northeast Italy, Austria and Germany. The high concentration of tourists in the area leads to a serious degradation of these coastal habitats. Other threats are agriculture, resulting in the fragmentation of the habitat and loss of biodiversity and the spread of alien species. The project included coordinated actions on all the Veneto sites of the coastal area.

At the beginning of the project there were minor organisational problems that reduced the amount of time available to implement some intended actions and also affected the regular implementation of some monitoring studies. Nevertheless, the project successfully achieved the renaturalisation of retrodunal humid areas and stopped the loss of retrodunal water habitats. In addition, 150 hectares of pine forests were thinned in order to foster the biodiversity potential of the involved areas, and reproduction of typical coast arboreal/shrub species has been started. Several attractive information and dissemination tools were produced and distributed. Various monitoring studies on habitat, animal and plant species were carried out to test the project's impacts. Nevertheless, further monitoring appears to be advisable. The beneficiary and associated partners have continued to work with other public authorities and private entrepreneurs to spread the key project's findings and intervention methods.

The project contributed to the knowledge and management of coastal habitat preservation, producing sound and updated intervention guidelines. It put into practice tools for minimising marine erosion and increased awareness among relevant authorities concerning this problem. In particular, the project had a positive impact on more than 200 ha of land and increased the size of the grey dune habitat. In addition, private actors involved in projects requiring an Environmental Impact Assessment were addressed on the basis of these interventions.

This best practice example demonstrates the successful mitigation of the impact of human pressure on biodiversity of the Veneto Adriatic coast, reinforcing the ecological connection, preserving hygrophilous grasslands and wetlands behind the dune belt through engineering work, and allowing proper management of the water levels. In addition, grasslands and fossil dunes habitats were restored through the elimination of exotic plant and selective felling of pine plantations to favour the spread of grassland habitats.

Veneto Region (Veneto Region- Commission's Coordination Project Unit, Italy) also referred to the results of the "Safeguard and showing off of the peat-bogs in Danta (Cadore)" project (LIFE04 NAT/IT/000177; project duration 2004-2008; budget € 841 650) carried out by Danta di Cadore Municipality (Comune di Danta di Cadore) and Veneto Region Forestry Services. The target area comprises six bog habitats, whereas two of them are listed as priority habitats in the Directive. Another reason for the necessity of the action was that the reed bed and woods drained the soil and transformed humid areas into dry habitats. Moreover the chemical composition of the water and the lack of maintenance of the tributaries affected the bogs' hydraulic balance requiring immediate actions.

The elaboration of a detailed intervention plan resulted in the implementation of a coordinated strategy for the conservation of the bog complex. It also controlled the spread of reed beds and other invasive species on 38 ha, and the spread of the conifers invading the bogs on another 38 ha. This action was complemented by the annual monitoring of the biodiversity status in the project site. Another key result of the project was the creation of two small canals along the road to collect the salt water and to channel it downstream of the bogs. In order to guarantee an optimum inflow of freshwater to the wetland area seven small scale engineering works on the tributaries were carried out. In the context of high presence of human activities and tourism the project increased the favourable status of precious habitats. In Italy, bogs are residual and often privately owned. The project also demonstrated that the relationship between public authorities and private owners for the management is difficult. On the one hand this is due to the fact that private owners are highly suspicious of the plans and interventions of local authorities. On the other hand local authorities tend to underestimate these difficulties and thus do not make plans for adequate awareness rising actions. This represents one of the most difficult management actions to carry on related to Natura 2000 network maintenance.

Province of Ravenna's RIVIVRO project is an ongoing project (2009-2013; budget € 634 500) for the restoration of habitats and species in the protected areas and Natura 2000 sites located in the South-East of the Padana Plain. The project is linked to another programme with the same name focussing on environmental education for children (primary school age) and information for adults about the importance of nature preservation.³ The Padana Plain is characterized by human modifications and utilization resulting in a very poor biodiversity, in

³ for more information on environmental education part of this project please see section 4.2 Educational activities

particular in freshwater habitats. A number of plants and animals typical of wetlands are extinct locally, thus a project to restore habitats and to reintroduce the extinct species in 8 small scale protected areas (of which a total of 5 are sites of the Natura 2000 network) has come to life. The approach has comprised the restoration of the disappeared habitats (woods, wet/dry meadows, ponds, river dead branches) and rare species with the following steps:

- Cultivation in botanical gardens
- Reintroduction of cultivated plants in newly restored habitats
- Seed banking of local rare species
- Gathering of wild local extinct animals (fish, amphibians and reptiles) from approximate areas
- Stock-breeding
- Reintroduction in new restored habitats of raised animals

A problem of the project implementation has been the justification of related project costs as these expenditures have been subject to critique by local politicians. The importance of biodiversity vital for the future of the conservation of protected areas and of Nature 2000 sites has been promoted with the support of press releases and workshops referring to habitats and species as defining part of collective memory.

Torre Guaceto (Consortium of Management of Torre Guaceto, Italy) refers to an action concerning the restoration and the re-naturalization of coastal lagoons started and implemented in 2008, supported by comprehensive study work. The natural park site and target area is located in the wetland of Torre Guaceto (BR) and is an important terrestrial natural park characterised by tricky hydro-geological balances between freshwater of stratum and marine water from continental intrusion. The hydro-geological balances relevant for the persistence of the wetland were threatened by the interrelated anthropic activities of transformation (drainages of wetlands) and exploitation (massive agriculture) of land. These gradual processes damaged the hydro-geological balances and habitat's quality (aquatic and terrestrial). The main target of the action was to increase the surface area of the ponds in the reserve, raising the number of birds and to improve the ecological system of wetland as well as the reduction of harmful influences associated with landfill.

The creation of a pond, characterised by stagnancy of freshwater facilitated the re-introduction of native floristic species in these habitats. In addition, a pond

for fire prevention and water supply purposes was created in the southern area of the wetland. These integrated interventions allowed for the regeneration of the coastal lagoon priority habitat. The studies prior to the action were of high significance for the development and implementation of the project targets.

TIMIS focussed on the protection of wetland, coastal, silvan, grasslands habitats by the reduction of human impacts in the protected area Surduc Lake in Romania. The main challenges were the reduction of unrestricted tourism and harmful recreational activities (fireplaces, boat trips etc.), the prevention of illegal deforestation and poaching as well as the prevention of unauthorized construction works. The reasons for the necessity of the implementation of practises were mainly the preservation of the uniqueness of the habitat and the threat by authority's inertia and ignorance of the value of the habitat. Various actions were set to develop a proper management strategy and to oppose adverse human activities. The approach aiming at the abatement of ignorance of natural heritage included a scientific analysis of the human impacts, leading to recommendations and concrete implemented steps. According to the scientific documentation, recreational activities were regulated by strictly prohibiting motor boats and any kind of poaching as well as by establishing of fishing seasons. A "buffer zone" was set up to, allowing a more environmentally friendly agriculture and mitigating the impacts of existing constructions. Moreover a wastewater collection system was implemented and the controlled collection of hazardous waste was put into practise. These results have enhanced a permanent security and protection activity of the Surduc Lake area.

2.5.2 Stakeholder involvement and educational activities

The involvement of relevant stakeholders is supposed to have great impacts on project progress and outcomes. Thus, the following best practises highlight numerous experiences where mutual benefits in terms of awareness, acceptance and appreciation were generated. Educational activities are of crucial importance for the sustainable establishment of the Natura 2000 network. Trainings, workshops, special programmes, guides and other dissemination material support knowledge exchange and help ensuring advancements.

Stakeholder involvement

Facing complex hydrological problems and the damages due to unsustainable land use activities in Amvrakikos wetlands in Greece, **ETANAM** (Development Agency for South Epirus – Amvrakikos, Greece) recognised that the development of an integrated management strategy for the whole area was the only way to antagonize these problems in a coherent way. This not only meant the coordination of the restoration and management of the valuable habitats and species worth protecting, but also ensuring that the area's natural assets were fully acknowledged in the regional development plans for the Amvrakikos region. With an international reputation as a biodiversity "hot spot", the delta is ideally placed to capitalise on the emerging eco-tourism market. This in turn should help to diversify local economic activities away from the unsuccessful agricultural programmes of the 1980s. The project was managed by the ETANAM with the technical support of its LIFE partners – notably a private consulting company with a long track record in the conservation of wetlands in Greece and a leading NGO, the project team aimed at the restoration of the lagoons and their hydrological characteristics, the protection and management of the habitats of six priority bird species (including the Dalmatian pelican for which the site is one of the most important in Europe) and the reduction of the loss of sea turtles in the surrounding bays by working closely with the local fishermen.

Therefore a comprehensive information base on the area's natural resources and their conservation state had to be developed at first. Only few restoration measures had taken place prior to the LIFE-Nature project, so detailed inventories and plans had to be set up for each of the main species and habitats. The six priority bird species were systematically monitored, information was collected in a database and conservation priorities were set. The results of the recordings contributed significantly towards the definition of the habitat management needs in Amvrakikos. In addition, a detailed identification and mapping of habitat types took place, in particular those habitats of importance for avifauna. Moreover macrophytes of the Rodia, Tsoukalio and Logarou lagoons were sampled and assessed to better describe the lagoon habitats and identify the abiotic and biotic parameters.

At the end of this information gathering stage the knowledge of the avifauna, the lagoons and water-related issues in the area was increased substantially. The information was used to generate a series of useful management and monitoring tools (water management plan, reed bed management guide, water monitoring system, habitat monitoring plan) which were implemented at project level

and at a long term basis as well. Especially for the restoration of the hydrology of the wetlands, which had a major impact on the landscape, innovative techniques were used. The lagoons responded immediately after being reconnected to their source of freshwater. Another measure with high-demonstration value was the creation of artificial islets for Pelicans which led to an increase in the local population from 32 pairs to 92 pairs from 2000 to 2003. This was the first time that such techniques were tested in Greece. The key ingredient for the successful implementation of the project and related outputs was to gain local support and acceptance. The project team put a lot of effort into involving target groups in the decision-making process and organising various events to allow people discover their local natural heritage promoted by further support of extensive media work and the permanent presence of skilled project staff.

In the case of **Veneto Region** (Veneto Region- Commission's Coordination Project Unit, Italy) a project on "Management plans guidelines - mandatory stakeholder involvement - regional regulation D.G.R. 4241/2008" (project duration 2007-2009) was provided. The management coordinator was Veneto Region - Commissions' Coordination Project Unit and the project was carried out in collaboration with local authorities. Starting with the preparation of the management plan local people (the groups engaged at local level, associations), environmental organisations and public bodies in the concerned area were involved to discuss the technical content of the plan and setting up partnerships.

Actively involve citizens in decisions affecting the local community can be a challenging task to undertake. In general, every citizen provides some of his/her resources (time, energy, etc.) only in cases where there is a real chance to be heard and to influence decisions which directly concern them to some extent.

The process of involvement required major organisational efforts and showed impacts in the medium and long term perspective. Information, awareness and the prospect of actually realizing options encouraged the implementation of the actions proposed in the management plan. In order to achieve the involvement properly, consultations took place on the basis of a protocol described in a "consultation document". This document contained the scope of the activity, the specific cognitive goals to be pursued, and the groups of people invited. For the purpose of information processing, the document included an appendix describing the scheme to be used for the responses and the definition of the transmission method to the authorities. Before defining the final draft of the management plans, each plan had to be discussed in at least six public assemblies.

In addition it was appreciated to make written remarks on web published documents during three specific periods of time. Those invited to the public assemblies submitted notices in the "document" (both for the paper and for the electronic version). The "document" and the results for each management plan were published on the local authority's, province's and region's websites.

During project implementation it was apparent that most of the involved people faced the Natura 2000 management topic for the first time. Conflicts in terms of complexity of the issue and the rising of many individual requests were overcome by increasing the number of public assemblies and by strictly sticking on to the same framework model. In this way there was time for everybody to clarify which contributions should actually be brought to specific plans.

All the documents and the results of consultation were part of the final draft of the management plan to be approved. This described methodology was the first widespread consultation ever carried out in Veneto Region on Natura 2000 management. It has led to better management actions and reduced costs compared to projects conducted without stakeholder involvement.

ETANAM (Development Agency for South Epirus – Amvrakikos, Greece) refers to "Collaborative Ecosystem Management", a crayfish reintroduction pilot project, resulting in specific management plans in Amvrakikos. Activities like hunting, grazing or cultivating the fertile land of Amvrakikos have been carried out for centuries. Reaching a consensus with the stakeholders, like the Greek hunters, has always been a huge issue. Moreover the participation of local communities in the environmental improvement or enhancement has always been hard to achieve. The extermination of the crayfish population of the river Louros, which had been quite important for the locals' nutrition, helped to achieve sensitisation and participation at the local level. Regarding the hunting management plan, the collaboration with a specialist team led to a consensus on the determination of hunting areas and hunting periods as a part of the local policies. So the active involvement of stakeholders significantly improved the situation and was an important factor for the success of the pilot project.

According to **STRANDJA** (Strandja Nature Park/ Strandja, Bulgaria), Bulgaria is at the beginning of the implementation process of the Natura 2000 network. The preliminary action plan for the Natura 2000 site "Bosna"(2008-2010) provides the guidelines and steps for institutional responsibilities regarding the future protection of this site. The plan outlines problems related to conservation of the protected site and the measures necessary to solve them. The approach for the development of this action plan includes the description of the current state of the protected site "Bosna" (location, borders, administrative region, bio-

geographical region), determination of the main objectives for the protection of the site, assessment of the site's relation with the Bulgarian and international legislation; description of the site's relation with other Natura 2000 sites and with the CORINE biotopes areas too. As a result, strict compliance with environmental regulations documents for the protection of habitats in the Protected site "Bosna" was achieved. The coordination and exchange of information between the institutions for effective protection of the protected site was improved and the integration of the plan into local and regional strategies was enhanced. Associated with these results an effective control of illegal cutting of forests and unauthorized collection of herbs and poaching was established. All these steps helped raising the awareness of local people about the problems of the protected site and its conservation.

The actual implementation of this plan enhances the involvement of local people in the management, conservation and use of the protected site in accordance to strict environmental laws explicitly. Thus, the interest of local population in preservation of natural resources is supposed to increase.

The LIFE project "Priority forest, sub-alpine and alpine habitats in Romania - Forest-Alp NATURA 2000" (LIFE05 NAT/RO/000176; project duration 2005-2009; budget € 933490) coordinated by the Transilvania University in cooperation with the associated project partners WWF Danube Carpathian Programme (WWF DCP), National Forest Administration Romsilva (NFA Romsilva), and Ministry of Agriculture, Forest and Rural Development served as a best practise experience of **DDNI** (Danube Delta National Institute for research and development). The project targeted all known Romanian forest, sub-alpine and alpine areas covering a total project area of 6.5 mill. ha. The overall objective was to prepare the designation of Romanian Natura 2000 sites for forests, sub-alpine and alpine habitats. Thus, important sub goals were the identification, mapping and description of potential SCIs according to the Habitats Directive.

Forest, sub-alpine and alpine areas cover about 40% of Romania's territory and comprise a range of rare and important species as well as habitats. Changes in land ownership posed a major threat to valuable forest habitats. Private as well as public owners were subject to growing economic pressure. While public owners were under some obligations to preserve biodiversity, private owners often had little incentives to protect biodiversity values. Land abandonment and intensification of land use similarly led to significant losses of biodiversity in sub-alpine and alpine pastures.

The project was well implemented and contributed significantly to the development of the Natura 2000 network in Romania both by its direct outputs. An im-

portant step for the success of the project was the consultation of key stakeholders and lobbying by decision makers. The inclusion of stakeholders and the development of compensation payments for private owners was an important cornerstone. The main direct outputs included the preparation and publishing of threat studies and of guidelines for the monitoring and management of target habitats. These studies were distributed among key stakeholders across the country and available on the project website.

50 of 56 proposed sites for pSCIs located outside the existing protected areas were accepted and designated. The developed compensation payments scheme for private forest land owners was recognized by the Ministry of Environment and the Ministry of Agriculture, serving as a model for compensation schemes for all habitats. Finally, one of the most valuable outcomes of this project was the "Habitat Manual" for forest, sub-alpine and alpine habitats of Community interest in Romania. Due to its importance and added scientific value, the manual received the annual award of the Romanian Academy in 2007 and has been the main reference source for habitats available in Romania.

Educational activities

In the framework of "RIPIDURABLE - Sustainable river" project **ETANAM** (Development Agency for South Epirus – Amvrakikos, Greece) developed interventions based on the knowledge and outcomes of a successful LIFE project in the wetlands of Amvrakikos. In this wetland ecosystem, the presence of riparian vegetation was the dominant characteristics until the 1960's. Intense land reclamation for agricultural use, irrigation works and logging for more than four decades, left only some riparian forest patches standing. The biggest one remaining was the major area of interest within the project and subject to public awareness raising, reforestation efforts and development of riparian zones management guides. Education and ecotourism promotion through trails built up and several education signs complemented these processes. A documentary film was produced and broadcasted by the media in addition.

There were some conflicts with the farmers, but the collaboration with local authorities played a crucial role in overcoming such difficulties. The area has become a centre of interest, as efforts have continued to turn it into a proper eco-educational site. The success of this project has led to a change in perception, planning and mentality of the authorities regarding riparian forests.

In 2006 the project "Education and information courses - regional regulation D.G.R. 3173/2006" has been started by **Veneto Region** - Commissions' Coordination Project Unit, ARPAV (Regional Agency for Environmental Prevention and Protection of Veneto), Veneto Agricoltura (Regional Agency for Agriculture and Forestry) and professional associations. There has been a lack of personnel with appropriate training in public administration, a lack of professional skills and expertise of bodies in charge of this matter, alongside with lack of courses and programmes at university-level related to Natura 2000 values in the Veneto Region. Project targets have therefore been:

- Increasing the knowledge on the principles and objectives of the Directives establishing the Natura 2000 and the regional provisions on the subject
- Understanding the evaluation methods of habitats and species as well as the use of specific indicators.
- Distributing the ministerial and regional guidelines for the preparation of management plans
- Learning the methodology of environmental impact assessment and its application to plans and projects

Thus, a minimum of two training courses has been organized each year. The front lessons have usually been given by Veneto Region personnel directly involved in Natura 2000 management and impact assessment.

Basically, the courses have been open to everybody interested, but there have also been specifically addressed modules to local authorities' representatives and technicians from the municipalities, provinces and mountain communities, regional employees, park authorities, other public employees and professionals. These courses are very popular, not only because they are free of charge, but also because they are the only institutional courses available updating skills of public administrations and professionals, in particular in terms of impact assessments. There has been a multiplier effect, as other public and private courses are based on the materials provided by Veneto Region (e.g. Veneto Agricoltura and professional associations carry out many other courses every year).

DDNI (Danube Delta National Institute for research and development, Romania) referred to the development of a guide "A chance for Nature in court!" (project duration 2008-2009; budget € 6750) including legal provisions and all relevant practical steps for the protection of biodiversity in Romania, coordinated by WWF Romania and funded by the Foundation for Partnership (Fundatia pentru

Parteneriat) and Trust for Civil Society in Central and Eastern Europe. Against the background of increasing pressure of investment activities that pose significant risks to the environment, especially in Natura 2000 sites or in their immediate vicinity, the main target was preventing and combating illegal actions that affect protected areas. Basically, this was achieved by improving the legal framework and awareness rising of the responsible authorities. The first guide should help environmental organisations or individuals interested in protecting biodiversity in Romania. This project output is considered to have an important educational and informational value. 500 copies of the guidelines were published and distributed to interested persons and organisations.

Another project about the "Conservative management of alpine habitats as a Natura 2000 site in Retezat National Park" project (project duration 2005-2008; budget €512150), a cooperative project of Retezat National Park Authority, Focal Centre for Biodiversity Monitoring and Conservation (Centrul Focal pentru Monitorizarea si Conservarea Biodiversitatii) and the Romanian Milvus Group Association (Asociatia "Grupul Milvus") was provided by **DDNI**.

The Retezat Mountains have become a brand for alpine habitats and species in Romania. The first nature reserve in the target area was established in 1927, and the Retezat National Park was created in 1935. In 2000, the area was declared as Biosphere Reserve (1979) and as an Important Bird Area for Europe. Two prime Butterfly Areas for Europe were also identified in the area in this year. Nevertheless, information on the distribution of habitats and species remained inappropriate in the park and management was not always adequate. Tourism in the area led to deliberate destruction of valuable mountain pine (*Pinus mugo*) habitats.

Facing difficulties, an extensive inventory of vegetation and several animal groups improved the knowledge of the natural values of the project area, enabling the project team to complete a proposal for declaration of the Retezat National Park as a Natura 2000 site in both categories SCI and SPA. The update of the management plan of the national park resulted in the establishment of a new information center in the most frequently visited part of the national park. These actions encouraged the sustainable use of alpine resources, aiming at long-term use of existing natural resources and the development of controlled tourism. The center built the basis of a comprehensive awareness campaign for the promotion of alpine habitats conservation throughout Romania. The project also contributed significantly to the public awareness of the alpine habitat by quite unusual means: an "alpine caravan" visited large parts of Romania promoting the value of alpine habitats. Dissemination materials were distributed by the caravan and at the information center. The Retezat Mountains is one of the

first nature reserves from the country and offers a fantastic opportunity to promote alpine ecosystems and Natura 2000 all over the country.

STRANDJA (Strandja Nature Park/ Strandja, Bulgaria) listed the development of specifically trained mountain guides regarding the Natura 2000 site Strandja as best practise experience. The project "The treasures of Strandja - training of tourist guides and local community involvement in the conservation of natural and cultural heritage" (project duration June-November 2005) was funded by the "Environmental Partnership" in cooperation of "Strandja" National Park Directorate and the NGO partner Golden Strandja and was awarded as the Best Project of Southeastern Europe in 2005.

After a pre-selection process of participants, where physical state, general knowledge and commitment to issues of environmental protection were the main criteria, a group was selected for training. Most of them were owners of guest houses and staff in the Directorate of Strandja park. A conflict arose with national providers of services related to mountain tours, apprehending competition of their own existing specialised tours. During the training, informal relationships and knowledge sharing were crucial for the formation of "Aknivna Conservation Community" and various sites were visited both in Strandja and in other parts of Bulgaria, including some facing the challenging development of rural and ecological tourism.

The targets of increasing the knowledge of the Strandja Mountain and a licensed capacity for guiding tourist groups in the natural environment were achieved. Moreover the project team has succeeded in the formation of an informal community of advocates for policy and sustainable development for the Strandja Mountain. In this context the introduction of these new guiding services has improved the tourism potential and the relationship with existing guest houses operating in an informal network.

At the end of the project 20 guides were trained in 7 villages surrounding the park. Information on the availability of such specialized mountain guides and the specific territory was published on the website of the Directorate, together with the guidebooks and tourist maps. This intervention was characterized by long-term effects and relatively small expenditures inter alia due to a successful cooperation between NGOs and state actors. There was also a multiplier effect due to the establishment of personal relationships and motivation for joint activities for nature conservation.

AREC presented a LIFE Project on the national park Gesäuse (LIFE05NAT/AT/000078; project duration 2005-2011; budget €2.365.000), a cooperation of the National Park Service, the Styrian Province Forest Management, Austrian Torrent and Avalanche Control Service, District Department Liezen, Water Management Service Styria as an important best practise example. Aiming at environmental protection strategies for forest habitat and wild river in the Gesäuse, a comprehensive forest management programme including a revitalization of 320 ha spruce trees in natural forests, integrated target species management was implemented. Conservation of alpine pastures as well as river management in terms reduction of technical measures against flooding, fish management, renaturation, protection of open water areas were ensured. Neobiota and invasive Neophyta were eliminated. The local population participated in information events and activities like planting actions. During the project the development of joint guidelines and management plans under continuous scientific monitoring were achieved.

The involvement of the population concerned was perceived to be of utter importance, since it was particularly valuable for the implementation of the management plans (e.g. planting activities, school activities, etc.) and thus for the success of the whole project. Drawing on know how transfer from former LIFE projects with comparable content (e.g. Rothwald LIFE 97, Nationalpark Kalkalpen LIFE 99) and cooperation with excellent experts and managers completed by specific working groups, the implementation of short, middle and long term measures for forest re-naturation succeeded.

Province of Ravenna's RIVIVRO (2009-2011; budget € 30000) programme was developed for the environmental education for children in primary school age and information for adult people about the importance of nature conservation within the Padana Plain. Specialists on environmental education at the protected areas designed specific lessons for children as well as booklets and presentations for adults. Province of Ravenna organized the workshop for citizens, while the other members of the environmental staff organised lessons for schools individually. After the lessons, each class was encouraged to restore habitats or to reintroduce plants and animals, working together with the experts of the University of Bologna or of Pavia. Planting activities or liberating fish, frogs or turtles were realised together. This way, about 1878 children of primary schools and about 200 adults were involved. The idea to link a project with a programme of environmental education and sensitisation of adults was innovative. People could participate and experience "work" in progress so that the level of attention and of interest was maximised.

2.5.3 Monitoring

Veneto Region' s (Veneto Region- Commission's Coordination Project Unit, Italy) monitoring example concerns the cross-border monitoring of flora-vegetation and fauna - INTERREG IV Italia Austria FanALP (progetto n° 1141-113; project duration 2008-2011; budget € 567500) coordinated and carried out by Friuli Venezia Giulia Region (LP) together with Veneto Region and Kärntner Landesregierung Abteilung.

Methods, indicators, monitoring and data collected can be very different, and in some cases may not be effective for understanding the state of preservation, although the protection of Natura 2000 sites in different States or regions concern the same habitats or species. For a common selected group of species and habitats groundwork for a complete DPSIR system of indicators and selecting appropriate methods of monitoring and measurement was developed. The approach included the collection of data and monitoring methodologies. If there were no methods or indicators available, a new common specific system was defined. Once the standard methods and common indicators were approved by all partners, a monitoring campaign was carried out in the field in order to improve them. Simultaneously, a common cross-border database including GIS models was created. It is very important to have common standards in Natura 2000 management and monitoring, so a bio-geographical conservation at regional level can be enhanced.

Danube Delta hosts the stronghold of White-tailed Eagle population from Romania and a key population of Europe, as **DDNI** (Danube Delta National Institute for research and development, Romania) points out. The highest mortality of White-tailed Eagles is registered among young birds (especially juveniles). The monitoring of juvenile birds through telemetry was considered to be the best solution to identify the movement area of the young eagles and thus satellite transmitters were attached on two juvenile White-tailed Eagles from Danube Delta. DDNI cooperated with DDBRA in this project (project duration 2009-2012; budget € 41897) and a better protection and understanding of this species could be achieved.

DDNI also monitored the European mink within a Danube parks project (SEE Programme 2007-2013; budget € 41747). The main tasks of the project were the monitoring of European Mink (*Mustela lutreola*) population in the DDBR and assessment of the recent distribution of this species. The monitoring was done using selective traps and all captured minks were released shortly after their measurement. The trapping was performed in different areas and habitats to ensure representative sampling areas. The most important project output was the elaboration and publishing of the European Mink Handbook.

A National Biodiversity Monitoring System in Hungary has been set up since 2008, as **NIMFEA** (Nimfea Environment and Nature Conservation Association, Hungary) reported. The overall aim is to establish a nationwide network-monitoring of changes of biosphere in Hungary, following the Rio Convention. The main focus of the system is on the species Great bustard (*Otis tarda*) protection on grassland, setting actions like the regulations of earliest mowing and the prohibition of any chemicals. A systematic data collection was carried out in the country, coordinated by the regional national park directorates and controlled by the ministries. The new system has established a representative network, focusing on species and habitats operating on a nationwide level.

According to **Province of Ravenna**, birds are the most important group of animals in the 16 SCI/SPA in the Po Delta and in the sites affected there are the major Italian population shares of many species (*Phalacrocorax pygmeus*, *Ardea purpurea*, *Ardeola ralloides*, *Platalea leucorodia*, *Plegadis falcinellus*, *Aythya nyroca*, *Circus aeruginosus*, *Recurvirostra avosetta*, *Himantopus himantopus*, *Charadrius alexandrius*, *Larus melanocephalus*, *Sterna albifrons*, *Sterna hirundo*, *Sterna sandvicensis*, *Gelochelidon nilotica*, *Chlidonias hybridus*).

An extensive research programme on birds of the Po Delta's SCI/SPA (and Natural Park) with financial resources of the Emilia-Romagna Region, based on a project idea, co-financing and coordination of the Province of Ravenna, took place from 2004-2006 (budget € 647088).

The study conducted by freelancers comprised the following tasks:

- wintering water birds census
- migrating water bird census (in three sample wetlands)
- nesting Passerines census (CES project)
- migrating Passerines census (in three ringing stations)
- nesting birds atlas
- Cormorant monitoring
- colonial nesting Ciconiiformes monitoring (with chicks ringing)
- colonial nesting Charadriiformes monitoring (with chicks ringing)
- hunting monitoring
- nesting Anseriformes monitoring
- migrating Anseriformes monitoring (in a ringing station)
- Flamingo colony monitoring (with chicks ringing)
- migrating Charadriiformes monitoring (in a ringing station)

Thus a current and comprehensive data base was created, but the Po Delta Park didn't carry on the monitoring, as recommended, after the three years financing by the Province had come to an end.

2.5.4 Financing cases and regional economic development

Torre Guaceto (Consortium of Management of Torre Guaceto, Italy) provided interesting insights in the successful and sustainable financing case of the "Gate of the Reserve Project" (project duration 2007-2008; budget € 180000) including a rest area, an information point and a car parking space. The challenge was to put up an appropriate structure to attract people to coastal area of the site and preserve natural resources. The main result of the creation of the parking area, where different kinds of transport modes are available (bicycles, electric carriers,...) was the establishment of sustainable tourism and the reduction of economic pressure. The distance from the coast has encouraged the use of bicycles which can be rented at the information point. Another important model is the principle of the selling of fish and food products produced within the park. The fees generated by the rents and the selling revenues allow for the opening of the park throughout the year and contributes significantly to the financing of the site management. The creation of the park also solved the problems of illegal parking and allowed for a rigorous control of tourist flows. The presence of the car-park at the beginning of the secondary road that leads into a nature reserve represents an ideal "gateway to the reserve" regarding the location for information points and also for raising awareness of tourists with the help of explanatory signs.

DDNI (Danube Delta National Institute for research and development, Romania) listed the implementation of a LIFE project for "Application of industrial ecosystems principles to regional development -ECOREG" (LIFE07 ENV/RO/000690; project duration 2009-2011; budget € 880700) as a worthwhile best practise example, allowing for regional "symbiotic" development by simultaneously conserving and developing the natural, leisure, cultural and industrial potential of the area of Suceava and posing a minimal impact on the environment.

Throughout project duration the Romanian Ministry of Environment and Sustainable development, NGOs and consulting enterprises worked together and facilitated the establishment of industrial symbiosis principles to the target area. The main outcome was a substantial reduction of produced industrial waste and the consumption of natural resources as well as environmental impact related expenses. The effects of this project included an improvement in economic efficiency by reducing production costs and the creation of new jobs. Moreover the interrelation between industrial units was improved and tourist potential of the pilot area was enhanced.

In the case of Hungary, no best practices could be provided regarding successful financing cases and experiences in tourism due to the management structure as the nature managers of the Hungarian Natura 2000 sites are mainly the national park directorates. The nature conservational activities related to the "classical" protected areas (national parks, reserve, protected landscape areas) but exact financial resources spent on activities on SPA and SAC sites or on habitats or species of Natura 2000 directives cannot be defined.

No best practices were available in the case of Bulgaria either due to the initial stage of development and implementation of the Natura 2000 network.

The second area of interest within the socioeconomic part was the assessment of regional economic impacts associated with tourism development, regional acceptance levels and awareness raising activities. Regarding these requirements the problem for Hungary is the same as the above mentioned causes for the missing examples for financing cases. The nature conservation managers of the Hungarian Natura 2000 sites are mainly the national park directorates and thus touristic activities are related to the national parks, basically to the maintenance of visitor centres, education paths, open-air schools and printing of publications related to them. The overlapping is meaningful, but purely a small proportion is oriented to the Natura 2000. There are hardly any promotional activities concerning Natura 2000 sites explicitly.

For **Veneto region** (Veneto Region- Commission's Coordination Project Unit, Italy) "Somadida Forest management" serves as an illustrative case of a best practice, as it is the largest forest of Cadore and one of the most beautiful forests of the Alps still persisting today. The Somadida forest is a national natural reserve and demonstrates vividly that even extremely fragile areas in the need of protection can be open for visitors under the condition of proper equipment and the support of experienced staff. The ongoing actions (annual budget € 60000) have aimed at the implementation of conservation measures guaranteeing the enjoyment for tourists, the improvement knowledge and awareness of the environment for residents and tourists. This has been facilitated by the extension of guided tours as well as the promotion of direct actions to increase tourist visiting facilities. The protection of ecosystems has always been in the centre of these activities, mainly based on improving the knowledge of residents and visitors. Thus, the State Forestry Department has initiated agreements with local authorities and sought new ways of connecting economic activities taking place in the target valley.

A better understanding of the protected area by residents and visitors, the maintenance and further development of natural resources as well as an improvement of the relation between the management authority and local communities have been achieved so far. Coincidentally environmental education activities and supportive materials for visits in the forest have been promoted effectively.

Another current project of **Veneto Region** concerns the Natural Park of the Ampezzo Dolomites, which is located in Cortina d'Ampezzo and includes most of the paths under the Dolomites peaks beauties. The area has suffered from a kind of mass tourism. The approach has been to improve the management systems by avoiding further increases of the park's operating costs. Another important aim has been improvement of the flow of tourists and to prevention of the use secondary routes threatening habitats and species protected by European directives. It took a lot of effort to set up the security arrangement of the most popular hiking routes combined with the restoration of the width of the trails in proximity to landslides and the building of dry stone walls or wooden supports. The tables and signage of the area are maintained in both directions to better manage the flow of tourists. The masking of secondary routes and the isolation of some areas allows for quiet areas for sedentary animals (particularly the alpine Galliformes).

These actions have resulted in an overall satisfaction of visitors as the hiking routes have been expanded and improved in terms of security as well as of organisation. This also implies a very important economic dimension as the costs for assistance provided in case of accidents or lost have been decreased. The maintenance of the most valuable shares of the protected territory as well as the conservation of habitats and species' status has been enforced. This best practise case was the first attempt of the integration of protected values in the park area and Natura 2000 network in the context of high pressure from tourism. The reduction of environmental threats and pressures associated with mass tourism has been achieved while still allowing high presence of tourists.

In the case of **Strandja** (Strandja Nature Park/ Strandja, Bulgaria) not enough information material about best practice examples for successful development of tourism, related to Natura 2000 network on a national level can be provided. On a local level Natura 2000 site Strandja Nature Park serves as an interesting and insightful experience. The raising of awareness about the region's high potential for development of a high quality service, such as rural and ecological tourism was the main target of the action programme, also presenting a premise for successful obtaining of benefits to the local communities in Natura 2000 sites. Thus, the use of quality local products and services with the regional brand

Strandja, provided within the Natura 2000 site and Nature park Strandja, were encouraged. In Strandja there are currently 22 guest houses in different villages, whose owners practise eco and rural tourism, and two companies for tourist attractions, which are holders of regional brand Strandja. About 1,000 people visit these labelled guest houses annually, which is a measure of the success of the set sections.

2.5.5 Bad practices

Veneto Region (Veneto Region- Commission's Coordination Project Unit, Italy) also provided various interesting cases of bad practises. In the field of legal implementation and management a lack of University courses and research on biodiversity conservation connected to the Veneto environment and to the specific provisions of Habitats and Birds Directives has been assessed. The universities which are well equipped with expertise in terms of physical and mathematical sciences, and legislation regarding natural issues, have never fully developed lines of research on flora, fauna, and habitats of the Region of Veneto). These deficiencies can also be found in the field of evaluation systems, e.g. in terms of an administrative and regulatory discipline.

The result is that there is an insufficient scientific knowledge of habitats and species, most of this knowledge available is produced by private organisations, individual "enthusiasts" or governmental organizations like the Veneto Region. The problem is that these scientific studies have often been conducted without utilisation of rigorous scientific methodology. Moreover, probably due to a lack of knowledge, universities do not offer specialized courses regarding the peculiar needs of Veneto. Instead only general-knowledge on this complex matter is provided. Lacking the basic training and knowledge, professionals and graduates are not able to conduct specific analyses for impact assessment studies. More generally, this is a major reason for the loss of biodiversity in Veneto, and also for the loss of the identity of the Venetian landscapes. The regional administration has tried on several occasions to involve the academic community to address this lack recently. Nevertheless, the major obstacles to the continuation of the initiative are the high administrative costs charged by universities actually leaving only a small share of the funds allocated by the Region to the research sector.

Another bad practice in the field of legal implementation, more precisely in the national and regional process of site designation, refers to the site designation process during the period 1995-2001 in the framework of the LIFE Project BIOITALY (LIFE94 NAT/IT/001048) and its development in Veneto Region. The project was coordinated by the Ministry of Environment and carried out by the Veneto Region. This project was also meant to support preparatory designation processes of SPA and SCIs.

Nevertheless, this individuation was not based on specific knowledge on habitat and species distribution in the Veneto Region, but rather on previous territorial planning issues. Furthermore stakeholders or landowners were not involved in this process. Habitats and species distribution and subsequent standard data form compilation were based on "expert opinion", so there were strong accuracy differences among sites susceptible for mistakes. Another problem was that the sites' boundaries were traced at small scale, so that there were not physical limits to justify some site borders, and this point was not really understandable by people concerned. The individuation was not approved by Veneto Region administration, but it was simply sent to the Ministry of Environment as a LIFE Project result. These experiences have led to a better organization of the administrative structures and to the start of completing the missing knowledge of habitats and species by the Veneto Region, still continuing.

In the case of financing the management a bad practice example was provided based on an experience of Veneto Region and local authorities. The persistence of habitats and species in the Venetian context has certainly been facilitated by human practices commonly defined as traditional activities. Territorial changes of the Venetian landscape have led to the appearance of many grassland habitats tending to regress on the one hand. On the other hand these changes have resulted in wetlands in the confinement of habitats unsuitable for settlement and production.

The long-term human presence can be considered as the main factor in maintaining and also for creating biodiversity within protected sites. In managerial terms the "ordinary" management (mowing, maintenance, maintenance of water systems, etc...) should be recognized appropriately. Paradoxically, the funds available do not address the financial management of these ordinary activities. The current situation is defined by reduced management possibilities and the dominance of mere experimental exercises which last only for the duration of specific projects. Actually, this sharply contrasts with the requirements for ensuring the daily management Natura 2000 sites. Traditional practices have long been abandoned in favour of more lucrative ones. In addition, agricultural properties are increasingly concentrated in the hands of only a few conductors, and

many landowners are no full-time farmers, so direct access to the funds covered by the common agricultural policy is not granted. Despite the fact that this policy is not a system for financing Natura 2000 by definition, it is an important way of conversely support agriculture. At Venetian level a financing structure characterized by EU funds of multiple origins, supplemented by State funds has been developed. These funds have been split up into different instruments and thus a substantial share of these resources has been used in the mere administration of projects or contributions.

3 Discussion, summary and conclusion

Methodological constraints are given due to the heterogeneity of the answering parties. The project partners' institutional backgrounds are quite different as there are NGOs, Protected Area Managements and public administration bodies involved, resulting in different expertise, experiences and access to regional and national data sources.

During the stage of the completion of the questionnaire, the setting within the teams was also different between the project partners. Some of them formed comprehensive expert teams and held one or more workshops. Others made use of internal experts or contacted other experts on demand.

But despite of this methodological heterogeneity, the analysis of the questionnaires gave a good overview on the existing gaps, as the comparison with other studies like the Snapshot report of Natura 2000 management of the European Environmental Bureau (2011) or WWF (2004) shows.

In the field of the **legal and institutional frameworks** for managing Natura 2000 sites the following gaps have been reported by the partners:

- Missing national legislative competences lead to different implementations and regulations in the provinces when federal legislative structures are given.
- In many cases, a sound management is only feasible in sites that are owned either by the public hand or by privates.
- No legally defined involvement of relevant stakeholders at national, regional and local levels is given
- No sufficient integration of impact assessment into legislation and experience exchange on implementation

The legal background in the partner countries is quite different, as the Fauna-Flora-Habitat Directive and the Birds-Directive had to be implemented into national laws. Even more differences occur, if nature conservation is in the competence of the provinces or federal states of a country, like in Austria (Geitzenauer, 2011).

In many countries, there are quite less regulations and limitations defined in the national or regional legal implementation of both EU-directives, in order to avoid conflicts with landowners or other important stakeholder groups. As the economic compensation of the landowners is still not sufficiently established in most countries, effective management measures are mainly restricted to sites which are owned by public hand or private NGOs.

While involvement of NGOs during the designation process has been good in Hungary (Mertens 2009), many partners report insufficient legal rights of stakeholders in the designation and management process of Natura 2000 sites.

Regarding the environmental impact assessment on all projects and plans that might affect the objectives of protection within a Natura 2000 site according to Article 6 of the FFH directive, the national implementation is not very effective in some countries. For example in Italy, the responsible public authority to approve the impact assessment differs by the type of plan or project. Different systematic approaches might be chosen for new roads, settlement development or projects in water management. The different responsible legal authorities are one reason for the difficulties in getting an overview on number, methodological approach and results of environmental impact assessments on Natura 2000 sites in Europe.

According to the current situation of **management** of Natura 2000 sites, the following gaps have been reported by the partners:

- There is a lack of specialists for Natura 2000 management and a lack of specific training and education in this field.
- There is limited knowledge exchange between different authorities that are responsible for Natura 2000 management.
- The designation process of sites was done by local authorities without having adequate technical, ecological and economic background.
- Management plans are available only for about 20% of sites.
- Almost no mechanisms are available to evaluate the effectiveness of management plans.

The quality of the designation process, the development of management plans and the implementation of management measures are strongly related to the knowledge and experience of the involved people. There are deficits not only for Greece (Apostolopoulou & Pantis JD 2009), but also in many other countries. The limited number of responsible managers for Natura 2000 sites is strongly related to the limited economic resources. Different languages and a spatial limited focus of the involved managers and authorities lead to inadequate knowledge exchange between the site managements.

In accordance with the report of the European Environmental Bureau (2011) the number of implemented management plans is still low. Additionally, there is a lack of mechanisms that evaluate the effectiveness of the management. This is also reported for Italy (Maiorno et al., 2009) and Crete (Dimitrakopoulos, 2009).

For the majority of the EU-member states monitoring concepts are already available for most of the species and habitat groups and have even already been implemented to a certain extent. The main gaps in **assessing**, monitoring and enhancing the favourable state of species and habitats are the following:

- Information in the standard data forms does not correspond to the actual situation
- Quantitative data on species and habitats is rare
- Only few sites actually implemented the monitoring concepts
- There is a lack of national programmes and projects and the effective communication of them is problematic
- Most of the projects are focussing on the protection on birds, followed by mammals (without bats). For amphibians and reptiles, insects and bats only few projects are implemented

Because of the high costs, detailed inventories on habitat and species are not available for all Natura 2000 sites. Even in the case, that species lists are available, numbers on the population size or density are missing. For birds the data situation is the best in comparison.

For the same reason, only in few cases, monitoring on species level is implemented in the Natura 2000 sites. The main objective of international scientific discussion should be on cost efficient monitoring systems in order to increase the number of available data.

This deficit is strongly related to the number of national programmes or projects concerning management of Natura 2000. At the moment it seems, that most of the resources are spent on the implementation of local management measures. To ensure effectiveness and to establish common standards, it is highly recommended to increase the number of national programmes and projects and to include as much site managements as possible into this programmes and projects.

Regarding the **socioeconomics** of the Natura 2000 sites, the costs of effectively managing Natura 2000 sites have been estimated by the European Commission to amount to about EUR 5.8 bn per year. Benefits are roughly EUR 200 to 300 bn per year resulting from conserving the natural capital providing a broad range of vital ecosystem services to the European societies and economies. Financial gaps are evident in the current survey of partner regions in the Be-Natur project. The European Commission estimates that – on a very broad average over all types of ecosystems – annual management costs for effective biodiversity conservation may come up to about EUR 80 per hectare. A roughly equal

amount was also indicated by partner regions as the “needed expenditure” for effective management. The financial gap analysis indicated that partner regions spend about EUR 15 per hectare; the financial gap is thus around 80%.

However, it becomes apparent that the Be-Natur partner regions also had an “informational gap” regarding socioeconomics of Natura 2000. A significant number of partners were not able to estimate actual or needed expenditure for effective management, thus suggesting that the institutional and human resource capacities of authorities planning and managing Natura 2000 sites is still weak.

While there is a broad range of potential financial sources available for Natura 2000 sites, partner regions indicated that the funding base is still very limited. This also points to institutional deficits since the application and management of funds also requires sound and firm capacities which seem to lack in partner regions. All in all, besides public funds (national, European), other sources of funding do not play any major role in financing Natura 2000. Private financing of Natura 2000 sites only has a very limited importance.

In terms of regional economic impacts of Natura 2000 sites, studies found some positive effects on regional development. However, the survey of the current study indicates that Natura 2000 does not play a major role in regional development besides single, very prominent sites. Again, the lack of substantial support for exploiting the regional economic development opportunities of Natura 2000 sites hinders many regions to benefit from conservation efforts.

Best and bad practises provide important insights in the individual experiences of the project partners. In particular, experiences in the management, monitoring, stakeholder involvement, education as well as financing cases and examples on regional development were analyzed.

Almost all project partners could give at least one example for best practises in the field of management and management strategies, highlighting the relative importance of this subtopic. Examples for progresses in the designation procedure, as well as in the development of management strategies and guidelines resulting in the overall improvement of protection levels and the state of specific habitats and species showed the variety of possible approaches. The experiences include the transformation of habitats, the abatement of invasive species and the elaboration of targeted intervention and management plans.

A remarkable approach eliciting the innovative potential associated with the Natura 2000 management was used by LBDCA (Lake Balaton Development Coordination Agency, Hungary), where a system of contracts associated with the development and mandatory use of strict management guidelines ensures the preservation of the Natura 2000 site Kis-Balaton and guarantees a satisfactory cooperation.

In general, the justification of project related costs has been problematic, indicating differing interests and motivations problems. Other problems detected were conflicts with local authorities or due to a lack of the involvement of relevant stakeholders. Naturally or self-explanatory the involvement of stakeholder can be an important contribution to a project's success.

The involvement process can be supportive in three ways, either by rising awareness and willingness to contribute prior to and during project duration by means of particular structures, programmes or by enhancing participation explicitly in project outcomes like management plans. Local support and acceptance can be achieved by the provision of specific information materials or events. Bringing into action specifically trained and skilled project staff can also be of significance for project outcomes, as described by ETANAM (Development Agency for South Epirus-Amvrakikos, Greece). Workshops and media cooperation were also described as supportive tools. An interesting way of gaining support by the private forest land owners was the development of a compensation payment scheme, according to DDNI (Danube Delta National Institute for research and development, Romania). Veneto Region's (Veneto Region- Commission's Coordination Project Unit, Italy) efforts to actively involve local citizens comprised consultation documents and public assemblies where the proposed management plans were discussed and modified. This resulted in a remarkable participation and acceptance of the local community.

In the field of education best practises ranged from the provision of cost-free training courses open for everybody interested in biodiversity issues as well as professionals, training and employment of mountain guides and the elaboration of educative guidelines for the protection of biodiversity. Province of Ravenna implemented an environmental educational programme for primary school children combined with informational dissemination material for adults. Specific lessons for children, field trips and planting activities, as well as workshops for citizens were measures for the success of this project.

For most of the described practices examples the development of associated monitoring studies and dissemination tools was perceived as enriching for the respective projects. But there are also experiences dealing with monitoring activities per se. The creation of data bases for different habitats or species, or comprehensive associated study work is important for project outcomes according to the partners' examples. Nimfea (Nimfea Environment and Nature Conservation Association, Hungary) has set up a Biodiversity Monitoring System, currently at a national level.

Difficulties in the provision of the successful financing and regional development cases were unexpected. As we have already shown in the socioeconomic assessment, almost all project partners appear to have to catch up on in this field particularly. However, Torre Guaceto showed that the interconnection of sustainable financing and the development of eco-tourism is feasible. Veneto Region (Veneto Region- Commission's Coordination Project Unit, Italy) managed to reduce tourism and to increase the protection of a natural park by isolating sensitive areas as well as improving the signage of routes. Thus, the overall security has been improved significantly while this also implies an important economic dimension as the costs for assistance associated with accidents have been decreased.

To sum up the best practices part of the analysis, it is apparent that the LIFE project framework comprises efficient project management, monitoring and project outputs in most of the cases. Thus, valuable experiences, creation of useful data bases and the knowledge exchange are ensured.

In the case of bad practises various lessons can be learned in addition. According to Veneto Region's detailed description communication problems, lack of adequate research and education structures in the field of biodiversity and nature preservation and the problem of high administration costs are the main difficulties. Regarding the financing of traditional managing activities, especially insufficient addressing of funds available constitutes a major barrier for the proper management in financial terms.

The current state of Natura 2000 management and implementation is heterogeneous and complex in the SEE partner countries. The gaps identified in all fields of assessment require further analysis and interventions. Based on the gap analysis, important next steps will come into action to optimize implementation structures and management strategies of Natura 2000 sites.

References

- Apostolopoulou E, Pantis JD (2009) Conceptual gaps in the national strategy for the implementation of the European Natura 2000 conservation policy in Greece. *Biological Conservation* 142: 221–237.
- Billionnet, A. (2011). Solving the probabilistic reserve selection problem. *Ecological Modelling* 222, 546-554.
- Cantarello, E., Newton, A. C. (2008). Identifying cost-effective indicators to assess the conservation status of forested habitats in Natura 2000 sites. *Forest Ecology and Management* 256, 815-826.
- Costello, C., Polasky, S., 2004. Dynamic reserve site selection. *Resource and Energy Economics* 26, 157–174.
- Dimitrakopoulos PG, Memtsas D, Troumbis AY (2004) Questioning the effectiveness of the Natura 2000 Special Areas of Conservation strategy: the case of Crete. *Global Ecology and Biogeography* 13: 199-207.
- Dissanayake, S., Önal, H. (2011). Amenity driven price effects and conservation reserve site selection: A dynamic linear integer programming approach. *Ecological Economics* 70, 2225-2235.
- European Environmental Bureau (EEB) (2011) Where there is a will there is a way: Snapshot report of Natura 2000 management, Brussels, 23p
- Gantioler, S., Bassi, S., Kettunen, M., McConville, A., ten Brink, P., Rayment, M., Landgrebe, R., Gerdes, H. (2010). Costs and Socio-Economic Benefits associated with the Natura 2000 Network. Final report to the European Commission, DG Environment on Contract ENV.B.2/SER/2008/0038; Institute for European Environmental Policy (IEEP), London.
- Geitzenauer M. (2011) Eine europäische Naturschutzpolitik als Ländersache: Die Umsetzung von Natura 2000 in Österreich. Tag der Politikwissenschaft, DEC 2, 2011, Salzburg, Austria.
- Getzner, M., Jungmeier, M. (2002). Conservation policy and the regional economy: the regional economic impact of Natura 2000 conservation sites in Austria. *Journal for Nature Conservation* 10, 25-34.
- Jennings MD (2000) Gap analysis: Concepts, methods, and recent results. *Landscape Ecology* 15: 5–20.
- Louette, G., Adriaens, D., Adriaens, P., Anselin, A., Devos, K., Sannen, K., Van Landuyt, W., Paelinck, D., Hoffmann, M. (2011). Bridging the gap between the Natura 2000 regional conservation status and local conservation objectives. *Journal for Nature Conservation* 19, 224-235.
- Maiorno L, Falcucci A, Garton EO, Boitani L (2007) Contribution of the Natura 2000 network to biodiversity conservation in Italy. *Conservation Biology* 21: 1433-1444.

- Mertens, C (2009) Agency of NGOs in the implementation of Natura 2000 in Hungary. Presented at the Amsterdam Conference on the Human Dimensions of Global Environmental Change 2-4 December 2009 Amsterdam, The Netherlands.
- Miller, C., Kettunen, M. (2007). Financing Natura 2000 - Guidance Handbook: Linking Management and Financing of Natura 2000. Final report to the European Commission, DG Environment on Contract ENV.B.2/SER/2006/0055; Institute for European Environmental Policy (IEEP), London.
- Önal, H. (2004). First-best, second-best, and heuristic solutions in conservation reserve site selection. *Biological Conservation* 115, 55-62.
- Polasky, S., Camm, J. D., Garber-Yonts, B. (2001). Selecting biological reserves cost-effectively: an application to terrestrial vertebrate conservation in Oregon. *Land Economics* 77, 68–78
- Rodrigues ASL, Akçakaya HR, Andelman SJ, Bakarr MI, Boitani L, Brooks TM, Chanson JS, Fishpool LDC, Da Fonseca GAB, Gaston KJ, Hoffmann M, Marquet PA, Pilgrim JD, Pressey RL, Schipper J, Sechrest W, Stuart SN, Underhill LG, Waller RW, Watts MEJ, Yan X (2004) Global Gap Analysis: Priority Regions for Expanding the Global Protected-Area Network. *BioScience* 54: 1092-1100.
- Scott JM, Davis F, Csuti B, Noss R, Butterfield B, Groves C, Anderson H, Caicco S, D'Erchia F, Edwards TC Jr., Ulliman J, Wright RG (1993) Gap Analysis: A Geographic Approach to Protection of Biological Diversity. *Wildlife Monographs* 123: 3-41.
- Selman, P. (2009). Conservation designations—Are they fit for purpose in the 21st century? *Land Use Policy* 26, S142-S153.
- Townsend Peterson A, Kluza DA (2003) New distributional modelling approaches for gap analysis. *Animal Conservation* 6: 47–54.
- Wätzold, F., Schwerdtner, K. (2005). Why be wasteful when preserving a valuable resource? A review article on the cost-effectiveness of European biodiversity conservation policy. *Biological Conservation* 123, 327-338.
- WCPA (2000). Financing Protected Areas. Financing Protected Areas Task Force of the World Commission on Protected Areas (WCPA) of IUCN, in collaboration with the Economics Unit of IUCN; IUCN, Gland, Switzerland and Cambridge, UK.
- WWF (2004) Natura 2000 in the new EU Member States – Status report and list of sites for selected habitats and species.

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4 Appendices: Questionnaire and data collection forms

4.1 Answers: Legal and institutional frameworks for managing Natura 2000 sites

4.1.1 Is the term “Natura 2000 site” defined in your national/regional legislation

Table 10: Definition of term “Natura 2000 site”.

PP	Na- tional	re- gional
AREC	No	Yes
CACAK	Yes	No
DDNI	Yes	No
ETANAM	Yes	No
LBDCA	Yes	No
NIMFEA	Yes	No
PRA	Yes	Yes
RVE	Yes	No
STRANDJA	Yes	No
TIMIS	Yes	No
TORRE	Yes	Yes
Total	10	3

Table 11: Comments on the definition of term “Natura 2000 site”.

PP	Comments
AREC	defined in the 9 Province laws about nature protection e.g. Stmk. Naturschutzgesetz 1976 (http://www.ris.bka.gv.at/Dokument.wxe?Abfrage=LrStmk&Dokumentnummer=LRST_5500_002&TabbedMenuSelection=LandesrechtTab&WxeFunctionToken=4082c8db-fcfd-488c-aaf0-3d2326f29c64); other laws refer to natura 2000 sites (national and regional;/ Ris bka
CACAK	Law on Nature Protection (2009), in very general terms
DDNI	The term "Natura 2000 site" is defined in our national legislation in Ministerial Order (OM) no. 207/2006 (Romania's Official Monitor (MO) no. 284/298.03.2006); Governmental Emergency Ordinance (OUG) no. 57/2007 (Romania's Official Monitor (MO) no. 442/29.06.2007)
ETANAM	The term “Natura2000” is not defined in the Common Ministerial Decision 11989 (FEK 123D/21-3-2008) concerning the Amvrakikos Wetland National Park. The transposition of Directive 92/43/EEC into Greek law has been implemented with the Common Ministerial Decision 33318/3028 (FEK 1289B/28-12-1998).
LBDCA	Government Decree No. 275/2004., App. 9.
NIMFEA	Decree No. 275/2004
PRA	DPR 357/97 modified with DPR 120/03
RVE	
STRANDJA	
TIMIS	
TORRE	The national Level is regulated by two laws (D.P.R. 357/1997 and D.P.R. 120/2003). The regional Level is regulated by L.R. 19/1997

4.1.2 Is there any difference between SPA and SCI “Natura 2000 site” defined in your national/regional legislation?

Table 12: Difference in legislation between SPA und SCI.

PP	Na- tional	re- gional
AREC	No	Yes
CACAK	No	No
DDNI	Yes	No
ETANAM	No	No
LBDCA	Yes	No
NIMFEA	Yes	No
PRA	Yes	Yes
RVE	Yes	No
STRANDJA	No	No
TIMIS	Yes	No
TORRE	No	No
Total	6	2

Table 13: Comments on the difference in legislation between SPA and SCI.

PP	Comments
AREC	SPA (Vogelschutzrichtlinie), SCI (FFH-Richtlinie)
DDNI	The difference between SPA and SCI "Natura 2000 site" is defined in our national legislation in Ministerial Order (OM) no. 207/2006 (Romania's Official Monitor (MO) no. 284/298.03.2006); Governmental Emergency Ordinance (OUG) no. 57/2007 (Romania's Official Monitor (MO) no. 442/29.06.2007)
LBDCA	There is difference and some overlapping between Natura 2000 sites (SPA, SCI) according to designation. But the same regulations are valid for all Natura 2000 sites.
PRA	SPA are defined by Law 157/92, while SCI are defined by DPR 357/97 (mod DPR 120/03)
NIMFEA	Different aspects of designation, see Decree No. 275/2004., App.9.

4.1.3 Is each individual Natura 2000 site defined in your national /regional laws or directives?

Table 14: Definition of individual Natura 2000 sites in laws.

PP	Na-tional		Regional	
	Yes	No	Yes	No
AREC	No		Yes	70 %
CACAK	No		No	
DDNI	Yes		No	
ETANAM	Yes		No	
LBDCA	Yes		No	
NIMFEA	Yes		No	
PRA	Yes		Yes	
RVE	No		Yes	
STRANDJA	Yes		No	
TIMIS	Yes		No	
TORRE	No		Yes	
Total	7		4	

Table 15: Comments on definition of individual Natura 2000 sites in laws.

PP	Comments
AREC	Verordnungen der Länder (z. B. http://www.ris.bka.gv.at/Dokument.wxe?Abfrage=LrStmk&Dokumentnummer=LRST_5500_026&TabbedMenuSelection=LandesrechtTab&WxeFunctionToken=be93bdc8-a39e-43b1-8b7f-a9b1b175129a)
DDNI	HG no.971/2011 (MO no. 715/11.10.2011); OM no.2387/2011 (MO no. 846/29.11.2011)
ETANAM	The Amvrakikos Wetland National Park coincides with Natura2000 sites. This Protected Area is governed by national legislation, that is the Common Ministerial Decision 11989(FEK 123D/21-3-2008)
RVE	Basically by its standard data form

4.1.4 Are the exact location and outline of the Natura 2000 sites defined in the law/directive?

Table 16: Definition of exact location of Natura 2000 sites in laws.

PP	Not yet defined	List of parcels	Map (scale)	Others
AREC	No	Yes	from 1:5000 to 1:20.000	
CACAK	Yes	No		
DDNI	No	No	1: 10 000 & 1: 25 000	
ETANAM	No	No	1:	
LBDCA	No	Yes	1:	
NIMFEA	No	Yes	1:	
PRA	No	Yes	1: 5 000	
RVE	No	No	1: 10 000	
STRANDJA	No	Yes	1: 5 000	
TIMIS	No	Yes	1: 10 000 & 1: 25 000	
TORRE	No	No	1: 10 000	
Total	1	6		

4.1.5 Are the objects of protection (species, habitats) specified in the law/directive?

Table 17: Definition of the objects of protection (species, habitats) in laws.

PP	Not yet defined	List of species or habitat types	Definition of population size or habitat quality	Others
AREC	No	Yes	No	
CACAK	No	No	No	Established ecological network protects species and habitats according to by-laws (list of species and list of habitats).
DDNI	No	Yes	Yes	
ETANAM	Yes	No	No	
LBDCA	No	Yes	No	
NIMFEA	No	Yes	No	
PRA	No	Yes	Yes	
RVE	No	No	Yes	
STRANDJA	No	Yes	No	Definition should be finished till March 2013
TIMIS	No	Yes	Yes	
TORRE	No	Yes	No	
Total	1	9	4	

4.1.6 Are there special regulations and limitations determined in the law/directive?

Table 18: Restriction on regional and national level.

PP	No regulations	Forestry or agriculture	Settlements, construction of buildings, infrastructure	Recreation and tourism
AREC	No	Nat.	Reg.	Reg.
CACAK	No	No	No	No
DDNI	No	Nat.	Nat.	Nat.
ETANAM	No	Reg.	Reg.	Reg.
LBDCA	No	Reg.	Nat.	Nat.
NIMFEA	No	Nat.	Nat.	Nat.
PRA	No	Nat. & reg.	Nat. & reg.	Nat. & reg.
RVE	No	Nat. & reg.	Nat. & reg.	Nat. & reg.
STRANDJ A	Reg.	No	No	No
TIMIS	No	Nat.	Nat.	Nat.
TORRE	Nat	Nat.& Reg.	Nat.& Reg.	Nat.& Reg.
Total	2	11	11	10

Table 19: Other laws implementing Natura 2000

PP	Spatial planning	Agriculture and forestry	Hunting and fishery	Water management	Others
AREC	Reg.	Reg.	Reg.	Nat.	No
CACAK	No	No	No	No	No
DDNI	Nat.	No	Nat.	No	No
ETANAM	No	No	No	No	No
LBDCA	Nat.	Nat.	Nat. & Reg.	Nat. & Reg.	No
NIMFEA	Nat.	Nat.	Nat.	Nat.	Nat.
PRA	Nat. & Reg.	Nat. & Reg.	Nat. & Reg.	Nat. & Reg.	Nat. & Reg.
RVE	Reg.	Reg.	Reg.	Reg.	Reg.
STRANDJA	Nat.	Nat.	Nat.	Nat.	Nat.
TIMIS	Nat.	No	Nat.	No	No
TORRE	No	Reg.	Nat. & Reg.	No	No
Total	8	7	9	6	4

Table 20: Comments on Other laws implementing Natura 2000.

PP	Comments
AREC	Natura 2000 sites are defined in regional development concept of Styria, must be considered in rural development strategies & implementations, agriculture and forestry (e.g. ÖPUL Funding), Vienna: Abfallwirtschaftsgesetz, Nationalparkgesetz, Umgebungslärmschutzgesetz, Seilbahn- u. Schipistenprogramm Tirol, Tiroler Umweltprüfungsgesetz (TUP), Tiroler Bergwachtgesetz, Kärntner Umweltplanungsgesetz, VO's Länder Funding, eigene VO's f. Natura Gebiete; more see BKA (national & province);
CACAK	NATURA 2000 is still not implemented in any regulation, but regulations and limitations stipulated in nature conservation legislation (related to biodiversity protection) are implemented in other sectors named above
DDNI	Governmental Emergency Ordinance (OUG) no. 57/2007 (Romania's Official Monitor (MO) no. 442/29.06.2007); Law no. 407/2006 (MO no. 944/22.11.2006) modified and completed by Law no. 197/2007 (MO no. 472/13.07.2007), modified by Law no. 215 (MO no. 757/10.11.2008), OUG no. 154/2008 (MO no. 787/25.11.2008), Law no. 80/2010 (MO no. 300/10.05.2010), OUG no. 102/2010 (MO no. 0810/03.12.2010) approved by Law no. 66/2011 (MO no. 329/12.05.2011); Ministerial Order (OM) no. 19/2010 (MO no. 82/8.02.2010)
ETANAM	The Common Ministerial Decision 11989 (FEK 123D/21-3-2008) is entitled as "Characterization of the land, wetland and marine regions of Amvrakikos Gulf as National Park & determination of uses, regulations and limitations" & includes restrictions for the core zones
LBDCA	Any activities that could be legally done before the site legislation, can be done legally furthermore. There are restrictions regarding any type of activities (forestry, agriculture, construction of buildings) that could not be legally done before the legislation
PRA	power plants
RVE	Natura 2000 network has to be taken into account, and case by case implemented, in all regional sectorial planning (e.g. extraction activities, energy, transport, etc.)
STRANDJA	Spatial development plans and Forestry management plans are evaluated for compatibility with the objectives and regimes of Natura 2000 sites
TIMIS	Governmental Emergency Ordinance (OUG) no. 57/2007 (Romania's Official Monitor (MO) no. 442/29.06.2007); Law no. 407/2006 (MO no. 944/22.11.2006) modified and completed by Law no. 197/2007 (MO no. 472/13.07.2007), modified by Law no. 215 (MO no. 757/10.11.2008), OUG no. 154/2008 (MO no. 787/25.11.2008), Law no. 80/2010 (MO no. 300/10.05.2010), OUG no. 102/2010 (MO no. 0810/03.12.2010) approved by Law no.

66/2011 (MO no.329/12.05.2011); Ministerial Order (OM) no. 19/2010 (MO no. 82/8.02.2010)

Who are the responsible persons or authorities/institutions in place (e.g. for the handling of Natura 2000 impact assessments of plans and projects)

Table 21: Responsibility/authority on national and regional level

PP	Who
AREC	The Austrian nine Federal States; Ämter der Landesregierung
CACAK	No
DDNI	Regional Environmental Protection Agency & National environmental protection agency; ministry of environment and forestry
ETANAM	The Ministry of Environment, Energy & Climate Change (http://ypeka.gr/Default.aspx?tabid=37&locale=en-US&language=el-GR)
LBDCA	Environmental, Nature Conservation and Water Management Authorities ; Ministry of Rural Development
NIMFEA	Regional authorities of environmental and nature protection and water management
PRA	Department of Environment - Parks and Forests Service of the Region; Ministry of Environment - DG Nature and Sea Protection
RVE	No
STRANDJA	Ministry of environment and water - If the SITES are part of protected areas, regarding national Protected areas act; Regional Inspectorates of Ministry of environment and water
TIMIS	ARPM Regional Agency for Environmental Protection; National environmental protection agency; ministry of environment and forestry
TORRE	Administration of the Region; Environmental Ministry

Table 22: Responsibility/authority on local level

PP	Who
AREC	Local Authorities working for protected area management, Gebietsbetreuung (z.B. Ennstal und Ausseerland/ directly coordinated by the Styrian Province, allocation to private companies, cooperation with the district authorities, chambers e.g. agriculture & forestry
CACAK	
DDNI	Environmental protection agency, administrators or custodians of protected areas (biosphere reserve, national/natural parks, natura 2000 sites (sci and spa), protected areas at national level
ETANAM	Amvrakikos Wetlands' Management Body http://www.amvrakikos.eu
LBDCA	
NIMFEA	
PRA	Provinces and Parks Authorities (but regional law is changed in January 2012 and we are now passaging to new Authorities for Parks and Biodiversity that will manage parks, reserves and Nature 2000 from July 2012)
RVE	
STRANDJA	
TIMIS	Environmental protection agency, administrators or custodians of protected areas (biosphere reserve, national/natural parks, natura 2000 sites (sci and spa), protected areas at national level
TORRE	Province for environmental impact assessment

How many Impact Assessments according article 6 of the 92/43/eec directive have been implemented in the last 5 years?

Table 23: Numbers of impact assessments.

PP	National level	Regional level
AREC	0	?
CACAK		
DDNI	672	
ETANAM		
LBDCA	Few thousand	Few hundred
NIMFEA	No data	No data
PRA		~ 100 (in the Province of Ravenna, at regional level they should be about 1.000)
RVE		1.546
STRANDJA	15.000	50
TIMIS	672	~ 80
TORRE		

Table 24: Comments on impact assessments.

PP	Comments
AREC	has to be checked in each province, management is implemented by technical bureaus on behave of the province government or directly by staff of province government other studies in order from the Federal Ministry of Agriculture, Forestry, Environment and Water Management (e.g. technical Bureau Suske with Analyses of ÖPUL in Natura 2000 sites); (BMLFUW-LE.1.3.7/0004-II/5/2008), Wien June 2009
CACAK	Impact assessment is obligatory for all protected areas
DDNI	This is the number of environmental permits issued by the environmental authority according to article 6 of the 92/43/eec directive
LBDCA	There are ten Environmental, Nature Conservation and Water Management Authorities in Hungary with different competence sizes and different number of cases. No central information can be found
NIMFEA	On regional level: No data available at regional authorities of environmental and nature protection because a diverse scale of legal processes can consist such assessment and they never counted such kind of statistics. On national level: Data absent, see before
PRA	Impossible to know at national level. At provincial level about 100
RVE	This number excludes local authorities, and some regional structures who could approve specific projects. There is a specific regulation which obliges all regional and local authorities to communicate each year those information, but data are not available
TIMIS	This is the number of environmental permits issued by the environmental authority according to article 6 of the 92/43/eec directive

Who has carried out the Impact Assessment according article 6 of the 92/43/eec directive?

Table 25: Organisations that implement impact assessments.

PP	Legal authority	NGOs	Consulting Agencies	Others
AREC			75 %	
CACAK				
DDNI			40 %	Authorized individual evaluators
ETANAM				
LBDCA		Some	Some	Private businesses, contractors
NIMFEA				
PRA	100 %			
RVE	100 %			
STRANDJA			100 %	
TIMIS			40 %	Authorized individual evaluators
TORRE	100 %			

Table 26: Comments on organisations that implement impact assessments.

PP	Comments
AREC	mostly private consulting (on behalf of the province government e.g. Styria www.ztkofler.at , including the management plans and operative activities of the Natura 2000 sites for Styria, or for the Ausseer land directly by the Province government (Dr. Karin Hochegger = Gebietsbetreuerin Ausseer Land, Sites 35, 36, 19, 20) nunter für die Steiermark (incl. Gebietsbetreuung)
DDNI	INDIVIDUAL EVALUATORS ARE AUTHORIZED BY THE MINISTRY OF ENVIRONMENT AND FORESTS. Some NGOs carried out several impact assessments but always subcontracted by a consulting agency or even an authorized individual evaluator. In the category of Con-

	sulting Agencies are also the authorized Research Institutes
NIMFEA	Investor or preparator of a plan has to carry out (Decree No. 275/2004, 10. §)
RVE	This is related only to Impact Assessment and not to the underlying studies.
STRANDJA	Consulting agency may put pressure on members of the investigative team. Member of the investigative team can be even replaced if the assessment prepared by him is not positive regarding the intentions of the investor..

Who has to cover the costs of the Impact Assessment according article 6 of the 92/43/eec directive?

Table 27: Financing impact assessments.

PP	Public au- thority	Applying com- pany	Others
AREC	50 %	50 %	
CACAK			
DDNI		100 %	
ETANAM			
LBDCA		100 %	
NIMFEA		100 %	
PRA	50 %	50 %	
RVE	100 %		
STRANDJA		100 %	
TIMIS		100 %	
TORRE		100 %	

Table 28: Comments on financing impact assessments.

PP	Comments
AREC	Funding programmes EU : Life Nature, ELER, tw. INTERREG, province governments other special studies are financed also by the Federal Ministry of Agriculture, Forestry, Environment and Water Management, ÖPUL Funding (Austrian Environmental programme for

	Agriculture) with special programmes for the sustainable management of grassland
CACAK	In other EIAs, it is always the investor (the applicant), according to Serbian legislation
DDNI	All costs for the Impact Assessment are covered by the investor. We made an assessment on national level of the types of investors who have benefited of Impact Assessments according 6 of the 92/43/eec directive: -50% mayoralities and/or local councils-40% private companies-10% individuals and church
NIMFEA	Investor or preparator of a plan
PRA	The Impact Study costs are covered by the applying companies; the Impact Assessment costs are covered by public authorities; so, I esteem 50% for each document
RVE	This is related only to Impact Assessment and not to the underlying studies (such latter costs are assumed by whom presents plans or projects).
STRANDJA	Preparation of Impact Assessments is financed paid by the investors, which also choose the member of researching teams - and that facts - in most cases - compromise and corrupt the conclusions
TIMIS	All costs for the Impact Assessment are covered by the investor (applying company).

4.1.7 Which steps have been undertaken towards the implementation of Natura 2000 to nature conservation law?

Table 29: Steps of implementation of Natura 2000 into national law.

PP	Comments
AREC	Natura 2000 It. UBA:Rechtliche Grundlagen des Biotop- und Artenschutzes innerhalb der Europäischen Union sind die Vogelschutzrichtlinie sowie die Fauna-Flora-Habitat-Richtlinie, auch FFH-Richtlinie genannt. Die Natura 2000 Bestimmungen sind in den 9 Landesgesetzen zum Naturschutz verankert. Hauptziel der FFH-Richtlinie ist der Aufbau des europaweiten Schutzgebietsnetzes "Natura 2000". Mit dem Schutzgebietsnetz sollen die natürlichen Lebensräume Europas dauerhaft gesichert werden. Die im Rahmen der Vogelschutzrichtlinie ausgewiesenen Schutzgebiete werden in das Schutzgebietsnetz "Natura 2000" integriert. In einigen Naturschutzgesetzen (Burgenland, Wien, Vorarlberg) ist die Schutzkategorie "Europaschutzgebiet" vorgesehen. Für alle Schutzgebiete des Natura-2000-Netzwerkes müssen die Mitgliedstaaten Erhaltungspläne vorlegen und ein Monitoringprogramm durchführen. Dieses soll Auskunft über die Wahrung des günstigen Erhaltungszustandes der zu schützenden Arten und Lebensräume geben. Die Gebietsauswahl

erfolgte aufgrund der Rechtslage in Österreich durch die neun Bundesländer. Bei der Auswahl der Gebiete war darauf zu achten, dass die Lebensraumtypen nach Anhang I und die Arten nach Anhang II der FFH-Richtlinie und Arten der Vogelschutzrichtlinie abgedeckt sind. Als ausreichend abgedeckt gilt ein Lebensraum dann, wenn seine Gesamtfläche bis zu 60% in den vorgeschlagenen Gebieten enthalten ist. Wenn weniger als 20% der Gesamtfläche eines Lebensraumes in den Gebieten erfasst ist, wird von einer unzureichenden Repräsentierung ausgegangen. Bisher wurden in Österreich 220 Gebiete nominiert (2011), davon wurden mindestens 148 Gebiete rechtlich verordnet. Die verordneten "Europaschutzgebiete" nehmen rund 12% der Bundesfläche ein. Dabei ist zu unterscheiden zwischen Gebieten, die nach der Vogelschutz-Richtlinie nominiert wurden und jenen, die nach der FFH-Richtlinie vorgeschlagen wurden. Ein Großteil der Gebiete wurde jedoch sowohl nach der FFH-Richtlinie als auch nach der Vogelschutzrichtlinie vorgeschlagen. In der Umsetzung der Verpflichtungen, welche sich aus der FFH-Richtlinie und der über Artikel 7 der FFH-Richtlinie in das Natura 2000-Netz integrierten Vogelschutz-Richtlinie ergeben, spielt der „günstige Erhaltungszustand“ insbesondere für folgende Bereiche eine zentrale Rolle:

- Vorschlag und Ausweisung von geeigneten Gebieten gemeinschaftlichen Interesses.

- Festlegung von Erhaltungszielen für die Gebiete.

- Festlegung von Erhaltungsmaßnahmen für die Schutzobjekte.

- Beurteilung von Verschlechterungen und Störungen.

- Beurteilung von Plänen und Projekten auf Verträglichkeit.

- Monitoring der Gebiete.

- Erstellung von Berichten. Entwicklung von Kriterien, Indikatoren und Schwellenwerten zur Beurteilung des Erhaltungszustandes der Natura 2000-Schutzgüter. Der Bericht behandelt 80 Vogelarten, 91 (weitere) Tier- und Pflanzenarten und 65 Lebensraumtypen:

Band 1: Vogelarten

Band 2: FFH-Arten

Band 3: FFH-Lebensraumtypen

Naturverträglichkeitsprüfung

CACAK

1. Law on Nature Protection (2009, 2010) defines in rather general terms. It also stipulates that existing legislation for ecological network (Decree on Ecological Network, 2010) will be basis for NATURA 2000 network. The time for consolidation of the network is set for the moment Serbia becomes a part of EU. Also, some general provisions of the Law

	<p>will apply to NATURA 2000, e.g. compensation (mitigation) measures regarding planning projects, works, various</p> <p>2. Biodiversity Strategy and Action Plan (MoE, UNEP, 2010) envisages specific activities related to development of the network</p> <p>3. The Twinning Project SR07-IB-EN-02 “Strengthening administrative capacities for protected areas in Serbia NATURA 2000” (http://www.ekoplan.gov.rs/n2ktwinning/eng/projekat/index.html), is developed in a partnership between the Ministry of Environment, Mining and Spatial Planning of Serbia (MoE), on the one hand, and the Environment Agency from Austria together with the Austria European Public Law Organization from Greece, on the other hand. The project started on January 1st 2010 and will be finalized on June 30th, 2012. The overall objective of the project is the implementation and enforcement of the NATURA 2000 network in the Republic of Serbia. More specifically, to improve protection of endangered species and their habitats in Serbia, to raise knowledge in the preservation of Serbia’s natural heritage and to increase the capacity to implement the legal standards in nature protection. The project will contribute to (a) the harmonization of the Serbian legislation with the EU nature directives (Birds and Habitats Directive); (b) the establishment of the Natura 2000 network in accordance with EU criteria; (c) the development of two pilot management plans for NATURA 2000 areas and (d) the elaboration and implementation of a training programme which will systematically deal with capacity building in development of the NATURA 2000 network in Serbia.</p> <p>4. NATURA 2000 Action plan 2011-2020 has been put on public review by MoE</p> <p>5. As a part of Twinning project, a blog on NATURA 2000 has been established on local WWF site.</p>
DDNI	<p>Romania already transpose the European directives (Bird and Habitat) to national legislation (Ministerial Order (OM) no. 207/2006 (Romania's Official Monitor (MO) no. 284/298.03.2006); Governmental Emergency Ordinance (OUG) no. 57/2007 (Romania's Official Monitor (MO) no. 442/29.06.2007), identified and designated the SPA and SCI network (Government Decision (HG) no. 128/24.10.2007 amended by HG no.971/2011 (MO no. 715/11.10.2011); Ministerial Order (OM) no. 1964/2007 amended by OM no.2387/2011 (MO no. 846/29.11.2011)) and start to implement the management system for Natura 2000</p>
ETANAM	<p>Scientific monitoring (physicochemical and biotic parameters) through programmes: LIFE-NATURE, master-plan for Amvrakikos Wetlands and Gulf</p>
LBDCA	<p>Since Government Decree No 275/2004 has been issued, the Government Decree No 69/2007. about “ rules of the Natura 2000 grasslands” and the Ministry of Rural Development Decree No. about „detailed rules of compensation support managing Natura 2000</p>

	grasslands" are in force
NIMFEA	The above mentioned Decree No 275/2004 covers those topographic sites and Annex I,II species which were not protected until it's declaration in Hungary. The decree reflects existing earlier laws connecting the Nature 2000
PRA	The National Government issued two laws to acknowledge the directives and to delegate the Regions to detail the local application, according to the national guidelines. The Region Emilia-Romagna issued a regional law to regulate the manager of sites and the responsible of impact assessment and also issued some directives about the procedures for the impact assessment. In Emilia-Romagna the sites manager are the Parks Authorities inside parks and the Provinces outside parks or in other kind of protected areas (natural reserves, protected landscapes, ecological network). For projects, the regional law delegates the impact assessment to any public authority that approve each project; for plans, the regional law delegate the impact assessment to the public authority that draw up the plan. In Emilia-Romagna monitoring is prerogative only of the Region.
RVE	Besides the sites designation, we have: conservation measures for all SPAs, and the greater part of SCIs (those measures are also part of regional hunting law) - the commitment to include in parks planning laws, Natura 2000 conservation objectives - the inclusion of 4 specific articles in the regional territorial plan law (including regional ecological network outside Natura 2000) - the proposal of a specific Natura 2000 Regional law. The draft law (which was meant to represent a framework legislation on Natura 2000 and on Veneto parks) has been prepared in 2006, but it has not been presented to the Regional Assembly yet.
STRANDJA	
TIMIS	
TORRE	The first steps have been made primarily for the implementation of the knowledge base for the development, planning and programming of the regional network of protected natural areas; for conservation and restoration of the natural regional heritage; for awareness, information and environmental education. As part of the Regional Organization, was established a Department of Parks and Biodiversity, to develop strategies and monitor the governance of the Park Authorities. The Parks Department also has the task of establishing, under the Regional Law 19/1997, the Regional Protected Areas: to date, it has set up 18 and others are in the process of being established. The Parks Department is

encouraging the development of implementation tools (Plan of the park, multi-year Economic and Social Plan, the Regulations) in each regional protected area. All this to ensure that protected natural area is not seen only as environment and nature, but also as a place where there is the man with its activities: it must implement the idea of collective participation and awareness of environmental management. As part of the implementation of basic skills have been produced feasibility studies, including one aimed at "the definition and development of the regional system of protected areas and interconnection to the system environment", and was also funded the preparation of plans management, expected by the rule when tools of planning and land management already present are not sufficient to ensure proper management of the site conform to the objectives of protection of the Habitats Directive. To now in Puglia, 13 Management Plans were adopted: they are thematic-sectoral planning instruments of the territory, which produce additional effects and replacement on the rules and provisions of current planning instruments of the municipalities involved

4.1.8 Which successful implementation strategies can you define/recommend?

Table 30: Successful implementation strategies.

PP	Comments
AREC	<p>Eionet: European Environment Information and Observation Network Die Naturverträglichkeitsprüfung und das Verfahren im Falle von Eingriffen regelt Artikel 6(3-4) der FFH-Richtlinie. Die FFH-Richtlinie verfolgt nach dem Vorsorgeprinzip das Ziel, absehbare Beeinträchtigungen und Verschlechterungen von Natura 2000-Gebieten zu erkennen, zu prüfen und bereits vor ihrem Eintreten abzuwenden. Eine Naturverträglichkeitsprüfung (NVP) ist dann erforderlich, wenn Pläne oder Projekte, die für ein bestimmtes Natura-2000-Gebiet festgelegten Erhaltungsziele erheblich beeinträchtigen könnten. Bei einer Umweltverträglichkeitsprüfung wird in erster Linie die Auswirkung eines konkreten Projektes bestimmter Größenordnung auf die Umwelt untersucht. Der Prüfungsansatz in den Natura-2000-Gebieten ist hingegen von der Projektgröße unabhängig und ausschließlich auf die die Auswirkungen auf konkrete Lebensräume oder Arten ausgerichtet. Ziel ist der Schutz der nach der Richtlinie relevanten Lebensräume und Arten und damit des kohärenten („zusammenhängenden“) Netzwerkes Natura 2000. Die NVP bildet die Grundlage für die Genehmigung oder Ablehnung eines Planes oder Projektes. Der Verträglichkeitsprüfung unterliegen „Pläne und Projekte, die ein solches Gebiet (FFH-Gebiet) einzeln oder im Zusammenwirken mit anderen Plänen oder Projekten erheblich beeinträchtigen könnten“. Damit ist die Prüfpflicht schon durch die begründete naturschutzfachliche Vermutung einer möglichen nachteiligen Wirkung auf das FFH-Gebiet bzw. Vogelschutzgebiet gegeben. Es ist dabei unerheblich, ob der geplante Eingriff innerhalb des gemeldeten Gebietes liegt oder ob Einwirkungen von außen auf das Gebiet zu befürchten sind. Kumulative Wirkungen mit weiteren geplanten Eingriffen oder auch mit bestehenden Vorbelastungen im Gebiet sind dabei ebenfalls zu berücksichtigen. Eine Genehmigung von Plänen und Projekten ist zunächst nur dann möglich, wenn das Natura-2000-Gebiet bezogen auf die Schutzobjekte, d.h. Lebensraumtypen und Arten der Anhänge, nicht beeinträchtigt wird. Dabei können schadensbegrenzende Maßnahmen erarbeitet werden, welche die Auswirkungen eines Projektes soweit minimieren, dass diese nicht mehr als erheblich zu werten sind. In einer NVP können wirtschaftliche u.a. öffentliche Interessen gegenüber Erhaltungszielen abgewogen werden (Abklärung von Alternativlösungen, die das Gebiet nicht beeinträchtigen) Wird ein Projekt od. Plan trotz negativer Auswirkungen genehmigt, muss diese Entscheidung an die Durchführung von Ausgleichsmaßnahmen geknüpft werden. Die Möglichkeit, einen entsprechenden Lebensraum minderer Qualität zu verbessern, besteht nur dann, wenn dies nicht bereits im Rahmen der Erhaltungsverpflichtung hätte erfolgen müssen. Ausgleichsmaßnahmen müssen greifen (ökolog. Funktionsfähigk.). Alle Ausnahmegenehmigungen sind meldepflichtig gegenüber der EU-Kommission.</p>

CACAK	<ol style="list-style-type: none"> 1. Detailed definition of NATURA 2000 network in the legislation; 2. Development of relevant legislation, enabling creation of the network; 3. Identification of all relevant stakeholders; 4. Identification of sources of financing of implementation process; 5. Relation of NATURA 2000 with existing networks in Serbia; 6. Promotion of intersectoral cooperation; 7. Involvement of all relevant stakeholders at national, regional and local levels; 8. Exchange of experience and transfer of knowledge; 9. Development of training programmes and capacity building; 10. Transparent and straightforward communication strategy; 11. Larger involvement of NGO sector.
DDNI	<p>We recommend to have an officially recognized (published) regional and national estimation of species population size and distribution as well as habitats size and distribution as good as possible. In this way is much more easier to identify the potential Natura 2000 sites and find the optimal size and limits from conservation point of view. Is important that all this selection and designation process to be made in a transparent manner and this is a good opportunity to promote the need of Natura 2000 network at local, regional and national level.</p>
ETANAM	<p>Management of the water provisioning and enrichment of the Wetlands from the rivers</p>
LBDCA	<p>Significant subsidy for the proper management</p>
NIMFEA	<p>The legislation of SPA and SAC sites itself, without such a widespread and outraged social debate then – for instance – in Finland occurred.</p>
PRA	<p>The knowledge of territory is basic to start the implementation of Nature 2000; then, it's very important to organize a staff of experts for each matter and group of habitats (forests, wetlands, grasslands, rocks, coastal habitats), plants and animals (mammals, birds, reptiles and amphibians, fish, insects, molluscs), leaded by an environmental scientist with a good ecosystemic approach.</p> <p>A specific and independent authority should be identified for all the activities concerning the managing of Nature 2000: monitoring, direct managing, impact assessment, etc.</p>
RVE	<p>- have always a solid knowledge base on habitats and species status / trend (great time-cost effort)</p>

	<ul style="list-style-type: none"> - be faithful to the provisions of the Habitats and Birds directives (short/zero time-cost effort) - always try to share as much as possible
STRANDJA	<p>Preparation of regimes in the Order for declaration and Specific Management Plans for some Natura 2000 sites with the participation of local authorities and people. The presented example is rather restrictive than related to sustainable development of the site. Local people from a small municipality in Southeastern Bulgaria, with the help of the local branch of the NGO working for the conservation of birds, together managed to impose an order with regimes of the local Natura 2000 site that prevented massive logging of state forests and inefficient development of the mining industry. How does the cooperation work? How does the participation look like. - concerned .campaign was incidental, and was associated only with the process of determining the site regimes. The local community was not the actual owner of the territory, and the action had only public resonance but no real managerial significance</p>
TIMIS	<p>Biodiversity conservation</p> <p>Limiting the influence of anthropogenic factor</p> <p>Environmental education</p>
TORRE	<p>Economic instruments to support implementation of the Natura 2000 network, aimed at nature conservation and promotion of activities compatible with its protection, are the funds of the Regional Programme for the Protection of the Environment (Axis 2 "Nature conservation areas, nature and biodiversity ") and the 2000-2006 Regional funds (Measure 1.6" Protection and promotion of natural assets environmental and ") relative to the old programming, and the ERDF OP 2007-2013 (Line 4.4. "Interventions for the ecological network") refer to the new programming.</p>

4.1.9 Where have you experienced difficulties

Table 31: Experienced difficulties in implementing Natura 2000.

PP	Comments
AREC	<p>9 different province laws with different priorities, no federal content/ focus of guidelines to other laws (bundesweite Festlegung in den anderen Gesetzen wie Raumordnung, Jagd, Forst Fischerei, uneinheitliche Kartierungsvorgänge (keine einheitlichen Vorgaben und Qualitätsstandards), zu wenig Geld für professionelle Erhebungen und Longer term MONITORING; das öffentl. Interesse weicht die Naturschutzrichtlinien auf; Landnutzungsinteressen versus Naturschutz (siehe dazu aktuelle Diskussion Salzburg mit Aufweichung</p>

	<p>der Naturschutzkompetenzen). Flächenfreikauf nur über Privatinitiativen zB. Naturschutzbund. Dort funktioniert das Management es fehlt aber an einer flächendeckenden PR und Ausstattung der Flächen. Mangelndes Wissen und Verständnis der Landnutzer (fehlende Bewirtschaftungsstrategien). tw. nur über Projekte wie ELER, Life Nature oder INTERREG mit räumlicher Schwerpunktsetzungen aber keine flächendeckende Strategie erkennbar. Kontraproduktive Förderungen / keine klaren Bestimmungen, Mangelnde Umsetzung der Verordnungen zu den ausgewiesenen Natura 2000 Flächen. Gebietsbetreuung und Management tw. von privaten Firmen im Auftrag der Landesregierungen, die gleichzeitig Gutachter f. Straßenbau und andere Infrastrukturmaßnahmen sind. kontraproduktive Förderungen in der Landwirtschaft / Forstwirtschaft (Forststraßenbau, Almerschließungswege, Bewirtschaftungsprämien, mangelnde Schutzgebietsausweisung Landwirtschaftskammern beraten unzureichend) municipalities are not informed about the relevant processes, supporting more or less the land owners or infrastructure and spatial planning projects (other priorities), political decision makers to many levels of authorities in Austria</p>
CACAK	<ol style="list-style-type: none"> 1. Nature conservation management is still centralized; 2. Local authorities and local stakeholders have very little or no authorities over processes such as establishing network of protected areas on its territory; 3. Managing bodies of protected areas are imposed by state government bodies, local communities have small or no influence in decision making process; 4. Capacities for NATURA 2000 implementation are low or do not exist at local level.
DDNI	<p>Because we had poor regional and national estimation of species population size and distribution as well as habitats size and distribution, we experienced difficulties to identify the potential Natura 2000 sites and find the optimal size and limits from conservation point of view. ETANAM Local community acceptance & public awareness</p>
ETANAM	<p>Local community acceptance & public awareness</p>
LBDCA	<p>The main problem is the lack of the official management plans for each Natura 2000 site. There have been some experimental management and maintenance plans in Hungary (http://www.naturaterv.hu/) In spite of the exhaustive preparation of these works, the reaction of the local general public was mainly negative, because of the unsatisfactory proportion of the financial support versus the regulations. None of these management and maintenance plans are official according to the law</p>
NIMFEA	<p>In the spatial delimitation of sites (should be practical but professionally strengthened), the responsible regional nature protection directorates had to perform it without enough informal and economic background. Other difficulty, resulted in Hungary's role at the European Court, implementation of Natura 2000 prescriptions into forestry laws and forestry planning.</p>

PRA	<p>As wrote at point 1.7, for projects, the regional law delegates the impact assessment to any public authority that approves each project. It would be better to identify one specific responsible for all the procedures, always the same and not depending from the authority approving the project. Because the impact assessment need high expertise and the small Municipalities are not equipped to manage this procedure. As wrote at point 1.7, for plans, the regional law delegate the impact assessment to the public authority that draw up the plan; this is really inappropriate, because the same subject is controlled and controller. A specific and independent authority should be identified for the impact assessment of all the plans</p>
RVE	<p>We have experienced the following difficulties:</p> <ul style="list-style-type: none"> - lack of data on habitats and species - little compliance between the standard data forms and real presence of habitats and species - lack of professional skills and expertise of bodies in charge of this matter at regional level - lack of courses and university-level education related to Natura 2000 values in Veneto - lack of communication and sharing; very few specific publications - lack of awareness of citizenship with the negative effect that is often frowned upon the Natura 2000 network, or it is considered very binding (many sites are little known by common people) - fragmented competences and lack of personnel with appropriate training in public administration - widespread "urban vision" in the planning and management of Natura 2000 - incomplete integration of Natura 2000 in park, forestry, agricultural, water, etc. management - lack of funds to implement specific provisions of Directives - lack of coordination among the different decision makers in this field
STRANDJA	
TIMIS	
TORRE	

4.2 Answers : Management and organisational structures

4.2.1 Does each individual Natura 2000 site has at least one person responsible for administrative and management issues and who is available for interactions with local stakeholders?

Table 32: Responsible persons for administrative and management issues

PP	All	Some
AREC	No	70 %
CACAK	No	
DDNI	No	30 %
ETANAM	Yes	
LBDCA	No	
NIMFEA	No	
PRA	Yes	
RVE	No	
STRANDJA	No	17 %
TIMIS	No	30 %
TORRE	No	n.a.

4.2.2 Are there management plans available for each of the Natura 2000 sites?

Table 33: Management plans available for each of the Natura 2000 site

PP	All	Some
AREC	No	70 %
CACAK	No	
DDNI	No	12 %
ETANAM	No	
LBDCA	No	
NIMFEA	No	10 %
PRA	No	
RVE	No	20 %
STRANDJA	No	10 %
TIMIS	No	15 %
TORRE	No	18 %

4.2.3 What do the management plans contain? Provide information (in relative terms) to what extent the below listed issues are covered by the assessed management plans.

Table 34: Content of management plans

PP	Number of assessed Natura 2000 sites	List of species	Maps of habitats	Scale of maps	Population size
AREC	?	100 %	100%	1:500 to 1:20000	10 %
CACAK					
DDNI	30	100 %	30%	1:10000 or 1:25000	60 %
ETANAM					
LBDCA					
NIMFEA	1	100 %	100%	not defined	100 %
PRA					
RVE	26	100 %	100%	1:10000	
STRANDJ A	10	100 %	30%	1: 2500	20 %
TIMIS					
TORRE	1	19 %	19%		5 %

Table 35: Content of management plans

PP	Assessment of favourable state	Specific management measures	Specific indicators for evaluation	National guideline for management plans	National guideline for assessment of favourable state
AREC	100 %	10 %	10 %		
CACAK					
DDNI	50%	100 %	60 %	100 %	100 %
ETANAM					
LBDCA					
NIMFEA	100 %	100 %	100 %	100 %	
PRA					
RVE	100 %	100 %	100 %	100 %	100 %
STRANDJ A	20 %	100 %	100 %	100 %	100 %
TIMIS					
TORRE	19 %	19 %	19 %		

4.2.4 Is there a national/regional process to ensure the quality of the management plans available and/or implemented?

Table 36: Processes to ensure the quality of available management plans

PP	Process available	Comments
AREC	Nat. & Reg.	The management plans are assessed by the department of nature conservation, federal state of styria. (Fachabt. 13 C)
CACAK		
DDNI		
ETANAM		
LBDCA	Nat.	The Ministry of Rural Development is proceeding a decree (finished probably in March 2012) about the preparation of the official management and maintenance plans and will also provide part of the budget for the producing
NIMFEA	Nat.	Content of Natura 2000 management plans is prescribed in the decree No. 275/2004, Ann. 13
PRA	Reg.	We had regional funding to implement management plans by 31/12/2012, following the regional guidelines
RVE	Reg.	It is mandatory in regional guidelines (the answers of the above 2.2.1 are referred to regional guidelines)
STRANDJA	Nat.	
TIMIS	Nat.	The management plans are developed by managers of protected areas; are approved by the Ministry of Environment; are advised by the Romanian Academy; are developed with all stakeholders; Can be changed only with the agreement of institutions which have approved; Urban development plans will be harmonized with the management plans; The provision of management plans take priority over any other development plan.
TORRE	Reg.	Regional Conference of the Regional System for the Conservation of Nature

Table 37: Processes to ensure the quality of implemented management plans

PP	Process implemented	Comments
AREC	Reg	Local authorities of the protected area management try to implement the management plan.(Gebietsbetreuung)
CACAK		
DDNI	Nat.	The management plans are developed by managers of protected areas; are approved by the Ministry of Environment; are advised by the Romanian Academy; are developed with all stakeholders; Can be changed only with the agreement of institutions which have approved; Urban development plans will be harmonized with the management plans; The provision of management plans take priority over any other development plan.
ETANAM		
LBDCA		
NIMFEA	Nat.	
PRA		
RVE		not yet implemented, because the approval of existing plans was depending by a rescinded regional law (Italian Constitutional Court - decision n. 316/2009)
STRANDJA	Nat.	
TIMIS	Nat.	
TORRE		

4.2.5 Is there a national/regional mechanism to evaluate the effectiveness of the management plans available and/or implemented?

Table 38: Mechanisms to evaluate the effectiveness of available management plans

PP	Mechanisms available	Comments
AREC	Reg.	at the moment no regional or national mechanisms are available
CACAK		
DDNI	Reg.	The mechanism is available only at local level
ETANAM		
LBDCA		
NIMFEA		Because we do not have enough management plan
PRA		
RVE	Reg.	It is mandatory in regional guidelines
STRAND-JA	Nat.	
TIMIS	Reg.	The mechanism is available only at local level trough different projects that evaluate the effectiveness of the management plan/s .
TORRE		

Table 39: Mechanisms to evaluate the effectiveness of implemented management plans

PP	Mechanism implemented	Comments
AREC		
CACAK		
DDNI	Reg.	The mechanism is implemented only at local level trough different projects that evaluate the effectiveness of the management plan/s .
ETANAM		
LBDCA		
NIMFEA		
PRA		
RVE		not yet implemented, because the approval of existing plans was depending by a rescinded regional law (Italian Constitutional Court - decision n. 316/2009)
STRAND-JA	Nat.	
TIMIS		
TORRE		

4.2.6 Have the management plans been implemented successfully?

Table 40: Amount of implemented management plans

PP	Management plans implemented	Comments
AREC	Partly	Most management plans have been established only recently, implementation will take more time
CACAK		
DDNI	Partly	generally some objectives and/or activities have registered delays or disruptions in implementation
ETANAM		
LBDCA	No	Plans not existing legally.
NIMFEA	No	Because we do not have enough management plan
PRA	No	We still don't have management plans
RVE	No	none of them is mandatory - rescinded regional law (Italian Constitutional Court - decision n. 316/2009)
STRAND-JA	Partly	Insufficient of subsidies; governmental changing of management plans, staff education, motivation
TIMIS	Partly	generally some objectives and/or activities have registered delays or disruptions in implementation
TORRE	Partly	It's impossible to answer to this question, without specific parameters to evaluate the effectiveness of management

4.2.7 To what extent the following stakeholder groups are involved in the designation process of Natura 2000 sites? Provide information in relative terms (total number of sites / number of sites with stakeholder involvement)?

Table 41: Degree of involvement of stakeholder groups in the designation process

PP	Number of assessed Natura 2000 sites	F A R M E R S S E R S	F O R E S T E R I O R E N	I N D U S T R I E S	E D U C A T I O N	T O U R I S M	H O U S I N G	O T H E R S
AREC	220	10%	30%		Yes	10%	10%	
CACAK								
DDNI	531		35%		5%			60%
ETANAM	467	10%	2%		2%		20%	46%
LBDCA								
NIMFEA								100%
PRA	26							
RVE	130	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STRANDJA	349							
TIMIS	531		35%		5%			60%
TORRE	1	Yes			Yes	Yes	Yes	

Table 42: Comments on the degree of involvement of stakeholder groups in the designation process

PP	Comments
AREC	Farmers: Only in some regions like Upper Austria Foresters: In some regions like Upper Austria, Lower Austria Education: National Parks, Nature Parks Tourism: National Parks, Nature Parks Hunting: Hunting districts of the municipalities
CACAK	
DDNI	
ETANAM	Others: Ministry of the Environment, Regional Authorities and Amvrakikos Wetlands' Management Body
LBDCA	There were NO consultations during the designation process
NIMFEA	Regarding to annexes of habitats and species, in Hungary, designation process is (was) not a question of stakeholders' involvement. It is (was) a strictly professional task regarding to annexes of habitats and species
PRA	
RVE	The designation process didn't involve any stakeholder
STRAND-JA	Ministry council. Officially only scientific criteria has been used
TIMIS	
TORRE	The Regulations for the compatible activities has been defined through participatory planning activities with stakeholders

4.2.8 To what extent the following stakeholder groups are involved in the management process of Natura 2000 sites? Provide information in relative terms (total number of sites / number of sites with stakeholder involvement):

Table 43: Degree of involvement of stakeholder groups in the management process

PP	Number of assessed Natura 2000 sites	F A R M E R S	F O R E S T E R S	I N D U S T R Y	E N V I R O N M E N T A L A U T H O R I T I E S	T O U R I S M	H O U N D S M A N S	O T H E R S
AREC	41	70 %	50 %	0		0	10 %	Yes
CACAK								
DDNI	210		33 %		3 %	0,5 %	7 %	53 %
ETANAM		10 %	2 %	10 %	2 %	10 %	18 %	48 %
LBDCA	0							
NIMFEA	0	90 %	Yes	1 %	1 %	1 %	5 %	5 %
PRA	26	100 %	100 %	0	0	0	100 %	
RVE	130	20 %	20 %	20 %	20 %	20 %	20 %	20 %
STRAND-JA	3	20 %	60 %	30 %	50 %	50 %	30 %	60 %
TIMIS	210		33 %		3 %	0,5 %	7 %	53 %
TORRE	1	Yes						

Table 44: Comments on the degree of involvement of stakeholder groups in the management process

PP	Comments
AREC	<p>Farmers: In Styria management plans and processes involve farmers by paying subsidies for ecological management practices</p> <p>Foresters: In Styria subsidies are available for ecological forest management</p> <p>Hunters: Hunting areas = Natura 2000 sites, need for protection of species/controlling</p> <p>Others: on the acquired Natura 2000 site near Trautenfels= Partially by (AT 222 9002), www.naturschutzbund.at (for other areas)</p>
CACAK	
DDNI	
ETANAM	Ministry of the Environment, Regional Authorities and Amvrakikos Wetlands' Management Body
LBDCA	
NIMFEA	Farmers: We have to clarify differences between (A) nature protection management and (B) general management (land use). It is not clear here what the target area is. Below a very rough estimate of GENERAL = ECONOMIC management listed.
PRA	<p>Region and Provinces decided to involve the directly interested in land use</p> <p>Industry: There aren't industries inside sites</p>
RVE	Stakeholders are mandatory involved by the management plan
STRAND-JA	
TIMIS	
TORRE	Farmers: and fishermen are organized into a community that is involved in planners processes of the management body

4.2.9 Has an assessment of the level of stakeholder acceptance already been carried out?

Table 45: Assessment of stakeholder acceptance

PP	Absolute number of assessed N 2000 sites	No concept available, not implemented	Concept available, not implemented	Assessment implemented on % of sites
AREC	41	Yes		
CACAK	0			
DDNI	531			100
ETANAM	0	Yes		
LBDCA	0	Yes		
NIMFEA	0	Yes		
PRA	26			
RVE	130		Yes	
STRANDJA	3		Yes	
TIMIS	531			100
TORRE	1		Yes	

4.2.10 Please describe current governance structure!

Table 46: Actual governance structure

PP	Comments
AREC	<p>Focus = 9 province laws, province governments are responsible for the implementation of Natura 2000 sites management on sites: private technical bureaus make the job (or some employees from the government (new structures are expected e.g. in Styria)</p> <p>Funding (e.g. ÖPUL), EU funding, ELER 07-13, Life nature</p> <p>The term Natura 2000 is implemented in different laws (see Annex 1 laws Austria) or RIS BKA including the structures of the responsibilities. Province government, District administration, Municipality</p>
CACAK	N/A
DDNI	<p>The current governance structure consists of :</p> <ul style="list-style-type: none"> - the president - the prime minister - the deputy prime minister - the govern that consists of 16 ministries <ul style="list-style-type: none"> - Ministry of Administration and Interior - Ministry of Foreign Affairs - Ministry of National Defence - Ministry of Culture and National Heritage - Ministry of Economy, Trade and Environment of Business - Ministry of Public Finance - The Ministry of Environment and Forests - Ministry of Health - Ministry of European Affairs - Ministry of Agriculture and Rural Development - Ministry of Communications and Information - Ministry of Regional Development and Tourism - Ministry of Education, Research, Youth and Sport

	<ul style="list-style-type: none"> - Ministry of Justice - Ministry of Labour, Family and Social Protection - Ministry of Transport and infrastructure <p>The Structure of government's working apparatus:</p> <ul style="list-style-type: none"> - Working Structure of Prime Minister - General Secretariat of Government - Department for Relations with Parliament - Department for Interethnic Relations - Department for European Affairs - Department of Government Control - Working Structure of Deputy Prime Minister <p>In Romania are 42 counties. Each county has its own prefecture (the government representative).</p> <p>The legal representative of the Ministry of Environment and Forests in each county is the Environmental Protection Agency and at regional level by the Regional Environmental Protection Agency</p>
ETANAM	
LBDCA	<p>At the national level the Ministry of Rural Development, while at the regional level ten Environmental, Nature Conservation and Water Management Authorities (legal authorities) and ten National Park Directorates are the responsible bodies for nature conservation management.</p>
NIMFEA	<p>At national level: Ministry of Rural Development.</p> <p>At regional level: Regional Authorities of Environmental and Nature Protection and Water management (formers are legal authorities).</p> <p>National park directorates' regional responsible bodies for NATURE CONSERVATION MANAGEMENT.</p> <p>Local authorities in the case of those (few) Natura 2000 sites which formerly were designated as a locally protected area, as responsible for nature conservation management AND legal authorities</p>
PRA	<p>The Province of Ravenna is now the manager of sites outside parks and it's responsible of 12 sites.</p> <p>The other 14 sites in Ravenna territory are inside parks and are managed by the Parks Authorities (Po Delta Park 13 sites; Vena del Gesso Park 1 site).</p> <p>The Province of Ravenna has "Parks Office" now with one technician (biologist) and one secretary; the staff is evidently undersized.</p>

	<p>The Po Delta Park has a staff of about 40 people, but only three employees (two technicians -biologist and agronomist- and one secretary) work for Nature 2000.</p> <p>The Vena del Gesso Park has a staff of 7 people, seconded by local Municipalities, and two work for Nature 2000 (one technician -forester- and one secretary).</p> <p>The Emilia-Romagna Region is now changing the management level of Nature 2000, that will pass from the Provinces and Parks to new "Authorities for the Management of Parks and Biodiversity", create for this specific aim. Now we don't know the future budget and the staff of those Authorities, that have already replaced the Parks Authorities will replace the Provinces from July 2012.</p>
<p>RVE</p>	<p>As foreseen in the DPR (Presidential Decree) n. 357/97, which implemented the directive at national level, Italian regions are responsible for participating in the identification process of sites, for their management and monitoring (possibly delegating some of these tasks to other local authorities, such as the provinces).</p> <p>As regards the Veneto territory, the regional administration is nowadays the only responsible body for management and monitoring of the sites (even if they are included into parks). There is a specific structure (Forestry and Parks Project Unit / Unità di Progetto Foreste e Parchi) which has under its competences the Natura 2000 dossier.</p> <p>Another structure is responsible for the most part of Impact Assessment carried out at regional level (Commissions' Coordination Project Unit - Environmental Planning Service / Unità di Progetto coordinamento commissioni - Servizio Pianificazione ambientale: four employees).</p> <p>These latter administrative responsibilities could change over time, due to the needs Regional Council (Giunta Regionale).</p>
<p>STRAND- JA</p>	<p>According to Bulgarian legislation, stating the foundation of authority for management of any Natura 2000 site is not obligatory.</p> <p>At this stage in the overlapping of the Natura 2000 site with traditional protected area under national law (17% of the whole Natura 2000 sites surface), which has a management plan and its own Directorate (of National and Natural parks) for implementing that Plan, the both functions will be combined</p>
<p>TIMIS</p>	<p>Administrator</p> <p>Chief accountant</p> <p>Community responsible</p> <p>Security responsible</p> <p>IT specialist</p> <p>Biologist</p> <p>Field agents</p>

TORRE

The Apulia Region designed the Nature 2000 network. In 13 of the sites, the Management Plans are implemented. To enforce the protection of the N2000 sites, the Apulia Region has overlapped the designations of the Regional Parks . At nowadays, there are 21 Regional parks designed. For regional parks, the management bodies have been identified through the regional laws for the establishment of each protected area. Where present within the boundaries of the regional park, the Natura 2000 areas are managed by the same manager.

The Parks Department is responsible for verifying:

- The status of the System of Conservation of Nature and the efforts made in the previous year
- the guidelines and the operational objectives for the natural system
- The forms of synergy and cooperation among institutions to implement management
- the necessary steps for the promotion, information and dissemination of the system of Nature Conservation
- The forms and sources of financing for intervention measures at the regional level, national and EU level as well.

The impact assessment of plans, as required by Legislative Decree 152/2006 and subsequent amendments and as explained in Circular No. 1 / 2008 of the Ecology Division (Regional Council Decree No 981 of 13.06.2008), is contained within the Strategic Environmental Assessment procedure.

4.2.11 Which management strategies (local, regional, national in place) have been applied to establish Natura 2000 sites?

Table 47: Already applied management strategies

PP	Comments
AREC	<p>League of Nature Protection in Austria: more than 1.100 Hektar oder 11 Millionen Quadratmeter Lebensraum für bedrohte Tier- und Pflanzenarten hat der NATURSCHUTZBUND mittlerweile im Besitz, - das sind insgesamt 1.029 Grundstücke in ganz Österreich. Viele weitere "Überlebensinseln" sollen noch geschaffen und bewahrt werden. Dort werden die Managementpläne auch umgesetzt. 1.029 Naturflächen in ganz Österreich! Die meisten davon, nämlich 395, befinden sich in der Steiermark. Die Schutzziele variieren von Bundesland zu Bundesland: In Kärnten hat der Moorschutz eine sehr lange Tradition, in Salzburg betreut der NATURSCHUTZBUND vor allem Feuchtwiesen und Tümpel. Im Burgenland pachtet er schwerpunktmäßig Wiesenflächen, um diese naturgerecht zu bewirtschaften. Auch die Österreichische Naturschutzjugend (önj) hat viele Naturräume durch Flächenkauf gesichert und betreut sie. Der Erwerb von Naturflächen bringt zugleich eine große Verantwortung mit sich. Genaue Planung, intensives Biotopmanagement und regelmäßige Pflege sind notwendig, um die sensiblen Naturflächen dauerhaft zu bewahren. Die NATURSCHUTZBUND-Grundstücke werden von unseren Landesorganisationen kompetent verwaltet und betreut – unter der tatkräftigen Mithilfe zahlreicher ehrenamtlicher Mitarbeiter. (siehe dazu Ö-Grafik). www.naturschutzbund.at;</p> <p>Naturschutz - Province Styria, FA 13 C = coordinator www.zt-kofler.at im Auftrag der Steiermärkischen Landesregierung: Definition des Erhaltungszustandes sämtlicher Schutzgüter für Europaschutzgebiet Nr. 5 „Ober- und Mittellauf der Mur mit Puxer Auwald, Puxer-Wand und Gulsen für Amt der Steiermärkischen Landesregierung, FA 13 C Wasserrechtliches bzw. naturschutzrechtliches Einreichprojekt und Managementplan für das Pichelmeier-Moor im Auftrag des Moorschutzvereines Pürgschachen, Arding, Europaschutzgebiet „Niedere Tauern“, Natura 2000-Gebietsbetreuervorarbeiten für das Jahr 2009</p> <p>Im Auftrag des Amtes der Steiermärkischen Landesregierung, FA 13 C Natura 2000 Networking Programme (NNP) The NNP is managed by Eurosite, ELO and EUROPARC on behalf of the European Commission. The homepage for the NNP is located at natura.org national park services Initiativen über Projekte (Leader/ Ländliche Entwicklung, BMLFUW direkt, Life, INTERREG, ...)</p> <p>In der Steiermark tw. Gebietsbetreuungen vor Ort (tw. auch von Landesbediensteten oder eben private Büros im Auftrag der Landesregierung)</p>
CACAK	N.A.
DDNI	<p>In Romania the Ministry of Environment and Forests has developed the methodology for the award of administration of protected areas that require establishment of management structures and methodology for awarding custody of protected natural areas that not require the establishment of management structures. This methodology was published in ORDER No. 1948 from 17.10.2010 published in OFFICIAL MONITOR</p>

	<p>No. 816 from 7.12. 2010 (http://www.mmediu.ro/protectia_naturii/protectia_naturii/natura2000/2011-09-07_natura2000/2011-09-07_natura2000_ordin1948din2010administrarecustodie.pdf)</p> <p>In ORDER No. 118 from 20.01.2011 was published the revised list of Natura 2000 sites that require their own administrative structures. (http://www.mmediu.ro/protectia_naturii/protectia_naturii/natura2000/2011-09-07_natura2000/2011-09-07_natura2000_ordin118din2011structuriadministrare.pdf)</p>
ETANAM	<p>Three main management strategies were applied for the protected area. Concerning the hunting, this was banned for the last two decades. As far as the fishing there are rules and regulations on the ways of fishing, fishing tools and seasonality. Finally, there is an attempt to reduce the nitrate pollution</p>
LBDCA	<p>The determination of the obtainable objectives has been done on each site. It would be a good base for the further development plants</p>
NIMFEA	<p>Professional advisory bodies were organised in the designation process by the coordination of the Ministry of Environment (NGOs, scientific institutes), but they worked inefficiently and provided only few useful data.</p> <p>National park directorates had to carry out the designation itself (rangers and internal experts) with the expected but not fulfilled products of the advisory bodies and GIS-help of State Geodetic Institute in the practical designation. Provided regional data were collected in the Ministry of Environment, who conciliated with other ministries. After this process the compliance with the responsible EU bodies subsequently begun.</p> <p>In this process regional and national level was working in fact.</p>
PRA	<p>There are already National and Regional conservation measures. The Province of Ravenna and the two Parks are now working at the local specific conservation measures, using funding by Emilia-Romagna Region; the conservation measures must be approved before 31/12/2012. There are national guidelines for the management plans. The Province of Ravenna and the two Parks are now working at the management plans of about all the sites, using funding by Emilia-Romagna Region, from CAP; the conservation measures must be approved before 31/12/2012.</p>
RVE	<p>Most of the sites were established during a national LIFE project (which involved all Italian regions) called BIOITALY. Veneto region had based the designation on his territorial plan which indicated some areas to establish parks. Later on, some other sites were defined to overcome infraction procedures of the Habitat and Birds directives. No management strategies were carried out in establishing Natura 2000 sites</p>
STRAND-JA	<p>National. According to Natura 2000 EU directives in the establishment of the Natura 2000 network should be considered only scientific criteria for national distribution and representativeness of the populations of target species and habitats. Both of the greatest Bulgarian NGO was asked to investigate potential sites and prepare a proposal to the Ministry of Environment. Due to the very strong public opposition, these proposals were offered to additional independent expertise of the Bulgarian Academy of Sciences. Final decisions on the scope of Natura2000 network were taken by the Council of Ministers.</p>
TIMIS	

TORRE

N.A.

4.2.12 Which experiences have you made so far and how would you evaluate different designation and management strategies?

Table 48: Experiences and evaluation of different strategies

PP	Comments
AREC	<p>Kartierungen uneinheitlich, kein Ö Gesamtkonzept erkennbar. Viele Einzelprojekte und Initiativen, Qualitätsmanagement fehlt. Jedes Land hat eigene ZT's die Managementpläne machen. z.B. www.coopnatura.at, www.zt-kofler.at;</p> <p>Unter Schutzstellung ist Landessache / Länder sind tw. sehr nachlässig. Tw. liegt das Problem auch bei den Besitzverhältnissen. Hat die öffentl. Hand oder private Vereine z.B. der Naturschutzbund die Flächen, dann kann ein entsprechendes Management durchgeführt werden. Es scheitert an den Kosten / Einzelinteressen der Landnutzer, ...Förderkulisse je nach Bundesländer unterschiedlich z.B. Tirol: Förderungen f. Lebensraum, Artenschutz, Landschaftsschutz, Umweltbildung und ÖA (auch ö-weit), Naturschutzforschung- und Planung: http://www.tirol.gv.at/themen/umwelt/naturschutz/foerderungen/gesamtuebersicht</p> <p>Ziel: einheitl. Gesetzgebung für Umsetzung EU Richtlinien und Natura 2000 (Bundeskompetenz), einheitl. Entwicklung Managementpläne und Qualitätsmanagement in der Umsetzung Förderungen f. Bewirtschaftung evaluieren. Berichtigung der Gesetzgebung Eine Stelle f. Datengenerierung/ Umsetzung der Natura 2000 Beschlüsse; Aktualisierung der Daten, Natura 2000 Kompetenzzentrum für jedes EU Land Vernetzung zu transnationalem Ansatz Förderungen: z.B. Akzeptanzanalyse der ÖPUL Naturschutzmaßnahmen auf Lebensraumtypen und Habitaten von Arten des Anhang I und II innerhalb und außerhalb der NATURA 2000-Gebiete wurde durchgeführt. Die Akzeptanzen wurden quantitativ (Datenanalyse) und qualitativ (Befragungen, Vor-Ort Kartierungen) untersucht.</p> <p>Methode: Dazu wurden 5 repräsentative NATURA 2000-Gebiete als Untersuchungsgebiete festgelegt sowie jene Schutzgüter identifiziert die „landwirtschaftlich geprägt“ sind.</p> <p style="text-align: center;">N2K-Code Gebietsname (Größe) Gebietstyp Bundesland</p> <p style="text-align: center;">AT2240000/ Ennsaltarme bei Niederstuttern/ (70 ha)/ SCI Steiermark</p> <p style="text-align: center;">AT21160000 Görschacher Moos (1.199 ha) SPA und SCI Kärnten</p> <p style="text-align: center;">AT3115000 Maltzsch (348 ha) SPA und SCI Oberösterreich</p> <p style="text-align: center;">AT1125129/ Parndorfer Platte –Heideboden (7.260 ha) / SPA Burgenland</p> <p style="text-align: center;">AT3303000 Valsertal (3.519 ha) SPA und SCI Tirol</p> <p>Die im Anschluss daran durchgeführte quantitative und qualitative Akzeptanzanalyse kann im Wesentlichen</p>

	<p>in drei Bereiche unterteilt werden:</p> <ol style="list-style-type: none"> 1. Datenanalyse der Akzeptanzen mit Hilfe INVEKOS Daten und Daten der Naturschutzdatenbank 2. Untersuchung und Auswertung der Einflussfaktoren auf Akzeptanzen mittels Befragungen 3. Qualitative Überprüfung von Erhaltungsmaßnahmen in Bezug auf Erhaltungsziele mittels Vor-Ort Kartierungen
CACAK	N/A
DDNI	<p>Some Natura 2000 sites completely or partially overlap protected areas (like Biosphere Reserves, National and Natural Parks) that already have an administration and a management plan. This is a favorable situation when the existing management plan must be adapted to meet the purpose of the Natura 2000 sites. Large and fragmented sites (especially the ones that are not overlapping large protected areas) are difficult to manage and is usually hard to find and implement a sustainable management strategy. For the (relative) small and unitary sites are easier to find a feasible management strategies.</p>
ETANAM	<p>Most restrictions and limitations (hunting & fishing) have a sufficient managerial impact in the protected areas, which positively affect the population sizes. However the restrictions and limitations, give rise to illegal activities (hunting, fishing & vandalism) and disrupt the social relations. According to common knowledge, education on environmental issues is necessary in order to raise public awareness on the values of nature</p>
LBDCA	
NIMFEA	<p>We have knowledge of the Hungarian designation process mainly. It seems that – for instance in Lithuania – this process was better organized and more professionally covered (e.g. countryside mapping of Ann II. Hab. Dir. Species BEFORE designation etc.). Each country has one designation and management strategy therefore we can only evaluate the Hungarian example. There were some difficulties regarding the deadlines (we had much time but for two years nothing has happened and at the end we had to rush) and the allocation of the budget was not entirely effective. However the designation was consequent and went smoothly.</p> <p>A management strategy for every SAC was prepared. These are mainly one or two pages' materials, maybe too short but enough to show development in the field of environmental regulation. There was no common methodology and criteria written down how should the national parks designate the sites</p>
PRA	<p>The first designation of 17 sites was leaded by Region, without involvement of stakeholder.</p> <p>The designation of last 9 sites was leaded by Province and we involved the Municipalities and, together with those, some stakeholders (farmers, woodsmen, hunters, fishermen).</p>
RVE	<p>Actually, neither in Italy nor in Veneto we have different designation strategies, we just apply the ones foreseen in the directive. It would not be suitable to establish different management strategies, since the</p>

	<p>measures regard all the existing sites, by taking into consideration a unique strategy and guidelines for elaborating management plans. Thus, at the regional level we need to have a unique strategy. Every value is then protected according to the place where it is located and to its conservation status thus having a different management (although embedded in the same regional strategy). Conservation measures embedded in the regional regulation identify which site needs a management plan, so that not all the sites have a management plan. As explained in answer 2.6, there is not a management team at site level, and nowadays there is not a fixed budget, nor a financial strategy. As regards site designation, the main problem we encountered was that no stakeholder involvement was foreseen. Thus, all possible conflicts were not faced and are still present at the moment.</p>
STRAND-JA	<p>Bulgaria use only one designation strategy. The scope of the Natura 2000 network - 34% of the national territory - is close to scientifically justified. At this stage, sustainable development of Natura 2000 network and the specific sites is not a priority for discussion and support of regional policy. Therefore - on the development of the network - use only one national policy. Bulgaria has no ever experience with implementing of management strategies. At this stage experience is limited to those 4 Natura 2000 sites to which prepares a draft (pilot) management plans</p>
TIMIS	
TORRE	n.a.

4.2.13 Is there information material available for each site?

Table 49: Information material available online

PP	Number of assessed Natura 2000 sites	Purpose of Natura 2000	Map & location	Description of site	Description of species	Description of habitats
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AREC	41	Yes	Yes	Yes	Yes	Yes
CACAK						
DDNI	531	100 %	100 %	100 %	100 %	100 %
ETANAM						
LBDCA	467	100 %	100 %	5 %	100 %	100 %
NIMFEA	0	Yes	Yes		Yes	Yes
PRA	26	100 %	100 %	100 %	100 %	100 %
RVE	130	100 %	100 %	100 %	100 %	100 %
STRANDJA	349	100 %	100 %	100 %	100 %	100 %
TIMIS	531	100 %	100 %	100 %	100 %	100 %
TORRE	1	Yes	Yes	Yes	Yes	Yes

Table 50: Comments on information material available online

PP	Comments
AREC	<p>Purpose: in the province legislation when decree for site www.verwaltung.steiermark.at f. alle Natura 2000 Gebiete</p> <p>Location: GIS Steiermark, RIS BKA</p> <p>Site: decree for site, RIS BKA</p> <p>Species: decree for site, RIS BKA</p> <p>Habitat: decree for site, RIS BKA</p>
DDNI	<p>Location: MAPS WITH LIMITS AND LOCATIONS FOR ALL NATURA 2000 SITES FROM ROMANIA</p> <p>Site: DESCRIPTION OF EVERY SITE IS AVAILABLE ONLINE</p> <p>Species: LIST OF SPECIES OF COMUNITARY IMPORTANCE FOR EVERY SITE</p> <p>Habitat: LIST OF HABITATS OF COMUNITARY IMPORTANCE FOR EVERY SITE AND THEIR DESCRIPTION IS AVAILABLE ONLINE</p>
ETANAM	<p>Purpose: http://www.amvrakikos.eu</p> <p>Location: http://www.amvrakikos.eu/</p> <p>Site: http://www.amvrakikos.eu/</p> <p>Species: http://www.amvrakikos.eu/</p> <p>Habitat: http://www.amvrakikos.eu/</p>
LBDCA	<p>Purpose: http://www.natura.2000.hu</p> <p>Location: http://geo.kvvm.hu/tir</p> <p>Site: http://www.naturaterv.hu/?q=tervezes</p> <p>Species: http://www.natura.2000.hu</p> <p>Habitat: http://www.natura.2000.hu</p>
NIMFEA	<p>Purpose: Only few information materials are available regionally. Basically, information materials are to be found on the official Hungarian Nature Protection website: www.termesztvedelem.hu. In EU context: Natura 2000 viewer, http://natura2000.eea.europa.eu/ www.termesztvedelem.hu consists of site by site: official map and location, (because of the texts of laws) . list of parcels, list and importance-evaluation of habitats and species.</p> <p>Species: the Natura 2000 viewer contains the species and habitat descriptions per sites</p>
TIMIS	<p>Location: MAPS WITH LIMITS AND LOCATIONS FOR ALL NATURA 2000 SITES FROM ROMANIA</p>

Site: DESCRIPTION OF EVERY SITE IS AVAILABLE ONLINE Species: LIST OF SPECIES OF COMUNITARY IMPORTANCE FOR EVERY SITE Habitat: LIST OF HABITATS OF COMUNITARY IMPORTANCE FOR EVERY SITE AND THEIR DESCRIPTION IS AVAILABLE ONLINE
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Table 51: Information material available via information board in the field

PP	Purpose of Natura 2000	Map & location	Description of site	Description of species	Description of habitats
AREC	Yes	Yes	Yes	Yes	Yes
CACAK					
DDNI	5%	15 %	15 %	15 %	6 %
ETANAM					
LBDCA					
NIMFEA	5%		Yes		
PRA	30 %	80 %	30 %	30 %	30 %
RVE					
STRANDJA	20 %	20 %	10 %	10 %	10 %
TIMIS	5 %	15 %	15 %	15 %	6 %
TORRE	Yes	Yes	Yes	Yes	Yes

Table 52: Comments on information material available via information board in the field

PP	Comments
AREC	Purpose: each Natura 2000 site has one or two information boards Location: decree of site, management plans if available Site: decree of site management plans if available Species: decree of site management plans if available Habitat: decree of site (list of sites) Amt der steiermärk. LandesReg
NIMFEA	Only if the site is a target area of a LIFE project

Table 53: Information material available via printed materials

PP	Purpose of Natura 2000	Comprehensive brochure on all sites	Special booklet for one site
AREC	Yes	0	80 %
CACAK			
DDNI	10 %		10 %
ETANAM			
LBDCA			
NIMFEA	Yes	0	
PRA	100 %	95 %	
RVE	100 %	Yes	
STRANDJA	30 %	100 %	20 %
TIMIS	10 %		10 %
TORRE	Yes		

Table 54: Comments on information material available via printed materials

PP	Comments
AREC	tw. Broschüren/ Folder von den Landesregierungen über div. Gebiete, Managementpläne, folder
ETANAM	http://www.amvrakikos.eu/english/foreas.pdf
LBDCA	
NIMFEA	only if the site is connected to any project
PRA	At Regional Level

Table 55: Information material for one site available via special booklets

PP	Map & location	Description of site	Description of species	Description of habitats
AREC	Yes	Yes	Yes	Yes
CACAK				
DDNI	60 %	60 %	60 %	60 %
ETANAM				
LBDCA				
NIMFEA				
PRA	40 %	40 %	40 %	40 %
RVE	100 %	100 %	100 %	100 %
STRANDJA	20 %	20 %	10 %	20 %
TIMIS	60 %	60 %	60 %	60 %
TORRE				

Table 56: Comments on information material for one site available via special booklets

PP	Comments
AREC	<p>Purpose: tw. Broschüren/ Folder von den Landesregierungen über div. Gebiete, Managementpläne, folder,</p> <p>Location: Tafeln am Standort, GIS Steiermark</p> <p>Site: Tafeln / Folder, Info Zentren (z.B. Trautenfels, Ödensee) , short version of management plan</p> <p>Species: info Tafeln, Folder, Verordnungstext</p> <p>Habitat: Tafeln, Folder (alles über das Amt d.Steiermärk.Landesreg. Fachabt. 13 C Naturschutz</p>
DDNI	<p>Species: PRINTED LIST OF SPECIES OF COMUNITARY IMPORTANCE FOR APROXIMATIVE 60% OF THE SITES</p> <p>Habitat: PRINTED LIST OF HABITATS OF COMUNITARY IMPORTANCE FOR APROXIMATIVE 60% OF THE SITES. DESCRIPTION IS AVAILABLE FOR ALL HABITATS OF CONSERVATIVE INTEREST FROM ROMANIA. PUBLICATION: NICOLAE DONIȚĂ AND COLAB., 2005 - HABITATS OF ROMANIADAN GAFTA, OWEN MOUNTFORD (COORD.), 2008 - INTERPRETATION MANUAL OF NATURA 2000 HABITATS FROM ROMANIA</p>
ETANAM	<p>Purpose: http://www.amvrakikos.eu/english/foreas.pdf</p> <p>Location: http://www.amvrakikos.eu/english/foreas.pdf</p> <p>Site: http://www.amvrakikos.eu/english/foreas.pdf</p> <p>Species: http://www.amvrakikos.eu/english/foreas.pdf</p> <p>Habitat: http://www.amvrakikos.eu/english/foreas.pdf</p>
NIMFEA	<p>Purpose: only if the site is connected to any project</p> <p>Location: only if the site is connected to any project</p>
PRA	<p>Purpose: At Regional Level</p> <p>Location: There are booklets about the sites, not as Nature 2000 sites, but as part of Parks, Reserves, other kind of protected areas</p> <p>Site: There are booklets about the sites, not as Nature 2000 sites, but as part of Parks, Reserves, other kind of protected areas</p> <p>Species: There are booklets about the sites, not as Nature 2000 sites, but as part of Parks, Reserves, other kind of protected areas</p> <p>Habitat: There are booklets about the sites, not as Nature 2000 sites, but as part of Parks, Reserves, other kind of protected areas</p>

RVE	<p>Location: within the comprehensive publication</p> <p>Site: within the comprehensive publication</p> <p>Species: within the comprehensive publication</p> <p>Habitat: within the comprehensive publication</p>
STRAND- JA	
TIMIS	<p>Species: PRINTED LIST OF SPECIES OF COMUNITARY IMPORTANCE FOR APROXIMATIVE 60% OF THE SITES</p> <p>Habitat: PRINTED LIST OF HABITATS OF COMUNITARY IMPORTANCE FOR APROXIMATIVE 60% OF THE SITES. DESCRIPTION IS AVAILABLE FOR ALL HABITATS OF CONSERVATIVE INTEREST FROM ROMANIA. PUBLICATION: NICOLAE DONIȚĂ AND COLAB., 2005 - HABITATS OF ROMANIADAN GAFTA, OWEN MOUNTFORD (COORD.), 2008 - INTERPRETATION MANUAL OF NATURA 2000 HABITATS FROM ROMANIA</p>
TORRE	

4.2.14 How many and what kind of initiatives on environmental education concerning Natura 2000 have been carried out so far?

Table 57: Number of initiatives on environmental education concerning Natura 2000 site

PP	Number of assessed Natura 2000 sites	TV/Radio podcast	Leaflets	Excursion and guided tours	Interpretive trails
AREC	41		38	30	5
CACAK					
DDNI	30	53	78	28	28
ETANAM					2
LBDCA	0				
NIMFEA	2				
PRA	26				
RVE	130	0	1	1	9
STRANDJA	4		2	1	20
TIMIS	1				
TORRE					

Table 58: Comments on number of initiatives on environmental education concerning Natura 2000 site

PP	Comments
AREC	<p>TV/Radio: Universum, if there are events on site, regional radio e.g. Aussee</p> <p>Leaflets: For all natura 2000 sites in Styria</p> <p>Excursions: In most of the natura 2000 sites managed by local authorities in Styria</p>
DDNI	<p>TV/Radio: Not too many TV/Radio podcasts about N2000 in Romania. It runs in the first serial shooting documentary about Natura 2000 in Romania. This is part of the project: National campaign to raise awareness of the importance of biodiversity conservation in Natura 2000 Network in Romania - 17 609 Project SMIS-NSRF</p> <p>Leaflets: Interreg programme Italia Autria - Fanalp project - counted only those specific on Natura 2000</p>
LBDCA	
NIMFEA	<p>They were connected with completed (and ongoing) LIFE projects and other EU co-financed projects.</p>
PRA	
RVE	<p>Excursions: Interreg programme Italia Autria - Fanalp project - counted only those specific on Natura 2000</p>

4.3 Answers: Ecological assessment

To what extent is the ecological assessment implemented?

4.3.1 Is there a national/regional interpretation manual for the habitats containing a description of the national/regional specification of habitats and species?

Table 59: Availability of interpretation manuals

PP	regional	national	Comments
AREC	Yes	Yes	e.g. Publications by the Federal Ministry of Agriculture and Forestry, Environment and Water Management, web pages Landesregierungen, UBA, Naturschutzbund, Veranstaltungen, Nationalparks, projekt web pages
CACAK	No	No	
DDNI	No	Yes	Nicolae Donita and Colab., 2005 - habitats of Romania Dan Gafta, Owen Mountford (coord.), 2008 - interpretation manual of natura 2000 habitats from romania
ETANAM	No	No	
LBDCA	No	Yes	Nested in a professional habitat-system prepared by the Botanical and Ecological Research Institute of the Hungarian Academy of Science (Á-NÉR)
NIMFEA	No	Yes	Nested in a professional habitat-system prepared by the Academy (Á-NÉR)
PRA	Yes	Yes	
RVE	No	Yes	
STRANDJA	No	Yes	
TIMIS	No	Yes	
TORRE	No	Yes	

4.3.2 Is there a national/regional definition of the favourable state of species or habitats specified by regionally adapted indicators?

Table 60: National/regional definition of favourable state.

PP	regional	national	Comments
AREC	Yes	No	FFH-Richtlinie: Bewertung mit Ampelschema
CACAK	No	No	
DDNI	No	Yes	It is accepted that the favourable state of species or habitats is the one indicated in the standard data form: -bird species per SPA in Government Decision (HG) no.971/2011 (Romania's Official Monitor (MO) no. 715/11.10.2011); - species (other than birds) and habitats per SCI in Ministerial Order (OM) no.2387/2011 (Romania's Official Monitor (MO) no. 846/29.11.2011)
ETANAM	No	No	
LBDCA	No	Yes	
NIMFEA	Yes	Yes	At national level some Annex II species do have a favourable status defined.
PRA	No	Yes	
RVE	Yes	Yes	Not completed yet for all species at regional level
STRANDJA	No	Yes	
TIMIS	No	Yes	biological diversity law
TORRE	No	Yes	

4.3.3 What is the state of implementation of a regular monitoring and reporting in Natura 2000 sites?

The first question is dealing with the availability of national/regional monitoring concepts of Natura 2000 sites for different species and habitats

Table 61: Availability of national/regional monitoring concepts

PP	plants	mammals	invertebrates	habitats	fish	birds	bats	amphibians
AREC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CACAK	No	No	No	No	No	No	No	No
DDNI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ETANAM	No	No	No	No	Yes	Yes	No	No
LBDCA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NIMFEA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PRA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RVE	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
STRANDJA	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
TIMIS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TORRE	Yes	Yes	No	Yes	No	Yes	No	No
Total	9	9	7	8	9	10	8	8

Table 62: Comments on the availability of monitoring concepts.

PP	Detail	Comments
AREC	Comments habitat	on small scale for certain habitats like meadows
AREC	Comments plants	Natura 2000 sites coordinated by HBLFA Raumberg-Gumpenstein (ennsaltarbe Niederstuttern, Wörschacher Moos
ETANAM	Comments birds	Locally bird monitoring is applied
ETANAM	Comments fish	Locally fish monitoring is applied
LBDCA	Comments habitat	There is a complex National Biodiversity Monitoring Programme focusing on Natura 2000 sites and species.
NIMFEA	Comments habitat	Nested in a professional habitat-system prepared by the Academy (Á-NÉR) and originated as a transformation of the 15 years old National Biodiversity Monitoring Programme's habitat-monitoring part.
NIMFEA	Comments plants	For species, this is connected with the 15 years old National Biodiversity Monitoring Programme. It covers a significant proportion of Annex I,II. species. Regional organisers are national park directorates
PRA	Comments all groups	Emilia-Romagna Region is now starting a new project for monitoring all the sites and all the elements protected by the directives
RVE	Comments bat	based on specific regional projects
RVE	Comments birds	based on specific regional projects
RVE	Comments fish	based on specific regional projects
RVE	Comments habitat	based on specific regional projects

RVE	Comments invertebrates	better to extend the concept to the invertebrates...
RVE	Comments mammals	based on specific regional projects
RVE	Comments plants	based on specific regional projects
STRANDJA	Comments habitat	not available and adopted national methodology
TIMIS	Comments habitat	frequency, the state of plans transmitted to the EU by the the National Agency for Environment Protection and Ministry of Environment

The second question should reveal, if national/regional monitoring concept of Natura 2000 is **implemented** for different species and habitats.

Table 63: Are monitorings for different species and habitats implemented? Estimated percentage of sites in brackets if available.

PP	plants	mam- mals	inverte- brates	habitats	fish	birds	bats	amphibi- ans
AREC	Yes (5)	Yes	Yes	Yes (5)	Yes	Yes	Yes	Yes
CACAK	No	No	No	No	No	No	No	No
DDNI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ETANAM	No	No	No	No	No	No	No	No
LBDCA	Yes (20)	Yes (20)	Yes (20)	Yes (20)	Yes (20)	Yes (20)	Yes (20)	Yes (20)
NIMFEA	Yes (20)	Yes	Yes (10)	Yes (15)	Yes	Yes (10)	No	No
PRA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RVE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STRANDJA	Yes (15)	Yes (15)	Yes (10)	No	Yes (10)	Yes (30)	Yes (20)	Yes (15)
TIMIS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TORRE	No	No	No	No	No	No	No	No

Table 64: Comments on the implementation of monitorings.

PP	Detail	Comment
AREC	Comments birds	birdlife?
AREC	Comments habitats	In the moment monitoring is implemented partially (eg Nationalpark Gesäuse, HBLFA Raumberg-Gumpenstein sites care for studies and special projects, climate data and biodiversity data
AREC	Comments invertibrates	National parks
AREC	Comments plants	Natura 2000 Areas of HBLFA Raumberg-Gumpenstein, National Park Gesäuse area, data collection of LTER regions, UBA, ...
DDNI	Comments on all groups	We can't give a certain percent of sites for which monitoring has been implemented because are no centralized data on this issue yet. We have data only about 10% but is not a reliable number for the moment. A national monitoring programme of habitats just started.
LBDCA	Comments habitats	Budget cut in 2011 stopped most of the running projects.
NIMFEA	Comments fish	3 years rotation of Ann II. species, site by site in the National Biodiversity Monitoring Programmes .
NIMFEA	Comments habitats	because of countryside financial reduction by government, in 2011 regional monitoring has stopped in most regions
NIMFEA	Comments invertibrates	Carabus hungaricus, Maculinea alcon, Maculinea telejus
NIMFEA	Comments mammals	comment: one species: souslik (Citellu citelus)
PRA	Comments on all groups	Emilia-Romagna Region is now starting a new project for monitoring all the sites and all the elements protected by the directives.

4.3.4 Are there specific management programmes or projects ongoing to ensure or increase the favourable state of species and habitats

Table 65: Number of programmes on national level to ensure or increase favourable status of species and habitats.

PP	Plants	Mam mals with- out bats	in- verti- brate s	Habi- tats	Fish	Birds	Bats	Am- phi- bi- ans and rep- tiles
AREC								
CACAK	?	3	?	?	?	2		
DDNI								
ETANA M								
LBDCA	2	1	1		1	4		5
NIMFEA	3	1	1	1		5		5
PRA	No data available							
RVE								
STRAN DJA	1	1	1	1	1	1	1	1
TIMIS								
TORRE								

Table 66: Number of projects on national level to ensure or increase favourable status of species and habitats.

PP	Plants	Mam mals with- out bats	in- verti- brate s	Habi- tats	Fish	Birds	Bats	Am- phi- bi- ans and rep- tiles
AREC								
CACAK	?	3	?	?	?	2		
DDNI					1	2		
ETANA M								
LBDCA	2	1	1	14	1	4		
NIMFEA	2	1	1	14	1	4		
PRA	No data available							
RVE								
STRAN DJA	2	2	2	2	2	2	2	2
TIMIS								
TORRE								

Table 67: Number of projects on site level to ensure or increase favourable status of species and habitats.

PP	Plants	Mam mals with- out bats	in- verti- brate s	Habi- tats	Fish	Birds	Bats	Am- phi- bi- ans and rep- tiles
AREC								
CACAK	?	3	?	?	?	3		
DDNI	8	30	5	23	7	30	5	8
ETANA M								
LBDCA	10	1	1		0	10-15		
NIMFEA	10	1 (Citel- lus citel- lus)	1 (Carab us hun- gari- cus)	no data	0	10-15		
PRA	3	1 (<i>Canis lupus</i>)	2	5	5	4	2	3
RVE	1		2	3	1	3	1	3
STRAN DJA	5	20	5	15	10	15	10	5
TIMIS								
TORRE								
Total	32	79	22	46	30	96	18	19

Table 68: Comments on programmes and projects to ensure or increase favourable status of species and habitats.

PP	Detail		Comment
AREC	Comments habitats		ELER, LIFE, INTERREG
CACAK	Comments birds		Only Griffon Vulture and Great Bustard
CACAK	Comments mammals		Brown Bear, Grey Wolf and European Lynx
DDNI	Comments groups	all	We can't give a certain number for the requested fields because are no centralized and/or available data about this issue yet.
ETANAM	Comments groups	all	Not currently. However, it has been scheduled that in the near future there will be a full-monitoring programme concerning all protected species (animal and plant species) and habitats at Natura2000.
LBDCA	Comments birds		Falco cerrug, Aquila heliaca, Falco vespertinus, Otis tarda
LBDCA	Comments fish		Umbra krameri
LBDCA	Comments invertebrates	in-	Maculinea species
LBDCA	Comments mammals		Spermophilus citellus
LBDCA	Comments plants		Dianthus diutinus, Crambe tataria
PRA	Comments groups	all	Data for the Province of Ravenna
RVE	Comments amphibians and reptiles	am- and	LIFE08 NAT/IT/000362 / LIFE09 NAT/IT/000110 / LIFE09 NAT/IT/000213
RVE	Comments bat		LIFE08 NAT/IT/000362
RVE	Comments birds		LIFE08 NAT/IT/000362 / LIFE09 NAT/IT/000110 / LIFE09 NAT/IT/000213

RVE	Comments fish	LIFE09 NAT/IT/000213
RVE	Comments habitats	LIFE08 NAT/IT/000362 / LIFE09 NAT/IT/000110 / LIFE09 NAT/IT/000213
RVE	Comments invertebrates	Invertebrates: LIFE08 NAT/IT/000362 / LIFE09 NAT/IT/000213
RVE	Comments plants	LIFE08 NAT/IT/000362