



Looking forward to 'strict protection': A critical review of the current legal regime for cetaceans in UK waters

A WDCS Science report

Editors: **Mick Green, Richard Caddell, Sonja Eisfeld, Sarah Dolman, Mark Simmonds**


Whale and Dolphin Conservation Society

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I. EXECUTIVE SUMMARY

The legal regime that applies to cetaceans (whales, dolphins and porpoises) – both international commitments and the UK's national laws – was reviewed. This was considered in the light of the current threats to cetaceans in this region. The seas around the UK are under pressure as never before, including through the drives for major offshore development of marine renewables and offshore oil and gas resources, along with increasing pressures from leisure and tourism, boats, whale-watching, recreational fishing, and the continued mismanagement of our fisheries.

The review highlighted the importance of the Habitats Directive for wildlife protection and, in particular, meeting its requirement to protect all cetaceans. However, existing UK laws have changed considerably in recent years and do not provide a comprehensive and ecologically sound structure to ensure the long term favourable conservation status of these animals. Instead, in some respects, it appears to have taken a step backwards and remains subject to considerable deficiencies.

In addition, overall there is a lack of coordination across different sectors, with markedly different approaches from the different licensing and regulatory bodies. This appears to be increasing with devolution.

For the two cetacean species currently listed in the Habitats Directive as requiring the designation of Special Areas of Conservation (SACs), harbour porpoise and bottlenose dolphin, there is still no 'coherent network' of protected sites. There are none currently proposed in the UK for the porpoise and only three established for the bottlenose dolphin. In addition, although there is likely to be more scrutiny of a proposal for an activity within a protected area, there is growing concern about the extent of effective 'protection' afforded to these sites.

The protection given to cetacean species outside of these sites that is needed to implement the wider protection measures required by the Directive, seems weak and from an enforcement point of view, confusing.

The development of an 'ecologically coherent network' of sites is being planned in a very piecemeal way and a further problem is the lack of adequate knowledge of status and trends, making the scale of possible impacts and importance of individual sites difficult to assess.

Overall, as we investigated the recent development and implementation of current legislation during the production of this report, we found that a proper commitment from Governments to protect cetaceans and their habitats was lacking. Only when the relevant processes are reinforced with a basic underlying principle that embeds protection of cetaceans and their habitats into all decision-making processes will we be able to achieve favourable conservation status for our whales, dolphins and porpoises.

Bearing these issues and conclusions in mind, and the requirements of international law, the legal regime in the UK needs to be revised and improved. The following series of recommendations were developed:

- In the short-term, 'recklessness' needs to be reinstated into the Habitats Regulations and the WCA 1981, to make it an offence to deliberately or 'recklessly' capture, kill, disturb, or trade in an animal of European protected species which includes all dolphins, whales and porpoises;
- Changes are also required within the regulations to allow the prohibition of the deterioration or destruction of breeding and resting sites to be defined and enforced with regard to mobile marine species;
- Where offences are created, meaningful penalties need to be applied;
- Annex II of the Habitats Directive should be expanded to include more cetacean species, in order to increase the opportunities for the Directive to aid cetacean conservation through the creation of SACs;
- To ensure that there is a 'coherent network' of sites to protect cetaceans, many more sites need to be designated;
- Designations should not be a 'one off' exercise but must be seen as an ongoing process to be informed by new research and surveys. Initial sites can be identified using the areas of critical habitat identified by for example Clark et al. (2010);
- The designation of such a network needs to be carefully co-ordinated across the various administrations involved to ensure that it is coherent;
- There should be a presumption against any developments within protected areas, unless robust assessments show beyond doubt that there will be no adverse effects on the species and habitats involved as well as the overall integrity of the site;

- Comprehensive research and assessments should be undertaken with appropriate public consultation whenever any development, plan or project may affect a site (and this includes developments outwith the sites), and a precautionary approach to decisions taken;
- Management plans for SACs need to be updated along with new plans being developed for sites designated under the Marine Acts so that they reflect this presumption against development and the strict application of assessments. For larger sites, zoning of activities may be appropriate;
- There needs to be better coordination of planning across all regions and all industry sectors throughout the UK. Overall spatial planning, licensing and enforcement needs to be separated from those bodies promoting industry sectors to ensure the process is unbiased and transparent, whilst independence needs to be sought across all oversight;
- Governments need to invest in comprehensive baseline, long term research and survey programmes collecting baseline cetacean data over the long term and funded under a 'polluter pays' approach, where industries are expected to substantially contribute to the costs of the independent research required to allow their activities and the funding gained from developers should be administered by a truly independent body/committee (made up of experts in the various appropriate fields) and provide independent oversight of assessment processes;
- SEAs and EIAs need to be carried out that do not pre-suppose that development is inevitable;
- Urgent measures are required to prevent disturbance, protect breeding and resting places, control noise, and ensure cross-sectoral planning and zoning of activities and this will require a better legal definition of 'disturbance' and one that can include reckless disturbance as deliberate under Article 12;
- In addition, a definition of 'breeding and resting places' is required for mobile marine species;
- Codes of Conduct should be made legally enforceable across all sectors with a lead organisation/s made responsible for enforcement. Impact studies should be undertaken in areas where recreational and commercial pressures may exist, including in both bottlenose dolphin SACs in Cardigan Bay and the Moray Firth;
- Effective methods and incentives that promote compliance with laws need to be introduced, including via the appointment of marine wildlife tourism officers located in areas of high marine tourism activity and/or areas which are particularly vulnerable; and finally
- Government needs to make a firm public commitment to cetacean protection so that it is clear to all sectors that activities at sea should take this into account.

2. INTRODUCTION

The UK has more than two dozen species of whales, porpoises and dolphins living in its waters. The UK has a responsibility to protect all these species, derived from legal requirements under the EU Habitats Directive (92/43/EEC), as well as various obligations under international law. Cetaceans have intrinsic value as species in themselves, and also for the role they play within ecosystems as top predators. As such, on paper, they are said to be provided with 'strict protection' under law. Yet evidence compiled here suggests that the current protection offered in UK waters may be ineffective and has recently been down-graded.

UK seas are under pressure as never before seen. The push for massively and rapidly increased marine renewable energy developments, along with increasing pressures from shipping, as well as leisure and tourism, recreational boats and fishing, commercial marine wildlife watching and so on, and the continued mismanagement of our fisheries and aquaculture, all put pressures on our marine wildlife. Other threats include chemical and noise pollution as well as military activities (Parsons *et al.* 2010 a & b; OSPAR 2010, ASCOBANS 2011 and references therein).

Climate change is also affecting cetacean populations and overall is likely to have a negative impact on them (Simmonds & Elliott 2009; Evans *et al.* 2010). Some cetacean distributions are changing. For example, Robinson *et al.* (2010) recently reported on the occurrence of short-beaked common dolphins in the Moray Firth in northeast Scotland from 2001 - 2009. Prior to this, with few historical sightings and just a handful of incidental stranding records, the short-beaked common dolphin had been listed as rare or notably absent from the northern North Sea (Reid *et al.* 2003; MacLeod *et al.* 2008). Accordingly, the regular occurrence of the species in the outer Moray Firth post-2005 described by Robinson *et al.* (2010), suggests a comparatively recent colonization of these northern waters over a relatively short period of time. Similar observations of common dolphin occurrence along the west coast of Scotland have also been described by MacLeod *et al.* (2005) and Weir *et al.* (2009), with rising sea temperatures having been proposed as the most plausible explanation for this phenomenon (MacLeod *et al.* 2008). The 2010 IWC workshop on climate change and small cetaceans has also recently commented on likely distributional changes in the NE Atlantic (IWC 2011).

New additions to the cetacean community in a particular region might conceivably lead to unexpected competition between species for common prey or essential habitat, whilst range changes may result in unexpected and, therefore, unplanned interactions with human activities. Common dolphins are particularly vulnerable to by-catch, for example, and animals progressing north may begin to interact with North Sea fisheries where there was previously no problem and therefore few or no mitigating measures currently exist to address this.

Several species in Scotland are at the extremity of their northern range. The white-beaked dolphin is a good example of a species that may even be lost from UK waters (MacLeod *et al.* 2005 & 2008; MacLeod 2009; IWC 2011).

3. REVIEW OF CURRENT LEGISLATION

3.1 Global International Agreements

The UK is a party to a number of treaties, both global and regional in scope, that address cetaceans. The operation and application of these instruments in relation to cetaceans is outlined in Parsons *et al.* (2010 a & b). These obligations are effected through a variety of mechanisms in the UK, ranging from specific implementing legislation, to less binding instruments such as codes of practice, recommendations and guidelines. The key treaties and primary obligations are outlined below.

3.1.1 United Nations Convention on the Law of the Sea 1982

The United Nations Convention on the Law of the Sea 1982 (UNCLOS) is popularly considered “*a constitution for the oceans*”, establishing a global framework for the exploitation and conservation of marine resources. The LOSC adopts a zonal approach to marine management, with coastal states afforded varying degrees of control over ocean territory. Cetaceans located within internal waters (waters lying behind the national baseline) and within the territorial sea (up to 12nm from the national baseline) are subject to the exclusive sovereignty of the coastal state. The UK therefore exercises full control over coastal species located within these waters in accordance with national law.

Within the Exclusive Economic Zone⁴, coastal states exercise sovereign rights “*for the purpose of exploring and exploiting, conserving and managing*” marine living resources, subject to obligations under Articles 61 and 62 to take “*proper conservation and management measures*” to prevent over-exploitation. Coastal states also exercise sovereign rights in relation to economic exploitation and exploration of these areas, including energy production. Coastal states may also exercise jurisdiction over *inter alia* scientific research and the protection and preservation of the marine environment. The UK has used these powers in the recent past to prevent access to Norwegian and Faeroese vessels conducting sighting surveys on whales⁵.

Cetaceans are addressed specifically within the LOSC through Articles 65 and 120. The wording of Article 65 is somewhat controversial in international law from a variety of perspectives. Article 65 provides:

“Nothing in this Part restricts the right of a coastal State or the competence of an international organization, as appropriate, to prohibit, limit or regulate the exploitation of marine mammals more strictly than provided for in this Part. States shall cooperate with a view to the conservation of marine mammals and in the case of cetaceans shall in particular work through the appropriate international organizations for their conservation, management and study.”

Article 120 extends the application of this provision *mutatis mutandis* to the high seas.

Articles 65 and 120 are controversial on many sides of the whaling debate. Some states have expressed concerns that these provisions permit coastal states to introduce very strict restrictions on whaling. Other states have raised concerns of a fragmentation of the regulatory regime due to the plurality of supervisory bodies seemingly endorsed by the terms of Article 65. This report does not seek to enter into this particular debate, which has been well-trodden in the academic literature (see for example, McDorman, 1998 and Freeland and Drysdale, 2005). The UK has sought to discharge this commitment through participation within the International Whaling Commission (IWC) as well as other agreements and institutions with an application to species of cetaceans.

3.1.2 International Convention for the Regulation of Whaling 1946

The UK has been a party to the International Convention for the Regulation of Whaling (ICRW) since its inception in 1946, and has played a very active part in the operation of the treaty. The ICRW, which seeks to facilitate “*the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry*” and is an old and controversial treaty. The position of the UK, at least in recent years, has been to support the moratorium on commercial whaling and to work within the IWC to promote conservation and welfare measures for cetaceans. The negotiating stance of the UK is now largely aligned with that of the other EU countries, as noted in section 3.3 below.

3.1.3 Bern Convention 1979

The Convention on the Conservation of European Wildlife and Natural Habitats 1979 (“Bern Convention”)⁶ entered into force on 6 June 1982 and is a binding international legal instrument in the field of nature conservation, which

4. NB – The UK has declared an Exclusive Fishing Zone (EFZ) and Renewable Energy Zone, rather than using the nomenclature provided by the LOSC. The EFZ operates in the same way as any standard EEZ.

5. *North Atlantic Marine Mammal Commission: Annual Report 2001* (Tromsø: NAMMCO, 2001), at 19-20; Parsons *et al.* (2010b)

6. 1982 UKTS 56.

covers most of the natural heritage of the European continent and extends to some States of Africa. Its aims are to conserve wild flora and fauna and their natural habitats and to promote European co-operation in that field.

The Convention places a particular importance on the need to protect endangered natural habitats and endangered vulnerable species, including migratory species.

All countries that have signed the Bern Convention must take action to:

- promote national policies for the conservation of wild flora and fauna, and their natural habitats;
- have regard to the conservation of wild flora and fauna in their planning and development policies, and in their measures against pollution;
- promote education and disseminate general information on the need to conserve species of wild flora and fauna and their habitats;
- encourage and co-ordinate research related to the purposes of this Convention.

They must also co-operate to enhance the effectiveness of these measures through:

- co-ordination of efforts to protect migratory species;
- and the exchange of information and the sharing of experience and expertise.

In addition, appropriate legislative and administrative measures must be adopted to conserve the wild fauna species listed in Appendix II. The following are prohibited:

- all forms of deliberate capture and keeping and deliberate killing;
- the deliberate damage to or destruction of breeding or resting sites;
- the deliberate disturbance of wild fauna, particularly during the period of breeding, rearing and hibernation;
- [...]
- the possession of and internal trade in these animals, alive or dead, including stuffed animals and any part or derivative thereof.

Species warranting particular regulatory attention are listed on Appendices to the Bern Convention. Cetaceans are well represented within these Appendices: some thirty species are listed on Appendix II, while Appendix III applies to “all species not mentioned in Appendix II”. In practice, the parties have sought primarily to implement the objectives of the Bern Convention concerning habitat protection through the on-going development of a coordinated series of protected areas, known as the Emerald network. These obligations are now primarily discharged by the UK – as is the case with other EU Member States – through adherence to the Habitats Directive.⁷

The Bern Convention has developed an innovative system of treaty compliance that offers a potential avenue to challenge particular projects and incidents affecting the conservation status of the various species subject to its regulatory purview. Although these mechanisms have yet to be widely applied in the distinct context of cetaceans, there nevertheless appears to be a growing awareness that these procedures may be of practical utility in individual instances of more localised anthropogenic degradation of habitats or in addressing emerging threats that have not to date been successfully mitigated within other fora, such as ocean noise and habitat disturbance (Scott, 2007). This remains somewhat speculative at present, however. The primary enforcement mechanism of the Bern Convention is its innovative system of case files, whereby the Bern Convention’s institutions respond to complaints alleging a failure to meet the requisite conservation standards. While almost 100 separate case files have been established during the Convention’s tenure, only two relate to cetaceans – one of which has engaged the UK. In December 1989 a case file was opened in relation to an unacceptable level of sewage sea-outfall sanctioned by the UK government in the Moray Firth, an area of critical habitat for bottlenose dolphins.⁸ After a series of negotiations, the Standing Committee deemed the matter to have been resolved and formally closed the file in January 1991. The UK has not subsequently been referred to the Standing Committee regarding cetaceans.

3.1.4 Convention on the Conservation of Migratory Species of Wild Animals 1979

The Convention on the Conservation of Migratory Species of Wild Animals (CMS) entered into force on 1 November 1983 and is the sole international treaty that seeks to specifically address the conservation needs of migratory animals (Caddell 2005). The CMS recognises that successful conservation and management measures in relation to migratory animals requires “*the concerted action of all States within the national jurisdictional boundaries of which such species spend any part of their life cycle*” (preamble). To this end, the CMS adopts a two-tier approach, with the parties drawing a distinction between species identified as “endangered” (listed in Appendix I to the CMS) and those

7. Resolution No. 5 (1998) concerning the rules for the Network of Areas of Special Conservation Interest (Emerald Network).

8. Case File No. 26.

considered to have an “unfavourable conservation status” (listed in Appendix II to the CMS), with differing obligations and policies prescribed in relation to each category. In doing so, strict protection measures are prescribed for such species, including regulating anthropogenic activities that may cause harm to such species and or their habitats (Article III).

The CMS is perhaps most notable for its innovative regulatory system in respect of Annex II species, for which the parties are encouraged to cooperate to advance the conservation of such species, by means of subsidiary agreements adopted under the auspices of Article IV of the Convention. In this respect, two broad types of instruments are envisaged: Agreements under Article IV(3) and Agreements under Article IV(4) which prescribe differing obligations and criteria for participations. Due to this arrangement, a participant to a CMS subsidiary Agreement need not be a formal party to the parent convention, as such instruments are essentially designed to be self-sufficient offshoots from the CMS.

A number of subsidiary agreements relating to cetaceans have been elaborated under the auspices of the CMS. The UK is a full party to the Agreement on the Conservation of Small Cetaceans of the Baltic Sea, North-East Atlantic, Irish and North Seas 1991 (ASCOBANS⁹), which is the sole international instrument that addresses small cetaceans exclusively. ASCOBANS prescribes a series of commitments towards addressing concerns for small cetaceans, including by-catches, pollution and disturbance. The UK has been an active participant to ASCOBANS since its inception. The UK has also participated in – although is not a full party to – the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area 1996, through the incorporation of Gibraltar waters within the Agreement Area.

At its latest Conference of Parties in 2011, CMS agreed a comprehensive global work plan for cetaceans with potentially wide ranging consequences for these species¹⁰. This initiative is the culmination of a long-standing interest in the plight of cetaceans within the CMS, which has adopted a series of Resolutions to address these species since its inception – including numerous policies towards bycatches, ocean noise, marine debris, data-deficiencies and other impediments to their optimum conservation status. Although these Resolutions do not have formal binding effect, they have nonetheless guided policy developments within the subsidiary Agreements and provide an additional political impetus towards cetacean conservation by the CMS parties.

3.1.5 Convention on Biological Diversity 1992

The Convention on Biological Diversity (CBD) was developed under the auspices of the UN Conference on Environment and Development in Rio de Janeiro in 1992, and remains one of the most widely ratified multilateral instruments currently addressing nature conservation concerns, with 191 parties to date.

The CBD is a lengthy document, but aims primarily “*to anticipate, prevent and attack the causes of significant reduction or loss of biological diversity at source*” (preamble), by promoting cooperation, institution building and the conservation of ecosystems and natural habitats and the recovery of endangered species. To this end, while recognising the sovereign right of states to exploit their own resources pursuant to national environmental policies, such rights are intertwined with the responsibility to ensure that activities conducted within their jurisdiction do not cause damage to other states (Article 3). Under Article 6, parties are primarily required to develop national strategies, plans and policies for the conservation and sustainable use of biodiversity and to integrate such strategies into relevant sectoral policies. To attain such goals, parties are required to cooperate through competent international organisations (Article 5), as well as establish protected areas (Article 8) and conduct research programmes (Article 9).

While cetaceans have historically occupied peripheral attention within the CBD, the Tenth Conference of the Parties identified a series of issues of emerging concern, including ecotourism, ocean noise, human health considerations and Arctic biodiversity, suggesting that this forum may be of greater future value to international conservation efforts regarding cetaceans. Of most obvious direct relevance, however, is the fundamental requirement for parties to develop National Biodiversity Strategies and Action Plans (Article 6). To this end, a series of Biodiversity Action Plans are being developed by the UK for certain species or groups of species..

3.1.6 Convention for the Protection of the Marine Environment of the North-East Atlantic

The UK is a party to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR), under which a series of initiatives have been advanced for the conservation of cetaceans. The OSPAR

9. Concluded 1991, came into force in 1994; agreement area was extended and redefined in 2008.

10. UNEP/CMS Resolution 10.15: GLOBAL PROGRAMME OF WORK FOR CETACEANS

Convention prescribes commitments towards the restoration of the ecological integrity of the North-East Atlantic and, especially, the conservation of marine ecosystems (Article 2(1)). The OSPAR framework also offers possibilities for the development of marine protected areas within the region. Moreover, although OSPAR does not have competence over fisheries, it has prescribed a series of programmes of Ecological Quality Objectives (EcoQOs). An EcoQO project was established in 2005 for by-catches of North Sea populations of harbour porpoises. Recent developments within OSPAR include attempts to address the problem of anthropogenic ocean noise (e.g. OSPAR 2010).

3.2 European Legislation

The relevant UK legislation addressing cetaceans is essentially driven by the need to effectively transpose pertinent EU obligations. The EU has a long-standing regulatory interest in respect of cetaceans. The most significant provision in this respect is the Habitats and Species Directive adopted in 1992¹¹ (hereafter referred to as ‘The Habitats Directive’). In addition, the Marine Strategy Framework Directive (MSFD), adopted in 2008, will provide a series of overarching policies to address the degraded state of EU sea areas, which also has significant implications for cetaceans. Specific measures have also been prescribed for fisheries, while the European Commission has also promoted a common stance on whaling issues within pertinent international bodies.

3.2.1 Habitats Directive

The Habitats Directive, as the foremost provision of EU nature conservation law, represents the primary basis for regulatory action for cetaceans, both at a European Community level and within the individual Member States. The Directive seeks 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*” (Article 2(1)). National activities are accordingly designed to maintain or restore natural habitats and species of “Community interest” at Favourable Conservation Status (Article 2(2)).

In pursuing these objectives, the Habitats Directive advances a two-pronged approach to the conservation of European fauna and flora. Firstly, the Directive aims to establish a network of Special Areas of Conservation (SACs), known collectively as “Natura 2000”. The Natura network comprises sites identified by the Member States as hosting particular habitat types (listed in Annex I of the directive), or the habitats of particular species (listed in Annex II). To date, only two species of cetaceans have been listed on Annex II, namely the harbour porpoise and the bottlenose dolphin. Secondly, Member States are required to guarantee the strict protection, within their natural range, of all species listed in Annex IV(a) of the Directive. Since all species of cetaceans have been listed in Annex IV(a), the Member States are accordingly required to ensure that the distinct conservation and management requirements established for such species are observed throughout their territory (Article 2(1)). There are 27 species of cetaceans recorded in UK waters (Reid *et al.* 2003; Evans, 2008).

3.2.1.1 The designation of cetacean SACs

The designation process for cetacean SACs is no different to that of any other species, which is predicated solely on relevant scientific criteria (*Commission v. France*, Case C-166/97 [1999] ECR I-1719). Member States first propose a list of appropriate native sites, containing the natural habitat types listed in Annex I, as well as those hosting species listed in Annex II (Article 4(1)), for which criteria for the designation of SACs are provided in Annex III of the Directive. In general terms, as far as Annex II species are concerned, 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.*
- *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 relevant evidence and information of qualification (Article 4(2)). Based on this information, 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. The Member State is then required to officially designate any such site within its jurisdiction as a SAC “*as soon as possible and within six years at most*” (Article 4(4)).

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

The development of cetacean SACs throughout EU waters has been rather slow. Article 4(1) provides that “[f] or aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction”.

Following an experts’ meeting in Brussels on 14 December 2000, DG Environment concluded that it is possible to identify areas representing crucial factors for the life cycle of this species, using the following basis for site selection:

- The continuous or regular presence of the species (although subjected to seasonal variations);
- Good population density (in relation to neighbouring areas); and
- High ratio of young to adults (in relation to neighbouring areas)

In addition, other biological elements can be characteristics of these areas, such as a very developed social and sexual life. This is further discussed below.

DG Environment advocated an approach based on the above-mentioned characteristics and suggested that it be applied with a view to site selection for this species (see Interpretation Note: Hab. 01/05).

This has proved to be practically challenging for many Member States (Caddell, 2012). 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 (Pedersen *et al.* 2009). Similar problems have been experienced in Dutch waters (Dotinga & Trouwborst 2009).

3.2.1.2 Management of cetacean SACs

The Habitats Directive establishes obligations upon the Member States in relation to SACs, most notably under Article 6, which provides the broad framework of protective measures to be taken and the coexistence of conservation strategies and economic activities within these sites. 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.

Particular obligations apply to the habitats of Annex II cetaceans under Article 6(2), which become operational as soon as a site is designated a SCI (Article 4(5)). 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”. The Directive offers no definition of what is meant by a “significant” disturbance. The *Guidelines for the designation and management of specially protected marine areas* (Commission of the European Community (CEC) 2007, hereinafter referred to as “*Marine Guidelines*”) have cited oil and gas exploration and ecotourism activities as examples of typical sources of disturbance in the cetacean environment. 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. For instance, Irish practice in relation to the establishment of dolphin-watching operations in the Shannon Estuary SAC mandates written government consent, with permission contingent upon adherence to specific Codes of Practice (Hoyt 2005).

Under Article 6.2 of the Directive, for SACs, Member States are required to establish the necessary conservation measures, involving appropriate management plans which correspond to the ecological requirements of the habitats and species present on the sites. Member States are also required to take appropriate steps to avoid the deterioration of natural habitats and habitats of species, and the significant disturbance of species for which areas have been designated.

Despite the establishment of SACs for Annex II cetaceans under the Directive, development activities may still occur within these areas. Article 6(3) provides that “[a]ny 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” for the purposes of this provision. A preliminary ruling by the ECJ¹² has clarified this issue somewhat, suggesting that “the terms ‘plan’ or ‘project’ should

12. *Landelijke Vereniging tot Behoud van de Waddenzee, Nederlandse Vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij*, Case C-127/02

be interpreted broadly, not restrictively”. More recently a UK High Court¹³ decision reinforced this interpretation and that any action that could potentially have an impact should be considered a plan or project and an Appropriate Assessment triggered. Likewise, the concept of a “significant” effect is undefined. A substantial negative impact of such activities could be potentially experienced within a SAC, without necessarily triggering a significant impact for the purposes of the conservation status of the animals concerned.

More significantly, Article 6(4) provides that “[i]f, in spite of a negative assessment of the 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”. The notion of “imperative reasons of overriding public interest” is vague and largely undefined. There is also little precise indication of the “compensatory measures” required of the national authorities.

Where a Member State invokes this exemption to pursue a particular project in an area for which Annex II species are present, it may only cite three broad grounds for proceeding on this basis, 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”.

Given the highly limited practice to date, the grounds upon which development activities may be permitted in cetacean SACs remain uncertain. 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, 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” (Marine Guidelines). Likewise, fisheries activities may also require management measures within these areas.

3.2.1.3 ‘Strict protection’ measures under Article 12

The Habitats Directive requires 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” (Article 12(1)). All species of cetaceans are listed. There is little judicial authority in relation to these requirements specifically addressing the “strict protection” of cetaceans, with only one case seemingly brought to date.

In *Commission v. Ireland (Case C-183/05)*, infringement proceedings were brought for a series of alleged breaches of the Habitats Directive concerning an eclectic group of species, including cetaceans. In this respect two central complaints pertaining to cetaceans were raised by the Commission. Firstly, 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 created would have an adverse impact on cetaceans, 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 alongside 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 European Court of Justice (ECJ) found Ireland to be in breach of its commitments in relation to Annex IV(a) cetaceans on both counts. The failure to establish species action plans, considered “an effective means of meeting the strict protection requirement under Article 12(1)”, was deemed to be a breach of the Directive. Particular criticism was also reserved for surveillance activities, considered while resources for marine conservation were “especially meagre” and wildlife rangers “focussed on terrestrial duties and do not have any meaningful seagoing capacity”. Accordingly, the Court ruled that a system of strict protection had not been demonstrated. Furthermore, it was held that the national authorisation process for seismic surveying was too permissive, rendering breeding and resting sites for cetaceans “subject to disturbances and threats which the Irish rules do not make it possible to prevent”.

The UK government has been considering plans for seismic exploration and oil and gas development adjacent to

13. R (on the application of Akester and Melanaphy) v Defra & Wightlink Limited (Wightlink)

and inside the SAC in the Moray Firth in NE Scotland which has bottlenose dolphins as one of its features. This is considered further below in case study 5.

Scallop dredging in the bottlenose dolphin SAC in Cardigan Bay, West Wales is the subject of a complaint to Europe by a number of non-governmental bodies, including WDCC (this is further considered below).

3.2.1.4 Fisheries issues and the implementation of the Habitats Directive

As noted above, the protection of cetaceans under EU law has been primarily guided by obligations established under the Habitats Directive. The implementation of the Natura 2000 network and securing the strict protection of cetaceans in EC waters have been clearly identified as ongoing priorities for the Member States in addressing the conservation needs of marine biodiversity. Such endeavours will therefore form the primary focus of initiatives to protect cetaceans in the mid- and long-term future. However, despite this stated focus, an unintentional impediment to the EU framework has arisen due to the division of competences between the EU institutions and the Member States in the field of fisheries. This has been especially pronounced in the context of marine biodiversity, as opposed to terrestrial species, due to the need to address fisheries interactions. Bycatches are considered to pose a serious conservation threat to cetaceans, with the risks posed by European fisheries deemed especially acute. There is accordingly an urgent need to address this issue as part of a wider policy to ensure the strict protection of cetaceans by the Member States and to ensure the ecological integrity of SACs.

The EU explicitly claimed competence over fisheries in 1992 by virtue of the Treaty on European Union (Article 3). Prior to this, fisheries measures were introduced as part of the Community's remit to regulate agricultural products, which included aspects of fisheries concerns. In 1981, the ECJ confirmed that the EC exercised exclusive competence over fisheries (Case C-804/79; *Commission v. United Kingdom* [1981] ECR I045). 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 Common Fisheries Policy (CFP)¹⁴, 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 (Council Regulation EC 2371/2002 of 20 December 2002 on the conservation and sustainable development of fisheries resources under the Common Fisheries Policy). As noted below, such powers have spawned a series of protective measures to address the particular problem of cetacean bycatches in community fisheries. However, these arrangements have also created considerable difficulties for Member States to pursue individual policies to address particular concerns over the incidental mortality of cetaceans within their jurisdictional waters.

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 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". 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 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 bycatches 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 (Article 7). Member States retain a power

14. For more information on the CFP and fisheries issues see Nunny (2011).

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 bycatch concerns in national waters that may not be replicated on a Community-wide basis and may therefore be less likely to command EU attention.

European Council Regulation No 812/2004 of April 2004 lays down measures concerning incidental catches of cetaceans in fisheries and amended Regulation (EC) No 88/98. The Regulation contains two main provisions:

1) the use of acoustic deterrent devices (pingers) in gillnet and tangle net fisheries, and 2) onboard observer monitoring of bycatch.

The Regulation EC lays down in Articles 2 and 3 that specified bottom-set gillnet and entangling net fisheries are required to use pingers during specified periods or all year in the areas indicated in Annex I. In the North Sea area, these are ICES areas IV (North Sea), III a (Skagerrak), VII e (Western English Channel) and VII d (Eastern English Channel). The starting date of this requirement was June 2005 for areas IV and III a, January 2006 for VII e and is January 2007 for VII d. The Regulation also details the technical specifications of the pingers to be used in its Annex II).

Member States may authorise the temporary use of acoustic deterrent devices which do not fulfil the technical specifications or conditions of use defined in annex II of the Regulation, provided that their effect on the reduction or incidental catches of cetaceans has been sufficiently documented. Such authorisations shall not be valid for more than two years.

Articles 4 and 5 require Member States to establish observer schemes to monitor the incidental capture of cetaceans in the fisheries and at levels specified in Annex III. However, the fisheries that are subject to pinger requirements under Articles 2 and 3 (which cover most of the North Sea area) are not included in Annex III, but should be subject to scientific studies or pilot projects to monitor and assess the effects of pinger use over time. Fishing vessels with an overall length of less than 15 m are exempt from the observer requirement, but for the fisheries listed in Annex III, these vessels should be monitored by appropriate scientific studies or pilot projects. Critically, the regulation includes no requirement to monitor cetacean bycatch by small vessels (< 15 m) in the fisheries and areas subject to the pinger requirements (Annex I). This means that many vessels, particularly in inshore fisheries in areas where porpoise bycatch has already been identified as a significant problem are not required to be monitored.

3.2.2 Marine Strategy Framework Directive 2008

The Marine Strategy Framework Directive (MSFD)¹⁵ was mandated as a key component of EU activity towards the marine environment under the Sixth Environmental Action Programme, adopted in 2002. Initial Commission proposals for a thematic marine strategy were unveiled in October 2005 (COM (2005) 504), which identified a series of deficiencies within the pre-existing legislative and policy framework. In this regard, particular concerns were raised by the inadequate institutional framework 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 a lengthy process of consultation, the MSFD was adopted in June 2008 establishing a framework for community action in the field of marine environmental policy. The MSFD is intended to operate as an “environmental pillar” to a distinct Maritime Policy, for which a Green Paper was adopted in June 2006 (SEC (2006) 689), and work is currently underway to develop a programme of measures under this broad umbrella.

The overall objective of the MSFD is to provide “*a framework within which Member States shall take the necessary measures to achieve or maintain good environmental status within the marine environment by the year 2020 at the latest*” (Article 1(1)). 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*” (Article 3(5)). Implicit in this optimal condition is that constituent marine ecosystems can withstand anthropogenic change, and habitats and species are protected, while the anthropogenic impact of substances and energy – including noise – into the marine environment does not cause pollution effects. In ascertaining the environmental status of Community seas, a series of indicators and qualitative descriptors are established in the Annexes to the Directive.

In pursuing this objective, and in keeping with the principle of subsidiarity, the MSFD places responsibility for marine governance primarily at a national or regional level, subject to EU supervision. Accordingly, in the first instance, each

15. Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008.

Member State is required to develop a marine strategy for its national waters, encompassing a clear assessment of their current environmental status and a targeted programme of measures to be introduced by 2016 at the latest (Article 5(1)). Recognising that individual coastal states are components of a wider marine region or sub-region, Member States are to take “due account” of this position (Article 4(1)) and cooperate to ensure that a good environmental status is attained in respect of the region or sub-region concerned (Article 5(2)). In implementing these commitments, national assessments should examine essential features and characteristics of these areas, the predominant pressures upon them and their primary economic and social uses (Article 8(1)). From this appraisal a series of environmental targets shall be identified (Article 10), as well as coordinated monitoring programmes for the ongoing assessment of these waters (Article 11). A detailed programme of measures is then to be developed (Article 13(1)), including contributing to protected areas under the EU nature conservation directives (Article 13(4)).

The MSFD cites its “ultimate aim” as “*maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive*”. A particular strength of the Directive is its emphasis upon the use of existing regional structures, focusing upon the potential application of the United Nations Environment Program Regional Seas Agreements (Article 6(1)). The focus on regional approaches within the MSFD should also provide opportunities for ASCOBANS and ACCOBAMS (Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area) to contribute to the envisaged framework of marine environmental governance in Community waters. Although both ACCOBAMS and ASCOBANS were rather marginalised in the drafting process of the MSFD (Caddell, 2008), the work of their various committees and working groups could have a considerable role to play in developing benchmarks for the Directive’s projected activities. To this end, ACCOBAMS has established a designated Working Group on this issue. The MSFD could help with a number of issues including over-exploitation of fish, cetacean bycatch, prey depletion and chemical pollution.

The MSFD also places particular emphasis upon the problem of ocean noise in a manner unprecedented at Community level to date. Indeed, in this respect, the MSFD may be considered the first clear translation of political concerns on this issue into binding legislation and public policy. Concerns raised by anthropogenic ocean noise have occupied a small but significant aspect of the EU political agenda, shortly after the identification of naval sonar as a potentially serious threat to cetacean welfare (Simmonds & Lopez-Jurado 1991; Frantzis 1998). In October 2004, the European Parliament adopted a Resolution calling for a moratorium on the deployment of high-intensity active sonars “*until a global assessment of their cumulative environmental impact on marine mammals, fish and other marine life is completed*”. Moreover, Member States were to “*urgently adopt*” geographic restrictions on the use of such sonar in sensitive marine habitats and to initiate, in conjunction with the Commission, a Multilateral Task Force to develop international agreements regulating ocean noise.

The MSFD has thereby established a clear legal basis upon which a number of these particular aspirations may be realised. In the first instance, the concept of “pollution” is broadly defined in the Directive to specifically include “*human-induced marine underwater noise*” (Article 3(8)). Moreover, the qualitative descriptors for demonstrating a “good environmental status” for the purposes of the Directive, listed in Annex I, specifically includes underwater noise, while the indicative list of pressures upon the marine environment, listed in Annex III, also includes this source of disturbance, citing “*shipping, underwater acoustic equipment*” as particular examples. There is some evidence to suggest that such sentiments are beginning to have a trickle-down effect upon Community policies. Indeed, shortly after the adoption of the Directive, in a communication relating to the Arctic region, the Commission identified as a key environmental policy the need to “[c]ontribute to assessing the impact on marine mammals of increased noise generated by human activities” (COM (2008) 763).

Nevertheless, considerable problems remain in relation to military uses of sonar (Papanicopolou 2010). This position has been reflected within the Directive itself, which precludes an application to “*activities the sole purpose of which is defence or national security*” (Article 2(2)). This position is tentatively softened by a commitment for Member States to “endeavour” to ensure that such activities are conducted in a manner that is compatible “*so far as reasonable and practicable*” with the broad objectives of the MSFD. Given that only Spain has to date introduced national restrictions on the use of military sonar (Parsons *et al.* 2010 a & b), such a position does not bode well for the swift implementation of voluntary standards among the other Member States under the Directive.

Finally, the MSFD is intended to act as the environmental basis of shipping and maritime affairs within Community waters. Accordingly, the Directive will ultimately advance a framework through which to regulate key aspects of shipping with the potential to cause marine environmental degradation. As far as cetaceans are concerned, this creates particular opportunities to address problems such as vessel-source pollution and shipping noise, given the emphasis accorded to these issues within the Directive. Nevertheless, the emergence of such measures under the

MSFD/Maritime Policy framework is also likely to constitute a longer-term project and the precise inter-relationship between these two broad ocean frameworks remains a matter of some uncertainty.

3.2.3 Environmental Impact Assessment (EIA) Directive 1985

Two European Directives require the environmental impact of projects to be assessed before permission is granted. The Environmental Impact Assessment (EIA) Directive¹⁶ dates from 1985, yet its UK Application was initially under the Town and Country Planning Act, which only applies to terrestrial and tidal areas of the UK. The EIA Directive was not initially applied offshore to all sectors. However, following a complaint to Europe by Friends of the Earth Cymru and Friends of Cardigan Bay (see chapter 5.6.5), the Directive was applied for the oil and gas industry under the *Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999 as amended* and the *Offshore Petroleum Activities (Conservation of Habitats) Regulations, 2001* which variously require that all major activities undertaken in connection with UK offshore hydrocarbon exploration and production should be subject to environmental assessment before consent is given for these activities. It has since been applied for various other developments, such as renewable energy developments, under separate regulations as listed below:

- The Environmental Assessment of Plans and Programmes Regulations 2004 – these regulations apply to any plan or programme which relates either to the whole or any part of England or to England and other parts of the UK. The regulations also apply to the territorial waters of the United Kingdom that are not part of Northern Ireland, Scotland or Wales, and waters in any area for the time being designated under Section 1(7) of the Continental Shelf Act 1964.
- The Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004 – these regulations apply to plans or programmes which relate solely to the whole or any part of Scotland.
- The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 - these regulations apply to plans or programmes which relate solely to the whole or any part of Wales.
- The Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004 – these regulations apply to plans or programmes which relate solely to the whole or any part of Northern Ireland.

3.2.4 Strategic Environmental Assessment (SEA) Directive 2001

EU Directive 2001/42/EC 2001 on the assessment of the effects of certain plans and programmes on the environment requires an overarching assessment of “plans or programmes”, basically Government policies, to be subject to a Strategic Environmental Assessment. These have been undertaken for oil & gas and renewable energy licensing in recent years.

The Directive’s stated objective is “*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment*”

3.2.5 Whaling policies

As far as the lethal catch of large cetaceans is concerned, the EU as an institutional collective is committed to “*continue its support of a continued international moratorium on commercial whaling*” (COM (2008) 864). Strong criticism has also been voiced by the European Commission of the resumption of commercial whaling under a reservation to the ICRW by Norway and Iceland – attacked as “a very negative step backwards” – while lethal scientific research conducted by Japan provoked an equally strident response. Such sentiments have been recently endorsed by the European Parliament, which has called for the maintenance of the global moratorium on commercial whaling and a cessation of lethal research. The EU nonetheless retains broad support for aboriginal subsistence whaling conducted through the IWC, provided that “*conservation is not compromised, whaling operations are properly regulated and catches remain within the scope of documented and recognised sustainable needs*” (COM (2008) 763).

Of particular significance to the EU stance on commercial whaling has been the introduction of strict measures under rules concerning the common market to restrict the import of cetacean products into the Community (Council Regulation (EEC) No. 348/81 of 20 January 1981 on common rules for imports of whales or other cetacean products). These provisions established that, from 1 January 1982, the introduction of cetacean products into the Community shall be subject to an import license, with no such license to be issued in respect of products to be used for commercial purposes.

16. Council Directive 85/337/EEC as amended by 97/11/EC and 2003/35/EC

In December 2007, the Commission adopted a further proposal to the Council to advance a common EU position in respect of the various Member States party to the ICRW to pursue at IWC Meetings (COM (2007) 871). To this end, the Commission considered that the EU Parties should advocate at the IWC the continuation of the moratorium on commercial hunting; the creation of further whale sanctuaries; the further regulation of scientific whaling and the continuation of aboriginal subsistence hunting; to support the activities of the Conservation Committee and other relevant fora such as Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and to encourage further transparency within the IWC by opposing the increased use of secret ballots.

3.3 UK National Legislation

3.3.1 In England and Wales

The current legal framework in England and Wales addressing nature conservation is currently undergoing a comprehensive legislative review with a view to codification and reform. This is to be greatly welcomed. Due to multiple revisions to the statutory provisions outlined below, the law has become highly fragmented, incoherent and extremely difficult to ascertain and apply. The ongoing devolution process in Wales also mandates that powers over wildlife will also be exercised by the Welsh Government in future years. It is to be expected that the current framework will be significantly adjusted by 2014.

3.3.1.1 Wildlife and Countryside Act 1981

The main UK enabling legislation for European Wildlife Directives and conventions such as the Bern Convention is, and has been for a long period of time the Wildlife and Countryside Act 1981 (WCA 1981, as variously amended over the years).

Under this Act it has been an offence (subject to certain exceptions) to intentionally kill, injure, take, possess or trade in any wild animal listed in Schedule 5 which for cetaceans initially, only included bottlenose and common dolphins and harbour porpoise, but it was extended to all dolphins, whales and porpoises at a later revision (The Wildlife and Countryside Act 1981 (Variation of Schedules) Order 1988 S.I. 1988/288).

The WCA also made provision for the designation of Marine Nature Reserves and gave powers to enact byelaws to protect such reserves. However, only three such reserves were ever designated (Lundy and Skomer Island and Strangford Lough) and these were, in effect, only very small areas of coastal and tidal habitat. Byelaws to protect the sites were also slow in coming. No reserves were designated to protect cetaceans.

3.3.1.2 Countryside and Rights of Way (CRoW) Act 2000

The WCA was amended by the Countryside and Rights of Way (CRoW) Act 2000 (in England and Wales). This served to strengthen the legal protection for threatened species. CRoW extended the offence of disturbing (and by extension killing and harassing) animals to include actions undertaken 'recklessly', in addition to 'intentionally', this being applied to a place of rest or shelter of a protected animal or a nest site. Additionally, "*any person intentionally or recklessly disturbs any wild animal included in Schedule 5 as (a) a dolphin or whale (Cetacea), or (b) a basking shark, shall be guilty of an offence*".

Jurisdiction of CRoW is currently applied only as far as the limit of territorial waters (12 nm from the low water mark).

3.3.1.3 The Conservation (Natural Habitats, &c.) Regulations 1994

The Conservation (Natural Habitats, &c.) Regulations 1994 transposed the Habitats Directive into national law. The Regulations came into force on 30 October 1994.

The Regulations provide for the designation and protection of 'European sites', the protection of 'European Protected Species' (EPS), and the adaptation of planning and other controls for the protection of European sites. These regulations have been revoked.

3.3.1.4 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007

The WCA was displaced as the most important piece of UK legislation for much wildlife, including all cetaceans, by the Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007. Under the new Regulations, the porpoise appears to be only protected from trade (under article 9(5)), and not from damage to places of shelter (article 9 (4a)) or disturbance while occupying places of shelter (article 9(4b)). Where dolphins and whales are concerned, it remains

an offence to intentionally or recklessly destroy, or obstruct access to, any structure or place which they use for shelter or protection (article 9(4a)) and to trade with them (article 9(5)).

3.3.1.5 The Conservation of Habitats and Species Regulations 2010

The Conservation of Habitats and Species Regulations 2010 consolidated all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect to England and Wales. The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, which includes all dolphins, whales and porpoises.

However, these actions can be made lawful through the granting of licenses by the appropriate authorities. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that they achieve their objectives, there are no satisfactory alternatives and that such actions will have no detrimental effect on wild populations of the species concerned.

3.3.1.6 The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007

The *Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007* transposed the Habitats Directive into national law in relation to marine areas where the UK has jurisdiction beyond its territorial sea (offshore marine area, offshore marine installations and certain ships and aircraft). The Regulations came into force on 21st August 2007.

The Regulations provide for the designation and protection of 'European offshore marine sites', the protection of 'wild animals listed in Annex IV(a) to the Habitats Directive', and the adaptation of planning and other controls for the protection of European offshore marine sites.

3.3.1.7 The Offshore Marine Conservation (Natural Habitats, &c.) (Amendment) Regulations 2009

These Regulations came into force on 30th January 2009 and amended the *Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007*. They amended the terms of offences of disturbing protected species. They contain defences to the offences relating to European protected species by providing that the defences do not apply if the prosecution shows that there was a satisfactory alternative to the defendant's action, or that the action was detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range. The Regulations specify in greater detail the arrangements to be made for surveillance of the conservation status of natural habitat types and species of Community interest, and to clarify the duty to take action in the light of that surveillance.

3.3.1.8 The Offshore Marine Conservation (Natural Habitats, &c.) (Amendment) Regulations 2010

These Regulations came into force on 1st April 2010 and amend the *Offshore Marine Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007* pursuant to the enactment of the *Planning Act 2008* and the *Marine and Coastal Access Act 2009*, and provide for the devolution to the Scottish Ministers of certain nature conservation functions of the Secretary of State in the Scottish offshore region.

3.3.1.9 The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001

These Regulations came into force on 31st May 2001 and implement the Habitats Directive in relation to oil and gas activities carried out wholly or partly on the UK continental shelf. They provide for the appropriate assessment of the effects of certain oil and gas activities where the activity is likely to have a significant effect on a relevant site; and they require the Secretary of State to give directions in the circumstances set out, in order to avoid, reverse, reduce or eliminate adverse effects on relevant sites, or deterioration or disturbance of certain natural habitats or species.

3.3.1.10 The Offshore Petroleum Activities (Conservation of Habitats) (Amendment) Regulations 2007

These Regulations amend the *Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001* and came into force on 18th February 2007. They implement Articles 6(3) and 6(4) of the Habitats Directive in relation to licenses to be granted under the *Petroleum Act 1998*, and to geological surveys related to oil and gas activities in UK waters. Any person who intends to carry out geological surveys in relation to oil and gas activities on the UK continental shelf or in UK waters or who intends to test equipment to be used in geological surveys relating to oil and gas activities on the UK continental shelf or in UK waters is required to obtain prior written consent of the Secretary of State. Prior written consent is required irrespective of any provision in a licence awarded under the *Petroleum Act 1998*. Before such a consent is granted, the Secretary of State must consider whether an appropriate assessment is required.

3.3.1.11 Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act provided no direct protection for cetaceans, but did

confer a responsibility on all public bodies to 'have regard to' biodiversity. This 'Duty to conserve biodiversity' states that "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity, and . . . a Minister of the Crown, government department or the National Assembly for Wales must in particular have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat."

The Act, which only applies to England and Wales and out to the 12nm limit, requires the publishing of lists of species and habitats considered "of principal importance for the purpose of conserving biodiversity" – these are mainly lists of principal Biodiversity Action Species (see below), with separate lists for England and Wales. These include most of the whales and dolphins and the harbour porpoise (16 species in England, and 14 in Wales).

3.3.1.12 Wild Mammals (Protection) Act 1996

This act makes provisions for the protection of wild mammals from certain cruel acts. If a person mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering he shall be guilty of an offence.

This Act does not apply to Northern Ireland.

3.3.1.13 Animal Welfare Act 2006

Whilst this is not directly relevant to wild cetaceans it would have bearing on any efforts to again keep cetaceans in captivity in the UK. It makes owners and keepers responsible for ensuring that the welfare needs of their animals are met.

These include the need:

- For a suitable environment (place to live)
- For a suitable diet
- To exhibit normal behaviour patterns
- To be housed with, or apart from, other animals (if applicable)
- To be protected from pain, injury, suffering and disease

Anyone who is cruel to an animal, or does not provide for its welfare needs, may be banned from owning animals, fined up to £20,000, and/or sent to prison.

3.3.1.14 Marine & Coastal Access Act 2009

The Marine & Coastal Access Act introduces a new system of marine management to England and Wales. This includes a new marine planning system, which makes provision for a statement of the Government's general policies, and the general policies of each of the devolved administrations for the marine environment, and also for marine plans which will set out in more detail what is to happen in the different parts of the areas to which they relate. The Act includes provisions which change the system for licensing the carrying out of activities in the marine environment. It also provides for the designation of Marine Conservation Zones (MCZs). It changes the way that marine fisheries are managed at a national and a local level and modifies the way licensing, conservation and fisheries rules are enforced. It allows for designation of an Exclusive Economic Zone for the UK, and for the creation of a Welsh Zone in the sea adjacent to Wales. The Act also amends the system for managing migratory and freshwater fish, and enables recreational access to the English and Welsh coast.

Part 1 establishes an independent body, the Marine Management Organisation (MMO). The MMO is to discharge a number of marine functions on behalf of the UK Government, although most of its functions apply to English and offshore waters.

Part 2 defines the UK marine area, used by subsequent Parts of the Act to describe areas where activities take place. It also allows an Exclusive Economic Zone to be designated, and creates the Welsh zone.

Part 3 introduces a new system of marine planning. The planning provisions provide for the preparation of a Marine Policy Statement to articulate the priorities and objectives of the UK Government, the Welsh Assembly Government, the Scottish Executive and the Department of the Environment in Northern Ireland in their marine areas. It also provides for the preparation of marine plans for the UK marine area which takes account of the Marine Policy Statement.

Part 4 will replace the licensing and consent controls currently exercised under Part II of the Food and Environment Protection Act 1985 and Part II of the Coast Protection Act 1949 (excluding Scottish inshore region) with new marine licensing provisions.

Part 5 of the Act provides a power, across most of UK waters, to designate new MCZs, in place of Marine Nature Reserves designated under the Wildlife and Countryside Act 1981. The three existing Marine Nature Reserves will be converted into MCZs. MCZs will contribute to a UK network of marine sites which will include European sites (e.g. SACs), Sites of Special Scientific Interest (SSIs) and wetlands protected under the Ramsar Convention (Convention on Wetlands, Ramsar, Iran, 1971). This will help the Government to fulfil the UK's commitment under OSPAR to establish an ecologically coherent network of marine protected areas. The Act provides for new duties on public bodies to exercise their functions in ways that further the conservation objectives set for MCZs, and not to authorise activities or development which carry a significant risk of hindering those conservation objectives. There will also be powers to make byelaws or orders, and interim byelaws or orders, to protect sites, and potential sites, from otherwise unregulated activities which may cause harm. The MCZ process currently remains in its infancy. In Wales, a strategic decision has been made to focus on the elaboration of a small number of Highly Protected Marine Conservation Zones (HPMCZs) that will integrate within the current network of protected areas established under other international and regional instruments. The emphasis is considered to fall on maintaining ecological coherence between protected areas, while in a departure from other instruments, socio-economic considerations may be taken into account in the designation process. It is not yet clear exactly how the HPMCZ network will apply to cetaceans – although they are not considered in the selection criteria - nor indeed how the ecological integrity of such areas are to be enforced or the impact that socio-economic concerns will have on their designation.

Part 6 changes the legislation relating to the establishment, organisation and responsibilities of Sea Fisheries Committees, establishing in England new bodies called Inshore Fisheries and Conservation Authorities (IFCAs). Within the Welsh zone, the fisheries powers have been taken 'in-house' by the Welsh Assembly Government.

Part 7 contains several Chapters amending existing legislation relating to marine and freshwater fisheries.

Part 8 provides for the appointment of enforcement officers and for a set of common enforcement powers for enforcing requirements across licensing, nature conservation and fishing in the marine area. It provides new powers that may be exercised for the purposes of enforcing sea fisheries legislation.

Part 9 introduces new powers to extend recreational access to the English coast. It also contains provisions enabling the National Assembly for Wales to allow recreational access around the Welsh coast.

Part 10 amends legislation in relation to Natural England and the Countryside Council for Wales. The final Part of the Act, Part 11, contains supplementary provisions including commencement arrangements and repeals.

3.3.2 In Scotland

3.3.2.1 Nature Conservation (Scotland) Act 2004

This Act of the Scottish Parliament came into force in June 2004 to “*make provisions in relation to the conservation of biodiversity; to make further provision in relation to the conservation and enhancement of Scotland's natural features; to amend the law relating to the protection of certain birds, animals and plants; and for connected purposes.*”

The Act covers some of the same ground for Scotland as CRoW and NERC in England and Wales. It confers the very similar duties with regards to biodiversity, and to publishing lists of principal species. It also bestows a duty on Scottish Natural Heritage (SNH) to produce the 'Scottish Marine Wildlife Watching Code' which must set out recommendations, advice and information on activities likely to disturb marine wildlife, circumstances in which marine wildlife may be approached, and the manner in which marine wildlife may best be viewed with minimum disturbance. This also now covers “reckless or intentional” disturbance. It was under this Act that the first prosecution for reckless disturbance of cetaceans in the UK occurred and this is discussed in more detail below.

3.3.2.2 The Conservation (Natural Habitats, &c) Amendment (Scotland) Regulations 2004

The Conservation (Natural Habitats, &c) Amendment (Scotland) Regulations 2004 amend the Conservation (Natural Habitats, &c) Regulations 1994. The Regulations also make provisions relating to site protection of European sites as set out in Part 2 of the Nature Conservation (Scotland) Act 2004. Further protection is given to European protected species through amendments to Part III of the Conservation (Natural Habitats, &c) Regulations 1994 which reflect the provisions relating to species protection contained in Part I of the WCA 1981. The Regulations make it “*an offence*

to deliberately or recklessly, harass any wild animal of a European protected species included in Schedule 2 as a dolphins, porpoise or whale (cetacean)".

3.3.2.3 The Conservation (Natural Habitats, &c) Amendment (Scotland) Regulations 2007

These Regulations, which extend to Scotland only, make further provisions for the transposition of the Habitats Directive. In doing so, they amend the *WCA 1981* and the *Conservation (Natural Habitats, &c) Regulations 1994*. The Regulations make it an offence to deliberately or recklessly harass, disturb, capture, injure or kill a wild animal of a European protected species. It is "*an offence to deliberately or recklessly disturb any dolphin, porpoise or whale (cetacean)*". In comparison to the equivalent Regulations for England and Wales, these Regulations are stricter and include additional offences.

3.3.2.4 Marine (Scotland) Act 2010

This Act provides Scottish Ministers with new powers, including a clear framework for marine planning, the creation of a network of Marine Protected Areas (MPAs) for nationally important species and sites, and an overhaul of marine licensing and seal legislation.

Under the Act, there are three kinds of MPA:

- 1) Nature Conservation sites – for the conservation of marine flora, fauna, habitats and geodiversity (ncMPAs);
- 2) Demonstration and Research sites - to demonstrate, or carry out research on, management approaches in inshore waters; and
- 3) Historic sites – for the purpose of preserving marine historic assets.

There is a duty on ministers to create a network of Nature Conservation MPAs. There is also a duty to state the conservation objectives for each Nature Conservation MPA, and report back on the extent to which the conservation objectives have been achieved (~every 6 years). As with the UK Act there is a pressing deadline for the designation of these sites – 2012 – because of various UK/Scottish Government commitments, including: the CBD, the OSPAR Convention and the World Summit for Sustainable Development.

The Act gives a general duty on ministers for the sustainable development, protection and enhancement of the health of Scotland's seas and a general duty on ministers on the mitigation and adaptation to climate change.

The Act lists broad categories for licensable activities at sea, including dredging, construction, incineration, but not fishing which is licensed through other legislation. Some activities, which fall below a 'specified threshold of environmental impact' will be registered, as opposed to licensed.

The Act makes it an offence to kill, injure or take a live seal. However, seal licenses can still be issued to authorise the killing of seals and these will come with some conditions, including the provision of information about damage that seals may be doing to a fish farm/fishery and the effectiveness of non-lethal alternatives. A license will be granted to someone with adequate firearms training, and the licence will specify species (grey seal or harbour seal), how many seals may be killed and the proximity to the seal before shooting is allowed. The license will require reporting on how many seals have been killed under that license.

The Act provides for marine enforcement officers to implement marine protection and nature conservation legislation, with fines relating to contraventions of law.

3.3.3 Wider protection regulation in the marine environment

3.3.3.1 Offshore industry

Many other potentially damaging operations in the offshore marine environment are covered under a variety of UK Acts including the Food and Environmental Protection Act (FEPA), the Coastal Protection Act (CPA), Electricity Act/Energy Act, Telecommunications Act, and statutory planning process transposing the Environmental Impact Assessment Directive 97/11/EC. In addition, the wider, strategic and regional environmental impacts of certain sectoral activities, such as offshore wind generation and oil and gas exploration, are addressed through SEAs (see chapter 2.2.4 above). The Marine Acts (see above) replace some consenting procedures under the above mechanisms.

3.3.3.2 Ministry of Defence

The Secretary of State for Defence has stated within the MOD Sustainable Development and Environment Manual

(JSP 418 - Volume 1) that “*within the United Kingdom, the Ministry of Defence will comply with relevant legislation, and with international treaties and protocols to which the UK is a signatory. Overseas, the MOD will apply UK standards so far as reasonably practicable, unless an international agreement or protocols indicate that in defined circumstances host nation standards should apply.*” So whilst environmental laws are not binding to the MOD, they have undertaken to comply with them, in UK waters at least (MoD 2005).

3.3.3.3 Voluntary Codes of Conduct

Several areas where dolphins are regularly seen have introduced ‘Codes of Conduct’ designed to give members of the public information about how to act in the vicinity of cetaceans to avoid disturbing them. Two codes that have been introduced, for example, are one by Ceredigion County Council initially covering the Ceredigion Marine Heritage Coast, and now more generally applied to the Cardigan Bay SAC, and the Dolphin Space Programme (DSP) which applies to the Moray Firth in NE Scotland (and discussed further below).

In Scotland

The Dolphin Space Program (DSP) is an accreditation scheme for wildlife tour boat operators in the Moray Firth in NE Scotland. It is an innovative, co-operative approach to sustainable wildlife tourism, launched on World Oceans Day, 8 June 1995. The aim of the DSP is to encourage people who go out to observe dolphins and other marine wildlife to “watch how they watch” and to respect the animal’s need for space. The mission of the DSP is to be a model of excellence in responsible wildlife tourism and to support the sustainable, positive development of marine wildlife watching in the Moray Firth, Scotland.

The DSP is overseen by a steering group which is involved in the development and running of the DSP scheme. Steering Group meetings are used to review progress, discuss any issues which may have arisen since the last meeting and to plan future development and improvement of the DSP scheme. The steering group is made up of various groups who are involved in one way or another with marine wildlife tourism in the Moray Firth.

The Scottish Marine Wildlife Watching Code (SMWWC) was designed for all those who watch marine wildlife around Scotland, whether they are on the shore or at sea. It is not a law or regulation, its over-riding purpose being to raise awareness and offer practical guidance. The Code will help users to enjoy watching marine wildlife, improve chances of seeing wildlife, help minimise disturbance to marine wildlife, provide a standard for the wildlife watching industry and help users to stay within the law.

In Wales

The first code of conduct was introduced by Sea Watch Foundation in conjunction with WWF and the local councils back in the early 1990s. Some thousands of copies of small and large format posters were made along with a leaflet. These were translated into Welsh and displayed around the various harbours, etc, then later disseminated around UK by the DoE (Evans, pers. comm.).

A further code was produced by WDCS for use in Wales. This was distributed widely around the Welsh Coast. In Gwynedd (North Wales), the Council requires the licensing of all personal craft launched from Council Slipways. All licensees are provided with a copy of a code of conduct regarding cetaceans.

4. APPLICATION OF THE LAW

In practice, application of the relevant legal regime has long seemed patchy and inadequate (see, for example, Parsons *et al.* 2010 a & b) and given the fundamental changes that have been made only very recently, assessing its effectiveness now is difficult in the absence of case law.

The inclusion of a species or its habitat within legislative protective measures does not in any way confer absolute protection. Despite the protective measures that were or are in place and a commitment to protect cetaceans, no successful prosecutions for crimes against marine wildlife had taken place for over 25 years (House of Commons - Environmental Audit Committee Environmental Crime: Wildlife Crime 2003-2004).

4.1 Implementation of Global International Agreements

4.1.1 Convention on Biological Diversity through UK Biodiversity Action Plans (BAPs)

In response to the UK's commitment under the CBD to develop "*plans or programmes for the conservation and sustainable use of biological diversity*", in 1994 the UK Government began the development of a series of national conservation action plans for species and habitats – a process initiated by the voluntary conservation bodies. Habitat Action Plans (HAPs) were developed for a variety of marine habitats while Marine Species Action Plans (SAPs) were developed for various marine species. Cetaceans are currently provided for nationally by two 'grouped' Species Action Plans, one for baleen whales, and another for toothed whales and dolphins. The harbour porpoise was the focus of a single Species Action Plan.

Progress on marine habitats and species plans, however, has been much slower and more limited than on land, and the cetacean plans are no exception. Targets have been missed; many proposed actions have not been progressed and the good quality data essential to feed into the process remains absent.

The aims of the cetacean plans, in the short-term, are to maintain the range and abundance of the listed cetaceans. The long-term goals of these plans are stated as being to increase:

1. the range of dolphin populations,
2. baleen whale population sizes and ranges, and
3. toothed whale abundance

"*by seeking to optimise conditions enabling their populations to increase*" and, for the harbour porpoise, to "*ensure that no anthropogenic factors inhibit a return to waters that it previously occupied*".

Various conservation actions are proposed by the national BAPs which typically involve trying to reduce, mitigate, assess or monitor a variety of threats. Several actions also propose investigating, evaluating or instigating MPAs, or conducting research to investigate habitat. Progress in attempting or completing these actions has been slow, as they attempted to be too ambitious, with unrealistic (and often imprecise) targets. Also, sometimes seemingly because of a lack of will or resources on the part of the executing body whilst, on other occasions, it appears to be due to inappropriate bodies tasked to complete the action. Inconsistencies between the plans with respect to which actions are listed and which bodies are tasked to take these on, also seem problematic (Parsons *et al.* (2007).

In addition to UK-wide plans for biodiversity conservation, local authorities have been charged with producing regional or 'Local' Biodiversity Action Plans (LBAPs). Typically, but not always, the actions outlined in national BAPs are used as a basis for the LBAPs.

In general though, there has been less effort on marine components of BAPs in the LBAP process and there is a lack of consideration for cetaceans in the LBAP process by many of the regions with coastal waters and/or insufficient funds to pursue necessary goals.

A revised UK BAP structure was implemented in late 2002, following government acceptance of the recommendations from the Millennium Biodiversity Report. The UK Biodiversity Partnership, comprising all those involved in the UK BAP, replaced the UK Biodiversity Steering Group. A UK Biodiversity Partnership Standing Committee was established to manage the business of the UK Biodiversity Partnership. It is assisted in this role by two advisory groups - the Biodiversity Reporting and Information Group (BRIG) and the Biodiversity Research Advisory Group (BRAG). There are also different approaches in the Devolved Administrations. For example, in Wales, a Marine Ecosystem Group has been established which reports directly to The Welsh Assembly Government.

With respect to the protection of calving areas and feeding areas, for the majority of dolphin species in the UK, this would require a dedicated research program to identify such areas – there is no evidence that such a dedicated, in-depth programme will be forthcoming from agencies such as DEFRA or JNCC in the near future.

4.2 Implementation of European Provisions

4.2.1 ASCOBANS

While in theory, ASCOBANS is a major step forward in the conservation of cetaceans, after more than two decades since the Agreement came into effect, progress on the conservation of small cetaceans in the Agreement area has been described as limited and patchy (Parsons *et al.* 2010 a & b). For instance, although a major abundance survey was conducted in the area under the auspices of ASCOBANS in 1994 (known as the SCANS survey) and another in 2005 (SCANS II), there has been only limited government-funded research on population size, structure, distribution and trends. Moreover, ASCOBANS has yet to address some issues, most notably prey availability, which is increasingly recognised to be a significant factor affecting the distribution, if not the overall status of cetacean populations in the region.

However, ASCOBANS was the main forum for pressure on fisheries by-catch issues¹⁷ and helped underpin the development and eventual agreement of Regulation EC 812/2004.

4.2.2 Fisheries legislation

In a review of cetacean conservation which included analysis of fisheries legislation, Parsons *et al.* (2010 a & b) point out that “*more than a decade has passed since the nature and scale of the cetacean bycatch problem in fisheries around the UK started to be understood. While the decline in certain fisheries may have reduced the problem incidentally in some areas, shifts in effort to different gears and stocks, means that bycatch is still likely to persist at significant levels. However, the inadequate information available on the operation and distribution of many, particularly static net fisheries renders the problem almost impossible to address effectively. In the UK there are still no mitigation measures in place to reduce what is likely to remain the main conservation and welfare problem affecting cetaceans around the UK*”.

4.2.2.1 Application of by-catch issues

The problems of the mis-match of fisheries regulation with the Habitats Directive has been strikingly illustrated in the attempts by the UK to reduce significant cetacean by-catches from pair-trawling within its territorial sea, eventually leading to a judicial review of national policies (*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). Here, the Commission had rejected an application under Article 7 of Regulation 2371 for emergency measures. The UK authorities responded with temporary emergency measures under Article 8 (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)), 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 of individual Member States to respond swiftly to emerging threats to stocks through fisheries interactions.

4.2.3 NERC Act

The requirement on all public bodies under the NERC Act to “*have regard...to the purpose of conserving biodiversity*” and the fact that the duty includes “*in relation to a living organism or type of habitat, restoring or enhancing a population or habitat*” on the face of it gives a mechanism to improve conservation within any decision making process. In reality, the Duty does not yet seem to have been recognised by most Departments. Consents rarely, if ever, make reference to how a decision has taken account of this duty.

4.2.4 SEA Directive

The wider strategic provisions have also proved unable to properly address cetacean protection. The Department of Trade and Industry (DTI, now DECC) have been undertaking Strategic Environmental Assessments for oil and gas licensing since 1999. Preceding the 24th licensing round, SEA 6 was undertaken. The SEA catalogued the significant and, in some areas, international importance of some species and habitats, especially for birds and cetaceans. Despite this, the then DTI decided that no areas should be off limits for oil drilling and seismic exploration, and there should be no exclusions whatsoever.

17. Now ICES takes a major role in bycatch issues as well.

A further 'Offshore energy SEA' published in 2009 covering the 25th licensing round, proposed offshore windfarms and carbon sequestration. The consultation draft identified that areas of importance for cetaceans should be avoided for windfarm developments. However, in Appendix I of the SEA Post Consultation Report, the policy was changed to one that stated "*it is recommended that within key areas of marine mammal sensitivity...operational criteria are established to limit the cumulative pulse noise 'dose' to which those areas are subjected*".

Such operational criteria are likely to be less protective than avoiding an area. This compares poorly with the situation in other EU countries. For example the Dutch government have a 6 month closed season (Jan-June) for pile driving, and the German government have imposed sound exposure limits. Given the lack of knowledge of long term implications of high level noise such as piling to cetacean individuals and populations, a more precautionary approach (see Case study I below) should be taken in the UK. Further, given the multinational developments occurring in the North Sea, a collaborative and comprehensive approach is required.

CASE STUDY I: The Precautionary Approach and Case Law

In a Judgement of the European Court (The 'Waddenzee judgement' – Case C-127/02, 2002), it has been clearly established that "*the precautionary principle ... is one of the foundations of the high level of protection pursued by Community policy on the environment*" and that the "*plan or project in question may be granted authorisation only on the condition that the competent national authorities are convinced that it will not adversely affect the integrity of the site concerned. So, where doubt remains as to the absence of adverse effects on the integrity of the site linked to the plan or project being considered, the competent authority will have to refuse authorisation*" and the authorities in the light of the site's conservation objectives, are to authorise such an activity only if they have made certain that it will not adversely affect the integrity of that site, that being the case if there remains no reasonable scientific doubt as to the absence of such effects". Given the lack of knowledge of the ecology of cetacean populations in UK waters, there is considerable scientific doubt as to the effects of many marine activities.

In an assessment of the offshore SEA process, Green (in prep) noted that environmental groups were supportive of the process and believe that it has the potential to be a positive tool in integrating environmental considerations into offshore oil and gas and renewable energy licensing plans. However, they were concerned that the existing SEA process is unable to ensure effective environmental protection and there are several parts of the existing SEA approach that need urgent attention. These were:

- **Data gaps and the Precautionary Approach:** Considerable data gaps have been identified both in the SEAs and in individual responses from stakeholders, and in many areas information is not currently available to allow us to make confident and informed decisions. Where this is the case a precautionary approach needs to be taken, as enshrined in EU environmental legislation. There is concern that there is insufficient evidence of the potential risks presented by oil and gas activities in certain areas, such that the SEA cannot confidently refute the need for additional controls to protect sensitive receptors. This weakens the overall conclusions of the SEA report.
- **Data gaps, the Habitats and Species Directive and the Precautionary Approach:** While the DTI (now DECC) has been funding some important surveys for the SEAs, there are still significant data gaps that have been identified during the SEAs, for which there does not appear to be any co-ordinated, transparent attempt to fill. Meanwhile, licensing continues despite the lack of information. Some of these gaps in our knowledge, such as the habitat requirements of certain cetacean populations, are so significant that an SEA should not be considered complete without them. Some organisations remain so concerned about these data gaps that, following the precautionary approach, they believe that licensing should not go ahead in some areas of the sea until data are available to inform the decision making process.
- **Cross-sectoral assessment.** *Current offshore SEAs have only been carried out for the energy sector, and then only oil and gas exploration, and exploitation and windfarms – 'wet' renewables (tide, wave etc) were not included. An SEA should also consider cumulative and in-combination effects. This is especially important in considering noise issues. Noise in a quiet area may be more significant than in an area where animals are habituated to background noise. Conversely, additional noise in an already noisy environment may take disturbance across a threshold rendering the area unusable.*

Licence conditions cannot be assumed sufficient to protect such areas or to enable their conservation objectives to be

met. In line with the precautionary approach, as discussed above, those SACs and SPAs as well as those areas known to be important for habitats and species which are particularly vulnerable to oil and gas impacts, should be identified through the SEA process and excluded from licensing. Such exclusion should also include a sufficient buffer zone to ensure full site protection. One example of such a site is Cardigan Bay SAC that is designated for bottlenose dolphins. Given the known and potential impacts of seismic testing, piling, drilling and contaminants (Green 1996) from oil & gas, then such a site should be excluded from licensing.

The UK has not conducted an SEA to examine the potential environmental effects from the development of wave and tidal power devices in English and Welsh coastal waters or in offshore UK waters between 12 and 200 nm. This is an increasingly important need as the deployment of these forms of energy generation accelerates (Dolman & Simmonds 2010).

In 2005, the Scottish Government commissioned an SEA to examine the potential environmental effects from the development of both wave and tidal power devices off the west and north coast of Scotland, spanning from Shetland to the Solway Firth, and out to a distance of 12 nm offshore. The SEA was available for public consultation in 2007 and, subsequently, an Environmental Report was produced. The SEA determined that between 1,000 MW (megawatts) and 2,600 MW of marine renewable energy generating capacity could be achieved using wave and tidal power devices in the study area.

The Scottish government is conducting an SEA for marine wind energy. The planned SEA will influence the Crown Estate Round 3 decisions about where to site potential developments. It is not currently clear how the UK and Scottish SEA processes for offshore wind farms will be linked, although a strategic approach to the planning of the development of marine renewable energy industries is important.

The Ministry of Defence has not undertaken an exercise area SEA, although it routinely exercises throughout UK waters, and particularly in its two offshore exercise areas off the west coast of Scotland and the South West Approaches to England.

4.2.5 EIA Directive

Many EIAs have been found to be inadequate in assessing the impacts of marine developments (see case study 2 below). For example, for the oil and gas industry, Green (2000) found that none of the environmental statements (ESs) assessed met EU guidelines. ESs have improved partially (EIA Centre 2007), but just under half of the statements reviewed were still unsatisfactory. Despite this, all the projects reviewed had received development consent.

The Institute of Ecology and Environmental Management has produced guidelines for the preparation of robust ecological impact assessments for marine and coastal developments (IEEM 2010).

CASE STUDY 2: The EIA Directive and the oil and gas industry

When the local environmental group Friends of Cardigan Bay asked to see an environmental assessment for proposed drilling in sensitive waters off Bardsey Island, Wales, in 1989, they were told by DTI that “*there are no environmental impacts; therefore we do not need to carry out an assessment*”. As oil and gas drilling is listed in annexes to the Directive as requiring mandatory assessment, the UK was in breach of the Directive. A formal Complaint to Europe, taken by Friends of the Earth Cymru and Friends of Cardigan Bay, was upheld by the EU, at which point the Directive was applied to the oil and gas industry. Although further regulations have applied the Directive to other sectors, including offshore windfarms, more than two decades later, there is still no comprehensive implementation of all the provisions of the Directive offshore.

4.2.6 Habitats Directive

The Habitats Directive is a vital instrument for the conservation of European species of cetaceans, both in its provisions for the establishment of protected areas and its facilitative role in ensuring the strict protection of all cetacean species throughout Community waters. Nevertheless, there are a series of underlying structural deficiencies within the Habitats Directive. Firstly, the designation of SACs is restricted to just two out of the 27 cetacean species - harbour porpoise and bottlenose dolphin. The reasons for this are contemporary to the drafting of the Directive, with

such species considered at the time to be the main cetaceans resident in inshore waters (Hoyt 2005). A strong case may be made to expand the range of species listed on Annex II, in order to expand the conservation possibilities of the Directive for cetaceans.

Secondly, the designation criteria for SACs are not presently conducive to the swift establishment of an extensive network of protected areas for cetaceans. While the identification of broad areas of importance may be possible, further targeted, painstaking and time-intensive research may often be required to demarcate the precise areas of fundamental significance to the species, in order to create a SAC in line with the demands of the Directive. This has particular implications for the development of offshore NATURA 2000 sites and explains to an extent the relatively slow rate of progress towards a comprehensive network of protected areas for cetaceans.

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 provides considerable scope for the continuation of anthropogenic activities, such as oil and mineral exploration, with potentially harmful effects upon cetaceans within these protected areas.

4.2.6.1 Inadequacy of SACs

As a preliminary point, it should be observed that the development of the Natura 2000 network within the marine environment has lagged significantly in comparison to terrestrial coverage. This accordingly presents practical implications for the conservation value of the Habitats Directive in the specific context of cetaceans. The causes of this discrepancy are largely historical, and two key factors may be considered to have inhibited the application of the Directive in the context of marine fauna.

In the first instance, there has been limited legislative and political momentum towards addressing the marine dimensions of the Habitats Directive until relatively recently. While the Directive draws no distinction between its terrestrial and marine remit, its operative Annexes remain dominated by terrestrial species and habitats. In 2001, a series of Biodiversity Action Plans noted the need for the full transposition of the Habitats Directive in both a maritime and terrestrial context as a key component of Community environmental policy (COM (2001) 0162). In order to provide a further impetus to the development of marine sites, in May 2007, the Commission adopted a series of indicative, yet non-binding, *Guidelines for the designation and management of specially protected marine areas* (Commission of the European Community (CEC) 2007, hereinafter referred to as “*Marine Guidelines*”¹⁸). Despite the Directive having been adopted in 1992, this document constitutes essentially the first central articulation of the marine application of the Directive. Areas representing the crucial factors for the life-cycle of the species were considered identifiable, 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.
- 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*” may also prove informative.

Secondly, these difficulties were compounded by a marked lack of clarity surrounding the precise jurisdictional application of the Directive in a marine context throughout its initial years of operation. Under Article 2(1), the Habitats Directive is stated to apply within “European territory” of the Member States, a position that was seemingly equated within the initial transposing legislation solely to the “territorial sea”, as opposed to the full range of jurisdictional waters. The jurisdictional dimensions of the Habitats Directive were subsequently clarified following a judicial review of the UK legislation: *R v. Secretary of State for Trade and Industry, ex parte Greenpeace Ltd [No. 2] (2000) 2 CMLR 94 (QBD)* Here, the court ruled that “a Directive which includes in its aims the protection of *inter alia* ... cetaceans will only achieve those aims, on a purposive construction, if it extends beyond territorial waters”. Such sentiments were confirmed by the European Court of Justice (ECJ) in a subsequent case addressing the UK’s licensing policies (*Commission v. UK, Case C-6/04 [2005] ECR I-9017*).

Only two species, bottlenose dolphin and harbour porpoise, are included on Annex II of the Habitats Directive and thus qualify for SAC designation. Furthermore, SACs will be proposed ‘*only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction*’. This is therefore another case

18. These allegedly were drawn up especially for harbour porpoises during a meeting of experts in Brussels (Evans, pers. comm.)

where there is no clear definition, and arguments within the UK authorities have meant that only two relatively small areas have been designated specifically for bottlenose dolphins, and none for harbour porpoises. This cannot be described as a 'coherent network', and there is increasing evidence that the existing bottlenose dolphin SACs are not sufficient to 'represent the physical and biological factors essential to their life and reproduction' (Wilson *et al.* 2004; Pesante *et al.* 2008 a,b).

Since the establishment of the Moray Firth bottlenose dolphin SAC, the distribution of the population has expanded (Wilson *et al.* 2004). Whilst protection should occur throughout the range of the dolphins, regardless of the boundaries of the SAC, this has implications for how industries view their legal requirements for environmental assessment and it also has research implications.

There have been studies to determine potential harbour porpoise SACs (for example, Evans & Wang 2003; Marubini *et al.* 2009; Embling *et al.* 2009) which identified sites of high activity that could meet the Directive's requirements; and to these can be added the recent review by WDCS (Clark *et al.* 2010) which identified areas of critical habitat for porpoises. Despite this, JNCC have concluded that no sites meet any of the criteria for SACs for porpoises. This conclusion includes the Dogger Bank in the North Sea (see Case study 3). This site was proposed as a SAC with the harbour porpoise as a qualifying feature, but turned down by the UK Government, despite the fact that the German sector of the Bank is already designated for harbour porpoise. Given that the SAC network, 'Natura 2000', is meant to be a coherent European network, this difference in approach is deeply concerning when it comes to protecting populations that inevitably cross territorial boundaries.

CASE STUDY 3: Approaches to Harbour Porpoise SAC Designation

Grading of Annex II species features in SACs

The criteria for selecting SACs for Annex II species are set out in Annex III of the Habitats Directive. They are:

1. Size and density of the population of the species present on the site in relation to the populations present within the national territory

- A: > 15% to 100% of national population
- B: > 2% to 15% of national population
- C: > 0% to 2% of national population
- D: non-significant presence (if graded D, no further consideration of additional criteria is required);

2. Degree of conservation of the features of the habitat which are important for the species concerned and restoration possibilities

- A: excellent conservation (regardless of ability to restore)
- B: good conservation (well conserved regardless of possibility to restore OR average or partially degraded condition and easy to restore)
- C: average or reduced conservation (and all other combinations);

3. Degree of isolation of the population present on the site in relation to the natural range of the species

- A: population (almost) isolated
- B: population not isolated, but on margins of area of distribution
- C: population not isolated within extended distribution range;

4. Global (overall) assessment of the value of the site for the conservation of the species concerned

- A: Site supports an outstanding population of the Annex II species in a European context
- B: Site supports an excellent population of the Annex II species, but of somewhat lower value than grade A sites
- C: Population of Annex II species is of at least national interest but not significantly above this. This species is not the primary reason for the SAC being selected.

The European Commission employs a system of grading using A, B, C and D for site selection/evaluation purposes. These grades are applied to each of the four elements referred to above. A site for which an Annex II species is identified as a primary reason for selection will need to be graded A or B. For sites graded C, the species will not be a primary reason for selection, but the species will be a 'qualifying feature', requiring conservation objectives and management measures (e.g. appropriate assessment). Where a species is graded 'D' for the site, it is considered to be a 'non-significant presence' and will not require conservation objectives.

CASE STUDY 3 continued:

The agreed UK policy for identifying site boundaries is based on overall grade A and B habitats and species only. Grade C habitats and species are added where they occur within those sites, but the site boundaries are not altered or extended to capture grade C features (nor sites proposed only for grade C features). Grade D features have no specific requirements beyond mention of their presence.

In relation to the selection of SACs, Article 4.1 of the Habitats Directive states that *'for animal species ranging over wide areas these sites shall correspond to the places within the natural range of such species which present the physical and biological factors essential to their life and reproduction. For aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction.'*

Approaches to Harbour Porpoise SAC Designation: Dogger Bank proposed SAC

In Germany (as in several other EU nations) three selection criteria were considered for designation of sites:

- continuous or regular presence over May to August (coverage in autumn and winter was very low by comparison to the spring/summer data);
- high population density (approximately >2 individuals km^{-2}); and
- a high ratio of mother-calf pairs (60% of sightings).

In the North Sea, only one site, Sylt Outer Reef, qualified under these criteria. The densities recorded at this site were 2.7 animals km^{-2} in 2002 and 3.7 animals km^{-2} in 2003. Despite these results, Germany has also designated two other harbour porpoise SACs in the North Sea: Dogger Bank and Borkum Reef. Densities recorded at these sites were 1.0 and 1.5 animals km^{-2} in 2002 and 2003 respectively for Dogger Bank, and 0.4 animals km^{-2} at Borkum Reef for both years. The Dogger Bank site was designated for its sandbanks habitat, but is also graded B for harbour porpoises (Population B, Conservation B, Isolation C, Global B). This was on account of the site having a higher density of animals present than surrounding North Sea areas and it was considered to represent a calving area (JNCC 2009).

Despite the German decision, JNCC decided not to designate the adjacent UK sector of Dogger Bank as a SAC for porpoises.

Commenting on this decision, WDCS said:

“Despite a wealth of relevant scientific research, ongoing monitoring and continuing assessment of the UK’s cetacean species, the harbour porpoise is currently completely unprotected even though a number of sites have been proposed. There are locations known to be important for cetaceans that, if protected, could make a valuable and increasingly necessary contribution to the protection of this species. In your 2008 assessment, you stated that “crude estimates indicate that for some of the year approximately 5% of the UK population of harbour porpoises use the dSAC”, Your reasoning also assumes that the UK population is one big homogenous population which we know is not the case (Evans & Wang 2003).

You admit that the JCD data held by JNCC and that collected during SCANS II were not currently amenable to analysis as to the ratio of calves to adults, and therefore you did not apply this criterion to the dSAC in your 2008 Assessment. We cannot find evidence that you have done this analysis in the 2010 Assessment either but nevertheless have made the decision to reclassify the harbour porpoise?

The European Commission proposed three key criteria to be used for the assessment of potential SAC sites for harbour porpoise, in addition to the selection criteria in Annex III to the Habitats Directive includes high ratio of young to adults during certain times of year.

It appears this point has not been taken into account with the Assessment made on just two criteria. WDCS believes this represents a significant failure in fulfilling EU legal requirements, By omitting to list the harbour porpoise as a qualifying feature at Dogger Bank (and possibly other sites), the UK is failing to give the European Commission a complete picture of the status of the species within the UK and, hence, the territory of the EU.”

Edited extract from letter from WDCS to JNCC June 2010. See also Evans *et al.*, (2008).

It might also be noted here that whilst the Germans and Dutch have surveyed the Dogger Bank waters for cetaceans, the UK authorities have chosen not to.

4.2.6.2 Poorly managed activities conducted within SACs

Coastal developments

Within the Moray Firth SAC, marina developments have occurred at Inverness and Avoch and have been considered for a development at Whiteness. All potential marina developments that might have a significant impact on the bottlenose dolphins (including by providing berths that lead to increases in recreational vessel numbers and commercial marine wildlife operators) should be subject to appropriate assessments before the relevant authorities make decisions about them.

According to a recent independent scientific study (Donovan *et al.* 2010), the inner Moray Firth may already be at carrying capacity for recreational vessels. When you add commercial craft (including fishing vessels, dive boats, power boat training schools and dolphin watching operators), it is likely that this capacity is being far exceeded.

The Scottish Government has recently made a commitment to be Europe's most sustainable tourism destination by 2015. It is therefore highly appropriate that the government ensures development of each of these three marinas meets the requirements of the EU Habitats Directive. This should include the provision of adequate appropriate assessments for each marina development; and striving to ensure that the existing dolphin watching industry is environmentally sustainable.

No new operators should be allowed to operate within the SAC until this essential piece of research has been completed. Decisions about recreational boat numbers and licensing and capping of the dolphin watching industry can then be made based upon sound science.

CASE STUDY 4: Fisheries Management and protected sites: scallop dredging within Cardigan Bay SAC

Scallop dredging has been carried out in Cardigan Bay for some years to varying extents, although, generally, activity has been low. The possibility of a scallop fishery was recognised in the Cardigan Bay SAC Management Plan and the listed management response is "There is a known mechanism for the activity to have an effect, but insufficient evidence at present to determine whether or not it is having a significant adverse effect".

The Countryside Council for Wales' guidance on the need for Appropriate Assessment states: "The check for likelihood of significant effects is an initial filter, and should be a relatively quick way of deciding whether the project would be likely to negatively affect the site in a significant way. The information required for the checking stage will vary from project to project, but it is the subsequent appropriate assessment stage that will probably form the more in depth assessment. The term 'likelihood' is important. The test is a likelihood of effects rather than a certainty of effects. The check should only allow those projects to proceed where it is clear that any significant effect is unlikely. If there is doubt and further information is needed, it should be concluded that there is a likelihood of significant effects."

It is clear from the Management Plan assessment that there is doubt as to the potential impact, therefore it should be concluded that there is a likelihood of significant effects and an Appropriate Assessment should be undertaken.

In 2006, up to 60 scallop dredgers had been reported as operating within Cardigan Bay including within the boundaries of the SAC. There followed many changes to the situation, with partial closures and re-opening, until 2009. Following much lobbying by conservation organisations, the Scallop Orders that enabled the fishery were reviewed. The Welsh Assembly Government realised that to make changes they had to undertake consultations. This led to the complete closure of the Welsh Scallop fishery for the second half of 2009 while consultations on its future were made. A consortium, led by WDCS, took a complaint to Europe over the lack of Appropriate Assessment in issuing Scallop licences. The fishery was partially re-opened between March and May 2010 with a significant part of the Bay declared off limits. However, part of the SAC itself was still left open to the scallopers. Despite advice from CCW that there were many uncertainties, no assessment was undertaken, and no permanent scallop order was made.

At the time of writing the situation is still unclear and the Welsh Assembly Government have declined to meet with WDCS and other local groups to discuss the fishery.

Scallop dredging

The inability of Sea Fisheries Committees to properly control damaging operations such as scallop dredging within SACs (see Case Study 4) also underlines the lack of comprehensive protection for cetaceans and their habitats, even within supposedly protected areas. The change of fishery management regime under the Marine Act may help here, but the example of the Welsh Assembly Government's failure to carry out an Appropriate Assessment for scalloping within the Cardigan Bay SAC, described below, does not bode well for future management.

Commercial dolphin watching and recreational activities

Currently no oversight of the commercial bottlenose dolphin watching industries is required in either Cardigan Bay or in the Moray Firth. Commercial boat numbers continue to increase unchecked and with no understanding of potential cumulative impacts of vessels that repeatedly seek out and interact with the dolphins.

Eventually work being undertaken by Aberdeen University may lead us to understand how many commercial and recreational boats can safely operate in the dolphins' range within the Moray Firth without causing significant disturbance. Until this work is completed and a sustainable number of vessels can be determined, in the interests of precaution and the requirements of the Habitats Directive, no new vessels should be allowed to operate in the inner Moray Firth.

Areas of critical habitat exist within the Moray Firth SAC and in the wider range of the dolphins (for example, off Aberdeen and in St Andrews Bay) although these are less well studied and their significance for the dolphins arguably less well understood. Further research is needed to assess which areas are of critical importance to dolphins and how these areas should be protected.

In an analysis of the protection offered by SACs, Green (2006) concluded there was little that could be seen as 'special' in terms of additional protection within SACs compared with the wider sea. This is true for bottlenose dolphins within the three existing SACs. Whilst the designation of SACs may have led to increased levels of environmental assessment through the production of Appropriate Assessments, the end result has been the same, where scallop dredging activities and oil and gas exploration have been licensed within SACs designated for the dolphins (see Case Study 5 below).

CASE STUDY 5: Licensing of activities within Cardigan Bay and Moray Firth SACs

If any plan or programme, such as oil and gas licensing, is likely to affect a European protected site (SAC), an 'Appropriate Assessment' (AA) is required under the Habitats Directive (for an explanation of the licensing process and potential impacts, see JLOGEC 1996).

DECC (previously DTi) opened the 24th round which offered licences to explore for oil and gas within both the Cardigan Bay and on the boundary of the Moray Firth SACs. Such development had long been opposed in these locations by campaigns that pre-dated the designation of the sites (Green & Simmonds 2008). Despite this, the Government went ahead with licensing, merely temporarily withholding those blocks within or immediately adjacent to the Moray Firth and Cardigan Bay SACs. No proper assessment of possible effects on designated sites from licensing was undertaken, nor adequate assessment of possible cumulative effects.

The AA failed to guarantee the protection of protected sites, and according to the Countryside Council for Wales (CCW), it failed to establish "...with sufficient robustness or certainty that the plan will not have an adverse effect on the integrity of any European Site or potential European Sites". A second AA was then undertaken. The original assessment failed to guarantee protection of the sites and licensing did not take place. If information is available that was not included in the original assessment, then that assessment should be re-done as a whole, not piecemeal to justify a decision already taken. Reassessment concluded there was insufficient evidence on which to make a decision for the Welsh SAC (i.e. they could not be sure '*beyond reasonable doubt*' that there would not be damage to features of the SAC), and this area was withdrawn from the licensing round.

The 25th round, announced in February 2008, offered licences to conduct seismic surveys in waters adjacent to both sites, as well as within the Pen Llyn a'r Sarnau SAC in north-west Wales, which has the bottlenose

Case study 5 continued:

dolphin listed as a qualifying feature. Following much lobbying, AAs were undertaken for the sites. For the Welsh sites, these concluded there was insufficient evidence on which to make a decision (i.e. they could not be sure '*beyond reasonable doubt*' that there would not be damage to features of the SAC) and this area was withdrawn from the licensing round.

Licensing subsequently occurred in the Moray Firth, following a final AA based on further desk-based and field research that DECC has commissioned. Seismic surveys took place in autumn 2010 and we await the results of the impact studies that were undertaken, The 26th licensing round announced in January 2010 again excludes the Cardigan Bay and Moray Firth SACs, but includes Pen Llyn a'r Sarnau SAC.

By announcing that no areas were off limits to the oil companies before the SEA and the AA were completed, the Government is pre-supposing the outcome of the assessment process. In re-doing an assessment apparently because it fails to support this position only further undermines the flawed process. There seems little point in going through the lengthy process of designating protected areas such as SACs if the designations are being ignored when it comes to offshore energy developments. The decision in the 24th licensing round to offer all areas within SACs to oil companies shows that currently marine designations carry very little weight with decision makers, and therefore offer little or no protection. In preparation for the seismic surveys in the Moray Firth, various government departments worked closely to fund a major research effort that included both baseline and impact research, the first of its kind in UK waters. Such studies should be routine as part of DECC planning and decision making, as is increasingly being required with the development of the marine renewable energy industry.

In response to a consultation on the proposed management plan for Cardigan Bay SAC, WDCS (2007) noted that "*the proposed management response to all potentially serious impacts is merely to trigger an 'Appropriate Assessment'.*" WDCS believe "*that as a 'special' and very important area there should be a presumption against damaging activities both within the site and within a broader zone of influence. Given the stated lack of information on the status of dolphins within the site, WDCS also believes that it should be assumed they are not in a favourable state and damaging activities avoided on a precautionary basis. There is no evidence that the Appropriate Assessment procedure is able to identify whether activities, beyond doubt, do not affect the features*".

4.2.6.3 'Strict protection measures'

Despite the requirement under Article 12 of the Habitats Directive, to establish a *system of strict protection*, there are little obvious robust and enforced mechanisms that would put a stop to *all forms of deliberate capture or killing (e.g. bycatch); deliberate disturbance, particularly during the period of breeding, rearing, hibernation and migration (e.g. licensing, mitigating and limiting noisy activities such as seismic survey work within areas known to be important to cetaceans), nor measures to stop deterioration and destruction of breeding sites or resting places* outwith SACs.

There is an urgent need to define how "breeding sites or resting places" are applied for mobile marine species and to identify how one can begin to protect them. There has also been no attempt to define the meaning of '*features ... major importance for wild fauna,,,'* and '*linear and continuous structures*' within the marine environment under Article 10 of the Directive.

For mobile species, such as cetaceans, protection of the wider environment is especially important. Indeed some will argue that it is wider and non-site related measures that should provide the primary protection for such animals. In this regard measures might include for example the use of pingers on gill nets to alert cetaceans to them or technical measures such as bubble curtains to limit the spread of noise from pile driving. It is beyond the scope of this document to review wider measures fully but for the moment there is little evidence that any wider measures are significantly assisting cetacean conservation.

Nonetheless action must be taken to meet the Directive's requirements to ensure the favourable conservation status of populations of some cetaceans outside designated SACs as well as within them, and this will be predicated on having adequate data to be able to show this.

4.3 Implementation of National Legislation

4.3.1 Disturbance in England and Wales

A conviction in England, under the Wildlife and Countryside Act 1981, for recklessly disturbing a solitary bottlenose dolphin was achieved in 2008. Two inebriated young men took advantage of the fact that a young solitary dolphin was very accessible from a beach in Kent, SE England, and interacted with her. Even after being repeatedly asked by police to cease, they continued to interact. This is a rare example of a successful prosecution; despite the fact that there are many reports of dolphins being chased or otherwise harassed by vessels.

Part of the problem in bringing prosecutions is defining 'disturbance'. Without specialist knowledge of cetacean behaviour, law enforcement officers and, indeed, courts might expect highly mobile animals, such as dolphins, to be able to move from unpleasant stimuli and simply temporarily or permanently relocate elsewhere. To human eyes, the seas may look like a relatively homogeneous environment offering for such an animal to take advantage of, including for it to potentially swim to a safer depth. However, dolphins and all cetaceans need to come to the surface on a regular basis to breathe. Indeed, dolphins could be said to be animals that have evolved to primarily live at or near the air-water interface. Moreover, whilst the extent of their habitat may seem large and they are typically referred to as 'wide-roaming', there will be habitat areas which are of importance to them for feeding and/or breeding and possibly other purposes (Simmonds & Eisfeld 2010).

Another problem is that the resources for prosecution are also severely limited and it appears this area is not seen as a priority for funding either in investigations or awareness-raising in some regions.

One area of difficulty in applying these protection measures to the wider marine environment and to species lies partly in the meaning of definitions. For example, 'taking' is not interpreted in the UK, in the same way as it is in the US¹⁹, to mean 'harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect'. In addition, there is little case law in the UK to provide definitions and nor are they included in the Acts, but 'taking' is usually interpreted as capture or killing. It is also notable that the US Endangered Species Act 1973 also extends this interpretation to cover significant habitat modification or degradation which affects the habitat use by species. Likewise, there is no definition of 'places of shelter or protection'. Whilst these are more immediately obvious in terrestrial species, such as otters' holts or birds' nests, for mobile marine species they are less easy to define; and it appears that rather than attempt a definition to cover such species, the subject has been largely ignored.

Another potential problem, as described earlier, is that different regions now have greater responsibilities on an individual basis to address marine environmental considerations, which could give rise to inconsistencies in approaches in future years.

4.3.2 Disturbance in Scotland

There has now been one successful prosecution for disturbance of a pod of bottlenose dolphins by an individual using a jet ski in the Moray Firth in Scotland under the *Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2004*. The incident occurred outside MacDuff Aquarium, where several different eyewitnesses had the foresight to collect important information including photographs and the license plate of the vessel involved, leading to a successful prosecution and a penalty fine (£500). The Grampian Police region is one of the few regions in Scotland to have a dedicated PAW (Partnership for Action Against Wildlife Crime) Wildlife Crime Officer, which meant adequate police time could be committed to pursuing this crime.

The Conservation (Natural Habitats, &c.) Regulations 1994, as amended, in Scotland, [Regulation 39(2)] takes a different and stricter line than the *Conservation of Habitats and Species Regulations 2010* and, for example, states that: 'Subject to the provisions of this Part, it is an offence to deliberately or **recklessly** disturb any dolphin, porpoise or whale (cetacean)' (see section 3.3.2.3 for all additional offences). Guidance is currently being developed by Marine Scotland and it was anticipated that this would be available in Spring 2011.

4.3.3 Licensing in England and Wales

Some licensing functions in England are being transferred to the new Marine Management Organisation under the Marine Act, but they are required to consult with Natural England before issuing licences. A wildlife licence is required from the MMO by anyone who wishes to carry out an activity in the English marine environment that is prohibited under nature conservation legislation, where the activity cannot be sufficiently mitigated. Licences may be needed for

19. Endangered Species Act 1973

development activities that may disturb cetaceans, such as piling for marine renewable foundations, active naval sonar, seismic surveys or a licence to carry out scientific surveys (see Case study 6).

CASE STUDY 6: JNCC Disturbance Guidance WDCS's full response can be found in Appendix I.

"In 2008, JNCC consulted on guidance on a new disturbance offence under the Habitats Regulations 2007 for England and Wales and the Offshore Marine Regulations 2007. The consultation ended in June 2008 and feedback was considered in the following months, much improving the document. In January 2009, there were amendments made to the regulations, which meant that the guidance also had to be slightly amended to reflect those changes, and this has resulted in a delay in its publication. Currently the guidance is in draft and should be published in 2011" (from <http://jncc.defra.gov.uk/page-4226>, accessed on 9 January 2012).

In June 2009, JNCC also issued *Guidelines for minimising the risk of disturbance and injury to marine mammals whilst using explosives* and in August 2010 separate *Guidelines for Minimising the Risk of Disturbance and Injury to Marine Mammals from Seismic Surveys*.

Both sets of regulations contain a revised definition of 'deliberate disturbance' of European Protected Species. According to JNCC, "sound generated from seismic surveys have the potential to cause both injury and disturbance to marine mammals...and the potential to cause two offences as defined under Regulations." Therefore, the 2009 version of the Guidelines contains "best practice for operators to follow" and "it is considered that adherence to the recommendations will minimize the risk of an offence being committed."

There appears to be considerable confusion as to what constitutes 'disturbance' for European Protected Species including, but not limited to, cetaceans. Recent case law regarding bats (*Vivian Morge v Hampshire County Council*, 10 June 2010*) concluded that whilst killing offences applied to killing of individual animals, all the offences regarding disturbance under the Habitats Regulations referred only to disturbing a population. This is worrying and would probably make it impossible to obtain convictions as there is no definition of what constitutes a population or how such a population might be significantly disturbed. This is currently under review in the Supreme Court and looks likely to be overturned.

WDCS remains very concerned that the current JNCC draft disturbance guidance, as consulted on, remains inadequate. The draft guidance contained some considerable flaws and if it were finalised in its consultation form, it would not offer European Protected Species the protection from disturbance that they are required under the EU Habitats Directive. In general, WDCS believes that much more detailed information about important habitats in UK waters is required; and that the UK government should fund field studies to better understand the population distribution, abundance and trends in UK waters.

* This matter was also considered at the Supreme Court in January 2011.

Scientific research also requires licences under the UK Marine Act. Licences are given by the Statutory Nature Conservation Agencies (e.g. SNH, CCW and NE). They issue licenses to researchers to 'disturb' dolphins during photo identification (photo id) surveys when the scientific and conservation management benefits outweigh any negative effects, as these involve approaching animals closely. The situation with respect to SNH may change under the new Marine (Scotland) Act (see above).

In addition to disturbance licences, the oil and gas industry require licences from the Department for Energy and Climate Change (DECC), the marine renewables industry require licences from the Crown Estate and UK/Scottish Government, and commercial marine wildlife operators require a licence from the relevant local authority. All these licences can have environmental conditions attached to them.

4.3.4 MPAs under the Marine and Coastal Access Act and Marine (Scotland) Act

MPAs come in various guises. The first introduced in the UK were Marine Nature Reserves (MNRs) under the WCA 1981. These were designed to protect small sites, and only three were ever designated in the UK: Skomer and Lundy Island, and Strangford Lough (in Northern Ireland).

These were followed by Special Areas of Conservation (SACs), designated under the EU Habitats Directive, where only two – Cardigan Bay in Wales and Moray Firth in Scotland – have been specifically designated for cetaceans (bottlenose dolphins). A third SAC, at the northern end of Cardigan Bay, includes bottlenose dolphins as a qualifying feature, but the site was not specifically designated for them. Under the OSPAR Convention, the designation of protected areas is required and these are termed Marine Protected Areas (MPAs). Under the UK Marine & Coastal Access Act, protected areas are termed Marine Conservation Zones (MCZs), and in Wales there may be additional Highly Protected Marine Conservation Zones (HPMCZs), which may be more akin to the concept of Marine Nature Reserves. In Scotland, under the Marine (Scotland) Act, the term of Marine Protected Areas (MPAs), relating to the OSPAR agreement, is retained.

The recent meeting of the Convention on Biological Diversity in Japan confirmed the target that at least 10% of our seas should be protected. The EU's Biodiversity Strategy (the main system to reach CBD targets) failed to meet its target of halting biodiversity loss by 2010, and the process of re-setting these was initiated in January 2011 with the publication of the EC Communication entitled *Options for an EU vision and target for biodiversity beyond 2010*. A big part of this has been the addition of Wilderness in the Biodiversity Strategy (in the separate Wilderness Strategy through the Re-Wilding Europe Project). This primarily concerns ensuring that 'Wilderness' is maintained in the EU. This also applies to marine areas; and the diversity of European cetaceans is an important indicator in the definition of marine wilderness.

There are some fundamental differences between the English/Welsh MCZs and the Scottish MPAs that are currently being proposed. In England and Wales most mobile marine species have been excluded from NE/JNCC's draft ecological network guidance to the regional MCZ projects. This is despite reference to designating sites for mobile species in Defra's draft Guidance Note 1. Also, socio-economic factors are included in determining the sites. The Welsh Assembly Government are considering designating a very small number of small highly protected MCZs. Only 3-4 are currently proposed (WAG 2010), and mobile species (indeed, protected species generally) are not included as primary reasons for site selection. It is obvious that 2-4 small sites cannot provide an 'ecologically coherent network' for any species. Unless mobile species, including highly mobile species, are listed clearly in the ecological guidance, it is unlikely that the regional MCZ projects will recommend these species as protected features, or indeed locate MCZs so as to meet the species' conservation needs.

The situation is better in Scotland, where three cetacean species (minke whale, Risso's dolphin and white-beaked dolphin) are currently included in the Scottish MPA Guidance as priority marine features that will underpin MPA selection. Furthermore, designation of MPAs in Scotland is based on science and not socio-economic considerations. However, this process is not without its flaws (see Case Study 7).

Designations are meant to be completed by 2012 to meet the UK's international obligations. It currently seems likely that the UK will fail cetaceans, as there is no cross-border approach to develop an ecologically coherent network. Recent work by WDCS (Clark *et al.* 2010) has identified areas of critical habitat for cetacean species around the UK, where sufficient data are available, and the report proposes key areas for protection to help ensure favourable status for the UK cetacean populations.

Seabirds, seals and two species of cetacean require protection through the designation of SPAs and SACs under the Birds and Habitats Directives (as part of the Natura 2000 network) respectively. In many cases, sites have not yet been designated for these species (see below for more detail). Seabirds, seals and cetaceans could therefore fall into the 'gap' between the Natura 2000 process and the MCZ process. Furthermore, designating European sites alone will not be sufficient to fulfil the protection requirements for these species as it will not protect *nationally* important sites. Therefore additional sites - MCZs - should be designated for the protection of these mobile species, thereby significantly contributing to the UK wide ecologically coherent network of MPAs.

The omission of mobile species from the ecological network guidance could effectively leave most of these species without any direct increase in protection resulting from the UK Marine Act. Without additional protection provided by MCZs, these species will remain poorly managed and surely be exposed to potential declines.

CASE STUDY 7: Cetaceans in Scottish MPAs

Neither bottlenose dolphins nor harbour porpoises are currently on the proposed list of Priority Marine Features for MPAs to be designated under the Marine (Scotland) Act. These are amongst the two most iconic marine mammals found in Scottish waters and, as with seabirds, there will be gaps in protection if they are not included in the list.

The SCANS (Small Cetacean Abundance in the North Sea and Adjacent waters) surveys in 1994 and 2005 (Hammond *et al*, 2002; SCANS II, 2006) have shown large numbers of harbour porpoises are found in Scotland's waters and many particularly important sites can be found here. As the most abundant coastal cetacean in Scotland and the UK, the harbour porpoise can be considered characteristic of Scotland's marine environment.

In the North Sea, the harbour porpoise is considered under threat because of high bycatch levels, and is included on OSPAR's list of threatened and/or declining species.

Currently, Scotland has one SAC for bottlenose dolphins in the Moray Firth and none for harbour porpoises. In addition to the small population of dolphins in the Moray Firth numbering around 195 animals, Scotland holds two other small and important populations of bottlenose dolphins off the west coast (whose populations consist of some 40 and 15 individuals). Scotland also has the highest densities of harbour porpoises in Europe. Yet neither of these species will benefit by the new provisions for MPAs under the Marine (Scotland) Act, according to the current SNH draft guidelines.

Whilst minke whales, Risso's dolphins and white-beaked dolphins are being used to underpin the selection of MPAs, protection of the other species will be incidental. The current process allows, should evidence be available, the resetting of boundaries to include other species on the Priority Marine Feature list (e.g. harbour porpoise and bottlenose dolphin), and adding further conservation and management objectives for these species to the ncMPA.

Source: *Briefing on Scottish Environment Link's concerns on the draft MPA selection guidelines under the Marine (Scotland) Act 2010.*

4.3.4.1 Wider protection measures under the Marine Acts

Marine Spatial Planning in England and Wales

Careful consideration needs to be given to the locating of all forms of energy generation including across national boundaries and within the waters of neighbouring European countries.

A Pilot Project in the late 1990s investigated the possibilities for a spatial planning approach for the management of our seas using the Irish Sea as an example. The resultant report was very comprehensive and gave many recommendations to take the project forward (DEFRA 2004). Although the project undoubtedly fed in to the development of the Marine and Coastal Access Act, much of the detailed recommendations have been lost and the consultations on the implementation of the Act are far less robust than the pilot project recommended.

The Marine and Coastal Access Act does, however, introduce some sort of spatial planning for our seas. Section Three of the Act introduces the concept of Marine Plans which will be developed in 8 regions as follows:

- (a) the English inshore region;
- (b) the English offshore region;
- (c) the Scottish inshore region;
- (d) the Scottish offshore region;
- (e) the Welsh inshore region;
- (f) the Welsh offshore region;
- (g) the Northern Ireland inshore region;
- (h) the Northern Ireland offshore region.

Those inshore areas within the devolved regions will be overseen by the devolved administrations, whilst the English inshore and all offshore areas will be overseen by the new MMO.

However, it appears that the spatial planning will be less than comprehensive; that zoning is not currently being considered, and that there is to be no overall comprehensive spatial plan for our oceans. A top level UK-wide Marine Policy Statement (MPS), will provide an overarching broad set of principles for marine planning across the whole of the UK, and is due for completion in Spring 2011. There will be different approaches to management in England, Scotland, Wales and Northern Ireland. The MMO does not have jurisdiction over oil and gas developments, military activities, or most renewable energy developments. The former remains with DECC, while the latter is currently dealt with by the Infrastructure Planning Committee (itself soon to be abolished, with its replacement unclear). In addition, most fishery issues remain an EU matter. This means that the Marine Act appears to be a wasted opportunity to put in place a comprehensive and integrated planning system for our seas.

Marine Spatial Planning in Scotland

There are provisions for marine spatial planning within the Marine (Scotland) Act. In accordance with, and sitting below the UK-wide Marine Policy Statement, will be the Scottish National Marine Plan and Regional Marine Plans. Both will contain marine ecosystem objectives, economic objectives and social objectives, and these will be reported on a 5-yearly basis. Regional plans may be steered by Marine Planning Partnerships, representing various stakeholders for a given region (consultation underway).

4.3.5 Effectiveness of Codes of Conduct

4.3.5.1 Ceredigion County Council, Wales

Ceredigion County Council has monitored compliance with their Code since 1994, amassing an impressive 16 years of data. It has involved a large number of local volunteers and enables local buy-in to the code and the protection of dolphins. The latest report (Allan *et al.* 2010) showed that of 494 boat encounters examined for rates of compliance / non-compliance with codes of conduct for boat users, compliance with the code of conduct was high. At one site, for example, it was 95%. Rates of compliance were lower elsewhere. The associated public awareness programme was also assessed as working well at the key site of New Quay.

Most cases of non-compliance involved vessels travelling too fast when close to dolphins. Operators of speedboats and motor boats were most likely not to follow the code of conduct. The report concludes that compliance with the code of conduct significantly reduced the incidence of negative response behaviours by bottlenose dolphins.

In addition to the above surveys, the Cardigan Bay SAC officer had a boat and was involved in a more high profile enforcement / education programme at key sites in the main tourist seasons. Since staff and funding changes in 2011 there is no longer a dedicated SAC officer and the level of enforcement remains unclear for the future.

Whilst compliance with codes of conduct is imperative, it is also important to understand the potential impacts on the long term status, distribution and behaviour of animals that is the focus of attention. A long-term and highly controlled study in Shark Bay, Australia (Bejder 2006, 2008) found that increasing the number of tour vessels even from one to two led to significant population level impacts on the resident bottlenose dolphins; including reduced survival and habitat abandonment.

4.3.5.2 Dolphin Space Program, Moray Firth, Scotland

A study conducted in 2005 indicated that compliance with the DSP guidelines was generally very high. All interactions between accredited tour vessels and wildlife were considered to be non-invasive, with all captains acting in a responsible manner. Complete compliance in terms of vessel conduct (i.e. speed, approach strategy) with DSP guidelines was demonstrated in 64% of trips sampled. For the trips where complete compliance was not achieved, non-compliance mostly involved periods of travel at higher than recommended speeds, although never in close proximity to cetaceans or other wildlife.

Set routes were adhered to by all businesses sampled whilst on board these vessels. However, one boat was observed outside its agreed area whilst observations on another boat were being made. This breach in compliance suggests that pressure to locate cetaceans can cause operators to deviate from fixed routes. There were no attempts to touch, feed or swim with cetaceans on any trips. Whenever passengers mentioned such activities, the response from guides and captains was always to strongly discourage these practices, both in order to prevent stress to cetaceans and for human and cetacean safety reasons.

Since 2005, compliance has remained high and regular seasonal monitoring has indicated very few breaches of the DSP code. Where breaches have occurred, there has generally been a good reason e.g. travelling outside of set routes or areas to avoid bad weather, for purposes of passenger health and safety. There have, however, been a few repeated incidents of area breaches in the inner Moray Firth area. These were only from two operators and were not for safety reasons, but due to pressure to see dolphins when they had not been seen in agreed areas for long periods of time. In these situations, the operators in question were spoken to and a new temporary agreement reached. This allowed the operators in question to travel to a different area where viewing dolphins was more likely, but was not considered such a 'sensitive' area.

In 2010, a new code of conduct was introduced for the inner area of the Moray Firth to deal with these persistent problems of area breaches. The new code allows tour operators more flexibility in regard to areas, but imposes more restrictions on behaviour, speed and time spent in sensitive areas. These sensitive areas now also have 'no go' or 'transit only' zones which operators have agreed to stay out of completely, or where necessary, just use to access other areas. The new code is currently being monitored to ensure it still provides a high level of protection for the dolphins, while allowing operators to conduct their business in a pragmatic fashion.

Whilst the code of conduct is largely being observed, the SAC may already be at capacity (Donovan *et al.* 2010), and impact research is currently being conducted.

There is currently no oversight of the commercial marine wildlife watching industry in the UK as a whole.

5. CONCLUSIONS

5.1 Failings in management of cetacean protection

The seas around the UK are under pressure as never before. The push for massively increased marine renewable energy, the drive to continue maximum exploitation of offshore oil and gas resources, along with increasing pressures from leisure and tourism, boats, whale-watching, recreational fishing, and the continued mis-management of our fisheries all put escalating pressures on our marine wildlife.

Whilst the legislation covering the protection of cetaceans and their habitats in the UK has changed considerably in recent years, mainly driven by EU legislation, it still does not provide a comprehensive and ecologically sound structure to ensure the long term favourable conservation status of our whales, dolphins and porpoises. Instead, as discussed above, it appears in some respects to have taken a step backwards and remains subject to considerable deficiencies.

In addition, overall there is a lack of coordination across different sectors, with markedly different approaches from the different licensing and regulatory bodies. This not only leads to confusion for other users of the marine environment, but means there is no comprehensive package of protection for cetaceans. This lack of coordination appears to be increasing with devolution, with varying legislation and differing willingness to enforce current protection measures within the various administrations and even across advisors such as NE, CCW, SNH and JNCC, where problems could arise from competing and somewhat blurred jurisdictions.

The statutory nature conservation agencies currently largely rely on marine users approaching them in order to provide advice on legislative responsibilities. An example of this includes the Ministry of Defence, which only began formally communicating with JNCC in 2010 and had previously, we believe, been making decisions about legislative responsibilities solely within its own departments. Other sectors, such as ports and harbours, are subject to a complexity of legislation, which could impact on nature conservation issues.

Historically, the UK has applied a very site-based approach to UK conservation. However, meaningful boundaries at sea are difficult to define, and, in any case, mobile species, including cetaceans, are not simply confined to such geographic boundaries, although as noted earlier, particular areas may be important to them.

For the two cetacean species currently listed in the Habitats Directive as requiring the designation of SACs, harbour porpoise and bottlenose dolphin, there is still no 'coherent network' of protected sites proposed. There are none currently proposed in the UK for the former and only three established for the latter with no new proposals. In addition, although there is likely to be more scrutiny of a proposal for an activity within a protected area, there is growing concern about the extent of effective 'protection' afforded to these sites.

The protection given to cetacean species outside of these sites that is needed to implement the wider protection measures required by the Directive, seems weak and from an enforcement point of view, confusing.

Both DEFRA and the Scottish Government state that habitats and species that are conserved under European legislation will not require further protection through protected sites. As a result, there will be no new protected areas for bottlenose dolphins or any for harbour porpoises. We anticipate that there will also be no species-based MCZs for cetaceans in England or Wales, undermining cetacean conservation.

The development of an 'ecologically coherent network' of sites is being planned in a very piecemeal way. The English waters are the subject of a series of regional initiatives, each with a slightly different approach. Welsh waters are being assessed by the Welsh Government with limited opportunities for direct public involvement. Moreover, the long-term direction of MCZ policies within Welsh waters is not especially clear at this juncture. The current focus remains on identifying a small number of HPM CZs to integrate within current protected areas; there is little indication as yet whether this policy will continue into the mid-term future, or whether new areas may be identified as more generalised MCZs. The approach under the Marine (Scotland) Act is still developing with input from some stakeholders.

A further problem is the lack of adequate knowledge of status and trends, making the scale of possible impacts and importance of individual sites difficult to assess. It is difficult to apply any laws when our knowledge is based on insufficient baseline data. Two SCANS surveys 11 years apart, conducted in a single month and of varying extent,

regional dedicated surveys along with casual observations (albeit carefully collated by voluntary organisations), and some seabird surveys seemingly form the basis of our understanding upon which all cetacean related decisions surrounding development at sea are made.

5.2 Recommendations

5.2.1 Changes to existing law

Comprehensive legislation needs to be in place to protect cetaceans. The existing body of law does not meet this requirement and for the immediate future, 'recklessness' needs to be reinstated into the Habitats Regulations and the WCA 1981, to make it an offence to deliberately or 'recklessly' capture, kill, disturb, or trade in an animal of European protected species which includes all dolphins, whales and porpoises.

Changes are also required within the regulations to allow the prohibition of the deterioration or destruction of breeding and resting sites to be defined and enforced with regard to mobile marine species. Where offences are created, meaningful penalties need to be applied.

Moreover, as observed above, the current wildlife legislation has been subject to substantial amendments throughout the past thirty years, for which the Law Commission has expressly considered creates substantial difficulties of interpretation even for specialists.

5.2.2 MPAs

To ensure that there is a 'coherent network' of sites to protect cetaceans, many more sites need to be designated. For bottlenose dolphins and harbour porpoises this can be done under the Habitats Directive as SACs. These, however, need to be large enough to cover all key requirements of the species. For other cetacean species these can be designated as MCZs or MPAs under the Marine Acts. Due to the overall lack of knowledge of distribution and habitat needs, the designations should not be a 'one off' exercise but must be seen as an ongoing process to be informed by new research and surveys. Initial sites can be identified using the areas of critical habitat identified by for example Clark *et al.* (2010).

The designation of such a network needs to be carefully co-ordinated across the various administrations involved to ensure that it is indeed coherent and the recommendations of the Irish Sea Pilot Study need to be implemented (Roberts *et al.* 2003). These state that *"a protected area network needs to be greater than the sum of its parts. The emphasis in Europe has so far been on selecting sites to protect specific attributes with little consideration given to how those sites interact with others. Management has been site specific rather than taking into account how a protected area affects and is affected by others. A central objective for a network is to ensure that there is ecological connectivity among protected area units. For species that move or disperse widely, populations in protected areas should be mutually supporting. Levels of coverage, replication, size and spacing of protected areas need to be set taking connectivity considerations into account."*

Sites must also be properly protected. There should be a presumption against any developments within protected areas, unless robust assessments show beyond doubt that there will be no adverse effects on the species and habitats involved as well as the overall integrity of the site. Comprehensive research and assessments should be undertaken with appropriate public consultation whenever any development, plan or project may affect a site (and this includes developments outwith the sites), and a precautionary approach to decisions taken. Management plans for SACs need to be updated along with new plans being developed for sites designated under the Marine Acts so that they reflect this presumption against development and the strict application of assessments. For larger sites, zoning of activities may be appropriate.

5.2.3 Oversight

The Marine Acts are essentially pieces of enabling legislation and, at the time of writing, many consultations are occurring with regard to their implementation. Already some problems are obvious. Some key issues are beyond the scope of the Acts and therefore will not necessarily be included in spatial planning. Oil and gas licensing, for example, remains with DECC and 'major' developments will be covered by the Infrastructure Planning Commission (or its probable successor within the Planning Inspectorate) in England and Wales; including the large scale windfarms proposed under Round 3 licensing. The Marine Management Organisation will only cover English waters²⁰ and

20. Welsh Ministers have the power under both this Act and the Government of Wales Act 2006 to "buy in" expertise from the MMO. The Welsh Government has currently shown limited interest in doing this.

offshore Welsh waters, meaning there will be a continued difference in approach in different areas, and ‘major’ development projects will be considered outside any special or protective structure.

There needs to be better coordination of planning across all regions and all industry sectors throughout the UK. Overall spatial planning, licensing and enforcement needs to be separated from those bodies promoting industry sectors to ensure the process is unbiased and transparent, whilst independence needs to be sought across all oversight.

5.2.4 Data

There is no UK-wide surveillance scheme for cetaceans and robust population estimates exist for only a few species. Therefore, precaution should be an integral component of decision making, but despite the clear statements made in the Wadenzee judgement, very few decisions can be seen to be precautionary in their approach. Moreover, a failure to uphold an effective monitoring system for species subject to “strict protection” under the Habitats Directive has been ruled to breach this legislation by the European Court of Justice in 2007 (Commission v. Ireland: Case 183/07).

Whilst data gaps have been acknowledged and have delayed the process of designated MPAs under the Marine Acts, the same data gaps have not been seen as a reason to delay development consents. Therefore, governments need to invest in comprehensive baseline, long term research and survey programmes collecting baseline cetacean data over the long term where these are lacking. This should be taken under a ‘polluter pays’ approach, where industries are expected to substantially contribute to the costs of the independent research required to allow their activities. This is quickly becoming the norm for the marine renewable energy industry. It should also be a requirement for the oil and gas industry, the Ministry of Defence and other marine users.

Such an arrangement has worked well in the outer Moray Firth, where DECC has led a three year funding program of field and desk-based research after WDCC conducted studies in the area (Eisfeld *et al.* 2009), and raised concerns about development there. Such a research model should not be restricted to the outer Moray Firth and government departments such as DECC should be working towards such fine scale data collection to inform decision making wherever industry proposes to operate.

SEAs and EIAs need to be carried out that do not pre-suppose that development is inevitable.

In addition, the funding gained from developers should be administered by a truly independent body/committee (made up of experts in the various appropriate fields) and provide independent oversight of assessment processes.

5.2.5 Disturbance

On direct protection, there has been great difficulty implementing and defining protection from disturbance, despite this being fundamental to the animals’ well being.

Urgent measures are required to understand the extent of and to prevent (not just minimise) disturbance, protect breeding and resting places, control noise, and ensure cross-sectoral planning and zoning of activities.

This will require a better legal definition of ‘disturbance’ and one that can include reckless disturbance as deliberate under Article 12. In addition, a definition of ‘breeding and resting places’ is required for mobile marine species.

5.2.6 Fisheries

Bycatch of cetaceans and destruction of habitat from fisheries remain a major problem with largely ineffective attempts having been made to resolve this issue. Full consideration of this complex issue is beyond the scope of this document but for a recent review please see Nunny (2011).

5.2.7 Codes of Conduct

Codes of Conduct should be made legally enforceable across all sectors with a lead organisation/s made responsible for enforcement. Impact studies should be undertaken in areas where recreational and commercial pressures may exist, including in both bottlenose dolphin SACs in Cardigan Bay and the Moray Firth.

Effective methods and incentives that promote compliance with laws or voluntary regulations need to be introduced, including via the appointment of marine wildlife tourism officers located in areas of high marine tourism activity and/or areas which are particularly vulnerable. This should be for all forms of marine wildlife and not just the bottlenose dolphin within SACs.)

Only when any process is reinforced with a basic underlying principle that embeds protection of cetaceans and their habitats into all decision-making processes will we be able to achieve favourable conservation status for our whales, dolphins and porpoises. Unless this happens and the principles on which we base our decision-making process are changed, then the environment will still be insufficiently protected²¹.

What is ultimately required is a proper commitment from Government to protect cetaceans and their habitats, which is something that we found lacking as we investigated the recent development and implementation of current legislation during the production of this report.

5.3 Acknowledgements

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21. There has been a recent commitment from the UK government to review how the Habitats Directive is implemented and that this will be completed before the next budget (http://cdn.hm-treasury.gov.uk/autumn_statement.pdf Page 34 and see <http://www.defra.gov.uk/news/2011/11/29/habitats-and-birds-directives/>).

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7. APPENDIX I

WDCS comments on JNCC Guidance on the deliberate disturbance of marine European Protected Species

We welcome efforts to provide comprehensive guidance that allows industry to make informed decisions about marine species conservation. European Protected Species (EPS) include all species of cetaceans and turtles and the sturgeon, and so the guidance within the document should apply to all these species.

However, the guidance contains some considerable flaws and we do not believe that if it were finalised in its current form that it would offer EPS the protection from disturbance that they are required under the EU Habitats Directive. In general, much more detailed information about important habitats in UK waters is required. The UK government should undertake field studies to better understand the population distribution, abundance and trends in UK waters.

SUMMARY

- Firstly, we are extremely concerned about the apparent conflict between what is proposed by the JNCC as interpretation of the new laws (The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007) compared with what is already in practice within 12nm provided by the Wildlife and Countryside Act (WCA) 1981. The WCA 1981 (and its equivalent in Scotland – the Nature Conservation Act Scotland 2004) has become increasingly important in terms of preventing disturbance to cetaceans, including inter alia a recent court case concerning a solitary bottlenose dolphin. Because of its growing importance in terms of preventing disturbance, under no circumstances should the provisions of this law be diluted, but we fear that by having a second law relating to much the same issues in play in the same area (but which is interpreted in a far less precautionary manner), there will be undesirable consequences for the protection already in place.
- We note that it was relatively recently that the 1981 Act was amended (via the Countryside and Rights of Way Act) to include the clause ‘reckless disturbance’ and removed the requirement that the offence was tied to a site. In both cases these changes were made because experience has shown that ‘deliberate’ and ‘site specific’ disturbance were very difficult offences to prosecute. The government was convinced by this case and the law amended. WDCS was closely involved in these changes to law and as noted above we believe that the interpretation offered will provide significant unhelpful interpretive problems and push the current protection in an unhelpful direction.
- WDCS was not consulted on the changes made to the relevant UK laws last summer. If we had been, we would have raised concerns then. These would have included a concern related to changes to the definition of which species are covered by the WCA 1981. It appears to us that harbour porpoises have now been excluded from its provisions. As far as we are aware there has been no discussion or explanation for this – but, if we are correct, this down-grading of the protection afforded to this species is a serious matter.
- Data available on the distribution and abundance of marine EPS is not of a sufficient scientific standard to enable reasonable estimates of population size, population units or status. There simply are not enough data available on populations to be able to determine with reasonable confidence a percentage criterion. SCANS II survey blocks provide the best available estimates for those cetacean species in UK waters, predominantly occurring on the continental shelf (i.e. harbour porpoise, minke whale, white-beaked dolphin and bottlenose dolphin). But the SCANS surveys are only one seasonal snapshot in time, with a 10 year gap between collection of datasets. It is not therefore appropriate to extrapolate SCANS beyond the purpose for which it was developed. SCANS data are not appropriate to be used for estimates of density and finer-scale information are required where such data are not available.
- It’s not clear how cumulative impacts of all disturbing activities that might affect a population are to be accounted for. This is a critical consideration.
- **The chosen percentages for significance seem to be somewhat arbitrary.** For many cetacean species around the UK there are no population estimates or only estimates for parts of their overall range and such an approach cannot be completed with any confidence – it is also not clear whether there are discrete sub-units within wider populations as we might expect with such species. The general notion taken by JNCC that cetaceans should be treated as large, ocean-wide unified populations is not precautionary and not in the best interests of conservation. Whilst it is left open that where scientific data in the future shows there to be smaller ‘conservation units’ the approach may change we would urge that a different approach is taken.
- Disturbance guidance should apply equally to all intense noise sources and not just pile driving, explosions and seismic surveying, including naval activities.

- Guidance should be best practise and should be consistent for all sources.
- Guidance should be clear and easy for industry to understand and apply.
- Guidance should be available for Scotland also.
- Best practise measures are required for seals and other marine species that are not listed as European Protected Species. Seals have been shown to be vulnerable to noise impacts and all measures should apply to them.

Under Section 1. Disturbance Offence:

- On page 4, an interpretation of 'significant group' is given which would include disturbance of a single animal, but only where that would significantly affect the ability of a significant group of animals to survive, breed or rear or nurture their young. JNCC says it seems 'unlikely that disturbance of an individual would significantly affect the local distribution or abundance of a species'. This is certainly not the case for small, sociable populations including that of the bottlenose dolphin, where the population in the Moray Firth for example, is around 130 animals.

Under Section 2. Assessing the likelihood of a disturbance offence:

- We welcome the activity-specific approach (single act may fall below the threshold of 'significant disturbance', but a repetition of the same act may result in the threshold being reached'). Where activities repeatedly occur in a region broader consideration of their potential impacts should be required through Environmental Impact Assessment (EIA) as required under the EU EIA Directive. Activities can not effectively be considered on an individual activity by activity basis. To begin to understand and mitigate for disturbance, this should be undertaken at the same scale as the population is affected - on a cumulative and region by region ecosystem scale. Strategic Environmental Assessment (SEA) is also required so that a variety of sources can be considered in a regional context. Whilst a number of activities are listed in the guidance document, populations (and particularly in coastal waters) are likely to encounter a number of them, routinely.
- We welcome the species-specific approach ('different species may have different sensitivities or reactions to the same type of disturbance'. 'The sensitivity of a species to disturbance may also be different depending on the season or on stages in its life cycle'), but disagree with the statement 'Also, for cetaceans, currently there is no evidence to support the perceived idea that mothers and newborn calves will be more vulnerable to disturbance than say, for example, mature females and juveniles'. For example, cow/calf pairs are in the author's experience more likely to exhibit an avoidance response to man-made sounds they are unaccustomed to. Thus any management issues relating to seismic surveys should consider the cow/calf responses as the defining limits (McCauley et al., 2000).
- Under 2.2.: What happens where there is no best population abundance estimate and genetic structuring available, as is the case for the majority of cetacean species in UK waters? As a prominent example, how can beaked whales or blue whales be effectively protected from the combined effects of ongoing seismic surveys and naval activities occurring in the Atlantic Frontier, when we do not have realistic estimates of population sizes?
- We do not agree with the statement that 'harbour porpoise, the most abundant marine mammal species in UK and adjacent waters, are known to form large populations whose individuals may range over very large distances (e.g. the whole of the British North Sea)'. Whilst harbour porpoises may be one of the UK's more abundant species, we have limited knowledge of their population structure and trends. Population level impacts are known to be occurring in the south-west of the UK. It is not clear to WDCS how the disturbance guidance will lead to better protection for these animals.
- This document is very contradicting and is likely to be confusing for industry that are expected to apply it: JNCC say: 'Cetacean species, by contrast, form groups of various sizes, depending on the species, their behaviour, the time of the year and the region. (...). The gregarious behaviour of cetaceans therefore makes them more vulnerable to disturbance, since significant groups of animals could potentially be affected by shorter-term activities with smaller ranges of impact'. Whereas earlier JNCC state that it seems unlikely that disturbance of an individual would significantly affect the local distribution or abundance of a species.
- We welcome the consideration of a distinction between species for which the FCS was assessed as favourable and those for which the FCS was assessed as unknown or unfavourable (even though the reasoning for giving one population favourable conservation status and another unfavourable is unclear). However, since the bottlenose dolphin was assessed to be favourable in 2006, the latest statistical analysis is reporting that the bottlenose dolphins in the Moray Firth shows that the population is more likely to be in decline than increasing (Corkrey et al., in press).
- The articles referenced for the annual, potential cetacean population rate of increase (estimated, using models, to be in the order of 4%) are from 1991 and 1998. These are old and insufficient to use for all

different species of cetaceans. All data sets available are surrounded by considerable uncertainty and they are not reliable enough to base such big management decisions on. Where low statistical power is demonstrated, considerable uncertainty in accuracy prevails. As an example, annual abundance estimates for bottlenose dolphins have a high coefficient of variation, and the statistical power to detect trends is low (Gerrodette, 1987). As shown in Wilson et al. (1999) and further developed in Thompson et al. (2000), this means that it would take around 20 years to have a high (>95%) probability of detecting a 2% annual decline in the population. Consequently, the lack of a clear trend in annual abundance estimates as presented in Thompson et al. (2006) cannot be taken as certain evidence of no change in population size.

- JNCC welcomes views on thresholds to help determine what would constitute a significant group – their suggestion for cetacean species with unfavourable or unknown FCS (favourable conservation status) should be either 1 or 2% of best available population estimate, for cetacean species where the FCS is favourable, the threshold should be either 2 or 4%. ⇨ **The chosen percentages seem to be totally arbitrary.** For many cetacean species around the UK there are no population estimates or only estimates for parts of their overall range. Furthermore, these estimates are generated infrequently and are associated with considerable uncertainty. For all the reasons described above, we do not believe that it is possible or appropriate to use this method to determine significance.

Under Section 3. The activities:

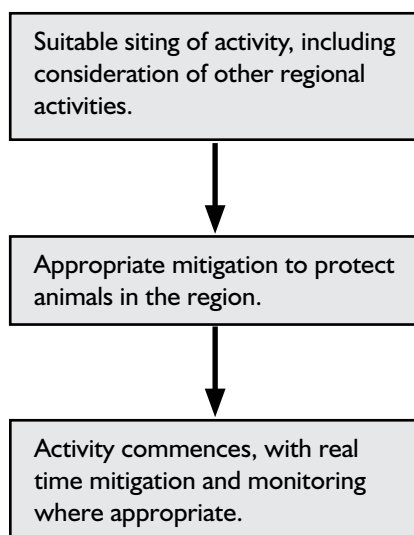
- We welcome the consideration of cumulative effects of activities. This is critical to beginning to understand the longer term and multiplicative effects of disturbance.
- Sea fishing is exempt from disturbance as 'all activities related to sea fishing are regulated within the framework of the Common Fisheries Policy' ("the defendant shall not be taken deliberately to have caused 'significant disturbance' where he did not intend that disturbance to occur and had taken reasonable steps to comply with requirements of relevant Community instruments" ⇨ This approach does not take the high bycatch of common dolphins in the English Channel into account. Fishermen fish there knowing well that the risk of bycatch is high. For a cumulative approach to be successful, all known threats have to be considered.

3.24. Construction works:

- "In order to obtain a license it may be necessary to carry out an EIA". ⇨ Unless it can be demonstrated that no impact will occur, there should always be an EIA before marine construction work. Clear and precautionary guidance is required from JNCC.

Pile driving:

- "Mitigation should be (and is usually) included in the project proposal by the developer, and further developed as part of the EIA process" ⇨ Mitigation measures cannot be relied upon to protect animals from harm. Other than the complete exclusion of activities from an area, there are no mitigation measures that have been scientifically proven to protect animals from short term observable behavioural effects of a number of activities that occur in the marine environment. Site selection is key in best environmental practice and should be the first tier of decision making. More emphasis should be placed on the use of alternative and more benign sources as a means of protecting populations. Mitigation measures should then be used as a second tier of responsible action, once suitable siting of activities has been demonstrated.



Rock dumping:

- “No data are available on what the noise levels generated by rock dumping might be, however this will typically be of short duration, and has low likelihood of a potential impact on cetaceans from the generation of noise”. ⇒ Lack of data is interpreted as lack of harm and this is not sufficient to protect marine animals from disturbance.

3.2.5. Decommissioning, including well abandonment

- Mitigation by “simply having a member of the ship’s crew making sure the area is clear of cetaceans before starting the explosions, to more sophisticated mitigation measures” ⇒ Explosions have a fast rise time and can kill marine mammals. Decommissioning can have considerable environmental impacts and there are a number of requirements that need to be fulfilled before explosive use is allowed to go ahead. Not least of all, consideration of the requirement for explosives in the future should be accounted for in the planning stages of a development and should not be allowed in particularly sensitive habitats where a suitable level of mitigation can not be obtained. There should be a requirement for trained and independent MMOs, plus passive acoustic monitoring (PAM). However mitigation can not ensure protection of European Protected Species. See comments on Annex B for more detailed requirements.

3.2.7. Electromagnetic surveys

- “Not much is known about the potential effects of this technique on cetaceans”. Surveys are carried out already, even though “no guidelines exist on good practice during the use of this technique”. Efforts to investigate and understand potential impacts of electromagnetic species on European Protected Species are clearly a requirement. Until demonstrated otherwise, guidance should be required as with other activities that have the potential to disturb, injure or kill EPS.

3.2.8. Explosive use

- ‘It is considered that there would be a low likelihood of disturbance occurring that would constitute an offence under the HR and OMR if suitable mitigation was in place for activities that make use of explosives for a relatively short period of time’ ⇒ Guidance should provide straight forward guidance as to what constitutes a ‘relatively short period of time’. Once again we reiterate that mitigation measures cannot be relied upon to protect animals from harm.

3.2.14. Seismic and other geophysical surveys

Seismic surveys:

- JNCC guidance admits that “most species of cetacean may be exposed to sounds produced during seismic surveys”, and they say that “evidence of avoidance or short-term behavioural responses is contradictory and might vary depending on the species” ⇒ this does not mean that there might not be an impact on the species. The guidance also says that “using appropriate mitigation measures the potential for injury and disturbance should be much reduced” ⇒ “should be” as mitigation measures remain largely unproven (Weir & Dolman, 2007). Whilst cause and effect are difficult to prove, the EU Habitats Directive requires strict protection (92/43/EEC). Applying avoidance measures first is a logical and precautionary way to prevent disturbance. Applying mitigation and best practice guidelines are worthy of consideration, however only in the capacity that they have been shown to be effective. The majority of mitigation methods are as yet untested, and so whilst they may be ‘common sense’ we do not believe that this is adequate to meet the required standard of the EU Habitats Directive. We refer you to Weir & Dolman (2007) and other similar publications, which document in detail the limitations of on board mitigation measures for the protection of marine species during seismic surveys. For the most part, these limitations are extended to both the use of pile driving and explosives, in that many of the monitoring and mitigation measures are the same. For intense noise sources where mitigation methods can not prevent significant disturbance, broader measures are required to protect marine European Protected Species (EPS), including through spatio-temporal restrictions.
- For seismic surveys, companies do not apply for a wildlife license, but rather for consent from BERR with consultation of JNCC. We need a unified system for licensing to enable the consideration of cumulative impacts.

Side scan sonar surveys

- “The potential impacts of side scan sonar on marine mammals are not well understood”, but JNCC guidance concludes that “the risk of any potential impact will be extremely localised” which means there remains a risk. Therefore guidance is required.

Sub-bottom profiling (pingers, boomers, sparkers and chirp systems)

- There is very little published information on the sound pressure levels generated from sub-bottom profiling equipment. No guidelines are in existence for the use of sub-bottom profiling equipment in the UK and “the need for these will be re-assessed if further evidence of the effects generated by sub-bottom profiling equipment comes to light” ⇒ This is not applying the precautionary approach as is required under the EU Habitats Directive. Efforts should be undertaken to investigate sound pressure levels and to set guidance in a precautionary manner in the meantime.

3.2.15. Shipping and vessel movements

- No good practice guidelines for minimisation of disturbance by shipping currently in the UK ⇒ Again, these are required and should be consulted upon. Boat disturbance is a considerable issue for some populations of coastal species in some regions and/or during particular seasons and efforts need to be made, beyond Wildlife Watching Codes, to protect coastal populations from the long term and cumulative impacts that may result.

Under Section 4. Marine EPSs – Species specific guidance

4.1. Cetaceans (dolphins, porpoises and whales)

- “...there is insufficient data linking human activities to disturbance and to its long-term effects at the species, population or even individual levels” ⇒ Yet, on p.24 JNCC list direct responses of cetaceans to disturbance which include: “moving away from an area for a period of time, diving behaviour changes (e.g. reduced surfacing time), vocalisation changes and separation of mothers and calves”. Also, in Section 2, p.2 JNCC say “also, for cetaceans, currently there is no evidence to support the perceived idea that mothers and newborn calves will be more vulnerable to disturbance than say, for example, mature females and juveniles.” Contradictions and inconsistencies will not help industry to make sound decisions. Guidance needs to be clear and straightforward.
- The data provided in the guidance document was mostly collected in the summer months and only gives a snapshot in time.

Common species in UK waters (FCS is favourable):

- There is no explanation in this guidance document on how JNCC choose which populations have a favourable conservation status and which do not. It is still not apparent how the choice of favourable, unfavourable or unknown conservation status is made. This should be clear.
- Data available on the distribution and abundance of marine EPS is not of a sufficient scientific standard to enable reasonable estimates of population size or status. If we consider the bottlenose dolphin, a species that has been studied the most extensively in UK waters over the last 15 years, there are still considerable uncertainty about the population size, extent of range and the population trend. Whilst previous population estimates have shown an increase in size, the latest study shows that the population is more likely to be declining. If our understanding of basic population parameters is not clear for our most studied cetacean species, we can not have confidence given the available data for all other cetacean species. We have nowhere near the required level of data for any other cetacean species. Population estimates that have been generated from infrequent surveys have considerable uncertainty surrounding them.
- Legislated boundaries are arbitrary to marine EPS. That guidance for Scotland is to be different to guidance for English, Welsh and the UK offshore marine area will be challenging and required ongoing communication and collaboration between relevant government departments.
- For most cetaceans around the UK, there is insufficient data about population boundaries (again, the lack of evidence of subdivisions in populations does not mean that there are no subdivisions in existence). Although some data on genetic structure exist for some species that suggest some spatial population subdivisions, this data should not be considered the only tool to define a population. The International Whaling Commission considered an appropriate unit for management for humpback whales was that of the feeding sub-stock, in other words groups of animals returning to the same feeding location. This concept, based on long term studies, might well be applied to other species if more data becomes available. JNCC should initiate a long term research programme to begin to answer these basic questions.

Bottlenose dolphin

- It is not clear if the offshore population in the north Atlantic and the resident populations in the Moray Firth and Cardigan Bay are going to be considered as separate entities or not. Clearly they should be.
- It is not clear what figures were used to conclude that 2 – 4 animals could be considered a significant group for coastal populations. As an example for the Moray Firth estimate of 129 animals, then it should be 3 – 4 animals as 2% of 129 is 2.58 which rounds up to 3.

- In terms of findings by Eisfeld et al. (in prep.) for the Moray Firth and Magileviciute (<http://www.wildlifeextra.com/go/news/cardigan-dolphins734.html>) for Cardigan Bay, there are sentinel or satellite dolphins that connect distinct groups of animals with each other, if these animals are removed for whatever reason, the connection between the groups is disrupted and communication fails and potential breeding links might be lost.

Application of percentage criterion in general

- We disagree with the approach taken by JNCC. It's impractical, because it will not be possible to prove that such high numbers as JNCC propose (e.g. for harbour porpoise: 4,600 porpoise in the North Sea or 1,900 animals in the Irish and Celtic Sea) are disturbed or in any way affected, especially as harbour porpoise are mostly seen in very small groups. This holds true for all the other species JNCC is considering in this guidance, even for the species with unknown or unfavourable FCS, as most of them occur in small groups. In addition, to apply a percentage criterion, recent data on local abundance within an area are required, rather than knowledge that a particular area was used by cetaceans and in most cases this kind of data do not exist.

Other species requiring protection

Best practise measures are required for seals and other marine species that are not listed as European Protected Species. Seals have been shown to be vulnerable to noise impacts and all measures should apply to them.

Annexes

Generally, guidance on piling, explosives and seismic surveys have some common components. These should include:

- 1) Consideration of EPS in the planning stages and suitable siting of activities;
- 2) areas of exclusion where mitigation is not sufficient to minimise disturbance;
- 3) comparable monitoring measures including adequate numbers of MMOs and PAM operators to conduct a full survey;
- 4) no activities at night or in adverse weather conditions;
- 5) exclusion zones including shut down when an animal enters that EZ; and,
- 6) adequate reporting back in a timely manner.

JNCC should endeavour to monitor and review guidance regularly to inform adaptive management. In addition, efforts to investigate the effectiveness of a number of the mitigation measures specified are required and should be undertaken.

Annex A – Statutory nature conservation agency protocol for mitigation of wind farm piling noise at sea – March 2008

WDCS support appropriately sited marine renewable developments. We refer you to Dolman et al. 2007 and Simmonds & Dolman, 2008.

Co-ordination between developments in UK and Scottish waters is required.

Guidance should apply to all European Protected Species, and should also include seals. The guidance is confusing in some places in that it specifies cetaceans, and marine mammals in others, we suggest changing cetaceans to marine mammals throughout.

Considering that mitigation measures are largely untested and that they are limited in their effectiveness (see Weir & Dolman, 2007 for fuller discussion), we concur that additional measures should be required in areas where EIAs suggest high abundances or sensitivities. However, firstly, it should not be a given that developments will be allowed to occur in such areas where impacts are likely to be significant to populations. Secondly, when conditions can be met, additional measures should be specified in this guidance.

Sufficient reporting back of mitigation and monitoring should be required and within a reasonable timeframe. Assessment of measures should be undertaken on a regular basis, as stated in the guidance, and not more than every 5 years, and amendments made as appropriate and subject to public consultation and scrutiny.

Under the section entitled 'Risk management and the precautionary principle' it should be specified that activities do not necessarily have to occur within an SAC to impact upon them (as stated in the European Commission, 2000).

Marine Mammal Observers (MMOs) and Passive Acoustic Monitoring (PAM) operators should be trained and available in sufficient numbers to monitor effectively throughout the work period.

Piling should be shut down if marine mammals enter the specified Exclusion Zone (EZ). If guidance on this point is not authoritative, it will not occur. It should be a requirement.

It should be specified that when seasonal restrictions aren't suitable (because animals are present all year for example) that more stringent measures will be required or alternative techniques.

Guidance is also required for marine wave and tidal devices.

Annex B – JNCC Guidelines for Minimising Acoustic Disturbance to Marine Mammals whilst using explosives – March 2008

Guidance provided during the planning stages are logical and well considered. However, given the impulsive nature of explosives and the potential for damage and injury at considerable distances from the source, the use of MMOs and PAM should be a requirement to ensure disturbance impacts to European Protected Species are minimised. The language needs revising so that it reflects that this is a standard requirement rather than a 'consideration' as it currently stands. It will not be possible to provide an MMO report and to monitor implementation and effectiveness of monitoring and mitigation measures if MMOs are not used.

In addition, guidance should be provided on activities proposed in or adjacent to Special Areas of Conservation (SACs) and other areas where aggregations of EPS are found.

As with pile driving and with seismic surveys, guidance is required for limitation of operations in adverse weather conditions and at night.

Annex C – Draft guidelines for minimising acoustic disturbance to marine mammals from seismic surveys

To begin with, we refer you to Weir & Dolman (2007) and other similar publications, all of which document in detail the limitations of on board mitigation measures for the protection of marine species during seismic surveys.

Use of PAM should be encouraged but its limitations should be specified. For example, it has almost no utility for the protection of minke whales, a species regularly encountered in UK and Scottish waters.

The date and location of survey should be provided to a sufficient level of detail to be useful for analysis purposes.

MMOs should receive regular training and should be dedicated and available in sufficient numbers to conduct a comprehensive survey. PAM operators should be available in addition to visual MMOs.

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Confidentiality

According to the requirements of the Freedom of Information Act (2000), all information contained in any consultation responses - including personal information - may be subject to publication or disclosure. At the end of the consultation period copies of the responses we receive may be made publicly available, or the information they contain may be published on our website in a summary of responses. If you wish to request that information given in response to the consultation be kept confidential, this will only be possible if it is consistent with freedom of information obligations.