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The Maritime Dimensions of the Habitats Directive: Past Challenges and Future Opportunities

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Introduction

As is well known, the Habitats Directive[1] is the leading legal provision addressing nature conservation concerns within the EU Member States. Despite the unquestioned regulatory value of the Directive, however, it has historically exerted a limited influence within the marine environment in comparison to terrestrial sites and species. In recent years, this position has begun to change markedly, with the EU demonstrating a considerable interest in marine environmental affairs. As a notable aspect of this general trend, an increasing emphasis has been placed on advancing the Natura 2000 network within inshore and offshore areas. This chapter accordingly seeks to examine the key challenges that are becoming apparent in the purported implementation of the directive in a maritime context.

This chapter suggests that, while the Habitats Directive offers the promise of the protection of aquatic species and habitats, considerable difficulties have been experienced in applying its provisions effectively within the marine environment. To this end, this chapter will first outline the move towards a greater degree of EU engagement with marine biodiversity concerns, before examining a number of the key challenges experienced with the Habitats Directive to date. These challenges range from an historical lack of guidance for marine biodiversity policy to the current practical difficulties experienced in gathering the requisite data to develop Special Areas of Conservation (SACs). The coexistence of major development projects at sea and the conservation of marine species and habitats will also be analysed. Likewise, as by-catch mitigation will constitute a significant component in the protection of major aquatic species, problems in reconciling sectoral

[1] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [1992] OJ L206/7.

competences will also be discussed. Finally some observations regarding future areas of priority activity are advanced.

The Conservation of Marine Species Under the Habitats Directive

A series of policy developments have emerged within the last decade to provide a greater impetus to marine biodiversity concerns under EU law. Nevertheless, in keeping with the practice of the Habitats Directive, such developments have been slow to emerge in comparison with terrestrial considerations. Indeed, when in 1998 the EC Biodiversity Strategy (ECBS) was elaborated to facilitate further management and conservation measures to address biodiversity loss throughout the Community,[2] it contained 'no reference in its text to the marine or aquatic environment'.[3] This position was rectified to an extent in 2001 with the adoption of four Biodiversity Action Plans (BAPs),[4] with the BAP on Natural Resources targeting the full transposition of the Habitats and Wild Birds Directives by 2002.[5] However, as noted below, this has proved somewhat overambitious in practice, especially in the context of marine species and habitats. Indeed, targets were set for the completion of the marine network by 2008, with management objectives to be agreed and instigated by 2010.[6] Furthermore, it was established that by 2010 'technical measures, including marine protected areas, [should be] effectively implemented to help ensure favourable conservation status of marine habitats and species not commercially exploited'.[7] This was reinforced in 2006 by a Communication on the further implementation of the relevant biodiversity provisions,[8] with the restoration of 'biodiversity and ecosystem services in the wider EU marine environment' considered a priority activity.[9]

Perhaps more significantly, the Sixth Environmental Action Programme (EAP) sought to further promote the protection of marine areas, especially under the Habitats Directive, as well as 'by other feasible Community means'. The EAP

[2] COM (1998) 42.

[3] C Lasén Diaz, 'The EC Habitats Directive Approaches its Tenth Anniversary: An Overview' (2001) 10 *Review of European Community and International Environmental Law* 287, 294.

[4] Communication from the Commission to the Council and the European Parliament, Biodiversity Action Plans in the areas of Conservation of Natural Resources, Agriculture, Fisheries, and Development and Economic Co-operation, COM (2001) 0162. The BAPs were introduced in conjunction with a pledge by the EU Heads of State and Government in June 2001 at the EU Spring Summit in Goteborg to 'halt the decline of biodiversity by 2010'.

[5] Para 1.

[6] 'Message from Malahide', objective 1.1, available at: http://www.ec.europa.eu/environment/nature/biodiversity/policy/pdf/malahide_message_final.pdf.

[7] Objective 7.3.

[8] COM (2006) 216.

[9] Objective 3.

has thereby provided a further impetus to develop the marine application of the directive. Indeed, a mid-term review of the EAP considered that the Habitats Directive presented a strong overall framework to achieve the stated goal of halting biodiversity loss, identifying 'the full and effective implementation of existing legislation' as the priority action in this respect.[10]

A further development of great importance was the adoption of the Marine Strategy Framework Directive (MSFD). Initial Commission proposals for a thematic marine strategy were unveiled in October 2005,[11] which identified a series of deficiencies within the pre-existing regulatory framework. Particular concerns were raised by institutional limitations and a deficient knowledge base, identifying a need to proceed with a dual EU-regional approach, based on ecosystem consideration and Member State interaction in framing future marine policy. Following lengthy consultations,[12] the MSFD was adopted in June 2008. The MSFD is intended to operate as an 'environmental pillar' to a further Maritime Policy,[13] for which a Green Paper was adopted in June 2006.[14]

The overall objective of the MSFD is to provide a legal framework 'to achieve or maintain good environmental status within the marine environment by the year 2020 at the latest'.[15] A 'good environmental status' involves the provision of 'ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations'.[16] This objective is addressed through the development of individual and regional marine strategies by the Member States encompassing a clear assessment of their current environmental status and a targeted programme of measures to be introduced by 2016 at the latest.[17] The specific policies pursued under the Habitats Directive in respect of marine species and habitats will therefore be complemented by a series of overarching policies to improve environmental quality generally. Ultimately, however, these policies are largely facilitative, providing guidance for the future direction of marine environmental policies or, in the case of the MSFD, conferring a greater degree of impetus towards the development of national and regional initiatives. To date, however, the primary legislative provision that directly impacts upon the practical conservation of threatened marine species remains the Habitats Directive.

The Habitats Directive remains the best-known provision of EU environmental law and is certainly the most pertinent in prescribing clear obligations to advance

[10] COM (2007) 225, 7.
[11] COM (2005) 504.
[12] For a full account of the development of the Marine Strategy see L Juda, 'The European Union and Ocean Use Management: The Marine Strategy and the Maritime Policy' (2007) 38 *Ocean Development and International Law* 259.
[13] Preamble to the MSFD, Third Recital.
[14] SEC (2006) 689.
[15] Art 1(1).
[16] Art 3(5).
[17] Art 5(1).

the conservation of marine biodiversity. The primary aims and objectives of the Habitats Directive are stated in Article 2(1) as being to 'contribute towards ensuring bio-diversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States'. Measures taken under the Directive are accordingly designed to maintain or restore natural habitats and species of 'Community interest' at favourable conservation status.[18]

In the pursuit of these objectives, the Habitats Directive advances a two-pronged approach to the conservation of European fauna and flora. Firstly, the directive provides for the creation of a network of SACs, known collectively as 'Natura 2000'. The Natura 2000 network consists of sites identified by the Member States as comprising particular habitat types (listed in Annex I of the directive), as well as the habitats of particular species (listed in Annex II). To date, a host of marine habitats and species have been so listed. Secondly, Member States are required to establish a system for the strict protection, within their natural range, of animal species that are listed in Annex IV(a) of the directive. All Member States are required to ensure that the distinct conservation and management requirements established for such species are observed throughout their territory.[19]

Despite the fundamental importance of this legislation to European biodiversity generally, the Habitats Directive itself has, until relatively recently, encountered a number of obstacles in seeking to address marine species. Two primary inhibiting factors may be identified as having posed particular difficulties for the advancement of conservation efforts for marine biodiversity under the directive. First, the tone and wording of the Habitats Directive has, since its inception, exhibited a strong emphasis on terrestrial species and habitats. Although a marine remit is clearly established within the directive,[20] there are nevertheless copious references throughout this instrument to 'land-use planning' and 'landscape'[21] with no corresponding identification of marine spatial planning or seascapes. Likewise, the various Annexes of the directive have long been dominated by terrestrial species and habitats, while the designation of offshore areas—which comprise the main areas of critical habitat for many species—as SACs remains embryonic at present. Moreover, as discussed below, the EU authorities have been relatively slow to develop clear guidelines for the marine application of the directive, which has

[18] Art 2(2). A favourable conservation status in respect of natural habitat is defined in Art 1(e) as being where its natural range and areas covered within that range are stable or increasing; the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and the conservation status of its typical species is also 'favourable'. A favourable conservation status in respect of species is defined in Art 1(i) as being where population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats; that its natural range is neither being reduced nor likely to become reduced for the foreseeable future; and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

[19] Art 2(1).

[20] Art 1(b) of the Habitats Directive states that 'natural habitats means terrestrial *or aquatic* areas' (emphasis added).

[21] See, eg the preamble to the Directive, as well as Art 3(3).

further served to hinder the development of SACs in comparison with terrestrial protected areas.

Secondly, and perhaps most significantly, the precise jurisdictional reach of the Habitats Directive in marine terms initially lacked clarity. Under Article 2(1), the directive is merely stated to apply within the 'European territory' of the Member States. Since the inception of the directive it has been questionable whether the concept of 'territory' is essentially analogous to the 'territorial sea', or whether it applies to the full range of jurisdictional waters claimed by the Member States. Initial drafts of the directive originally defined 'territory' as 'including maritime areas under the sovereignty or jurisdiction of the Member States', a clarification that was ultimately omitted from the final version of the text. Consequently, an initial interpretation that the directive applied solely to coastal waters might not be considered entirely misguided. From an ecological standpoint, however, such a narrow view of the directive is essentially self-defeating in the context of species with an extended range, as opposed to those exhibiting more coastal tendencies.[22] Accordingly, the EU institutions have broadly considered the Habitats Directive to apply to national Exclusive Economic Zones (EEZs),[23] even if this viewpoint may not have been consistently endorsed within the practice of the Member States.[24]

Perhaps surprisingly, the first judicial consideration of this issue was only advanced in 2000. Here an application for judicial review was raised in the UK,[25] in response to the adoption by the UK government of a series of Regulations[26] to license future oil and gas exploration on the continental shelf, which had expressly confined the application of the Habitats Directive to the territorial sea.[27] The applicants considered that the restrictive approach taken by the UK authorities constituted a failure to correctly transpose obligations under the Habitats Directive into national law, given that a host of species—especially

[22] Similar sentiments have been expressed in relation to the maritime application of the Wild Birds Directive: D Owen, 'The Application of the Wild Birds Directive beyond the Territorial Sea of European Community Member States' (2001) 13 *Journal of Environmental Law* 38.

[23] In 2001, for instance, the Council Conclusions on the Strategy for the Integration of Environmental Concerns and Sustainable Development into the Common Fisheries Policy encouraged the Member States, in cooperation with the Commission, to 'continue their work towards the full implementation of these directives in their exclusive economic zones': Point 15, available at: http://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/agricult/ACF20DE.html.

[24] For instance, the German *Bundesnaturschutzgesetz* (Federal Nature Conservation Act) initially stipulated that the Habitats Directive was to be applied solely within the territorial sea. In 2002 this provision was amended to specifically extend the application of the Natura 2000 programme to the EEZ: Art 38.

[25] *R v Secretary of State for Trade and Industry, ex p Greenpeace Ltd (No 2)* (2000) 2 CMLR 94 (QBD).

[26] Conservation (Natural Habitats etc) Regulations 1994.

[27] Regulation 2(1). Somewhat curiously, however, the UK government had previously officially considered that the Habitats Directive operates in a manner so as to preclude commercial whaling activities within the EEZ: PGG Davies, 'The Legality of Norwegian Commercial Whaling under the Whaling Convention and its Compatibility with European Community Law' (1994) 43 *International and Comparative Law Quarterly* 270, 281. It is, therefore, difficult to reconcile the distinction between the operation of the directive in these waters concerning the directed hunting of a protected species, with a non-application to other potentially harmful activities.

marine mammals—could be adversely affected by such activities. In granting the application, it was duly observed by the trial judge that a directive that seeks to protect such species 'will only achieve those aims, on a purposive construction, if it extends beyond territorial waters'.[28]

Echoing this rationale, the European Court of Justice (ECJ) subsequently confirmed in a later case, *Commission v UK*,[29] that an unduly narrow view of the jurisdictional purview of the Habitats Directive would essentially defeat the key aspirations of the legislation.[30] Indeed, in the prior Opinion of Advocate-General Kokott: 'While the Habitats Directive admittedly contains no express rule concerning its territorial scope, it is consonant with its objectives to apply it beyond coastal waters ... the directive protects habitats such as reefs and species such as sea mammals which are frequently, in part even predominantly, to be found outside territorial waters'.[31] Accordingly, it has become settled law that the Habitats Directive applies to and must be enforced within the EEZs and non-extended continental shelves claimed by the Member States.

In order to evaluate the application of the Habitats Directive to marine species, it is necessary to examine both aspects of the conservation regime prescribed by the directive, namely the scope and operation of Special Areas of Conservation for Annex II species and the strict protection measures particular listed species.

Special Areas of Conservation

As noted above, although the Habitats Directive is considered to be the cornerstone of EU nature conservation law, the various biodiversity Communications have consistently lamented the slow rate of progress towards advancing the Natura 2000 network. This has proved to be particularly challenging within the marine environment, where the establishment of SACs has long lagged behind terrestrial designations. Accordingly, rectifying the sparse coverage of the Habitats Directive, especially in the offshore environment, should be considered a significant area of activity for the Member States if the directive is to realise its full conservation potential in a marine context.

In the light of these concerns, and in line with the sentiments of the Sixth EAP, a series of initiatives has been launched in recent years to address the various shortcomings in the marine application of the Habitats Directive. In October 2002, at a meeting of Nature Directors of the Member States, it was agreed that further work was necessary in order to designate and manage sea-based Natura 2000 sites. In March 2003, a Marine Expert Group was established to outline a common

[28] (2000) 2 CMLR 94, 114 (*per* Maurice Kay J).
[29] Case C-6/04 *Commission v UK* [2005] ECR I-9017.
[30] At para 117.
[31] At para 132 of the Opinion of the Advocate General.

understanding of the provisions of Natura 2000 within the marine environment, which culminated in the adoption by the Commission in May 2007 of a series of indicative, yet non-binding, Guidelines for the designation and operation of marine SACs.[32] Such a development must be considered especially timely, given the Commission's observation that 'to date there have been relatively few Natura 2000 sites identified for the offshore marine environment and this represents the most significant gap in the Natura network'.[33] Nevertheless, as observed below, the Natura 2000 programme can be seen to be subject to particular difficulties in the marine environment—both in the designation of SACs in the first instance and in the subsequent management of such areas by the Member States.

The Designation of Marine SACs

As a preliminary point, it should be observed that the designation process for marine SACs is no different to that of their terrestrial counterparts, with the identification of the Natura 2000 network predicated solely on relevant scientific criteria.[34] Accordingly, it is incumbent upon the Member States to propose a list of appropriate native sites, containing the natural habitat types listed in Annex I, as well as those that host species listed in Annex II.[35] Criteria for the designation of SACs are provided in Annex III of the directive. For Annex II species, Annex III lays down the following considerations as site assessment criteria:

- size and density of the population of the species present on the site in relation to the populations present within national territory;
- the degree of conservation of the features of the habitat which are important for the species concerned and restoration possibilities;
- the degree of isolation of the population present on the site in relation to the natural range of the species; and
- the global assessment of the value of the site for the conservation of the species concerned.

On the basis of this information, the indicative list of such areas produced by the Member State is subsequently transmitted to the Commission, together with documentation concerning the name, location and extent of the site, a map of

[32] *Guidelines for the Establishment of the Natura 2000 Network in the Marine Environment: Application of the Habitats and Birds Directives*, available at: http://ec.europa.eu/environment/nature/natura2000/marine/docs/marine_guidelines.pdf (hereafter 'Marine Guidelines').

[33] Ibid, 6.

[34] Case C-166/97 *Commission v France* [1999] ECR I-1719; this point is reinforced in the Marine Guidelines. ibid, Section 2.10. As to the protection afforded during the designation stage see Jones and Westaway, ch 4 in this volume at X.

[35] Art 4(1).

the area, as well as data generated in the application of the Annex III criteria.[36] Thereafter, the Commission is responsible for producing a draft list of Sites of Community Importance (SCIs) in consultation with the Member State, which will then be formally adopted.[37] The Member State is then required to officially designate any such site within its jurisdiction as an SAC 'as soon as possible and within six years at most'.[38]

Despite the operation of an administrative system that—on the surface, at least—appears relatively uncomplicated, the establishment of the Natura 2000 network has ultimately proved to be a protracted process in practice, both in relation to terrestrial and marine SACs. That the demanding deadlines[39] for the completion of the network have not been met may be explained by the fact the relatively straightforward wording of the directive masks what is often a complex, expensive and labour-intensive series of research activities on the part of national nature conservation agencies. Moreover, the data required under Annex III to identify SCIs is often highly challenging to swiftly obtain in a marine context—especially in offshore waters—given the practical and financial difficulties posed in conducting concerted studies on these species and areas in the wild. Large-scale survey projects, conducted over large maritime areas, are often cost- and time-intensive, given that the areas are generally less accessible than those on land. In addition to funding considerations, studies may also be adversely affected by weather conditions, especially in unpredictable offshore areas, which may further inhibit the ability of researchers to access such species and gather the necessary data.[40] Moreover, some species eligible for SAC protection are rather more difficult to monitor than others. Natural camouflage and an extended and unpredictable range have impacted upon the ability of researchers to gather data effectively for particular populations, with coastal species generally easier to track—and accordingly identify crucial habitats—than more pelagic species.[41]

Secondly, the seemingly innocuous evidential threshold advanced within the Habitats Directive for the creation of SACs for marine species is, in reality, deceptively high. Article 4(1) provides that: 'For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable

[36] Art 4(2).

[37] Under Art 20 this will be evaluated by a specialist Committee, which will then submit its recommendations to the Commission under Art 21 for adoption.

[38] Art 4(4).

[39] The Member States that were under the EU umbrella at the time of the conclusion of the Habitats Directive were originally scheduled to have furnished the European Commission with the requisite national lists by June 1995, with a list of Sites of Community Importance due to have been finalised by June 1998.

[40] Such considerations have impacted on the progress of studies by German researchers, for instance, given that '[g]ood survey conditions are rare for the German Exclusive Economic Zones in the Baltic and North Sea': U Siebert et al, 'A Decade of Harbour Porpoise Occurrence in German Waters—Analyses of Aerial Surveys, Incidental Sightings and Strandings' (2006) 56 *Journal of Sea Research* 65, 78.

[41] CB Embling et al, 'Using Habitat Models to Identify Suitable Sites for Marine Protected Areas for Harbour Porpoises' (2010) 143 *Biological Conservation* 267, at 267.

area representing the physical and biological factors essential to their life and reproduction.' It may be considered that the legislative intent of this provision is to prevent the designation of excessive expanses of the sea as protected areas and thereby permit the coexistence of vital economic activities with nature conservation. There is nonetheless some suggestion from current practice that this formulation is rather counter-productive. Indeed, the stringency of these requirements, and concomitant difficulties in demonstrating unequivocally that areas of high species density are also in fact 'essential to life and reproduction', is cited as a primary reason for truncating the parameters of a key SAC for harbour porpoises within the German EEZ.[42] A similarly staccato approach to the identification of marine SACs has also been experienced in Dutch waters.[43]

Some uniform principles were tentatively developed in respect of marine-based Natura 2000 sites by an ad hoc working group of the EC Habitats Committee in December 2000.[44] The working group considered potential designation criteria for protected areas for migratory marine species, using harbour porpoises as a benchmarking exercise. Areas representing the crucial factors for the life-cycle of the species were deemed identifiable, especially where:

— there is a continuous or regular presence of the species, subject to seasonal variations;
— there is a good population density in relation to other areas; and
— there is a high ratio of young to adults during certain periods of the year.

Such considerations are not considered to be exhaustive and 'other biological elements are characteristic of these areas, such as very developed social and sexual life'[45] may also prove informative.

The practice in respect of harbour porpoise designations reveals that states have tended to adopt a broader approach in identifying potential Natura 2000 sites. Recent Danish practice has considered site fidelity in a reproductive context as the key aspect in ascertaining potential SACs.[46] Likewise, although there is little definitive practice informing the 'other biological elements' referred to by the Marine Guidelines, a 'high proportion of sensitive behaviour, i.e. resting' was deemed to be of additional significance in establishing German SACs for harbour porpoises.[47]

[42] SA Pedersen et al, 'Natura 2000 Sites and Fisheries in German Offshore Waters' (2009) 66 *ICES Journal of Marine Science* 155, 160.

[43] See H Dotinga and A Trouwborst, 'The Netherlands and the Designation of Marine Protected Areas in the North Sea: Implementing International and European Law' (2009) 5 *Utrecht Law Review* 21, 35–38.

[44] EC (2001) Habitats Committee, Hab 01/05.

[45] Marine Guidelines 47.

[46] J Teilmann et al, *High Density Areas for Harbour Porpoises in Danish Waters: NERI Technical Report No 657* (Åarhus, National Environmental Research Institute, 2008) 9.

[47] JC Krause et al, 'Rationale Behind Site Selection for the NATURA 2000 Network in the German EEZ' in H von Nordheim, D Boedeker and JC Krause (eds), *Progress in Marine Conservation in Europe: Natura 2000 Sites in German Offshore Waters* (Heidelberg, Springer Verlag, 2006) 72.

While the guidelines were elaborated with the harbour porpoise specifically in mind, they have been also successfully applied to other species of marine mammals.[48] Likewise, recent practice has seen a tentative emergence of the Natura 2000 network into offshore waters, with designations for SCIs pending in a number of Member States. The first concerted programme of activity to establish SACs within the EEZ of a Member State was undertaken by Germany in the light of the amendment of the *Bundesnaturschutzgesetz* to confer formal powers upon the pertinent authorities to do so. Accordingly, in 2004 a list of 10 new SCIs—the first in offshore waters within the Community—were proposed to the Commission,[49] with the western area of the island of Sylt ultimately designated as a SAC for harbour porpoises.[50]

There is some scope for optimism that, in the mid-term future, an increasing number of critical areas of habitat for Annex II species may be identified and proposed as SCIs by the Member States, as the offshore and inshore coverage of the Natura 2000 programme continues to develop.[51] In this regard, an ambitious target has been set for the completion of the Natura 2000 network, both in a terrestrial and marine context, by 2012. However, notwithstanding the instructive corpus of practice that has begun to emerge in recent years on the establishment of marine SACs, the prospects of the Member States ultimately meeting this demanding deadline are slim. Not only is the designation process dependent primarily upon the ability of national authorities to allocate substantial funds to identify key areas for marine species, data collection on this magnitude remains very much a long-term project. Where there is a considerable body of pre-existing historical data on key species and their habitats in the waters of a particular Member States, such a task is somewhat easier. However, many such areas are still considered data deficient,[52] which suggests that acquiring the necessary information to develop a coherent network of marine SACs is likely to extend significantly beyond the confines of the current Commission targets.

The Management of Marine SACs

The designation of maritime SACs under the Habitats Directive, like that of any marine protected area, is essentially meaningless unless accompanied by a clear set of management targets and enforcement provisions. Indeed, the establishment of

[48] For instance, the UK has designated two SACs in inshore waters for bottlenose dolphins in the Moray Firth, Scotland and Bae Ceredigion, Wales, respectively.

[49] Krause et al, above n 47, 66–67.

[50] Pedersen et al, 'Natura 2000 Sites and Fisheries' 160.

[51] For instance, the UK submitted twelve separate offshore sites as candidate SACs in three tranches between August 2008 and August 2011: see www.jncc.defra.gov.uk.

[52] Indeed, data availability on the distribution of Annex II species generally is considered 'very sparse': Marine Guidelines, 47.

an SAC entails a long-term commitment to the maintenance of such sites, given that protected areas in a marine context 'require effective governance and well-functioning management institutions if they are to be ecologically and socially successful'.[53] Moreover, a leading review of best practice for protected areas for marine mammals considers that such sites, as a basic necessity, require inter alia an ecosystem-based and socio-economic management plan, legal recognition and a clear enforcement programme.[54] The Habitats Directive establishes obligations on the Member States in relation to SACs, most notably under Article 6, which provides the broad framework of protective measures to be taken[55] and the coexistence of conservation strategies and economic activities within these sites.[56] Nevertheless, some concerns may be raised as to how effective such commitments may be in practice for marine SACs.

Under Article 6(1), the national authorities 'shall establish the necessary conservation measures involving, *if need be*, appropriate management plans specifically designed for the sites or integrated into other development plans, and appropriate statutory, administrative or contractual measures which correspond to the ecological requirements' of the habitats or species in question.[57] There is no express obligation to ultimately develop a targeted management plan of the type identified by Hoyt as crucial to the basic success of a protected area for major marine species. In practice, however, national conservation agencies have elaborated management plans for the marine SACs established to date.[58] Likewise, the Marine Guidelines strongly recommend the establishment of conservation plans for marine SACs, citing the OSPAR model as a particular example of good practice.[59]

The second limb of Article 6(1), however, is clear and unequivocal: Member States must establish appropriate measures to safeguard the ecological requirements of the site. Given the extreme variability in the conservation needs of habitats and species addressed under Annexes I and II, the Commission has sought to avoid undue prescription in the discharge of this obligation. Nevertheless, it is clear that such measures must correspond to the particular needs of the species

[53] A Charles and L Wilson, 'Human Dimensions of Marine Protected Areas' (2009) 66 *ICES Journal of Marine Science* 6, 9.

[54] E Hoyt, *Marine Protected Areas for Whales, Dolphins and Porpoises* (London, Earthscan, 2005) 75.

[55] Art 6(1) and (2).

[56] Art 6(3) and (4).

[57] Emphasis added.

[58] For instance, species action plans have been adopted by the UK for its two bottlenose dolphin SACs, while national action plans are also considered to be a key aspect of present and future Danish conservation initiatives: Teilmann, 'High Density Areas', 8. As noted by Krause et al, 'sound site selection must be followed by effective management if the overall conservation intent of marine NATURA 2000 sites is to be achieved', hence this is a key aspect of the German porpoise strategy: see above n 47 at 94.

[59] Marine Guidelines, at Section 5.5. The OSPAR Guidelines are themselves modelled upon those advanced by the IUCN.

throughout its life cycle.[60] In the context of Annex II species, such measures might, for instance, be envisaged to take particular account of migratory behaviour and provide for enhanced protection during breeding and birthing seasons.[61]

Particular obligations apply to the habitats of Annex II species under Article 6(2), which become operational as soon as a site is designated as an SCI.[62] This provision prescribes a two-pronged approach to habitat protection, with Member States to 'take appropriate steps to avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated, *in so far as such disturbance could be significant in relation to the objectives of this Directive*'.[63] However, while the requirements pertaining to habitat deterioration are clear, interpretive difficulties are raised by the 'disturbance' of marine SACs. The point at which this obligation will be triggered is difficult to quantify objectively; the directive offers no definition of 'significant' disturbance. Likewise, whether a disturbance will affect the conservation status of a protected species is dependent upon multiple factors such as the nature of the disturbing activity; the point at which it occurs within the life cycle of the species; the projected adverse impact upon individual animals; as well as stock numbers and dynamics to ascertain whether unsustainable material losses are likely to occur.

This lack of a generic 'tipping point' demonstrates the practical utility of a clear management plan where an SAC is created. Indeed, good practice would appear to involve the development of indicative guidelines within the management plan on proposed responses to disturbing activities likely to be faced within the SAC. Although the conditions within each SAC are highly individual in nature, the Marine Guidelines have cited oil and gas exploration[64] and ecotourism activities[65] as examples of typical sources of disturbance. Accordingly, the development of localised guidelines to address such activities may be considered an increasingly important aspect of SAC management on the part of the Member States. This is present on an ad hoc basis,[66] but while the development of national action plans appear to form a significant basis for the 'strict protection' of species under the directive, it is not yet clear whether localised initiatives are mandatory or merely desirable.

[60] *Managing NATURA 2000 Sites: The Provisions of Article 6 of the 'Habitats' Directive 92/43/EEC* (Brussels, European Commission, 2000) 18.

[61] On the specific issue of the conservation of migratory species under the Habitats Directive see R Caddell, 'Biodiversity Loss and the Prospects for International Cooperation: EU Law and the Conservation of Migratory Species of Wild Animals' (2008) 8 *Yearbook of European Environmental Law* 218, 238–40.

[62] Art 4(5). The same is true of Art 6(3) and (4), while the requirements of Art 6(1) do not apply until the site is formally established as an SAC.

[63] Emphasis added. The objectives of the directive in this regard are considered to be the maintenance of Annex II cetaceans at a favourable conservation status.

[64] Marine Guidelines, Section 5.9.3.

[65] The Marine Guidelines note that ecotourism 'needs to be carefully managed', Section 5.9.10.

[66] For example, ecotourism activities are regulated by localised codes of conduct in the Shannon Bay SAC: Hoyt, above n 54, 186–87.

As an emerging marine practice, it appears that buffer zones may be increasingly developed to address disturbances. The issue of disturbance is particularly acute for marine species, with the oceans known to be a highly effective propagator of sound, in a manner not generally replicated in a terrestrial context.[67] Consequently, marine species may be adversely affected by noise sources originating a considerable distance away from their key habitats, which has had a proven displacement effect upon a number of species, especially marine mammals.[68] As noted above, the directive requires designations to be based on scientific considerations. Given that standard scientific practices in Marine Protected Area (MPA) design consider the use of buffer zones seemingly as a matter of course,[69] there would appear to be little legal impediment to such a policy. The size and application of particular buffer zones will be essentially context-dependent, although the mitigation of shipping noise in areas of particular traffic concentration may require buffer zones of up to 10 kilometres in order to render habitat conditions in SACs tolerable for certain species.[70] The problems raised by the widespread use of low-frequency sonar[71] may require the establishment of even larger buffer zones,[72] which may have practical implications for future designation practices.

Where an SAC is ultimately designated under the directive, 'the inclusion of a site into the network Natura 2000 does not, a priori, exclude its future use'.[73] Accordingly, Article 6(3) and (4) establish the conditions under which such activities may be conducted within protected areas. These provisions are not uncontroversial, nor indeed may they always be considered especially clear. Moreover, they are likely to be invoked with increasing frequency given the major economic and social interests at stake in a number of areas of critical marine habitats.

Article 6(3) provides that: 'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives.' However, the directive is silent on what constitutes a 'plan or project' caught under the purview of this provision. The ECJ has clarified

[67] WJ Richardson, CR Greene, Jr, CI Malme and DH Thomson, *Marine Mammals and Noise* (San Diego, Academic Press, 1995) 159.

[68] For striking examples see P Tyack, 'Implications for Marine Mammals of Large-Scale Changes in the Marine Acoustic Environment' (2008) 89 *Journal of Mammalogy* 549 and DP Nowacek, LH Thorne, DW Johnson and PL Tyack, 'Responses of Cetaceans to Anthropogenic Noise' (2007) 37 *Mammal Review* 81.

[69] G Kelleher, *Guidelines for Marine Protected Areas* (Gland, IUCN, 1999).

[70] Embling, above n 41, 277.

[71] On this issue see ECM Parsons *et al*, 'Naval Sonar and Cetaceans: Just How Much Does the Gun Need to Smoke Before We Act?' (2008) 56 *Marine Pollution Bulletin* 1248. Sonar has been identified as a significant causal factor in whale strandings, and may have severe adverse impacts upon both protected species and their prey: see MP Simmonds and LF Lopez-Jurado, 'Whales and the Military' (1992) 351 *Nature* 448 and A Frantzis, 'Does Acoustic Testing Strand Whales?' (1998) 392 *Nature* 29.

[72] Embling, above n 41.

[73] Marine Guidelines, Section 5.9.3.

this issue,[74] viewing the definition as broadly following a related directive[75] and suggesting that 'the terms "plan" or "project" should be interpreted broadly, not restrictively'.[76] Likewise, the concept of a 'significant' effect is undefined and a substantial negative impact of such activities could be experienced within the SAC, without necessarily triggering a significant impact on the conservation status of the animals concerned. Much of the current litigation to date on this provision has concerned the need for an Environmental Impact Assessment (EIA) in individual circumstances,[77] for which there is a substantial array of specific EU legislation.

More significantly, Article 6(4) provides that:

> If, in spite of a negative assessment of this implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected.

Article 6(4) thereby seeks to reconcile the demands of economic and industrial activity of fundamental importance to the Member State with the practical demands of Community biodiversity commitments.

Nevertheless, Article 6(4) suffers from a marked lack of clarity concerning the threshold by which economic activities may be conducted within an SAC. Indeed, the notion of 'imperative reasons of overriding public interest' is among the most contentious—and certainly one of the most opaque—clauses of the Habitats Directive, for which the Commission readily admits that the ECJ 'has not given clear indications for the interpretation of this specific concept'.[78] De Sadeleer considers this phrase 'as referring to a general interest superior to the ecological objective of the Directive'.[79] A further interpretation of considerable influence mandates a balance of interests approach, whereby: 'A project that is of great public interest but involves only minor adverse effects to the protected area in question should be treated differently than a project with marginal economic

[74] Case C-127/02 *Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij* [2004] ECR I-7405.

[75] Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment [1985] OJ L175/40. This provision defines a 'project' (but not a 'plan') as 'the execution of construction works or of other installations or schemes' and 'other interventions in the natural surroundings and landscape including those involving the extraction of mineral resources', Art 1(2). The present case considered cockle fishing to constitute a project for the purposes of Directive 85/337/EEC and, by extension, the Habitats Directive.

[76] Opinion of Advocate-General Kokott, para 30, see Tromans, ch 5 in this volume.

[77] See, eg Case C-256/98 *Commission v France* [2000] ECR I-2487.

[78] *Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC* (Brussels, European Commission, 2007) 7. On the notion of 'imperative reasons of overriding public interest' see Clutten and Tafur, ch 10 in this volume.

[79] N de Sadeleer, 'Habitats Conservation in EC Law—From Nature Sanctuaries to Ecological Networks' (2005) 5 *Yearbook of European Environmental Law* 215, 249.

public interest but important detrimental effects on ecological values.'[80] It is accordingly evident that the concept remains highly subjective and is dependent entirely on the particular conditions present within each individual SAC.

The obligations incumbent upon the Member States under Article 6(4) are also uncertain. There is little precise indication of the 'compensatory measures' required of the national authorities, aside from a vague intimation that nesting or resting sites should be moved to an appropriate safer point along migratory pathways or that so-called 'habitat banking' may be considered.[81] While this is more feasible for certain terrestrial or avian species or habitats, such policies represent a substantial challenge in a marine context. Instead, mitigation measures in marine SACs are likely to involve, for instance, temporal and spatial restrictions on fishing activities and the introduction of guidelines on seismic activities in areas of critical habitat.[82]

A Member State may only invoke this exemption on three broad grounds, namely considerations of human health or public safety, beneficial consequences of primary importance for the environment or 'further to an opinion from the Commission, to other reasons of overriding public interest'. Invocations of the first two criteria are likely to be relatively infrequent, although it should be observed that the current EU aspirations towards the further development of alternative energy sources[83] may involve an increasing volume of tidal barrages and offshore windfarms, which may raise concerns over the integrity of marine sites.[84] Subject to an appropriate EIA, the environment clause may be considered likely to override such concerns, while military activities may be justified under the 'public safety' exemption. The clearest area of conflict, however, is likely to occur in the context of the expansively worded sweep-up clause, 'other imperative reasons of overriding public interest'.

To date, a number of Opinions have been delivered by the Commission regarding Article 6(4) projects,[85] although they may not necessarily represent a precise template for the application of this provision in a marine context. Insofar as broad principles may be distilled from these Opinions, it appears that such a project will

[80] A Nollkaemper, 'Habitat Protection in European Community Law: Evolving Conceptions of a Balance of Interests' (1997) 9 *Journal of Environmental Law* 271, 280.

[81] *Guidance Document on Article 6(4)*, above n 78, 13. On the potential inter-relationship between habitat banking and the directive see C T Reid, 'The Privatisation of Biodiversity? Possible New Approaches to Nature Conservation Law in the UK' (2011) 23 *Journal of Environmental Law* 203, 214–19.

[82] On this issue generally, see R Compton et al, 'A Critical Examination of Worldwide Guidelines for Minimising Disturbance to Marine Mammals During Seismic Surveys' (2008) 32 *Marine Policy* 255.

[83] COM (2006) 848.

[84] Again, to use the harbour porpoise as an example, concerns have been raised about the implications of similar projects within SACs: A Kellermann, K Eskildsen and B Frank, 'The MINOS Project: Ecological Assessments of Possible Impacts of Offshore Wind Energy Projects' in von Nordheim, Boedeker and Krause, above n 47, 245–46.

[85] Available at: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm. On this issue generally, see L Krämer, 'The European Commission's Opinions under Article 6(4) of the Habitats Directive' (2009) 21 *Journal of Environmental Law* 59.

be permitted where the Member State demonstrates that it is essential to alleviate substantial unemployment or social hardship,[86] to secure the competitiveness of a Member State or Community industry on an international level,[87] to create vital infrastructure links[88] or to service fundamental human needs.[89]

Given the highly limited practice to date, the degree of toleration for development activities in marine SACs remains largely an exercise in conjecture. Nevertheless, certain key industrial activities have been identified within the Marine Guidelines for which supervision will be required when carried out in proximity to, or within SACs. In addition to ecotourism activities,[90] particular concern has been reserved for oil and gas exploitation, active sonar use, vessel-based noise and acoustic by-catch mitigation devices, all of which 'need to be regulated in accordance with the provisions of article 6(3) and (4) of the Habitats Directive if they are likely to have a significant effects [sic] on protected features at a Natura 2000 site'.[91] Likewise, fisheries activities may also require management measures within these areas, for which the Commission has produced concise outline guidance.[92] In this respect, additional complications are created by the demarcation of competence over fisheries management in particular areas, as noted below. Accordingly, with potential marine SACs encompassing locations of significant economic activity, it is likely that the parameters of Articles 6(3) and (4) in a marine context will become areas of considerable controversy and conflict in future years as the Natura 2000 network develops further in both inshore and offshore waters.

Strict Protection Measures

The second key conservation objective pursued by the Habitats Directive mandates that Member States 'shall take the requisite measures to establish a system of strict protection for the animal species listed in Annex IV(a) in their natural range'.[93] Article 12(1) prescribes, inter alia, the prohibition of all forms of

[86] *Prosper Haniel Colliery Development Plan*, Opinion of 24 April 2003.

[87] *Project Mainport Rotterdam Development Plan*, Opinion of 23 April 2003; *Mühlenberger Loch Development Plan*, Opinion of 19 April 2000.

[88] *Grenadilla Port Development Plan*; *Karlsruhe/Baden-Baden Airport Development Plan*, Opinion of 6 June 2005; *TGV Est Development Plan*, Opinion of 16 September 2004; *Peene Valley Development Plan*, Opinion of 18 December 1995.

[89] *La Breña II Dam Development Plan*, Opinion of 14 May 2004.

[90] As noted above, conditions have been imposed by the Irish authorities in respect of such activities in the Shannon Estuary SAC, which may represent an attractive model for other Member States to follow.

[91] Marine Guidelines, Section 5.9.2.

[92] *Fisheries Measures for Marine Natura 2000 Sites: A Consistent Approach to Requests for Fisheries Management Measures under the Common Fisheries Policy* (Brussels, European Commission, 2008).

[93] Art 12(1). As noted above, 'all species' of cetaceans are listed in Annex IV(a).

deliberate capture or killing of specimens[94] in the wild, of deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration[95] and the deterioration or destruction of breeding sites or resting places. A firm line has been taken on such activities, as demonstrated in the leading case of *Commission v Greece*,[96] in which multiple violations of Article 12 were found to have arisen from the poor protection of turtles and their habitats in a major area for tourism. Likewise, Article 12(2) prohibits the keeping, transport, sale or exchange or offering for sale or exchange of such species. Furthermore, Article 12(4) requires the Member States to establish a system to monitor the incidental capture and killing of Annex IV(a) species, with by-catches considered a 'looming crisis' for stocks of many marine species protected under the Directive.[97] As noted below, this has given rise to practical difficulties in the context of fisheries regulation.

Likewise, Article 16(1)(c) permits derogations 'in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance to the environment'. As in the case of SACs, there is considerable elasticity in the wording of this provision to license important economic and industrial activities within the marine environment, which may ultimately result in a growing number of challenges to such derogations in future years. There is limited decided authority in relation to these requirements specifically addressing the 'strict protection' in a marine context. Nevertheless, the key case of *Commission v Ireland*[98] suggests that the Court of Justice of the European Union (CJEU) will not lightly tolerate a failure to facilitate such a system. In this respect, subsequent complaints are likely to involve close scrutiny of the procedural aspects of derogation practice, as well as the resources allocated to facilitating the enforcement and monitoring obligations towards Annex IV(a) species.

In *Commission v Ireland*, infringement proceedings were brought for a series of alleged breaches of the Habitats Directive concerning an eclectic group of species. Particular concerns were raised regarding the impact of development projects on marine mammals. First, it was alleged that the Irish authorities had failed to establish a system of strict protection due to an absence of a national action plan for cetaceans and a failure to fulfil surveillance and monitoring obligations. Secondly, concerns were raised that a project to lay a gas pipeline in Broadhaven Bay involved the use of explosives which, despite acknowledging that the sound

[94] 'Specimens' are defined in Art 1(m) as 'any animal or plan, whether alive or dead, of the species listed in Annex IV and Annex V, any part or derivative thereof, as well as any other goods which appear, from an accompanying document, the packaging or a mark or label, or from any other circumstances, to be parts or derivatives of animals or plans of those species'.

[95] By virtue of Art 12(3), these two obligations 'shall apply to all stages of life of the animals', as indeed does the obligation concerning sale and trade of the species in Art 12(2).

[96] Case C-103/00 *Commission v Greece* [2002] ECR I-1147.

[97] AJ Reid, 'The Looming Crisis: Interactions between Marine Mammals and Fisheries' (2008) 89 *Journal of Mammalogy* 541.

[98] Case C-183/05 *Commission v Ireland* [2007] ECR I-137.

created would have an adverse impact, was nonetheless authorised by the government without entering a derogation under Article 16. The Irish authorities responded that a species action plan was 'underway' and that monitoring projects were being conducted by conservation volunteers with more in-depth government studies in certain areas. Moreover, a national records database had since been established together with full adherence to the by-catch monitoring obligations prescribed under relevant fisheries legislation, while permission for seismic blasting had been granted in accordance with national rules.

The ECJ found Ireland to be in breach of its commitments on both counts. The failure to establish species action plans, considered 'an effective means of meeting the strict protection requirement under Article 12(1)',[99] could not be defended by demonstrating that initiatives to comply with this requirement were concluded after the expiry of the Reasoned Opinion issued by the Commission.[100] Particular criticism was reserved for surveillance activities, considered 'ad hoc and confined to certain geographical areas',[101] while resources for marine conservation were 'especially meagre' and wildlife rangers 'focussed on terrestrial duties and do not have any meaningful seagoing capacity'.[102] Accordingly, the Court ruled that a system of strict protection had not been demonstrated.[103] Furthermore, it was held that the national authorisation process for seismic blasting was too permissive, rendering breeding and resting sites 'subject to disturbances and threats which the Irish rules do not make it possible to prevent'.[104]

The Habitats Directive and the Marine Environment: Opportunities and Limitations

The Habitats Directive is clearly a vital instrument for the conservation of marine species, both through its provisions for the establishment of protected areas and its facilitative role in ensuring the strict protection of species and habitats throughout Community waters. Unlike many MPA-based approaches, the directive provides a strong prescriptive impetus for the creation of such areas, as well as a clear system for the review of decisions affecting the ecological integrity of SACs. While some reservations may be raised concerning the permissive nature of Article 6, the SAC regime demonstrates clear potential to transcend the 'paper sanctuaries' often associated with MPAs, which are commonly starved

[99] Opinion of Advocate-General Léger, para 39.
[100] At para 16 of the judgment. This position had been established in earlier (unrelated) litigation: Case C-282/02 *Commission v Ireland* ECR I-4653, para 40.
[101] Opinion of Advocate-General Léger, para 84.
[102] Ibid, 69.
[103] At para 31 of the judgment.
[104] Ibid, 36.

of resources and devoid of meaningful enforcement powers. Moreover, the ECJ has demonstrated a strong approach to deficiencies in the establishment of a Community-wide system of strict protection. The high political visibility of particular species, such as marine mammals, within the EU institutions will also ensure a proactive review of national policies that have the propensity to adversely affect their conservation status.

Nevertheless, these clear strengths obscure a series of underlying structural deficiencies within the Habitats Directive that undermine its overall effectiveness as a conservatory regime in a marine context. First, the designation of SACs is an obligation restricted to a relatively small list of species. As Hoyt observes, the reasons for this are contemporary to the drafting of the directive, with limited information available at the material time regarding the range, distribution and threats to such species.[105] Subsequently, a case may be made to expand the range species of species listed on Annex II, in line with an expanding knowledge base on the conservation needs of particular species.

Secondly, the designation criteria for SACs are not presently conducive to the swift establishment of an extensive marine network of protected areas. The stringency of Article 4(1) means that while a particular site may be identifiable as being high in species density, demonstrating definitively that it qualifies as representing physical and biological factors essential to life and reproduction is often rather more complicated. Moreover, existing data deficiencies are also 'understandably regarded as hindrances in the establishment of offshore NATURA 2000 sites'.[106] While the German experience demonstrates that such challenges are not insurmountable, practical difficulties may be experienced in other Member States. Indeed, the UK authorities consider that such sites take 'several years for an area to progress from being an Area of Search to being submitted as a cSAC',[107] while some of the more recent EU entrants may lack the research facilities to gather such information as swiftly and efficiently as Germany.[108]

Finally, concerns must also be raised by the often vague and permissive nature of the obligations imposed upon the Member States concerning SACs under Article 6, which is considered 'a poor piece of legislation that, unless strictly interpreted, contains big loopholes for major infrastructure projects in vulnerable areas'.[109] These loopholes are likely to be explored with increasing frequency given the major economic interests at stake in key areas of marine habitats throughout the Community. Given the practical difficulties associated in developing alternative habitat sites and lingering concerns over mitigation obligations for seismic

[105] Hoyt, above n 54, 183.
[106] Kraus et al, above n 47, 93.
[107] Cited by the JNCC at: http://jncc.defra.gov.uk/.
[108] The position within the post-2004 accession states is rather understudied. For a discussion of the experiences of one of the new Member States see R Caddell, 'Nature Conservation in Estonia: From Soviet Union to European Union' in DJ Galbreath (ed), *Contemporary Environmentalism in the Baltic States: From Phosphate Springs to 'Nordstream'* (Abingdon, Routledge, 2010) 28–53.
[109] Nollkaemper, above n 80, 286.

testing,[110] such areas will prove a considerable test to the Commission's ability to balance the interests of nature conservation and economic development.

Fisheries Concerns and the Habitats Directive

Finally, although the Habitats Directive will continue to frame nature conservation obligations in the marine environment, the role of the Common Fisheries Policy (CFP) should also be briefly observed. The implementation of the Natura 2000 network and securing the strict protection of particular species in EC waters have been clearly identified as ongoing priorities for Member States in addressing the conservation needs of marine biodiversity.[111] Despite this stated focus, an unintentional impediment to marine conservation efforts has become increasingly pronounced in recent years. It has become apparent that, in some areas, implementation difficulties will arise due to the division of competences between the EU institutions and the Member States in the field of fisheries.

Competence to address biodiversity concerns has developed incrementally under the constituent EU treaties.[112] The original 1957 EEC Treaty was not endowed with competence to regulate environmental concerns. This position was altered in the aftermath of the 1972 Stockholm Conference with the establishment in 1973 of the Environment and Consumer Protection Service and the first Programme of Action of the European Communities on the Environment.[113] From these preliminary initiatives, certain provisions of the EEC Treaty addressing the common market were used as a basis for legislative activity.[114] Subsequent reforms of the EC Treaty have established clear supervisory competence over ecological concerns. A key development in this regard was the adoption of the Single European Act in 1986, designed primarily to further develop the common market. The SEA elaborated a distinct 'Environmental Title',[115] which prescribed competence, inter alia, to 'protect, preserve and improve the quality of the environment'. These powers were subsequently consolidated within successive revisions of the EC Treaty.

Particular difficulties have arisen in the marine context due to conflicts between sectoral competences. This has been especially pronounced in the context of marine biodiversity, as opposed to terrestrial species, due to the need to address

[110] CR Weir and SJ Dolman, 'Comparative Review of the Regional Marine Mammal Mitigation Guidelines Implemented during Industrial Seismic Surveys, and Guidance towards a Worldwide Standard' (2007) 10 *Journal of International Wildlife Law and Policy* 1.

[111] 'Mid-Term Review of the Sixth EAP' 3.

[112] On the graduated emergence of competence of the EEC over biodiversity concerns see L Krämer, 'The Interdependency of Community and Member State Activity on Nature Protection within the European Community' (1993) 20 *Ecology Law Quarterly* 25.

[113] [1973] OJ C112/1.

[114] Namely ex-Art 100 (now Art 94) and ex-Art 235 (now Art 308).

[115] See also L Krämer, 'Thirty Years of European Environmental Law: Perspectives and Prospectives' (2002) 2 *Yearbook of European Environmental Law* 155.

fisheries interactions. By-catches are considered to pose a severe conservation threat to a number of key species, with the risks posed by European fisheries deemed especially acute.[116] There is accordingly an urgent need to address this issue as part of a wider policy to ensure the ecological integrity of SACs.

The specialist technical measures required to address by-catches would ordinarily be introduced and applied by a coastal state through its fisheries legislation. This has proved challenging in the EU context due to the nature of competences over fisheries concerns. The EC Treaty explicitly claimed competence over fisheries in 1992 by virtue of the Treaty on European Union.[117] Prior to this, fisheries measures were introduced as part of the Community's remit to regulate agricultural products, which included aspects of fisheries concerns.[118] In 1981 the ECJ confirmed that the EC exercised exclusive competence over fisheries.[119] Subject to powers delegated to the Member States, the European Council is therefore charged with establishing the conditions regulating fishing activities pursued by Community fleets. This includes the development of technical measures in respect of fishing and the conservation and exploitation of fisheries resources. In the context of the CFP, this is addressed by the Council through a 'Basic Regulation', with the current version adopted in 2002 following a root-and-branch reform of Community fisheries objectives.[120] However, these arrangements have created practical difficulties for Member States in pursuing individual policies to address incidental mortality within their jurisdictional waters.[121]

Chronologically, the first major legislative acknowledgement by the EU of the threat posed to marine wildlife from incidental capture came in 1992—through the Habitats Directive as opposed to specific fisheries legislation. In line with commitments towards individual protected species, incidental catches are addressed under Article 12(4) which establishes an obligation to address, inter alia, by-catches:

> Member States shall establish a system to monitor the incidental capture and killing of the animal species listed in Annex IV(a). In the light of the information gathered, Member States shall take further research or conservation measures as required to ensure that incidental capture and killing does not have a significant impact on the species concerned.

[116] RR Reeves, BD Smith, EA Crespo and G Notarbartolo di Sciara, *Dolphins, Whales and Porpoises: 2002–2010 Conservation Action Plan for the World's Cetaceans* (Gland, IUCN, 2003) 14–15.

[117] Art 3.

[118] For a comprehensive appraisal of the early operation of the CFP, see R Churchill and D Owen, *The EC Common Fisheries Policy* (Oxford, Oxford University Press, 2010).

[119] Case C-804/79 *Commission v United Kingdom* [1981] ECR 1045.

[120] Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable development of fisheries resources under the Common Fisheries Policy [2002] OJ L358/59.

[121] On the difficulties raised in this regard see A Proelss et al, 'Protection of Cetaceans in European Waters—A Case Study on Bottom-Set Gillnet Fisheries within Marine Protected Areas' (2011) 26 *International Journal of Marine and Coastal Law* 5.

This requirement is further bolstered in Article 15 of the directive, which requires Member States to prohibit 'the use of all indiscriminate means capable of causing local disappearance of, or serious disturbance to, populations of such species'.

For terrestrial species, there is little obvious legal impediment to the development of policies by the individual Member States to implement this obligation. However, for marine species, discharging commitments under Article 12(4) will inevitably require the introduction of restrictions on fishing activities. So, while Article 12(4) may technically mandate further by-catch mitigation measures, in practice Member States are not freely able to swiftly adopt such policies in the manner envisaged by this provision.

Instead, having transferred legislative competence over fisheries to the EC, a Member State wishing to introduce protection measures in the context of by-catches must instead rely on powers delegated by the Council. In this respect, the Basic Regulation prescribes a highly limited scope for the unilateral imposition of emergency environmental measures. Where a particularly pressing situation arises, a Member State must, in the first instance, request that the Commission introduces temporary emergency measures.[122] Member States retain a power under Article 8 to introduce measures for a period of up to three months in duration, but the development of mitigation strategies on a more sustained basis remains the responsibility of the EU. This position offers considerably less flexibility to Member States to mitigate individualised by-catch concerns in national waters that may not be replicated on a Community-wide basis and may be therefore less likely to command EU attention.

Indeed, this has been strikingly illustrated in the attempts by the UK to significant marine mammal by-catches from pair-trawling within its territorial sea, eventually leading to a judicial review of national policies.[123] With the UK having previously registered concerns over cetacean by-catches in this fishery in 2003,[124] the Commission rejected an application under Article 7 of Regulation 2371 for emergency measures.[125] The UK authorities responded with temporary emergency measures under Article 8,[126] but have since been restricted in attempts to develop a more permanent national solution in this particular location, despite the demands of Article 12(4) of the Habitats Directive. The dichotomy between environmental and fisheries competences therefore has clear and negative implications for the development of effective by-catch policies and the ability

[122] Art 7 of Regulation 2371/2002. A refusal may be overruled by the Council by a qualified majority vote.

[123] *Greenpeace Ltd v Secretary of State for the Environment, Food and Rural Affairs* [2005] EWHC 2144 (High Court judgment); [2005] EWCA Civ 1656 (Court of Appeal judgment).

[124] Written Question E-0482/03 [2003] OJ 243E/135. In response, remedial measures were 'not considered a high priority'.

[125] [2005] EWHC 2144, para 22.

[126] South-West Territorial Waters (Prohibition of Pair Trawling) Order 2004 (SI 2004/3397), amended by South-West Territorial Waters (Prohibition of Pair Trawling) (Amendment) Order 2005 (SI 2005/49).

of individual Member States to respond swiftly to emerging threats to protected marine species from fisheries interactions.

Conclusion

In many respects, the EU has an important role to play in the protection of the marine environment. It is endowed with legislative powers, structural funding and enforcement mechanisms that are largely absent from many other marine regulators. Despite the initially slow rate of progress, the Habitats Directive regime is seemingly better placed to deliver a network of MPAs with clear powers of designation, monitoring and review that are not generally replicated in other major marine regions. Likewise, the strong emphasis on marine concerns within the various political organs of the EU also present opportunities for the development of further regional legislation to protect such species, underpinned by a clear system of judicial enforcement. Moreover, there is considerable scope for financial assistance for research activities through schemes such as EU LIFE to contribute towards addressing the deficient knowledge base on species by funding long-term projects.

Despite these clear advantages, the legal framework pertaining to marine species is subject to certain key shortcomings that will require further supervision by the EU institutions in order to ensure that the legislation is properly and effectively transposed. While the Habitats Directive presents strong conservation possibilities in an aquatic context, the Commission must nonetheless continue to apply pressure on the Member States to designate further SACs for marine species. Moreover, considerable assistance may be required within the new Member States in order to ensure a relatively swift establishment of a network of SACs in the Baltic and Black Sea regions. Ultimately, however, conservation efforts under the Habitats Directive are to an extent undermined by the very high scientific thresholds for the identification of potential Natura 2000 sites in the first instance and, more importantly, by the permissive nature of Article 6 that allows considerable leeway for the continuation of major industrial activities within SACs. As Verschuuren notes: 'So far, many of the SPAs and SACs are small islands where large-scale economic activities are dominant'.[127] Given the major industrial importance of key areas of marine habitats, it is likely that this fate will be replicated in many emerging SACs.

As far as the further development of marine species policy is concerned, it may be considered that future regulatory initiatives are likely to be increasingly based around one key issue: anthropogenic ocean noise. More specifically, such policies

[127] J Verschuuren, 'Effectiveness of Nature Protection Legislation in the EU and the US: The Birds and Habitats Directive and the Endangered Species Act' (2003) 3 *Yearbook of European Environmental Law* 303, 328.

are likely to address the impacts of seismic testing and oil exploration activities, as well as vessel-source noise, which have not as yet been substantively tested in the context of the Habitats Directive. Tensions are also raised over the use of military sonar in European waters. Indeed, given that the EU is currently precluded from developing binding standards in relation to the use of military sonar,[128] consideration of this issue is likely to remain confined to the realms of ad hoc pronouncements and political lamentation concerning the effect of this equipment upon the marine environment.[129] Instead, initiatives through NATO will, in practice, be instrumental in developing safer standards for military sonar, which may then be incorporated into national legislation on a voluntary basis by the Member States. In the meantime, the Commission considers—somewhat optimistically, perhaps—that 'Article 6(3) and (4) of the Habitats Directive provides a balanced framework to solve possible conflicts of interest between military activities and nature protection issues'.[130]

Indeed, as far as civilian sources of noise and disturbance are concerned, Article 6 of the Habitats Directive will continue to play a primary—and not uncontroversial—role. Some concerns may be expressed that this provision, on its current construction, will offer a less than optimal degree of protection to marine species, while the balance of interests envisaged under Article 6 may be increasingly tipped in favour of economic interests. Given the importance of industrial and resource extraction activities in areas of critical habitats, it is likely that the public interest exemption will be increasingly invoked in a marine context. Moreover, there are a number of examples of national legislation within the Member States that, although in conformity with Article 6, nonetheless prescribe considerable preference to mineral extraction and the development of offshore windfarms over the conservation of protected areas.[131] Such legislation will continue to run the gauntlet of the permissive provisions of the Habitats Directive in this respect, for which there is a pressing need for clear guidance both from the Commission on operational requirements within and around marine SACs, as well as the CJEU in adjudicating what is likely to be an increasing volume of litigation on these issues.

Ultimately, and despite these deficiencies within the current framework, the EU offers significant regulatory opportunities to address the conservation needs of marine species and, moreover, has consistently exercised a strong political and legislative will to do so. The priority activities for the coming years should therefore be focused on nurturing and increasing the collective Natura 2000 capacity—

[128] Article 2(2) MSFD.

[129] European Parliament Resolution on the Environmental Effects of High-Intensity Active Naval Sonars [B6-0089/2004].

[130] Marine Guidelines, 101.

[131] A particular example is the current *Bundesnaturschutzgesetz* in Germany, in which '[t]he preference given to mining and wind power is rather astonishing': D Czybulka and T Bosecke, 'Marine Protected Areas in the EEZ in Light of International and European Community Law—Legal Basis and Aspects of Implementation' in von Nordheim, Boedeker and Krause, above n 47, 43.

possibly involving the amendment of Annex II of the Habitats Directive to include a greater number of species—as well as striking a more effective balance with oil and gas exploration and extraction in current and future SACs. Such activities should also be complemented by balancing fisheries and biodiversity competences and in continuing to advance influential conservation policies within key international fora.