

SAVING BIODIVERSITY: RELEASING NATURA 2000'S POTENTIAL

EEB publication prepared in close cooperation
with the European Habitats Forum and with
the support of the Fundación Biodiversidad
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FOREWORD

With the publication of the Biodiversity Communication and the Action Plan for 2010 and beyond in May 2006, the European Commission has put the protection of nature and biodiversity firmly on the European Union's political agenda. It received strong support from the European Council, the Committee of the Regions, and the Economic and Social Committee¹. The last two especially strongly urged swift and effective implementation of the 2010 Action Plan. The plan underlines the urgent need for effective and efficient implementation of the relevant legislation, particularly the Birds and Habitats Directives (BHD). These Directives, and especially the Natura 2000 network, are unique tools worldwide and are the cornerstones of European nature conservation. They have already achieved important successes, for example in protecting migratory birds, but also in ensuring that sites for nature conservation are selected on scientific criteria alone. However, there are implementation bottlenecks, which attract headlines more easily than conflicts which are easily resolved or even avoided. With the next round of the Member States' Habitats Directive implementation reports in preparation, the latter cases deserve special attention to set a benchmark for good implementation.

For this reason EEB, closely cooperating with its partners in the European Habitats Forum, has produced this study which looks at the conservation successes achieved from implementing the Habitats Directive and how it has proven itself to be a key driver for sustainable development. Complementing this study, on 27 February 2007, EEB organised an expert-level seminar where a selection of the materials presented in this publication were presented and discussed. Both the seminar and the publication were made possible by the support of the Spanish Fundación Biodiversidad and the Dutch Vereniging Natuurmonumenten. Where appropriate, this paper refers to the seminar's presentations, discussions and conclusions. The publication is based on a desk study carried out between November 2006 and January 2007 by Gordon Modro, an EEB intern. This study gathered existing case studies which demonstrate how implementation bottlenecks can be tackled, covering some of the Directive's most important requirements (site designation, management planning, appropriate assessments, species protection outside protected sites and monitoring²). The main sources of information were existing documents, studies (mostly posted on the internet), internet websites, telephone interviews with EEB members and input from the seminar. We took care to cover the widest possible range of EU Member States. However, since experience of implementation varies between older and more recent Member States, and some information was available only in national languages, it was not always possible fully to respect this principle. All case studies were sent to EEB members in the respective Member States to verify the information. Draft texts have also been circulated among EEB and EHF members for further feedback, consultation and verification. The material presented and discussed here is, of course, far from exhaustive, and much more can and should be gathered.

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KEY POLICY MESSAGE FROM THE REPORT AND SEMINAR

Examples mentioned in this report and presented at EEB's seminar are only a small selection: many other similar ones can and should be found. What clearly emerges from these examples is that, where implemented properly, the Directives have already proved to be instrumental in driving more sustainable development. For example, this happened by ensuring that alternatives for plans and projects were considered and, crucially, sometimes also chosen. In short, nature protection is becoming an integral part of planning processes. However, where implementation bottlenecks arise, these are the result of poor implementation and application of the Directives' requirements, including, and perhaps most crucially, a lack of proper communication about what the actual implications of the Directives are. These two problems are, of course, closely connected and sometimes reinforce each other. If, for example, an authority is lacklustre in designating sites, it will also not bother communicating a policy's implications to relevant stakeholders, which in turn adds to the confusion. Addressing the underlying problem of lack of political will is therefore crucial. This can in turn only be achieved through a combination of strengthened enforcement capacity within Member States and the European Commission and public pressure. But these stronger enforcement efforts should go hand in hand with a communications campaign which re-assures stakeholders, dispels myths and clarifies the real implications and requirements of the Directives.


Better implementation through stronger enforcement by the European Commission and Member States to ensure the full, consistent and effective application of all the Directives' requirements combined with strengthened communications activities at all levels, is essential. The following implementation issues should be given the highest priority by Commission, Member States and NGOs alike:

Defining conservation objectives – It is absolutely crucial for smooth implementation that conservation objectives for sites are defined as soon as possible. Only then can appropriate conservation measures be identified, the actual conservation status of the sites in relation to objectives be monitored, the impact of certain plans and projects be assessed and appropriate mitigation and compensation measures be identified and implemented effectively.

Stakeholder involvement – Landowners, land-users, planners, developers and NGOs must be involved throughout the implementation process, to ensure a thorough understanding of the Directive's legal requirements and the effective implementation of the measures needed to achieve the environmental objectives.

Transparency – A comprehensive, up-to-date and robust data system with information on, for example, where protected species and habitats are must be set up and should be publicly accessible and user-friendly. Such a system is an important tool for better informed decision-making throughout the EU.

Consistent interpretation of key definitions – It is crucial that key concepts such as 'mitigation and compensation measures' and 'imperative reasons of overriding public interest', are interpreted consistently throughout the EU. When they are absent, the Commission should produce guidance documents to help the unequivocal interpretation and implementation of such concepts. Where Member States fail to apply such guidance, legal action should be taken by the Commission.



Financing – Although not explicitly covered in the report and seminar, one point keeps coming up: nature conservation without funding is conversation. Financing N2000 from regional, fisheries and rural policy funds is a major challenge and it is far from clear whether it will work at all. The Commission ought therefore to evaluate the success of the integrated approach to financing Natura 2000 in time to influence discussions on the mid-term review of financial perspectives and the CAP.

Biodiversity post 2010 – Implementing the Habitats and Birds Directives is only half the story of saving biodiversity. Action in other policy areas is also needed. Effective integration starts with strong, clear rules within the sector, including but not confined to the BHD. The next step is to make other policy areas more consistent with environmental rules. An initial opportunity for this will be the 2008 CAP 'Health Check' and the 2009 EU budget review, where biodiversity protection will need to become central to the debate. Other policy areas where biodiversity conservation must be considered more thoroughly are climate change and trade. Climate change may have devastating effects on biodiversity, which should be taken into account in the current debate and for Kyoto post-2012. But great care must also be taken to ensure that mitigation and adaptation measures are thoroughly thought through and are well-designed to ensure that they do not harm biodiversity. The best adaptation strategy is to have healthy functioning ecosystems with a rich biodiversity. Most importantly, a vision for biodiversity policy after 2010 should be developed soon to ensure proper follow-up to the actions defined in the Biodiversity Action Plan, and provide a strong political framework for continued implementation of relevant policies.

SUMMARY REPORT

Site designation

Although the site designation process is nearing its end in most EU Member States, there are crucial lessons to be learned for countries such as Poland and Bulgaria, which are at serious risk of making the same mistakes as many of their longer-standing counterparts, as well as for the candidate countries, such as Croatia, which have yet to embark on the process. By not designating sites which should be designated on scientific grounds, an authority only makes planning future developments harder. This is clearly illustrated by the example of Karlsruhe-Baden regional airport, where the airport authorities themselves tried to submit a site to the Commission so as to be able to continue with the planning process. It is only with a swift designation process that planning projects can continue according to the steps outlined in the Directive and the relevant guidance documents.

Recommendation: Member States which are starting the site designation should do this based solely on scientific criteria and in a participatory, transparent way. EU countries where designation is stalling or incomplete should address this as soon as possible to uphold planning and investment security.

Conservation measures and management plans

Whereas the Directives are very clear about how the site designation process should operate, they leave much more scope for Member States to decide on which conservation measures to take, and even more which detailed conservation objectives to set. The Directive even explicitly states in Article 2 (3) that social, economic and cultural aspects must be considered when deciding on conservation measures. At this stage it is even more crucial to engage with stakeholders to reach agreement on the best approaches to take. Only this way can these conservation measures be best tailored to the specifics of local situations.

Recommendation: Authorities should work with all stakeholders to identify and ensure effective implementation of the most appropriate conservation measures, including management plans.

Infrastructure projects

Regarding the integration of the Birds and Habitats Directives into planning infrastructure projects and other development, serious engagement with the provisions of the Nature Directives at all stages of the planning process is indispensable, as this is the key factor for getting project approval. Many problems arising in this area are 'inherited' from slow and incomplete implementation. It is therefore crucial that all of the Directive's requirements are implemented effectively, swiftly and comprehensively. Getting the site designation right is the way forward for creating planning security. Finally, it is important to stress that species and habitats protected under the Habitats Directive are not just there for their own sake. Their conservation status is a key indicator of the general state of the environment and a prerequisite for sustaining ecosystem services such as green open spaces close to cities for recreational purposes.

Recommendation: For both public and private enterprises, the best way to achieve planning security is through timely and effective application and consideration of the Habitats Directive's requirements. At EU level, a publicly-accessible database containing up-to-date information on exact site boundaries and where species and habitats occur, with information on their conservation status, should be set up as soon as possible to help planners know whether or not they need consider the Directive's requirements.

Species protection outside N2000 sites

With Article 5 of the Birds Directive and Article 12 of the Habitats Directive, Member States have committed themselves to adequately integrating biodiversity protection into agriculture and forestry practices, and in infrastructure planning outside protected areas, while leaving countries free to decide the best way to do this. These articles can thus act as an important driver for more sustainable land-use. However, proper monitoring is important to allow the success and the effectiveness of the specific initiatives undertaken to be evaluated. Given the unavoidable impacts of climate change and the need to adapt to this through developing and implementing ecological networks, Article 12's application will become more important over the coming years. For the Article's provisions to have the desired effect it is of course crucial that sectors as a whole are not exempted, to avoid neutralising the incentive to promote the best available practice within the sector.

Recommendation: Member States should use the species protection requirements under Article 5 of the Birds Directive and Article 12 of Habitats Directive more effectively to promote sustainable land use practices, principally in agriculture and forestry. For this to work, Member States should most importantly not grant exemptions to entire sectors.

Monitoring

Monitoring is one of the key aspects of implementation as it allows for a proper evaluation of a policy's success. For example, it allows a proper evaluation of just how sustainable certain land-use practices are and how successful are the conservation measures taken. Monitoring results are the basis for more effective implementation efforts. However, monitoring must take place for a large number of environmental policies and it is crucial this is done in an integrated manner, using the same data for different purposes and, most importantly, avoiding duplication. Commission initiatives such as INSPIRE and SEIS can support such an integrated and streamlined approach, but it is crucial that such information systems are publicly accessible to allow for independent evaluation.

Recommendation: Although it is not obligatory, Member States should carry out monitoring for different environmental objectives in an integrated way. Results should be made publicly available, at national and European levels through a single web portal.

CHAPTER 1: INTRODUCTION TO THE HABITATS AND BIRDS DIRECTIVES

EU nature conservation policy is based on two main pieces of law – the 1979 Birds Directive (*EC 1979*) and the 1992 Habitats Directive (*EC 1992*). The Habitats Directive focuses on protecting wild species and their habitats. Each Member State has committed itself to identify sites of European importance, 'Special Areas of Conservation' (SACs), and, where necessary, to install management plans. Under the earlier Birds Directive, Member States agreed to classify 'Special Protection Areas' (SPAs), which are similar to SACs and may at times overlap. The sites identified under the two Directives, together with the species protection regime provided by the Habitats Directive, comprise Natura 2000, which is envisaged to be the EU's coherent network of protected areas. These Directives are the backbone of European efforts to protect its natural capital and halt the loss of its biodiversity, to which heads of state committed themselves at the Gothenburg Summit in 2001.

With the Birds Directive, Member States committed themselves to preserve, maintain or re-establish a sufficient diversity and area of habitats for birds to maintain healthy populations of all species. This is to be done primarily by creating protected areas, managing habitats inside and outside protected areas, re-establishing destroyed biotopes and creating new ones. Member States must lay down a general system of protection for all species of wild birds, although exceptions are made for hunting and certain other reasons. Annex I of the Directive particularly lists vulnerable species which are to be subject to special conservation measures concerning their habitat to ensure their survival and reproduction. Member States have agreed to classify the most suitable sites (land and sea) as Special Protection Areas (SPAs) to conserve these species and prohibit these birds being caught or hunted. Annex II lists species that can be hunted within certain limits.

The Habitats Directive's aim is to contribute to maintaining biodiversity by conserving natural habitats and protecting wild fauna and flora. The Directive aims to establish 'favourable conservation status' for both habitat types and wild species of Community interest. Member States therefore agreed to designate sites as Special Areas of Conservation (SACs) and set up necessary conservation measures, including management plans, which will result in the establishment of a 'coherent European ecological network' of sites of Community importance to be known as 'Natura 2000'. Annex I lists habitat types whose conservation requires the Special Areas of Conservation (SACs) designation. A habitat type is defined as being of Community interest if it is in danger of disappearing within its natural range, if the Community has a special responsibility for its conservation because of the proportion of its natural range falling within EU territory, or if it represents an outstanding example of one or more of the six bio-geographical regions (Alpine, Atlantic, Continental, Macronesian, Mediterranean and Boreal). A seventh region, the Pannonian region, was added by the 2003 Accession Treaty.

Annex II contains a list of animal and plant species of Community interest, the conservation of which benefits from the special designation of their habitats. As with Annex I, a number of priority species are identified.

As with much Community legislation, transposing and applying these Nature Directives has been delayed. The name Natura 2000 is very indicative of this problem, since this network was to have been finalised and under adequate protection by 2000. Seven years later, many of the EU-15 sites have yet to be placed under an adequate protection regime. The causes for this delay vary throughout the EU but several more general implementation bottlenecks can be identified in the various phases of implementation. In the following chapter, each of these bottlenecks will be examined more closely by means of case studies and conclusions drawn from how Member States have approached and usually solved these bottlenecks.

CHAPTER 2: KEY IMPLEMENTATION ISSUES

This chapter follows the same steps as the implementation process, starting with site selection and designation, then defining conservation status and developing management plans for these sites, species protection requirements outside designated areas and, perhaps most crucially, integrating protection requirements into infrastructure project planning through the assessment procedures. Finally, it will examine the approach to monitoring, although there is little experience of that since these requirements are among the last to be implemented.

2.1 Site selection and designation

Under Article 4 of the Habitats Directive, Member States are obliged to propose, based on criteria listed in Annex III and relevant scientific information, a list of sites indicating which natural habitats in Annex 1 and which native species in Annex II the sites host. It is the first major step in implementing the Habitats Directive and is also the one most easy to follow and evaluate. A series of progress reports produced by WWF demonstrates that site selection and designation has been very slow in most EU countries. This is also confirmed by Commission reports and the number of legal steps taken on this subject. Although Article 4 of the Habitats Directive sets a strict deadline for Member States to submit their list of proposed sites (three years after notification for older EU nations, and by accession for new members), most countries only managed to provide more or less adequate lists ten years after this deadline. Some still face infringement procedures for not having classified enough sites. Although the site designation process is now nearing its end in most EU countries, apart from the above outstanding issues and one or two notorious laggards, it remains relevant to current accession and candidate countries. It is therefore useful to look briefly into how some of the older EU members addressed these problems.

In most Member States which have delayed the site designation process, the main hold-up was that governments found it hard to designate sites solely on scientific grounds as required. Governments often feared Natura 2000 would frustrate development of future projects. The result was that the protection status of these sites (potential sites not on the official list) was unclear, making it harder to continue development since the Directive's provisions for such cases were not yet applicable. We shall address this problem in more detail in Chapter 2.3. The procedures used to select privately-owned land have also led in some cases to considerable and widespread resistance to implementing the Natura 2000 network. Resistance was mainly due to lack of information and misconceptions about Natura 2000, which provoked unfounded concerns. For example, people often thought Natura 2000 sites were strictly protected nature reserves which ban any kind of land use. Some even feared their land would be expropriated.

A major technical bottleneck which also caused delays was the lack of sufficient data. Good scientific data are a key factor in elaborating a good list of sites. Unfortunately, knowledge of the abundance of habitats and species was often insufficient in many countries at the start of the site selection process.

A two-step approach to gathering data

This was also the case in Austria. In Lower Austria, the Natura 2000 site selection procedure was carried out in two major phases. In a first phase, Lower Austria simply proposed large 'potentially suitable' areas with a presumably high abundance of relevant habitats and species covering about one-third of its territory. In the second phase, experts were asked to choose actual sites from these potentially suitable areas. This team comprised NGOs and research institutes. Altogether, over 30 experts (botanists and zoologists) were involved, which included precise mapping of habitats over

two years. The outcome of the expert studies was used as a scientific basis for the further designation process. With other valuable forests, bogs and species-rich meadows, the actual habitats designated as pSCIs altogether covered some 17 % of the region³. The 52 bird species found in Lower Austria were also taken into consideration. Based on the data collected by BirdLife Austria, large areas were suggested as SPAs.

Habitats inventory in Spain

Under Spanish law which transposed the Habitats Directive, the regions are responsible for designating pSCIs, with the national Government coordinating. EU co-funding was initially drawn from the LIFE III programme, after which mapping Annex 1 habitats was carried out by universities and research institutes. In this exercise, they made use of the alliances and associations of national vegetation classification linked to Annex 1 habitat types. These data were then entered into a GIS especially designed for this purpose. Before drawing up the regional lists, an analysis was made of Annex 1 and 2 type numbers in existing protected areas. Based on this, further lists were devised. Given that there were major differences in the available information and resources between regions, no common methodology was possible, so the team laid down a core set of evaluation criteria to ensure compatibility and consistency between regional lists. Before sending the lists to the Commission, the team evaluated regional lists according to these criteria. At the end of this exercise about a quarter of Spain has now been designated as Natura 2000.

Involving stakeholders in Slovakia

In Slovakia, preparatory work to implement Natura 2000 was carried out by the Ministry of the Environment, the State Nature Conservancy and NGOs with financial and technical support from the Dutch Government. All relevant stakeholders (owners, administrators, and tenants of land designated for protection under Natura 2000) were involved in the designation process, as this is a legal obligation in Slovakia. To identify all stakeholders, a land inventory was carried out and a database of owners, administrators, and users of the affected land prepared. Over 300 meetings were held, which gave an opportunity to explain in detail the reasons for and implications of the Natura 2000 network, as well as potential opportunities and benefits. Unfortunately, not all administrations made best use of these opportunities. As a result, some misunderstandings persisted among stakeholders. Stakeholder responses were mixed, from generally positive to sceptical. Most scepticism was connected with doubts about the state's ability or willingness to pay compensation for eventual land-use restrictions.

Conclusion

The Habitats Directive's requirement that sites must be designated on scientific grounds alone is crucial and constitutes a major advance in nature protection in most countries, where predominantly economic and political arguments had hitherto determined where nature was to be protected. It is common sense to protect nature where it is most valuable and diverse. And equally, once sites have been designated, socio-economic aspects must be considered when developing conservation measures and deciding on future developments. The Slovakian example shows how sites can be designated in an open and transparent way involving all stakeholders. Not only did this bring greater stakeholder acceptance, it also greatly increased the quality and availability of data on which sites were designated.

This is a crucial lesson, not only for new-entrants such as Bulgaria, but also for countries awaiting accession such as Croatia, and older EU states such as Poland, where site designation is still far from complete. It is crucial that this is done as quickly as possible to achieve more planning security for economic development.

2.2 Conservation measures and site management

After designating sites, the next big step in the implementation process is establishing the necessary conservation measures, which can include management plans according to Article 6(1). Although this Article does not explicitly say so, this is also generally the stage where conservation objectives for sites are developed. While site designation is a purely scientific process, the conservation stage is where socio-economic considerations must be included, as stipulated in Article 2(3).

Europe's natural heritage contains not only natural habitats like primaeval forests, bogs and alpine rocks, but also many man-made habitats, which derive from traditional land-use practices and in most cases depend on continuing these extensive forms of land-use. These 'semi-natural' habitats (and the species which depend on them) are today in great danger due to the major changes in agriculture in recent decades. Many habitats covered by the Directive are semi-natural habitats rich in species, eg hay meadows, wet grasslands, wooded pastures and open heaths. Most of them are still managed today by farmers, foresters and other land-users and the lion's share are privately-owned. Since most Natura 2000 sites are valuable precisely because of how they have been managed, it is important to ensure that these compatible land-use practices can continue. In other cases, land-use activities which harm species or habitats can easily be adjusted to conservation aims, often without jeopardising productivity.

Some stakeholders' concerns that arose during site designation often remained because in many cases little effort was made to explain the objectives and obligations of the two Directives. It was only when countries began discussing what conservation measures would be applied, including management plans, that much apprehension evaporated as it became clear that socio-economic and cultural requirements, and local characteristics would be taken into account.

Bottom-up management planning in France

One of the most prominent and successful examples is the management planning process in France. In France, implementation of the Natura 2000 network in the beginning mainly focused on identifying sites and compiling the list for Brussels. Poor public consultation and communication during this process inflamed stakeholders who staged major protests. Consequently, the whole implementation process stalled. After consultations with the Commission, a new approach was taken. This was based on responsibility and cooperation and involved regional government and local authorities and all relevant stakeholder groups, and led to successful public acceptance of Natura 2000.

The DOCOB approach in France

At national level, a committee has been installed which discusses the national framework and approves and disseminates methodological guidance and training. Most of the work takes place in local committees which include all stakeholders (farmers, hunters, landowners, NGOs, and officials). Local steering committees produce the management plan ('Document d'Objectifs' (DOCOB)) and the Natura 2000 charters and contracts with local stakeholders. These management plans contain a site description, the site's conservation objectives, identify past good practices, the Natura 2000 charter, which contract-based conservation measures are to be taken, from where funding is to come (including EU funds and tax breaks) and how monitoring will occur. The French Government ultimately approves the document. To date, 534 DOCOBs have been completed and another 474 are in preparation. Work needs to start on another 666 sites.

The various players regarded the management planning process as very positive as it led to better involvement and trust between stakeholders and ultimately to increased responsibility for Natura 2000 sites. The Natura 2000 network is now perceived as a further valuable aid to spatial planning and enhancement of natural heritage and local economic development.

Other successful approaches

Many other examples of good practice can be found in various Member States, although not all countries' implementation is equally advanced. All these examples follow a bottom-up approach with early and continuing stakeholder involvement. An interesting example is the development of a management plan for the Papa Stour marine site in the Shetland Isles (UK), where the appointment of a local project officer responsible for both coordination of management planning and participation by local inhabitants was the key to success. Another useful example that shows how implementation bottlenecks can be solved is the management planning in Austria's Verwall mountains. Here, site designation was completely blocked following strong resistance from local land-owners. This dilemma was tackled through a formal mediation procedure which systematically brought together all stakeholders and resulted in a common agreement on the area's future use.

Nature conservation and leisure activities

Areas which host the most valuable habitats and species under the Habitats Directive are mainly in scenic landscapes which are also the site of various leisure sector activities (tourism, recreation and sport). Although this sector depends on a high natural and landscape quality, leisure activities which do not respect nature can seriously damage natural habitats and species. It is therefore unsurprising that designation of Natura 2000 sites has often provoked resistance from promoters of tourism and other recreational activities. In many other cases, Natura 2000 designation can boost tourism by giving an area special status. A positive example of this is Italy's La Cassinazza estate which transformed itself from a purely agricultural enterprise, into one focusing much more on improving the landscape elements such as hedgerows and woodlands and catering to tourists.

Integrated management strategies

Most outdoor recreational activities are not only perfectly compatible with the Habitats and Birds Directives' provisions, but depend on the natural beauty for whose protection these Directives are instrumental. The key lies in sensible planning to ensure leisure activities do not destroy the very thing on which they rely. It is thus perfectly possible to develop a solution satisfactory to both tourism and nature. An example of how leisure activities and nature conservation can be reconciled is the Feldberg district in Germany's Black Forest, where an integrated management strategy was developed, based on early and comprehensive stakeholder involvement. This strategy aimed to separate priority wildlife zones and areas for leisure activities. As it offered both improved habitat structures within the wildlife zones and enhanced infrastructure for leisure activities outside them, the strategy benefitted both sides. Unfortunately, the agreement was later questioned by one of the local councils involved, which wanted to expand the skiing area after it had bought a ski-lift company. But the main point here is that as long as parties are willing to hold constructive talks, it is perfectly possible to reconcile the short-term interests of tourism and nature conservation.

Reconciling tourism and nature in Feldberg district

Feldberg is the Black Forest's highest mountain and is a popular year-round destination for tours and outdoor sports with some two million visitors a year. The area around the Feldberg is criss-crossed by hiking trails, cross-country ski routes and downhill pistes and it is planned further to expand this network. The Feldberg massif is, because of its height, one of the last refuges of sub-Alpine fauna and flora outside the Alps. Among its wildlife is one of the last populations of capercaillie and hazel grouse in Central Europe. Competition over this confined area increasingly resulted in conflict between nature conservation and tourism. This bottleneck was relieved by developing an integrated management strategy that took account of tourism, forestry, hunting and nature conservation interests. All these interest groups were involved from the outset. Based on inventories of the forest structure, the presence of species and the hiking and skiing trail networks, a spatial concept was developed which identified priority areas for wildlife in which silvicultural measures (which control the establishment, growth, composition, health, and quality of forests to meet diverse needs and values of landowners and society) should improve habitat structures for capercaillie and hazel grouse. At the same time, stakeholders, local authorities and NGOs agreed measures to concentrate and improve the tourist infrastructure outside these sensitive areas. This meant that if one trail was closed, it would be replaced elsewhere or another trail improved. This cooperative process was mutually advantageous as it improved habitat structures as well as an enhanced infrastructure for leisure activities

Conclusions

Whereas the Directives are very clear about how the site designation process should operate, they leave much more scope for Member States to decide on the conservation measures. At this stage it is even more important to engage with stakeholders to identify agreement on the best approach. Only in this way can conservation measures be tailored to local specifications. An important part of deciding what conservation measures to take, is first to decide on the objectives. Thus it is clear to all involved what should happen to the area concerned, and which measures are needed to meet the objectives.

2.3 Infrastructure Projects

One of the Habitats Directive's two pillars is the establishment of a coherent European ecological network of protected areas, 'Natura 2000', that also incorporates the protected areas designated under the Birds Directive (the other pillar is the strict protection of species on Member States' territory which we shall discuss in chapter 2.4). In these Natura 2000 sites, the natural habitats and populations of species for which the site is designated should be maintained at a 'favourable conservation status'. The Habitats Directive does not seek to ban economic activity in Natura 2000 areas, but rather aims to promote sustainable activities which do not jeopardise these areas' conservation objectives. Thus, new activities and developments which could harm a Natura 2000 site must undergo a special assessment to ensure they do not hamper each site's conservation objectives. For this 'appropriate assessment' and the subsequent decision, a clear step-by-step procedure is laid down in Article 6 (3) and (4) of the Habitats Directive. As the Habitats Directive regards not only ecological requirements, but also economic, social, cultural and regional ones, it even allows the approval of plans and projects with negative impacts on Natura 2000 sites, provided these are for an imperative overriding public interest and there are no suitable alternatives. In these cases, the Directive lays down provisions to ensure negative impacts are mitigated and compensated as much as possible. The European Commission recently published a new guidance document on the application of this specific requirement, clarifying various key concepts such as 'Alternative Solutions', 'Imperative Reasons of Overriding Public Interest' (IROPI), 'Compensatory Measures', 'Overall Coherence' and 'Opinion of the Commission', using existing jurisprudence following rulings from the European Court of Justice. The jurisprudence presented in this guidance document demonstrates that the Commission has generally taken a very favourable line with most of the IROPIs presented, even where arguments for this were poor.

Natura 2000 in the planning process

A frequently-encountered situation is that in many infrastructure development projects, Natura 2000 requirements are neglected during the planning process or considered far too late and only cosmetically. As the law is very clear, this predictably brings problems like delays in project approval procedures and additional costs.

These situations can be solved relatively easily by following the existing guidance documents which explain in detail how exactly to integrate Natura 2000 requirements at a very early stage of the planning process. Simple screening at the start of the planning process can be used as a tool to detect potential conflicts with Natura 2000 sites. For example, in the Netherlands a database is being set up which includes all known data on where protected species and habitats occur, including Annex IV species protected under Article 12. Project developers need simply consult the database to know whether to follow procedures under Article 6(3) and 6(4). A publicly-accessible database of this kind might also be considered at European level. In cases where impact on Natura 2000 sites cannot be avoided, alternative solutions (eg different locations or routes with linear developments or project modifications) should be considered at the earliest stage, thus avoiding adverse effects as far as possible. A good example of considering Natura 2000 from the very beginning is the German Federal Transport Infrastructure Plan (FTIP), which is a framework investment plan and planning tool for construction and upgrading Germany's transport infrastructure. While this plan was being developed, all proposed projects were screened in a preliminary assessment (the 'Early Recognition System'), to identify projects with high conflict potential. In some 800 road infrastructure projects out of the initial 1,700, a high potential for conflict was identified. These projects' environmental impacts and their compatibility with the Nature Directives' requirements were examined more closely. In most cases solutions could be identified by modifying or re-planning the projects, which allowed them to be realised while also meeting nature conservation requirements. An example of this was the planned construction of a motorway crossing a protected forest site where black storks lived. The intended route was judged to have a major 'barrier effect' on the storks and an alternative route skirting the site chosen. Projects where conflicts could not be resolved at FTIP level were specially labelled and given a "special nature conservation planning mandate", ensuring that nature conservation requirements would be taken into account at subsequent planning stages (route selection procedure and project approval).

Site-bound projects

In contrast to the above-mentioned infrastructure projects, where the search for spatial alternatives is a feasible option to avoid conflict, many projects are also bound to a specific site. Typical of this category of project is port expansions. But here too viable solutions can be found.

One example of a successful port expansion project which also respected nature conservation requirements was the proposed expansion of the Port of Rotterdam (the 'Rotterdam Mainport Development Project'). This project required, inter alia, the reclamation of some 2,000 hectares of land, with likely negative impacts on habitats (including priority ones) and species in the surrounding SACs/SPAs. During the planning process, the requirements of the Birds and the Habitats Directives were fully considered. It became clear that an adverse effect on priority habitats was unavoidable, so a comprehensive package of compensation measures, including establishing a marine reserve and creating dunes and wetlands, was developed in close cooperation with stakeholders. These measures were also approved by the Commission in accordance with Article 6 (4).

Rotterdam Main Port project: 'Maasvlakte II'

Initially, planners established that there was no alternative to expansion. Other local ports could not expand because of over-shallow water and unused land in the existing port was insufficient to permit better use of this area without threatening nearby housing. Since the affected Natura 2000 site contains priority habitats and species, the Commission had to provide an opinion about the imperative reasons of overriding public interest. The Commission accepted the port's importance to the Dutch economy, as well as being part of the TEN-T and it also accepted the proposed compensation measures. These included creating new dunes, a marine reserve and enhancements in the remaining N2000 site.

Another promising approach has been developed in the UK, based on the view that the best way to achieve development while fully meeting the needs of environmental regulation requires discussion between developers and the environmental bodies. This means not just exchanging information, but also fully involving statutory environmental bodies and environmental NGOs in the planning process. An example of this approach was the construction of a new ferry terminal at Immingham Outer Harbour. During the planning process, there was full consultation between the port developer, the Environment Agency, English Nature and RSPB, all of whom reached consensus on the project's adverse effects and the necessary compensation measures. This led to a legal agreement between the developer and environmental bodies, which withdrew their objections to the scheme. Other major harbour development cases in the UK, eg Bathside Bay, Harwich and the London Gateway proposal (Shell Haven), also demonstrated the value of this participatory approach.

Legal uncertainty and 'de facto' SPAs

Another factor that caused problems (and sometimes still does today) is the legal uncertainty about a given site's status. A prime example is the European Court of Justice's 'Basses Corbières' judgment (Case C-374/98), concerning bird areas which ought to have been classified as SPAs but were not, which had far-reaching consequences. This judgment was a reaction to the fact that even 20 years after the entry-into-force of the Birds Directive, Member States have failed to designate enough SPAs. The Court argued that a Member State must not derive any advantage from its failure to comply with its Community obligations. The onus is thus on EU countries to resolve this issue by swiftly completing their SPA networks. Similarly, most legal doubts about the legal status of potential SACs were due to the lengthy site selection process (cf. chapter 3.1). A speedy and complete implementation would have quickly established legal certainty. This means that once the Natura 2000 network is fully established, most problems with legal uncertainties can be solved.

Finalise the designation process

However, while governments drag their feet over designating sufficient sites, business will suffer from planning blight. The Karlsruhe/Baden Airport case in Germany illustrates the importance that individual economic operators attach to planning security. In this case, planning security for expanding the airport was refused as large areas of the airfield were covered by Annex I habitats but were not on the list of proposed SCIs. To overcome this situation, the airport operator itself tried to submit the potential SAC to Brussels. Since the site was finally submitted to the Commission as a proposed site of Community interest (pSCI), an Appropriate Assessment was carried out and, after drafting several alternatives which reduced the negative effects, the mitigation and compensatory measures were proposed. After requesting a Commission opinion pursuant to Article 6 (4) of the Habitats Directive, the project was approved by the Regional Government. Similarly in Austria, it took pressure from an unusual coalition of green NGO WWF Austria and the Austrian Chamber of Commerce for the Government to finalise a stalled designation process after the country's accession in the late 90s.,

Natura 2000 as a tool to improve and protect quality of the living environment

The Birds and Habitats Directives' objective is to preserve biodiversity, so Natura 2000 sites are designated according to ecological and bio-geographical criteria. Since preserving biodiversity is fundamental to preserving our ecosystems and the services they provide, implementing these Directives simultaneously offers a wide range of benefits to people. Not only do these ecosystems provide many economic benefits like 'ecosystem services' (eg water purification and flood control), supply of food and timber products or tourism and leisure possibilities, they also offer important social benefits. For example, Natura 2000 sites make an important contribution to better living conditions, environmental education, recreation and health benefits. Around densely-populated towns they act as 'green lungs'. A recent BirdLife publication, "Wellbeing through Wildlife" provides an overview of the above-mentioned benefits including the major economic benefits provided by successful nature conservation. The presence of protected species and habitats in such open spaces is an indicator of the general quality of these spaces and provides legal protection against their unsustainable development.

Preserving green spaces and hamsters

In the last election campaign in the German state of North Rhine-Westphalia and in Germany's 2005 federal election, many politicians campaigned against 'excessive nature conservation' as part of a more general drive against 'Brussels bureaucracy'. An oft-cited example was of a hamster destroying jobs, such as the case of the Aachen-Heerlen commercial site, 'Avantis'. In reality, the hamster's protection status was crucial in preserving a much-valued green space for local use. The debates and planning for the 100ha cross-border Avantis site between Aachen in Germany and the Dutch town of Heerlen lasted for years. The controversy began in 1979, when the first plans became known. Even then, residents' and conservationists' main argument against the plan was that Horbacher Börde should remain a green belt. The area is important for local recreation, has valuable soil and is a habitat for many rare plant and animal species, including the European hamster, partridge, common quail and skylark. At the time, Germany also had a 170% glut of commercial sites, according to the Federal Research Institute for Regional Geography and Regional Planning (BfLR). But advocates of the site promised 12,000 jobs, despite the presence of several hundred hectares of developed but unoccupied commercial sites in the immediate vicinity. In 1994, several citizens' initiatives and conservation organisations lodged a first complaint with the Commission, mentioning inter alia the problem of the European hamster strictly protected in the Habitats Directive (1992), but planning proceeded. So after the approval of the land-use plan, an official EU complaint followed in 1998. Over the following years, the job-creation predictions were reduced, first to 3,000, then to 1,800 and finally to 1,200. But construction has proceeded since 1998. The EU infringement proceedings were conditionally dropped in 2003 (the NRW State Government and Environment Minister Bärbel Höhn had promised a state-wide European hamster protection programme). But the three office buildings constructed until August 2005 using public funds, a total of €60m in taxes were spent on Avantis, remain vacant except for the Avantis administration. Just one manufacturer, Solland Solar, has moved in. Of the predicted 12,000 jobs, about 120 finally resulted.

Conclusions

The key to success in all these cases was wholehearted and thorough consideration of the nature Directives' requirements. This comprises early assessment of all impacts, focussing on mitigation and full compensation for unavoidable impacts. Ideally, these aspects should be considered during an iterative process seeking to improve the project's location and design at the earliest possible stage. It is crucial to successful and swift realisation of plans that planning bodies (whether public authorities or entrepreneurs) take the Birds and the Habitats Directives' requirements fully into account.

Involving environmental bodies (statutory bodies and NGOs) in the planning process should also be part of such an approach, as this can help not only find suitable and fully functional compensatory measures but can also bring a better understanding between environmental bodies and project developers. The importance of eliminating legal uncertainties by finalising the site designation process must also be stressed.

Finally, as the Avantis commercial sites case demonstrates, it is important to stress that species and habitats protected under the Habitats Directive are not just there for their own sake. Their conservation status is a key indicator of the general state of the environment and a prerequisite for sustaining ecosystem services such as green open spaces close to cities for recreational purposes.

2.4 Species Protection outside protected areas

As previously mentioned, the Habitats Directive has two main components or 'pillars': conserving natural habitats and habitats of species characterised by the establishment of the Natura 2000 network (discussed previously) and protecting animal and plant species to maintain or restore the species at a favourable conservation status. The latter is laid down in the provisions of the Habitats Directive's Articles 12 and 16, which establish a system of strict protection for the species listed in Annex IV, and allow for exemptions from these provisions under specific conditions. This protection regime not only covers the physical protection of specimens but also protection of their eggs, breeding sites and resting places. In contrast to the first pillar, which is limited to the Natura 2000 network, species protection applies to Member States' entire territories.

Implications of Article 12 HD species protection requirements for farming and forestry

Article 12 of the Habitats Directive prohibits deliberately capturing or killing specimens, the deliberate disturbance of species, particularly during the breeding, rearing, hibernation and migration periods, the deliberate destruction or removal of eggs from the wild and the deterioration or destruction of breeding sites or resting places. As this last provision does not include the word 'deliberate', it prohibits all acts resulting in deterioration or destruction of these locations regardless of whether they are deliberate. Since Article 12's scope is not geographically restricted, this has implications for specially intensive land-use. It should also give strong encouragement to make such activities more sustainable. For this to work, the national law into which the Directives are transposed should not, as for example happened in the most recent revision of Germany's nature conservation law, give general exemptions to an entire sector such as farming and forestry. Such exemptions remove any incentive for farmers and foresters to join initiatives to promote the best wildlife-friendly land-management practices. The examples below, and discussions in the working group at EEB's seminar, demonstrate that plenty of experience with such initiatives already exists.

Farming

As mentioned in the management planning chapter, the presence of protected species in farmland and forests is in most cases also a result of traditional land-use and low-input, extensive farming practices. These clearly support the relevant species, and are thus perfectly compatible with the Directive's provisions. Since maintaining a favourable conservation status of species actually depends on continued land-use in this manner, it should be encouraged from a nature conservation viewpoint. Where the lack of awareness of the species' needs or a former intensification of land-use practices have brought impairments, adjustments must be made to ensure compatibility with species protection requirements (eg a later mowing regime, a different pattern of mowing or leaving dead wood in forests). In many cases, these modifications do not even result in financial loss, and where they do, compensation is usually possible through agri-environmental and, since 2007, sylvi-environmental, schemes, provided of course that Member States have used these opportunities provided by the European Rural Development Funds. An important issue to avoid negative impacts is to raise aware-

ness among land-users and promote guidance on sustainable management practices. This could include training, codes of conduct, guidance documents, and promoting best practice. In some cases, where existing farming practices are particularly unsustainable, switching to organic farming can be an option which both helps protect wildlife and gives farmers a higher price for their produce. A good example is Spain's Ebro Delta, where conventional rice farming harms water quality and biodiversity. SEO/BirdLife Spain therefore set up a private company, Riet Vell SA, specifically to demonstrate how organic rice farming could operate in these conditions. Following SEO's example, regional and national authorities are now promoting programmes to support a stronger presence of organic rice in the area. The farm has demonstrated that organic rice production is possible but in the long-term and to reach enough local farmers, it will need more support from local stakeholders and public authorities at local, regional and national level. Further upstream in the Ebro valley, the landscape is characterised by dry steppes where the productivity of traditional nature-friendly farming is generally very low. To increase profitability and ensure farmers do not switch to more (water) intensive farming, SEO/BirdLife Spain, is running a project to add value to crops and their final product, pasta, by branding it as not only being of outstanding quality but also being highly beneficial to wildlife.

Forestry

Applying Article 12 to Forestry is, in some respects, more complicated since it may be more likely that crops to be harvested have themselves become the habitat (breeding site/resting place) of some of the species concerned. In accordance with the Commission's guidance document on Article 12, 'CEF-measures' (*Measures to ensure the continuous ecological functionality of breeding sites and resting places*) may be an option when an activity can affect parts of a breeding site or resting place. The concept of CEF-measures is based on the view that if the breeding site or resting place, owing to CEF-measures, retains the same size and quality for the species in question, deterioration has not taken place, so an activity or project can be initiated without derogation under Article 16. For forestry this could translate into a management system approach which ensures that the overall conservation status of species and habitats is not threatened by forestry operations. An example of a regional initiative to promote nature-friendly forestry is the recent publication in the German state of Hesse of a guidance document for foresters in implementing Natura 2000. The document, written by the forestry department and NABU, a local NGO, draws from the regional forestry departments' experiences over recent decades in 'close-to-nature' forest management which has led to the return of black storks (*Ciconia nigra*), a species that depends for nesting on old trees. Special care was taken to ensure that the measures recommended in the documents were practical, easy and cost-effective for foresters to use. It is not just in Germany, but also in many other EU countries that there is a long-standing tradition of 'Pro Silva' or 'close-to-nature' forest management which has proved very successful in combining economic and ecological objectives.

Pro Silva general principles

Pro Silva promotes forest-management strategies which optimise the maintenance, conservation and use of forest ecosystems so that ecological and socio-economic functions are sustainable and profitable. The general approach to management advocated by Pro Silva includes market and non-market objectives, and takes the whole forest ecosystem into consideration. With reference to sustainability in its broadest sense, Pro Silva believes forests provide four categories of benefit to society. These are:

1. Conservation of ecosystems

The maintenance of ecosystems provides a basis for forests' protective, productive and recreational functions, and however society wishes to use forests, the vitality and inter-relation of life-forms in forest ecosystems provide the foundation for all its other functions. The preservation, and if necessary restoration, of the ecosystem is, therefore, the first priority

2. Protection of soil and climate

Some essential elements of the protective function are:

- Protection or restoration of natural soil fertility and soil structure (soil protection)
- Protection of natural forest types (biotope protection)
- Protection of typical and rare or endangered species (species protection)
- Protection against erosion (erosion protection)
- Protection and cleaning of water (water protection)

3. Production of timber and other products

Pro Silva regards sustainable forest ecosystems as the proper basis of economic sustainability. Protection and production are both important to society. For sustainability in the broadest sense, continuing and optimal productivity is only possible if the protective function remains intact. This precludes production strategies that ignore the protective function.

4. Recreation, amenity, and cultural aspects

Pro Silva recognises the increasing importance of forests for physical and mental health, especially in Europe's most densely-populated regions. The essential elements of forests' recreational function includes their suitability for quiet, 'eco-friendly' forms of physical and mental recreation

Implementation of the Habitats Directive and the application of Article 12 in forestry should inspire a wider application of such close-to-nature forestry practices. An added bonus of this is that forests which are managed in this way are much more resistant to catastrophic events such as extreme weather and plagues. This is a property that in the face of the impacts of climate change will be very likely to have strong competitive advantages over biodiversity-poor, mono-culture forests.

Implications of Article 12 HD species protection requirements for other land-use activities

Besides agriculture and forestry, other land-use activities such as clay or sand extraction may harm breeding sites and resting places. One solution to this was found in the Rhineland-Palatinate, where clay mining operations threatened breeding sites of the yellow-bellied toad. An agreement was reached for clay mining companies to create small pools in their mining area, so toads are ensured several alternative breeding sites in case a particular pool has to be destroyed for mining.

Damage caused by protected species

Some protected species can cause damage, often in rural areas. An example is otters ravaging fish ponds, or bears attacking bee-hives or sheep. Some protected species such as large carnivores can, in rare circumstances, even threaten humans. Austria's experience with the brown bear shows how best to deal with such situations.

Case study from Austria (Brown Bear)

In the early 1990s, initial attempts to re-introduce brown bears (*Ursus arctos*) in central Austria led some bears to forage for food close to human settlements, by raiding rabbit hutches, entering sheep pens and even emptying fish-ponds. After two bears were shot, reports of damage returned to their original level, but the bears' image was seriously harmed and public support for reintroduction plummeted. To overcome this challenge, a bear management programme was launched in 1995 with financial support from the EU's LIFE Programme, in close cooperation with the authorities of the provinces concerned, the Ministry of Environment and various interest groups such as hunters, farmers, bee-keepers, and tourism and school associations.

The management plan, adopted in 1997 and updated in 2005, proposed unrolling new organisational structures including a coordination group for Austria, field-workers (known as 'bear advocates') who would help analyse critical situations and consult local residents, and an emergency team to handle 'human-habituated' or 'food-conditioned' bears. Routine monitoring of bears was also recommended to obtain reliable and up-to-date information. Another proposal was implementing a uniform damage regulation system for all provinces which comprised prevention measures and financial compensation for damage caused by bears. Finally, public relations are an important tool for involving people in the bears' plight and providing information about bear management.

The Coordination Board for Bear Management in Austria coordinates measures among the provincial authorities and ensures professional and uniform management is carried out throughout the country. It mainly comprises representatives of hunting and nature conservation authorities in provinces with a regular bear presence, representatives of the Environment Ministry, Austria's central hunting organisation and WWF, and bear advocates. The advocates regularly update the Coordination Board on the bear situation and any related problems. An annual discussion forum gives stakeholders and other interested parties the opportunity for direct contact with bear management decision-makers.

Some key aspects of Austria's bear management plan are the prevention of and compensation for damage and handling of 'nuisance bears' (which repeatedly cause damage and pose an imminent risk to people).

The Management Plan recommends actions to handle nuisance bears. A contingency plan lists actions to ensure a swift and coordinated response to crises. Measures include the capture, radio-marking and 'aversive conditioning' of nuisance bears and, as a last resort, removal of bears representing serious threats to human life. To deal with nuisance bears, a bear emergency team was set up comprising experts in dealing with bears. Among the members are wildlife biologists, vets and hunters recruited for their professional experience and availability for emergency deployment. The team supports bear advocates in trapping, aversive conditioning and, if all else fails, removal of bears imminently threatening humans.

To reduce damage, special prevention measures, eg the installation of electric fences to protect sheep or bee-hives, are provided. Bear-damage in provinces with regular bear presence is compensated through third-party insurance by hunting organisations (Carinthia, Lower Austria, Styria, and Upper Austria) or by the provincial government in Salzburg. Damage evaluators (bear advocates or specially-trained staff) try to assess whether reported damage is caused by bears and give the insurers, hunting association or provincial government responsible for compensation expert advice. They guide damage victims through the claims process and advise on measures to prevent further damage.

Conclusions

With Article 5 of the Birds Directive and Article 12 of the Habitats Directive, Member States have committed themselves to integrating biodiversity protection adequately into agriculture and forestry practice, and into infrastructure planning outside protected areas, while leaving the option open to decide on action at national, regional or local levels. These articles can thus act as an important encouragement for more sustainable land-use practice. However, proper monitoring is very important to evaluating the success and effectiveness of the specific initiatives undertaken. Given the unavoidable impacts of climate change and the need to adapt to it through developing and implementing ecological networks, applying Article 12 will become ever more important in coming years. For the Article's provisions to have the desired effect it is, of course, crucial that entire sectors are not exempted, which would neutralise the incentive to promote the best available practice within that sector.

2.5 Monitoring and evaluation

The Habitats Directive insists on maintaining or re-establishing a favourable conservation status for species and habitats in the Natura 2000 network. Monitoring must be continuous both at site level and at the level of the whole Natura 2000 network if we are to know whether or not this goal has been accomplished. The Directive's Article 11 is devoted to this subject and monitoring the conservation status may reveal the need to intervene in a particular way, either to link up sites or to establish or re-establish habitats using restoration techniques, or review application of Article 12 species requirements.

Article 11 of the Habitats Directive specifies that surveillance, or monitoring, is an important aspect. Article 17 requires Member States to submit a report once every six years on implementation of measures specified in the Directive and an assessment of their impact on the conservation status of targeted habitats and species. EU nations submitted their first reports in 2000, which the Commission summarised. However, since implementation has been slow, these reports' content was somewhat disappointing. It is only now with the second round of implementation reports, due in 2007, that Member States are required for the first time to assess the conservation status of their species and habitats, and define their conservation objectives. To comply with this obligation, countries can either carry out nationwide monitoring programmes or they must be able to collect the results of all local monitoring programmes.

In 2006, European Habitats Forum members, led by WWF, carried out a 'shadow' monitoring report, to test Article 17 reporting formats prepared by the Commission and formulate recommendations for developing and implementing monitoring requirements. Their recommendations for an effective ten-step monitoring system are:-

- 1) Ensure a streamlined approach is taken when using biodiversity data to meet the various monitoring requirements for different EU policies, such as nature conservation, water management and rural development, and that these monitoring obligations are compatible
- 2) Fully integrate civil society into the monitoring process, to allow timely and adequate input at national and EU levels
- 3) Special attention must be made to setting Favourable Reference Values (FRVs) in the Commission's evaluation of national reports, and improve as necessary, the guidance and practical advice
- 4) Integrate NGO recommendations for setting FRVs
- 5) Ensure the integration of biogeographical aspects (connectivity and trans-boundary perspectives, etc) within the monitoring scheme
- 6) Member States should dedicate a specific section of their reports to assessing the contribution of management measures adopted for the Natura 2000 network, and special species conservation measures
- 7) Member States must improve the data situation within the six-year period before the next report

- (8) Establish adequate procedures for marine habitats and species. Clear guidance is needed with concrete actions and clear responsibilities
- (9) Implement a 'biogeographical seminars process' for monitoring, for all biogeographic regions, starting in 2008 in a similar way to those undertaken for Natura 2000 site selection, with a focus on concrete results and obligations for action. Member States should be required to take action to improve the conservation status of habitats and species within the next six years
- (10) Promote the establishment of a similar monitoring system for the signatories of the Convention on the Conservation of European Wildlife and Natural Habitats to ensure the assessment of the conservation status of habitats and species included in the annexes of the Convention.

A good, though not perfect, example for a streamlined approach to using biodiversity data for monitoring requirements under different environmental legislation comes from Denmark:-

The Danish Natura 2000 and WFD monitoring system

In Denmark, monitoring Natura 2000 sites and species has been linked with Water Framework Directive monitoring in a system called NOVANA. The NOVANA programme started in 2004 and built on its predecessor, NOVANA 2003. The programme is led by the National Environmental Research Institute (NERI).

NERI observes the status of selected species and habitats, coordinates monitoring of the aquatic environment and is responsible for supervising Danish marine waters. The state is responsible for monitoring groundwater, lakes, watercourses and fjords. NERI investigates the turnover and effects of nitrogen and phosphorus, of selected hazardous substances, sustainable use of water resources, marine mammals, and restoration of lakes and watercourses. It also investigates how global warming will affect the aquatic environment, and constructs mathematical models to forecast the trend.

The launch of the National Programme for Monitoring of Aquatic Environment and Nature (NOVANA) in 2004 has provided Denmark with systematic monitoring of habitats and species encompassed by the Habitats, Wild Birds and Water Framework Directives.

NOVANA was initially planned for 2004-2009. It will be succeeded by Decentralised Water & Nature Monitoring (DEVANO), a more detailed monitoring programme for Natura 2000 areas. The DEVANO programme will result in the complete mapping of habitat types and protected species within the borders of Natura 2000 sites. This will include mapping threats, invasive species, eutrophication, coastal protection and lack of natural dynamics.

Although NOVANA and DEVANO have led to a more coherent and efficient monitoring programme in Denmark, there have been reductions in the content and financing of the programme over the past year. There has been a reduction in monitoring toxic substances and pesticides. The programme has become narrower in scope, forest habitats, protected by the Habitats Directive, are not part of NOVANA, nor are sea mammals. NOVANA and its focus on Danish EU obligations has also led to a collapse of nature site monitoring, which is not protected by the EU.



Conclusion

Monitoring is one of the most important aspects of implementation as it allows for proper evaluation of a policy's success. For example, it allows proper evaluation of exactly how sustainable certain land-use practices are, and how successful the conservation measures taken. Monitoring results are the basis for improved and more effective implementation efforts. However, monitoring must operate for many environmental policies and it is crucial this is done in an integrated manner, where possible using the same data for multiple purposes and, most importantly, avoiding duplication. Ongoing Commission initiatives, such as the Infrastructure for Spatial Information System in Europe (INSPIRE) and the Shared Environmental Information System (SEIS), can support such an integrated and streamlined approach. It is important that such information systems are publicly accessible and user-friendly to support better-informed public debate.

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http://ec.europa.eu/environment/nature/nature_conservation/natura_2000_network/managing_natura_2000/exchange_of_good_practice/wetlands/04case_amvrakikos.html (*Amvrakikos case)

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