THE EUROPEAN NATURA 2000 PROTECTED AREA APPROACH: A PRACTITIONER'S PERSPECTIVE

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ABSTRACT
Natura 2000 is the first and only regional biodiversity protected area approach in the world. Over its 20 years of existence it has been a positive force for conservation, but it has certain limitations. This paper assesses some of its strengths and weaknesses from a practitioner's perspective. Overall, the assessment is positive as without it biodiversity loss would probably have been greater, and with it there is a unique transnational approach. The positive aspects identified are the biogeographical framework, pan-European classification of species and habitats, and the political will to implement it. The negative aspects are that it is a static approach to species and habitat conservation, the Natura approach to biodiversity conservation is being undermined by perverse subsidies from other EU funding mechanisms, especially the Common Agricultural Policy, and the effects of development on the fragmentation of habitats are dominant. Also, in practice, there has been a failure to implement wider countryside and connectivity measures. Lessons relevant to other parts of the world are discussed.

KEYWORDS: Natura 2000, practitioner's perspective, perverse subsidies, connectivity, lessons learned

INTRODUCTION

The European Union (EU) programme for the protection of birds, and of species and habitats has been implemented primarily through Natura 2000. The paper sets out the basis of the approach, assesses the strengths and the weaknesses, identifies some improvements needed and provides lessons for other parts of the world. It is not a definitive and objective assessment. It is written from the perspective of a practitioner involved in implementation of the approach in one EU Member State and with knowledge of protected areas systems around the world (see Crofts, 2008a and 2008b), in the hope of stimulating debate in future issues of *Parks* on this globally significant protected area approach.

THE DIRECTIVES

Natura 2000 is a key element in the implementation of two European Union Directives. Their essential components are as follows.

The Birds Directive*:* Council Directive 79/409/EEC on the Conservation of Wild Birds was approved by the Council of Ministers in 1979 (European Commission, 1979); it is now known in its amended form as Directive 2009/147/EEC. The Directive provides for the protection, management and control of all species of naturally occurring wild birds on the European territory of EU Member States. It has a number of requirements. Member States have to identify areas to be given special protection: for the rare or vulnerable species; for regularly occurring migratory species; and for the protection of wetlands, especially wetlands of international importance. These areas are known as Special Protection Areas (SPAs). There are 195 species and sub-species listed in Annex I.

There are now 5,372 terrestrial SPAs covering 768,141 km² and 874 marine SPAs covering 125,262 km² (European Commission, 2013).

The Habitats and Species Directive*:* The 'Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna' (European Commission, 1992) (called the Habitats Directive hereafter) is much broader than the Birds Directive. Its purpose is 'to promote the maintenance of

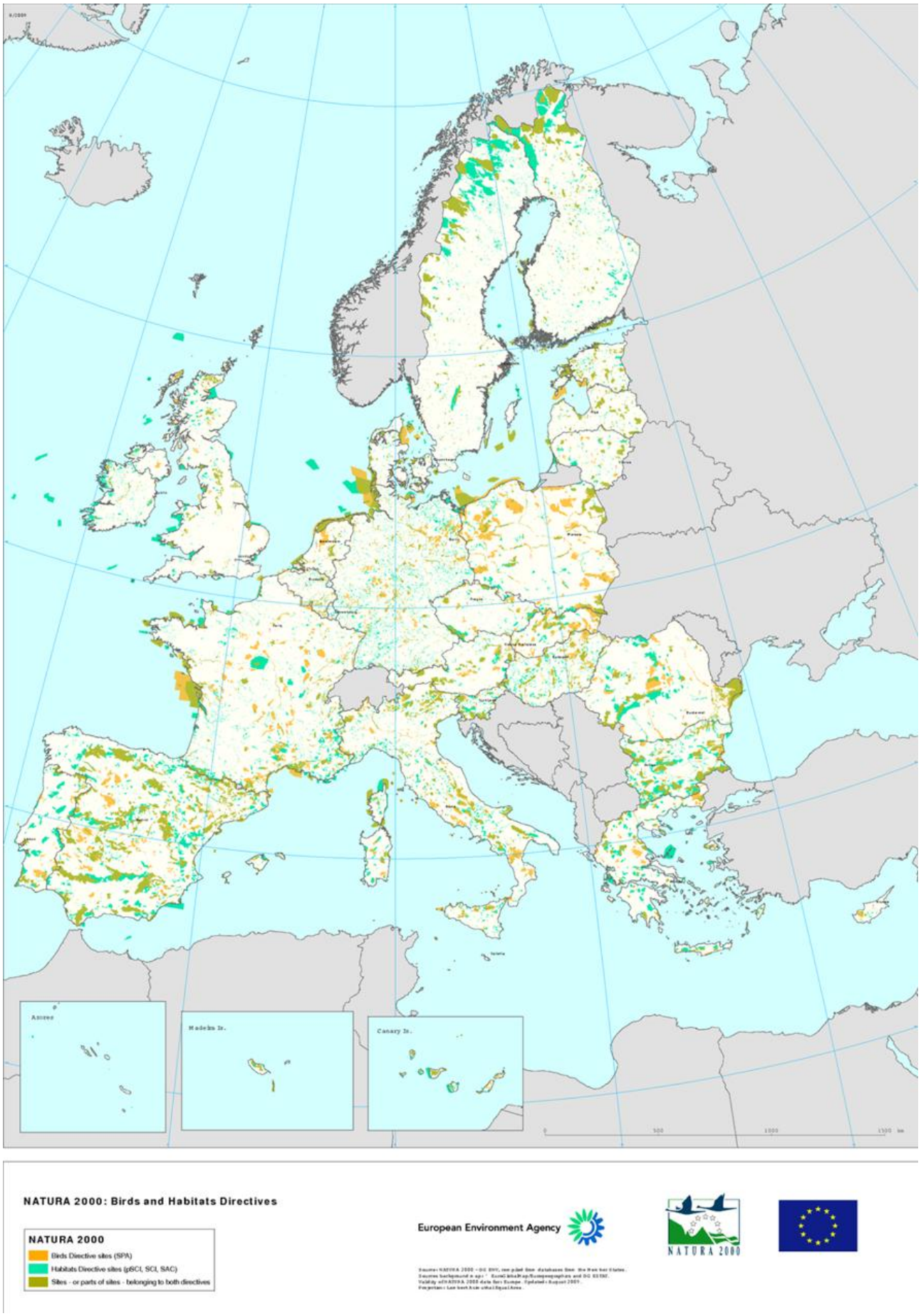


Figure 1 Natura 2000 network in Europe.
Source: www.eea.europa.eu/data-and-maps/figures/natura-2000-birds-and-habitat-directives-1

biodiversity, taking into account economic, social, cultural and regional requirements'. Its aim is to contribute to ensuring biodiversity through the conservation of natural habitats and wild fauna and flora. It provides for the preservation of habitats and species of interest at the regional level of the European Union Member States. It requires Member States to identify sites to be given special protection for the species and habitats listed in the Annexes to the Directive. Sites are identified by Member States. Following scrutiny by the EC, assisted by the European Topic Centre for Nature Conservation in Paris and in consultation with Member States, the selected sites are classified as Sites of Community Importance (SCI). When approved by the EC, the sites are designated by the Member State as a Special Area of Conservation (SAC). Around 200 types of natural and semi-natural habitat, almost 200 animal species and over 500 plant species in need of protection are identified in the Annexes; these include those habitats that have shrunk considerably and those that are outstanding examples of the typical characteristics of the biogeographic regions of the EU. The Directive places special attention on those natural habitats and species that are in danger and defines these as priorities. It requires the implementation of measures to maintain and restore the favourable conservation of all of the species and habitats listed in Annexes I and II. The whole suite of sites for the natural habitats and the habitats of the species listed in the Annexes I and II should form a 'coherent European ecological network of special areas of conservation under the title Natura 2000'.

Sites are selected on the basis of species and habitats being endangered or sensitive at the EU scale within the framework of biogeographical regions, focusing especially on representivity, ecological health, and the size and density of population.

There are now 22,593 terrestrial SCIs covering 585,900 km² and 1,769 marine SCIs covering 202,929 km² (Figure 1). The total number of Natura sites designated under the two Directives is 26,444 with a total area of 1,009,930 km² representing 17.9% of the land area of the 27 Member States. Information on the sites is available at natura2000.eea.europa.eu/#.

POSITIVE COMPONENTS

From the author's practical experience, there are many positive attributes of the Natura 2000 system.

A regional approach*:* Most protected area systems around the world are developed at national level by the national authorities. The Natura 2000 network is the largest and most comprehensive system applied to any region in the world. This is not only important in its own right, but it recognises that species and habitats do not recognise political boundaries. A unified approach across 28 countries is a major achievement.

'Directive' approach*:* The EU Member States have no discretion about whether to implement the Directives. They have to translate the Directives into national legislation, although precisely how that is done is for the national legislature to determine. Member States also have very limited discretion on the number and distribution of sites to be classified in each country as their submissions are scrutinised on a biogeographical region basis by the European Environment Agency. For any development that might be in or impinge on the interests of the species and habitats in a Natura 2000 site, an *appropriate assessment* must be undertaken by the state authorities before any decision is taken. There have been no set timescales for the implementation of the Birds Directive, and although timescales for implementing some of the provisions of the Habitats Directive were set by the European Commission, individual Member States largely ignored them, and were challenged either through the courts or as part of the accession negotiations for new members wishing to join the EU. What freedoms there are relate to the instruments for securing management, the processes for interaction with stakeholders, and the financial instruments used for implementation.

Non-government organisations have complained about slow and weak implementation and called for tougher approaches and decisive implementation. These organisations are ready and willing to take state parties to national courts, or report them to the European Commission, who could take them to the European Court of Justice (ECJ). Critical cases are where state parties have wished to develop major infrastructure projects on existing or proposed Natura 2000 sites on the grounds of overriding public interest. 'Appropriate assessments', under the terms of Article 6 (2), have to be undertaken to assess the implications of the proposals for the integrity of the site. It is possible for development to go ahead if the public interest can be achieved without adversely affecting the integrity of the interests for which the site is designated. In some cases, there have been proposals to modify the boundaries to ensure that the proposed developments are outside the designated area; see for example, the proposed development of the funicular railway in the Cairngorm Mountains of Scotland (Scotland Court of Session, 1998). The resolution of continuing disputes has to be through the courts; in the first instance through courts in the Member State, and if no resolution is found or if the court's judgement is

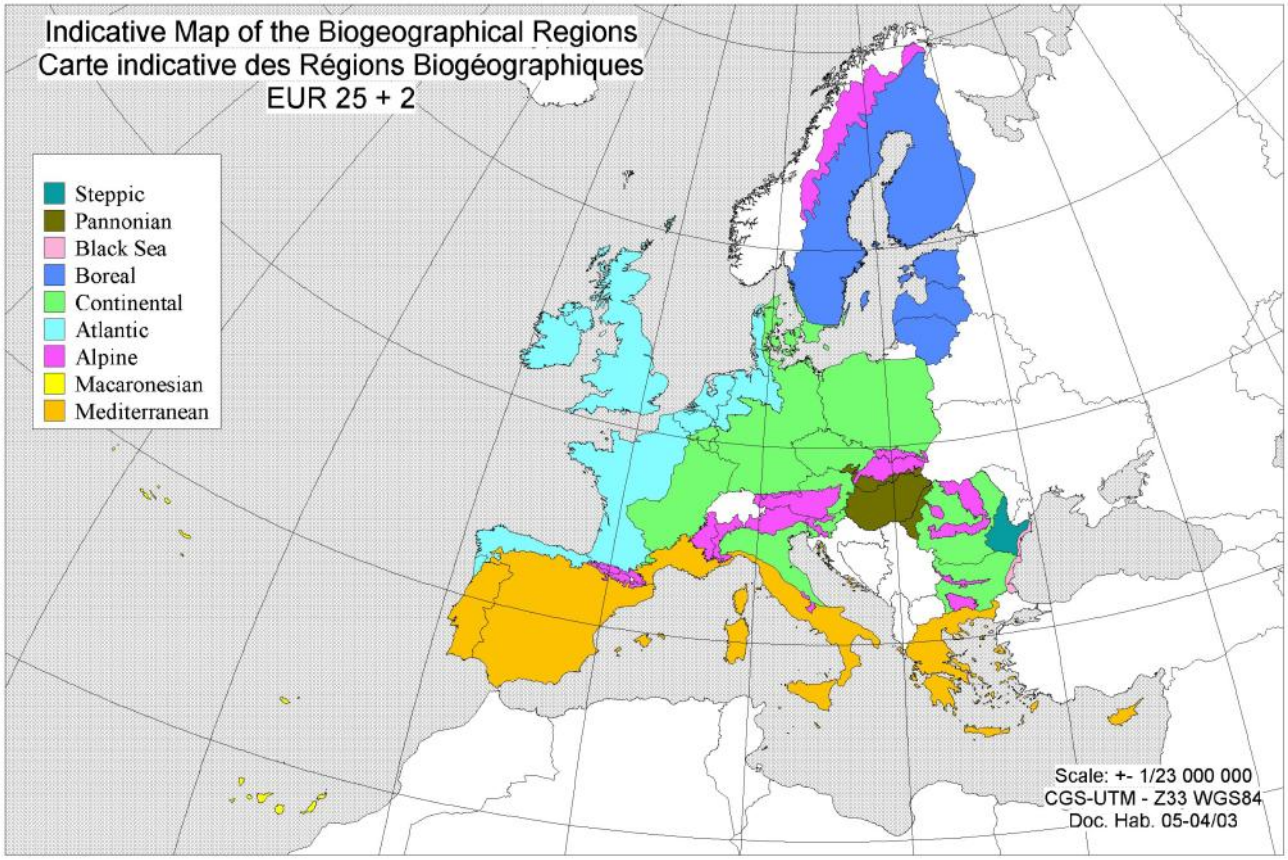


Figure 2: Map of EU bioregions used as basis for site selection
Source: http://ec.europa.eu/environment/nature/natura2000/sites_hab/biogeog_regions/index_en.htm

contested, the case will go to the ECJ. See, for example, the Court of Justice of the European Communities. 1993 case on the Santoña marches, Spain and the Court of Justice of the European Communities 1996 case on Lappel Bank, England. Most of these judgements have clearly articulated the primacy of nature protection and determined that, providing an 'appropriate assessment' under Article 6 has been undertaken and it can be demonstrated that there will be no significant impacts on the species or habitats of the site, a development can go ahead.

The approach is relatively tough, especially when set alongside the oft-stated international concern about the weakness of nation states in implementing their own protected areas mechanisms. On many occasions in different countries, the power of the Directives, the strength of purpose of the European Commission in seeking to influence the Member State's attitude towards protecting sites, and the power of the environmental charities acting as informal policemen, have all been evident and valuable.

Spatial framework*:* In defining a network of protected areas, best international practice is to take a systematic and strategic approach across the whole territory based on biogeographical regions. Within these regions both representative and unique species and habitats are identified, and spatial connectivity between the sites, through corridors and networks, is assessed (see Crofts, 2004).

Natura 2000 goes someway in the direction of best practice. The land territory of the Member States has been subdivided into nine biogeographical regions (Figure 2). Analysis of the distribution of species and habitats is undertaken within this spatial framework and the best and most representative sites and areas chosen to be part of the Natura 2000 network. This is a major step forward in many EU Member States. It has also encouraged informal knowledge networks.

Wider countryside mechanisms*:* It is generally recognised that protected areas can only play their role of protecting species and habitats in good ecological condition if the management of the surrounding territory is sympathetic to the management objectives within the protected areas (see, for example, Worboys et al., 2010).

The provision under Article 10 of the Habitats Directive to develop and implement 'wider countryside measures', which is advisory and not compulsory, is particularly

necessary in the EU as natural habitats and the species dependent on them have been reduced in size and become fragmented by intensive agricultural practice through the implementation of the EU Common Agricultural Policy, the development of transport and other infrastructure, and in some countries by the development of commercial forestry (EEA, 2012). This was a far-sighted provision and has since been supported by the provisions for whole catchment management in the Framework Water Directive (European Commission, 2000).

Species and habitats and link to biodiversity*:* The best protected area systems should ensure that there is a direct link between species and habitat protection and the safeguarding of biodiversity and stemming the loss of species and the fragmentation of habitats (see Adams, 1996). The Birds Directive focussed entirely on this species, perhaps as a result of the greater organisation and influence of the bird protection NGOs in the 1970s. Birds are also species whose population trends are more easily monitored and more generally noticed by the general public. However, the Habitats Directive moved beyond the purely species protection approach to a combination of specific species protection alongside protection of major habitats of European significance. This enabled the individual species, irrespective of whether they were rare, endemic or commonplace, to be protected.

The Directives and subsequent decisions by the Council of Ministers, such as the Sixth Environmental Action Programme (European Commission, 2002) and the El Teide Declaration (European Commission, 2002) and the Malahide Declaration (European Commission, 2003), have all reinforced the central importance of Natura 2000 in delivering the European Union's biodiversity strategy. The latter has reinforced the importance of the two Directives as crucial instruments in the delivery of the biodiversity strategy. It also represents a strengthening of the political will of the EU to deliver improved biodiversity conservation through protected areas.

Terrestrial and marine: Many protected area systems around the world treat terrestrial systems separately from marine, partly a reflection of the early date of many systems and partly a lack of recognition of the importance of linkages between terrestrial and marine ecosystems.

Both EU Directives protect terrestrial and marine species and habitats. The Birds Directive is dependent for its implementation on identifying and classifying bird feeding and seasonal roosting areas at sea for species that nest and breed on land. The Habitats and Species Directive identifies a number of habitats and also species that are entirely marine. A legal challenge was made by the NGO Greenpeace in the UK to clarify whether the Directive applies only to the territorial limits up to 12 natural miles, or throughout the waters where Member States exert their powers. The UK High Court concluded that the Directive is applicable to the UK continental shelf and the waters above the sea bed up to the limit of 200 nautical miles from the baseline. This was a valuable legal clarification and has probably forced the hand of other Member States to designate Natura 2000 marine sites.

Ecological maintenance and restoration*:* A great deal of effort on protected areas around the world has been on their identification and designation, and relatively much less on their maintenance and even less still on their restoration (see, for example, Hockings et al., 2006). Natura 2000 breaks new ground on restoration and maintenance in two respects. First, the Habitats Directive makes specific provision for the maintenance of ecological quality in requiring the achievement of *favourable conservation status*. This is vitally important in countries which have been settled for a number of millennia where many of the habitats are not wholly natural, as they have been subject to human intervention at some stage in their history. Also, some habitats are a result of human intervention so that if this is withdrawn the attributes of nature conservation significance will be lost; an example is the moors and heaths of western Europe dominated by *Calluna* and *Erica* species.

The second important respect is the concept of restoration. Here the Habitats Directive breaks new ground by providing for the possibility of the identification and designation of habitats that are currently degraded and not at the appropriate level of ecological health. This is recognition of the attrition which certain types of habitat have experienced, especially the various types of mire systems through drainage, and the possibility of active management returning them to a better ecological state.

In addition, Article 17 of the Directive places a requirement on Member States for reporting on conservation status.

Use of existing protected areas*:* In many parts of the world, an individual protected area can have many designations and labels attached to it in fulfilment of the national, regional and international status of the site.

The two Directives require selection of sites without reference to existing designations. But one of the practical aspects of the implementation of Natura 2000 sites is the use of existing protected areas in many Member States. This has the advantage of building on already tried and tested approaches, using existing management objectives and management experience, and building on existing relationships with owners and occupiers of the sites. However, from the experience in the UK and Finland, for example, national governments have often been keen to use existing sites to reduce the possibility of further protected area designation which are often unpopular with business interests and local communities, as well as with politicians.

A CRITIQUE

There are aspects of Natura 2000 which do not compare favourably with the lessons learned globally by practitioners within the WCPA network (see for example, Lockwood et al., 2006). Three basic criticisms are identified: it is a narrow approach to species and habitat protection, it fails to stimulate the engagement of key stakeholders, and the implementation mechanisms are totally inadequate.

(1) Narrow approach

Natura is not the most modern approach to the protection of species and habitats. The up to date approaches ensure that sites are buffered from activities and their effects beyond their boundaries, and are networked in practice through linking corridors especially to allow migration of species (see review in Crofts, 2004). Modern approaches also recognise that changes will occur, as a result of natural and/or human-induced changes, which will necessitate additional sites and in places de-designation where the interests are no longer there (see Adams, 1996). And protected areas are recognised as providing vital ecosystem services (Lockwood et al., 2006). By contrast, Natura 2000 focuses on site based protection, with little emphasis on buffering sites and only weak advice on developing linked networks. So the term 'network' applied frequently to Natura 2000 by the European Commission is incorrect.

There are a number of specific weaknesses.

Wider countryside and ecosystem scale measures given inadequate attention*:* Natura 2000 has been implemented by Member States as a largely a site-based approach, rather than a whole landscape approach. Although the 'wider countryside' provisions exist, these have not been a factor in the remorseless battle between Member States and the European Commission on the identification of sites. Linkages and stepping stones are only considered in the narrow context of the specific species and habitats which are protected within the Natura 2000 sites. The Directives do not demand the use of these provisions: they are discretionary. This is an important issue in Europe where habitat fragmentation has been a major cause of habitat and species loss (Crofts, 2008a). It is a pity that Member States and the Commission have not used the lessons from the exemplary approaches taken in The Netherlands and in some central and east European Member States in developing ecological corridors and networks. Despite the good work of individual Member States, a coherent approach across the regional 'network', in the real sense of the term, has not been achieved.

Static approach to biodiversity conservation*:* The exemplary approach to protected areas is to recognise that the species and habitats are subject to natural changes (see Hockings et al., 2006). In addition, the impacts of human activity directly on the sites and indirectly through climate change should be taken into account in the management strategy and action (see, for example, Dudley et al., 2010). The concepts underlying the Natura system are a static approach with no recognition given to the likely loss of habitats and species due to a combination of natural and/or human induced changes.

(2) Lack of stimulus to involve key stakeholders

The best protected areas systems have the following characteristics: a combination of top/down and bottom/up approaches; engagement of key stakeholders at all stages in the process of identification, designation and management; and recognition of the different levels of authority in devolved systems of administration of nature protection in some countries (Phillips, 2003; Lockwood et al., 2006). In contrast, the Natura 2000 sites have been identified and designated in a manner which ignores best practice, with a number of consequences.

Top/down approach*:* First and foremost, Natura 2000 is very dirigiste approach to nature conservation. It was left to each Member State to determine whether to establish means of consultation with key stakeholders, however informal. It was a major oversight by the European Commission not to include such a facility in the original prescription for the Habitats Directive. In the diverse societies within the EU, it is difficult to stop those who consider that their interests have been or are likely to be affected not having a voice in the decision-making process. More direction from the Commission to Member States itself would have been of benefit in allaying the fears and concerns of stakeholders.

Coastal lagoon habitat for bird protection; greater flamingo (*Phoenicopterus ruber*) flock. Camargue, France © Roger Leguen / WWF-Canon

The only way forward in some countries was for the implementation agency to take the matter into its own hands and establish a consultation process. However, the consultation could only be on a limited basis because of the way the Directives are worded: did those consulted agree or otherwise with the scientific case for classification of the site? This was a very difficult question for many stakeholders to answer as they had neither the scientific expertise nor the information to challenge the conservation experts. This lead in some instances in Scotland, for example, to protestors hiring their own nature conservation experts to challenge the case put forward by the state agencies. In retrospect, this was a valuable exercise as it forced a more rigorous approach to be taken by the state agencies. Although use of formal procedures for effective engagement with key stakeholders would have would have lengthened the timescales for agreeing sites to be designated, it would have probably resulted in more durable agreements between the interests.

Failure to recognise delivery on private land*:* The scale of requirements for sites and areas under the two Directives meant that in many EU Member States it has not been possible to satisfy them purely on land owned by the state. In some countries, protected areas on private land have been a long tradition, for example in the UK and in Finland.

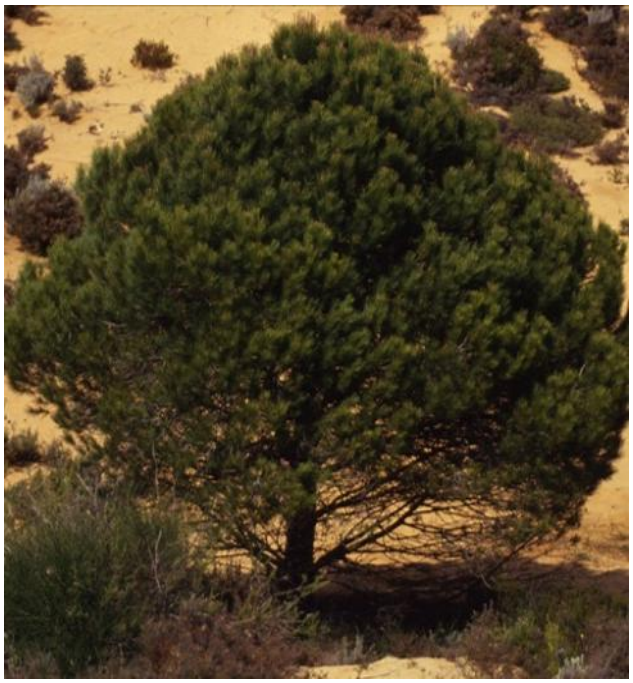
This 'directive' approach inevitably leads to much dissatisfaction, many protests, and a great deal of legal challenge. Perhaps Finland is the best, or worst, example of this outcome: there were around 14,000 cases taken to the courts in protest at the application of Natura 2000 onto private land. Although these were all resolved, it did prolong the timescale and, more significantly, tainted the view of many private landowners towards the Directives and to the role of the EU more generally.

Non resolution of 2 and 3 tier systems in Member States: In some Member States, such as Austria, Germany and Spain, nature conservation is delegated to the provincial or regional levels of government. This lead to tensions between the national government with responsibility for implementing the Directive and the lower tiers of administration which wished to retain their legal independence on matters delegated to them.

(3) Inadequate implementation mechanisms

The best protected areas systems have the following characteristics: financial assessment of the costs of all stages in the process, appropriate financial mechanisms and resource allocation to ensure that the necessary tasks can be undertaken both in the short and longer terms, and the revision of those policies and programmes whose continuation would impact on or hinder the implementation of the protected areas measures (Phillips, 2003; Lockwood et al., 2006). The Natura 2000 system does not perform well when assessed against these standards.

Failure to align all policies and programmes to support*:* In the EU, policies and associated funding instruments for regional development, infrastructure improvement, agriculture, and fisheries have substantial political support compared with policies for nature and biodiversity conservation. More significantly, the resources available to support the implementation of these policies, most especially the Common Agriculture Policy, are very significantly greater than the budgets available for implementing Natura 2000. There have been attempts to transform these policies to make them



Coto Doñana National Park, Spain: large wetland, shrub and sand dune area internationally important for migrating birds and the Imperial Eagle © Michel Gunther / WWF-Canon

more environmentally friendly, for example the Maastricht Treaty, the EC Communication introducing the Biodiversity Strategy, the El Teide and Malahide declarations and the European Parliament Resolutions (for example, on the EU Biodiversity Strategy, 20th April 2012) and the conclusions of relevant Council meetings (for example, 19th December 2011). The Mid-Term Review of the CAP, implemented over the past decade in Member States, is perhaps the most far-reaching step as no support for agriculture is now provided to farmers without their compliance to a strict code of environmental practice. However, the recently agreed revision of the Common Agricultural Policy is arguably a retrogressive step as compliance with nature protection is not changed in a positive direction as the European Commission originally proposed, demonstrating the power of the agricultural lobby in Europe compared with the nature conservation lobby. There have been instances where Member State governments have been threatened with removal of access to certain EC funds unless they improve their performance on the implementation of Natura 2000, for example, Bulgaria and Romania. These approaches are helpful, but there is not a universally agreed approach linking compliance with agreed EU Directives with the provision of funds for programmes and projects which might cause problems.

No specific EU funding line for implementation*:* Funds available for the implementation of Natura 2000 and the funds approved by the European Council and the Parliament are totally inadequate for implementing the provisions of the two Directives. First, Article 8 only refers to priority species and habitats rather than the whole suite listed in the annexes to the Directives and is an ineffective instrument for co-financing the implementation of Natura 2000. More important is the fact that the funds available for implementing Natura 2000 are miniscule when compared with the assessments of resources undertaken a few years ago. This is in complete disregard of the provisions in Article 8 for the co-financing of management measures by the EC in sites containing priority species or habitats. It ignores the amount of co-financing that might be required and does not provide new money but rather relies on existing sources which are defined for different purposes, are not complementary with each other and none are available on a long-term basis. The costs of financing implementation are calculated at €6bn pa but only between 9 and 19 per cent are provided (Kettunen, 2011). Options for improving funding have been identified, but consistently these have not been agreed by the collective decision of Member States through the Council or the elected members through the Parliament. This is a case of determining the project but failing to will the means of its achievement and therefore is bad practice in implementing a regional protected areas mechanism. Also, it is interesting to note that no formal assessment of funding was undertaken until 10 years after the approval of the Habitats Directive.

Spatial units too coarse: Subdividing the EU territory into units to reflect the great diversity of its biogeography could undoubtedly lead to too many units to make a pan-European system manageable. However, the biogeographic regions used in the selection of species and habitats are too coarse grained. For example, the Atlantic Biogeographical Region comprises at least 3 major habitat types and their associated species compositions: arctic/alpine, upland heaths, and lowland grasslands. Although the influence of the temperate maritime climate is evident over much of the sub-region, there are other critical factors, especially altitude, which mean that the biogeographical units on the ground are much more complicated than depicted on the maps. Also, selecting the biogeographical regions was not based on sound science, nor subject to a process of expert consultation.

Inconsistencies in dealing with additional countries: New Member States joining the EU has meant that the biogeographic regions have been added to or extended in a piecemeal way; and reflect a pragmatism not applied to the definition of the original regions. Also, the system has not been able to recognise the impact of new Member States on the allocation of biogeographical

Table 1 Summary of strengths and weaknesses of Natura 2000

Strengths	Weaknesses
Regional, transnational approach	Not all Member States took it as seriously as they should have
Based on biogeographic regions	More rational approach to selection of regions
Common classification of species and habitats	Unsystematic in subdivision of habitats
Site and area focus	Lacks focus on connectivity
Encouragement to restore habitats	Selection of priority habitats unsystematic
Encouragement to re-introduce lost species	Little activity in most Member States
Expert scientific basis	Difficult for non-expert to engage
Top down approach ensures action	Top down approach causes conflict with key stakeholders
eNGOs played positive role in implementation	Opponents feel that eNGOs have too much influence
Natura key EU biodiversity mechanism	Other EU policies in opposition with perverse incentives
Responsibility on Member State to resource	No additional resources provided

regions. In Scotland, for example, many arctic/alpine species are common with the Nordic countries, but it was classed as part of the Atlantic Region originally and no changes were made following the accession of Sweden and Finland to the EU which are assigned to either the Boreal Region or the Alpine Region.

Species and habitats unbalanced*:* Protected areas should ensure that the whole range of species and habitats are represented recognising the variations in size and scale (see Adams, 1996).

The listing of species and habitats in the 1992 Directive displays a very unbalanced approach. Some major habitats are collapsed together and others are sub-divided to an extraordinary degree. A number of examples are taken from the largest sub-region, Atlantic.

Marine and brackish water fjords and rias are characteristic of west coasts of Europe with variations in salinity, depth and species. Yet, the 1992 Directive excludes these unless they are 'large shallow inlets and bays'. On the other hand, the coastal sand dunes of the Atlantic, North Sea and Baltic coasts are subdivided into 17 types based on subtleties in vegetation types. Another example of imbalance is the vagueness of 'sandbanks which are largely covered by sea water all of the time', compared with 6 different types of scree (talus).

ASSESSMENT

The focus of this review is whether Natura 2000 is a model protected area mechanism for biodiversity conservation. There are two critical questions: has biodiversity conservation improved as a result of the system and what lessons can be learned for use in other parts of the world.

Has Natura been success? The first issue to address is whether the Natura sites are protected areas according to the IUCN definition (Dudley, 2008). In the work undertaken by the IUCN National Committee for the UK *Putting Nature on the Map* (Crofts & Phillips, 2013), the Assessment Panel concluded that Natura sites did pass the IUCN definition test and that they are protected areas.

Overall, the preceding analysis concludes that the basic concept of the two Directives and the way they have been implemented has both strengths and weaknesses. These are summarised in Table 1.

The requirement for all existing, 15 at the start and now 28, Member States to comply is a great strength of the Natura 2000 system. There is now a systematic pan-European approach to the protection of all significant species and habitats which did not previously exist. This exists in perpetuity, except in the unlikely event there is a major political upheaval to remove or dilute all of the EU's environmental directives. No other part of the world has achieved such a focussed and non-discretionary approach. Janez Potočnik, the current European Commissioner for Environment said "I very much doubt that 20 years ago, people imagined that the European Union would one day be home to the largest coordinated international network of protected areas in the world" (European Commission, 2013). Despite this point, the Commission has made it clear that the task of identifying and designating sites is not completed, although it is complete for five Member States: Denmark, Hungary, Ireland, Luxemburg and The Netherlands (European Commission, 2013).

It is difficult to determine from available statistics whether biodiversity conservation has improved.

Table 2: Habitats and species trends in the Europe (%)

Trend	Terrestrial habitats	Terrestrial species	Marine habitats	Marine species
Unfavourable bad	37	22	20	13
Unfavourable inadequate	28	30	30	11
Favourable	17	17	10	2
Unknown	18	31	40	74

Source: Compiled from EEA, 2010, *EU 2010 Biodiversity Baseline*, EEA Technical report No 12/2010 (www.eea.europa. eu/ publications/eu-2010-biodiversity-baseline/?b_ start:int=12&-C=)

Certainly, there were many species and habitats still in an 'unfavourable state' in the 2001-06 monitoring report (bd.eionet.europa.eu/activities/Reporting/Article_17/ Reports_2007/chapter8). More recent results are not yet available, but informal indications are that there are some slight improvements. Table 2 provides an overview of habitat and species trends. It shows a high proportion of unfavourable trends. Add to this the effects of land use practices and infrastructure development on the fragmentation of habitats, it is probably justifiable to state that without the Natura 2000 network the state of biodiversity conservation would have been much worse. Whether the management of protected areas has improved as a result of implementation of Natura 2000 is a mute point. Certainly, the requirement to achieve *favourable conservation status* is over time likely to lead to improvements, but unless sanctions are applied then there is little incentive for Member States to ensure that this happens. Perhaps the increasing availability of common standards of monitoring and means of measuring effectiveness of management, as for example developed by WCPA experts (see Hockings et al., 2006), has had and will continue to have as much effect. Only detailed assessment will be able to ascertain whether this is correct.

Some elements are in need for improvement to improve biodiversity conservation. At a technical level, there is the need to make sure that the linkages between protected areas are a central part of the system and a whole landscape approach is taken rather than a focus on isolated sites and areas. More fundamental is the need to remove the perverse subsidies to farmers through the Common Agricultural Policy as this actively ignores the role of these actors as stewards of the environment and its natural biodiversity, including Natura 2000 sites.

The slow pace of implementation of Natura 2000 has proved to be frustrating for the EC. But the political processes within the European Union have been part of the problem, if not perhaps the major cause for many of the reasons stated in the critique. International experience suggests that lack of engagement of key stakeholders, lack of financial mechanisms and lack of policy coherence will all significantly delay the implementation of a new mechanism. The conclusion, therefore, is that the EU, through the offices of its Commission should have identified and resolved these issues at the outset of the process of implementation and should have provided adequate guidance and advice, rather than leaving many key aspects to be wrestled with in different ways by individual Member States.

As a result of this vacuum, there has been a great deal of variation between Member States in the willingness to implement, the pace of activity and the processes used. The approach to nature protection adopted, fails to link ecologically the protected areas with the surrounding territory, and does not recognise the dynamics of nature and the effects of human activities on nature. In a continent where loss of species and habitats continues and there is fragmentation of the small areas that are left, the Natura 2000 scheme has proved to be a significant benefit. In addition, it is increasingly seen as a tool for encouraging greater public interest in and engagement with nature in Europe's special natural places.

Lessons for elsewhere*:* No doubt if the authorities were devising the Natura 2000 system now it would have looked very different from the one in place for the past 20 years. Nevertheless, there are some crucial aspects which are likely to have remained broadly the same and bear consideration for application elsewhere. First, and foremost, is the ability to implement a scheme across national boundaries through the political will of individual countries acting collectively and which are part of a multi-facetted organisation bound by legal agreement. With similar, but not so legalistic arrangements in other continents and regions, it is worth exploring whether there is political willingness to develop continent- or region-wide schemes. Second, the technical design of the system has some important pointers for application elsewhere, especially the use of a biogeographical framework and the use of a common classification of species and habitats for selecting sites and areas, and the use of specialist, independent technical teams to review and adjudicate on the selection of sites.

Red squirrel (*Sciurus vulgaris*) in Cairngorms National Park, Scotland: species of European Community Interest listed in Annex 4 of the Directive in need of strict protection © Wild Wonders of Europe /Peter Cairns / WWF

There are also lessons from the poor performance in the EU to be learned if others adopt similar transnational approaches. Three are fundamental. First, top-down approaches are negative, result in legitimate opposition from affected parties, especially private owners, and result in longer timescales and high costs through legal challenges through the courts. Second, all policies and financial instruments which have or could have a perverse effect on biodiversity need to be addressed and hopefully resolved, otherwise, however well conceived the biodiversity conservation measures are, they will not be effective. Third, as is well known in some continents, but not in Europe, large scale connectivity measures are needed to cope with species migration and with the effects of climate change on the distribution of species and habitats.

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REFERENCES

Adams, W. M. (1996). *Future nature: a vision for conservation.* Earthscan.

Court of Justice of the European Communities. (1996). *Judgement of the Court Case-44/95 Lappel Bank*, Luxembourg: European Court of Justice.

Court of Justice of the European Communities. (1993). Judgement of the Court - Case C-355/90 *'Santoña Marshes'*. Luxembourg: European Court of Justice.

Council of the European Communities. (1979). *Council Directive 79/409/EEC of ……on the conservation of wild birds*.

Council of the European Communities. (1992). Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

Crofts, R. (2004). 'Linking protected areas to the wider world: a review of approaches', *Journal of Environmental Policy and Planning,* 6, 143-156.

Crofts, R. (2008)a. 'Europe' in *The World's Protected Areas: Status, Values and Prospects in the 21st century, Ed Chape, S., Spalding, M. and Jenkins, M. University of California Press, Berkeley, USA,* pp227-237.

Crofts, R. (2008b). 'Changing approaches to nature in Europe in the later twentieth century: the three progressions'. In *The Environmental Histories of Europe and Japan*, Nagoya University, Japan, 23-36.

Crofts, R. and Phillips. A. (2013). *Putting Nature On The Map: Applying The IUCN Protected Areas Management Categories in the UK'. PARKS*, 19(1), 81-90.

Dudley, N. (ed) (2008). *Guidelines for Applying Protected Areas Management Categories.* Gland, Switzerland: IUCN.

Dudley, N., Stolton, S., Belokurov, A., Krueger, L., Lopoukhine, N., MacKinnon, K., Sandwith, T., Sekhran, N. (Eds). (2010). *Natural solutions: protected areas helping people cope with climate change.* IUCN-WCPA, TNC, UNDP, WCS, The World bank and WWF. Gland, Switzerland.

European Environment Agency (EEA). (2012). *Protected Areas in Europe.* www.eea.europa.eu/publications/protected-areas-in-europe-2012

European Commission. (2002). *Final report on Financing Natura 2000.* Working Group on Article 8 of the Habitats Directive.

European Commission. (2002). Sixth Environmental Action Programme.

European Commission. (2002). El Teide Declaration.

European Commission.(2003). Malahide Declaration.

European Commission. (2012). Natura 2000. *Nature and Biodiversity Newsletter*, 32.

European Commission, 2013. Natura 2000. *Nature and Biodiversity Newsletter*, 34. http://ec.europa.eu/environment/nature/info/pubs/docs/nat2000newsl/nat34_en.pdf

European Commission. (2000). EU Framework Water Directive 2000/60/EEC.

Hockings, M., Stolton, S., Leverington, E., Dudley, N., and Corrau, J. (2006). *Evaluating effectiveness: a framework for assessing management effectiveness of Protected areas.* IUCN, Gland, Switzerland.

Kettunen, M., Baldock D., Gantioler, S., Carter, O., Torkler, P., Arroyo Schnell, A., Baumueller, A., Gerritsen, E., Rayment, M., Daly, E. and Pieterse, M. (2011). *Assessment of the Natura 2000 co-financing arrangements of the EU financing instrument*. Institute for European Environmental Policy (IEEP), Brussels, Belgium.

Lockwood, M., Worboys, G. L. and Kothari, A. (2006). *Managing protected areas: a global guide.* Earthscan.

Phillips, A. (2003). Turning ideas on their head: the new paradigm for protected areas. In Jaireth, H. and Smyth, D. (eds). *Innovative Governance, Indigenous Peoples, Local Communities and Protected Areas.* Ane Books, New Delhi, India.

Scotland Court of Session. (1998). WWF UK Ltd and RSPB v SNH, the Secretary of State for Scotland, the Highland Council, Highlands and Islands Enterprise and the Cairngorm Chairlift Co Ltd. Edinburgh, UK.

Worboys, G. L., Francis, W. L. and Lockwood, M. (2010). *Connectivity Conservation management: a Global Guide.* Earthscan.

RESUMEN

Natura 2000 es la primera y la única red regional de espacios protegidos para la conservación de la biodiversidad dentro de la Unión Europea. Si bien durante sus 20 años de existencia ha sido una fuerza positiva para la conservación, tiene ciertas limitaciones. Este documento evalúa algunas de sus fortalezas y debilidades desde la perspectiva de un profesional. La evaluación es positiva en general, por cuanto sin ella la pérdida de biodiversidad probablemente habría sido mayor, y con ella se facilita un planteamiento transnacional único. Los aspectos positivos identificados son el marco biogeográfico, la clasificación paneuropea de especies y hábitats, y la voluntad política para ponerla en práctica. Entre los aspectos negativos cabe destacar la naturaleza estática del enfoque de Natura a las especies y la conservación del hábitat, así como el hecho de que el planteamiento de Natura para la conservación de la biodiversidad está siendo socavado por los subsidios perversos de otros mecanismos de financiación de la UE, siendo especialmente dominantes la Política Agrícola Común y los efectos del desarrollo con respecto a la fragmentación de los hábitats. Además, en la práctica, ha habido omisión en la adopción de medidas más amplias a nivel de paisaje y de conectividad. Se examinan lecciones que podrían ser útiles para otras partes del mundo.

RÉSUMÉ

Natura 2000 constitue la première et la seule approche régionale de la biodiversité des aires protégées au monde. Au cours de ses 20 ans d'existence, elle a été une force positive pour la conservation, mais elle est néanmoins sujette à certaines limites. Ce document évalue quelques unes de ses forces et ses faiblesses du point de vue d'un praticien. Dans l'ensemble, l'évaluation est positive, car sans cette initiative l'appauvrissement de la biodiversité aurait probablement été plus conséquent, sans compter que son approche transnationale est unique. Les aspects positifs identifiés sont donc le cadre biogéographique, la classification paneuropéenne des espèces et des habitats, ainsi que la volonté politique de la mettre en œuvre. Les aspects négatifs sont en revanche son approche statique de la conservation des espèces et de l'habitat, le fait que l'approche Natura de la préservation de la biodiversité est constamment compromise par des subventions aux effets pervers provenant d'autres mécanismes européens de financement, résultant en particulier de la Politique Agricole Commune, et enfin les effets qu'a le développement sur la fragmentation des habitats. En outre, dans la pratique, on a constaté une carence dans la mise en œuvre de mesures plus extensives touchant à l'environnement et à la connectivité. Nous tentons d'en tirer des leçons pour d'autres parties du monde.