

# THE COMMON ENEMY: COASTAL EROSION AND THE PROTECTION OF ENVIRONMENTALLY IMPORTANT SITES

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## INTRODUCTION

Since England first acquired a coastline, the sea has been moulding its shores. Over the centuries, man has sought to reclaim land from the sea, or keep the sea at bay. With the arrival of climate change that battle has intensified. Sites monitored by the Environment Agency 'indicate a relative rise in historic mean sea level by up to 2.2mm per year. This reflects a real sea level rise of about 1mm per year combined with long-term geological movements (where by the south and east are sinking and the north of the UK is rising). These are significant upward trends and are indicative of changing climate.<sup>1</sup> Rising sea levels are not the only result of climate change. Storm frequency increases and this in turn is likely to lead to an increase in the size and energy of the waves. Waves are the main cause of coastal erosion and there is some evidence that the height of offshore waves is increasing. That is not, of course, the end of the matter. The material displaced by the waves must go somewhere and will be deposited either on another section of coastline or offshore, which will result in further environmental change.<sup>2</sup> The impact of fluvial and coastal flooding will depend upon the management strategy adopted,<sup>3</sup> but this article is primarily concerned with questions of the protection of environmentally important sites. It examines the legal regimes protecting wetlands, habitats and wild birds under the Ramsar Convention<sup>4</sup> and the EC Habitats and Birds Directives and in particular, the provisions regarding activities which adversely affect protected sites. Examples of some of the issues faced by specific English sites which are particularly vulnerable to coastal erosion are considered. Finally, some of the recent Government strategies and policies on coastal erosion and the nature for compensatory measures are reviewed.

\* The author would like to thank Professor William Howarth for his comments and suggestions during the preparation of this article.

1 Environment Agency 'Environmental Indicators: sea level change' (2005) [http://www.environment-agency.gov.uk/yourenv/432430/432434/432475/438776/?version=1&lang=\\_e](http://www.environment-agency.gov.uk/yourenv/432430/432434/432475/438776/?version=1&lang=_e).

2 Defra 'Charting Progress: An Integrated Assessment of the State of UK Seas' (2005) <http://www.defra.gov.uk/environment/water/marine/uk/stateofsea/index.htm>.

3 For a detailed analysis of predicted impacts and strategies see E Evans and others *Foresight Future Flooding Scientific Summary* (Office of Science and Technology London 2004) Volume 1 Future risks and their drivers [http://www.foresight.gov.uk/Previous\\_Projects/Flood\\_and\\_Coastal\\_Defence/Reports\\_and\\_Publications/Volume1/Chapter4a.pdf](http://www.foresight.gov.uk/Previous_Projects/Flood_and_Coastal_Defence/Reports_and_Publications/Volume1/Chapter4a.pdf).

4 Convention on Wetlands of International Importance especially as Waterfowl Habitat (2 February 1971) UNTS 14583 (Ramsar Convention) as amended by the Paris Protocol 3 December 1982 and Regina Amendments 28 May 1987.

## PROTECTED SITES

The types of protection and the array of initials which accompanies them, especially at a national level, can be confusing to say the least.<sup>5</sup> For the purposes of this article, the sites to be considered will be those designated under the Convention on Wetlands of International Importance Especially as Waterfowl Habitat 1971 (the Ramsar Convention) otherwise referred to as 'Ramsar sites'; Special Protected Areas (SPAs) designated under the Conservation of Wild Birds Directive<sup>6</sup> (the Birds Directive) and Special Areas of Conservation (SACs) (including Marine SACs) designated under the Conservation of Natural Habitats and of Wild Fauna and Flora Directive<sup>7</sup> (the Habitats Directive). SPAs and both types of SACs can be grouped together under the 'Natura 2000' label as explained below. One site may be designated under a selection of schemes. For example, the Medway Estuary and Marshes are designated as a Ramsar site and an SPA. As the Sites of Special Scientific Interest (SSSI) system under national legislation<sup>8</sup> is used to protect SPAs and SACs, this site is also designated an SSSI. In addition to being a Ramsar site, an SPA, an SAC and SSSI, the North Norfolk Coast is also a Marine SAC under the Habitats Directive.<sup>9</sup>

### Ramsar sites

Under the Ramsar Convention, a Contracting Party is required to 'designate suitable wetlands ... for inclusion in a List of Wetlands of International Importance ... "the List"' (Article 2(1)). The definition of 'wetlands' in Article 1 includes salt water and coastal waters which do not exceed a depth of six metres at low tide. Designation does not prejudice 'exclusive sovereign rights' (Article 2(3)). The phrase 'exclusive sovereign rights' is not defined in the Convention, but has been interpreted in the context of the right of the Contracting Party to deal with its own natural resources.<sup>10</sup> The concept is relevant, for example, when it comes to a Contracting Party delisting a site. A site may be delisted

5 For further discussion, see K Bishop, A Phillips and LM Warren 'Protected Areas for the Future: Models from the Past' (1997) 40 *Journal of Environmental Planning and Management* 81-110.

6 Directive 79/409/EEC [1979] OJ L103.

7 Directive 92/43/EEC [1992] OJ L206.

8 Wildlife and Countryside Act 1981 as amended by Countryside and Rights of Way Act 2000.

9 It is also a Biosphere Reserve, but that is outside the scope of this article.

10 MP Bowman 'Ramsar Convention comes of Age' (1995) *XLII Netherlands International Law Review* 1-52.

or reduced in the event of 'urgent national interest' (Article 2(5)). If sites are delisted or reduced, the International Union for the Conservation of Nature and Natural Resources (IUCN: this is the organisation responsible for, inter alia, maintaining records under the Convention) must be informed (Articles 2(5)(8) and the Contracting Party must, as far as possible, compensate for any loss of wetland resources. The creation of additional wetland reserves is specified as a form of compensation (Article 4(2)). The site chosen for additional wetland should not be a site which should be chosen for designation in its own right (see below). No specific consequences are imposed on a Contracting Party when it delists or alters sites, although it is required to 'consider its international responsibilities for the conservation, management and wise use of migratory stocks of waterfowl' (Article 2(6)).

The issues of delisting and compensation were considered by the 8th Conference of the Parties (COP8) in 2002 and a resolution passed entitled 'General guidance for interpreting "urgent national interests" under Article 2.5 of the Convention and considering compensation under Article 4.2'.<sup>11</sup> The guidance is advisory only, as the determination of 'urgent national interests' falls within the concept of exclusive sovereign rights of the Contracting Party (Article 2(3)) and is therefore at that party's sole discretion.<sup>12</sup> Further guidance on sites which cease to fulfil the designation criteria was agreed by the 9th Conference of the Parties (COP9) in November 2005.<sup>13</sup> No listed sites have been removed from the register under Article 2(5), although boundaries have been restricted on two occasions.<sup>14</sup>

The Ramsar Convention also requires a Contracting Party to arrange for any changes<sup>15</sup> (or likely changes) to the ecological character of a listed site to be notified to them at the earliest possible time. The IUCN should then be notified.<sup>16</sup> Once a site is notified under this provision, it will be placed on the Montreux Record<sup>17</sup> and the state will then receive guidance on monitoring and managing the site. A Ramsar Advisory Mission comprising two or more experts will visit and prepare a report on the site.<sup>18</sup> Quite how the right of a state to deal with its own resources sits with this obligation to notify any changes to the ecological character is not clear; nor does the Convention spell out what should

be done if a state refuses or neglects to follow the guidance on monitoring and managing the site.

In the case of the UK, two sites are listed on the Montreux Record, namely the Dee Estuary and the Ouse Washes. The Bridgend Flats, Islay were placed on the Montreux Record in 1990 but removed in 1991.

In the case of the Dee Estuary,<sup>19</sup> a site on the North Wales/North-West England border, the reasons for notifying the site were numerous. Heavy industrialisation, coastal squeeze and 'the administrative complexity of the site and the resulting lack of coherent policy development, guidance and implementation' were among the reasons for concern about the decline of the site.<sup>20</sup> The Dee Estuary was (and continues to be) subject to coastal erosion, the coastal wetlands were being eroded but could not migrate inland due to, inter alia, the important industries based in the area and associated sea defences. Although delisting and boundary restriction and issues of 'urgent national interest' are the sole preserve of the Contracting Party, the Ramsar Advisory Mission Report on the Dee Estuary doubted whether development applications implemented and proposed at the time of the inspection had been properly dealt with under the Ramsar Convention. The tenor of the report suggests that the claim of 'urgent national interest' was not regarded as an exceptional circumstance and that the decision to 'compensate' was too easily made. Although the Dee Estuary has not been removed from the Montreux Record, steps have been taken to remedy the issues identified by the inspectors. According to an inspection in March 2004 under the SSSI monitoring procedure, 29.76 per cent of the site was, at that date, in a favourable condition, with the balance of 70.24 per cent described as unfavourable but recovering.<sup>21</sup> In the Ramsar Site Information Service, the site is subject to 'less significant (ecological) change'.<sup>22</sup>

The problems faced by the Ouse Washes, however, have not been so easy to solve. The site forms part of the Cambridgeshire Fens<sup>23</sup> and is adversely affected by summer flooding and deteriorating water quality. The higher peak discharges were linked to climate change and it was noted that the rise in sea level was of future concern. The Ramsar investigators noted that various strategies had been tried, but they could not identify a solution. Instead they recommended that a different approach be adopted which should be based on integrated river basin planning (now of course required under the Water Framework Directive), in addition to an ecosystem approach for the whole region of the Fens.<sup>24</sup>

11 Resolution VIII.20.

12 Ramsar (2002) General guidance for interpreting 'urgent national interests' under Article 2.5 of the Convention and considering compensation under Article 4.2.

13 Resolution IX.6 Guidance for addressing Ramsar sites or parts of sites which no longer meet the criteria for designation [http://www.ramsar.org/res/key\\_res\\_ix\\_06\\_e.htm](http://www.ramsar.org/res/key_res_ix_06_e.htm).

14 The Ramsar List of Wetlands of International Importance [http://www.ramsar.org/key\\_sitelist.htm](http://www.ramsar.org/key_sitelist.htm).

15 The definition of 'change in ecological character' was revised in 2005 (COP 9) by Resolution IX.1 Annex A on a Conceptual Framework for wise use [http://www.ramsar.org/res/key\\_res\\_ix\\_01\\_annexa\\_e.htm](http://www.ramsar.org/res/key_res_ix_01_annexa_e.htm).

16 For revisions of the definition of 'ecological character' and 'changes in ecological character' before 2005, see 'Assessing and reporting the trends of wetlands' (2002) COP8 Resolution VIII.8 [http://www.ramsar.org/res/key\\_res\\_viii\\_08\\_e.htm](http://www.ramsar.org/res/key_res_viii_08_e.htm).

17 The Record was established in 1990 by recommendation 4.8 of the Conference of the Parties held in Montreux: Ramsar Information Paper no 6 [http://www.ramsar.org/about/about\\_infopack\\_6e.htm](http://www.ramsar.org/about/about_infopack_6e.htm) accessed 16 September 2005.

18 *ibid*.

19 English Nature <http://www.natureonthemap.org.uk/map.aspx>.

20 Ramsar Advisory Mission No. 34: United Kingdom (1994). [http://www.ramsar.org/ram/ram\\_rpt\\_34e.htm](http://www.ramsar.org/ram/ram_rpt_34e.htm)

21 Condition of SSSI Units: Dee Estuary (2005) <http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt13&category=S&reference=1000595>.

22 Ramsar Sites Information Service 2005 <http://www.wetlands.org/RSDB/>.

23 English Nature at <http://www.natureonthemap.org.uk/map.aspx>; Ramsar site at <http://www.wetlands.org/RSDB/>.

24 R Posthoorn, E Kuijken and T Salathé Ramsar Advisory Mission No. 49: United Kingdom (2001) Ouse Washes Ramsar Site, United Kingdom [http://www.ramsar.org/ram/ram\\_rpt\\_49e.htm](http://www.ramsar.org/ram/ram_rpt_49e.htm)

This site, drained in the seventeenth century, has always required human intervention if it was to be maintained as an agriculturally valuable site. It is now also recognised as being of environmental importance and climate change, bringing, as it would appear, increased rainfall and rising sea levels, exaggerates the problems faced in keeping the waters at bay.

Since the Ramsar Advisory Mission, the Ouse Washes have continued to defy solution. Part of the site was assessed under the SSSI monitoring procedures in August 2003, with the remainder assessed in January 2005. The whole site is recorded as being in an unfavourable condition with no change. Of the 14 out of 17 units for which reasons were given for their adverse condition, 82 per cent of the site was identified as due to water pollution (either discharge or agriculture/run off).<sup>25</sup>

### SPAs

Under the Birds Directive, Member States are required to designate protected areas (known as 'Special Protection Areas' (SPAs)) to 'preserve, maintain or re-establish a sufficient diversity and area of habitats for all species of birds ...'. Further, having designated such areas, Member States are required to 'upkeep and manage (...) in accordance with the ecological needs of habitats inside and outside the protected zones' (Articles 2, 3). Certain derogations from provisions of the Directive are allowed under Article 9 but these do not apply to the creation and running of SPAs. The delisting of sites is not provided for in the Directive. It should be noted that the conservation of birds is discussed in terms of preserving habitats.

With the implementation of the Habitats Directive, SPAs form part of the Natura 2000 network (Habitats Directive Article 3(1) and see below). Further, Article 4(4) of the Birds Directive has been replaced by Article 6(2)–(4) of the Habitats Directive (Habitats Directive Article 7). Article 6(1) of the Habitats Directives therefore does not apply to SPAs, but similar provisions apply by virtue of Article 4(1), (2) of the Birds Directive.

### SACs

Moving on to the Habitats Directive itself, management of protected sites under this Directive is governed by the requirements set out in Article 6. Article 6(1) contains a positive duty to establish 'the necessary conservation<sup>26</sup> measures' which include 'appropriate management plans'.

The remaining duties under Article 6 are expressed in negative terms. Appropriate steps should be taken to avoid the deterioration of natural habitats and the habitats of species as well as the disturbance of

species (Article 6(2)). Avoidance of deteriorating events is not limited to intentional acts, it includes 'chance events that occur (fire, flood etc) as long as they are predictable. In the case of catastrophe this concerns only the obligation to take (relative) precautionary measures to decrease the risk of such catastrophes as long as they could jeopardise the aims of the directive.'<sup>27</sup> Further, deterioration is not limited to any particular purpose but should be read in the light of the Directive's objectives generally. Whether climate change is an intentional act or chance event is debatable, but whichever it is, it is arguable that a policy of managed retreat would amount to a breach of Article 6(2).<sup>28</sup>

The term 'disturbance', however, is given a limited meaning. First, the disturbance must be significant and related to the physical degradation of habitat. Using the factors set out in the definition of favourable status (see below), a reduction in the natural range and areas of a species would amount to deterioration, as would the impairment of the specific structure or functions of an area. The guidance does recognise that '[o]n a particular site, conservation status should reflect the dynamic nature of the habitats and species concerned'.<sup>29</sup>

Article 6 then goes on to acknowledge that it will be necessary to review not only the management of the SAC but also plans and projects which are 'likely to have a significant effect' on the management of the site (Article 6(3)). It is probable that a broad interpretation will be given to the phrase 'plans and projects', the key point being the effect on the designated site. There may be occasions when for 'imperative reasons of overriding public interest' a Member State will be permitted to go ahead with a plan or project even though it will have an adverse effect on an SAC (Article 6(4)). The guidance suggests that the interpretation of this paragraph will be restrictive. Competent national authorities will have to examine the imperative reasons which can include those of a social and economic nature. If a priority natural habitat type and/or a priority species will be adversely affected, only reasons relating to human health or public safety can be considered by the competent national authority. An opinion from the Commission must be sought if other imperative reasons are to be relied upon. When it is deemed acceptable to pursue the plan or project, 'all compensatory measures to ensure that the overall coherence of Natura 2000 is protected' must be taken (Article 6(4)). Although 'compensatory measures' are not defined, guidance suggests that this is a measure of last resort and substituting an area which is already inventoried as being of importance will not be acceptable as such an area should be protected as a matter of course under the Directive. It will only be in exceptional circumstances that proposing a new site

25 Condition of SSSI Units: Dee Estuary (2005) <http://www.english-nature.org.uk/special/sssi/reportAction.cfm?report=sdrt13&category=S&reference=1000595>. The Ramsar Site Information Service showed the ecological changes of this site as 'significant/substantial negative changes' <http://www.wetlands.org/RSDB/> accessed on 19 September 2005.

26 For the meaning of 'conservation' see text p 177.

27 Managing Natura 2000 sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/CEE. [http://europa.eu.int/comm/environment/nature/nature\\_conservation/eu\\_nature\\_legislation/specific\\_articles/art6/pdf/art6\\_en.pdf](http://europa.eu.int/comm/environment/nature/nature_conservation/eu_nature_legislation/specific_articles/art6/pdf/art6_en.pdf).

28 S Bell and D McGillivray *Environmental Law* (6th edn Oxford University Press Oxford 2005).

29 *ibid*.

will be a satisfactory compensatory measure.<sup>30</sup> As has been seen from Article 6(4), priority habitats and species are afforded particular protection.

As with the Birds Directive, the Habitat Directive does allow certain derogations, but not from the provisions relating to the creation and maintenance of SACs (Article 16). Although an SAC may be allowed to deteriorate or a species be allowed to be disturbed, the Habitat Directive does not formally provide for the delisting of sites.

### Marine SPAs and SACs

In addition to land based protected sites, states may also designate marine sites. In the UK, some 75 marine SACs have been designated<sup>31</sup> and one wholly marine SPA,<sup>32</sup> although of course numerous SPAs protect sea birds.

### Natura 2000

The identification of individual protected areas alone is not enough as these sites cannot exist in isolation. The Habitats Directive recognised this fact and set up Natura 2000 as a 'coherent European ecological network' (Article 3) which includes both SPAs and SACs.<sup>33</sup>

## CONSERVATION AND PRESERVATION

The terms 'conservation' and 'preservation' are key to the legislation outlined above. Generally, whilst these terms are sometimes used interchangeably, conservation has been defined as referring to the sustainable use and management of natural resources. Preservation, on the other hand, strictly defined means maintaining habitat that is untouched by humans in that condition. Conservation involves a biocentric approach to the environment, whereas preservationists may seek to maintain the environment for the benefit of humans, but alternatively adopt the ecocentric position and preserve habitats for their own value.<sup>34</sup>

In the Ramsar Convention, 'conservation' is not defined although guidance is available on the action states should take when seeking to fulfil their treaty obligations.<sup>35</sup> Neither 'conservation' nor 'preservation' are defined by the Birds Directive but in the Habitats Directive, 'conservation' is defined as 'a series of measures required to maintain or restore the natural

habitats and the populations of species of wild fauna and flora at a favourable status'. In the context of a natural habitat, 'favourable status' is defined, *inter alia*, in terms of a stable or increasing natural range and areas and for the purpose of species, favourable status will be achieved when, *inter alia*, 'there is and will probably continue to be, a sufficiently large habitation to maintain its populations on a long term basis'. (Article 1) The language used in these definitions is wide enough to require Member States to take into account all influences on the designated environments. Although no definitions of ecological requirements are provided, guidance on conservation status suggests that 'all ecological needs of abiotic and biotic factors necessary to ensure the favourable conservation status of habitat types and species'.<sup>36</sup>

### UK SITES

As stated above, a site may be designated under more than one scheme, the Medway Estuary and Marshes and the North Norfolk Coast being but two examples, chosen to illustrate the point because of their vulnerability to changes in sea level.

The Medway Estuary and Marshes are recorded on the Ramsar database as an area of saltmarsh and grazing marsh of international importance, covering an area of 4,607 ha. The site shows signs of rapid erosion of the intertidal habitat 'due to natural processes and the effects of sea defences ...'.<sup>37</sup> According to the English Nature report on the condition of SSSI units, Units 100 and 101 within the Medway Estuary and Marshes SSSI (both these units have a main habitat of littoral sediment) are in an unfavourable declining condition. The islands in the Medway are 'becoming increasingly dissected and eroded'. The condition of the sediment is also of concern as it is turning anoxic, leading to a loss of bird food supply. Part of the reason for the adverse conditions is 'inappropriate coastal management' (English Nature). Units 100 and 101 cover some 3849 ha which represents about 84 per cent of the site. The site has not been registered as a Montreux record site. Registration is envisaged when a site is facing 'serious adverse change'.<sup>38</sup>

The North Norfolk Coast is described on the Ramsar database as 'one of the largest expanses of undeveloped coastal habitat of its type in Europe ... of marshland coast with intertidal sand and mud, saltmarshes, shingle banks and sand dunes' which cover some 7,887 ha. Whilst the Ramsar database does not record any adverse factors,<sup>39</sup> the English Nature report on the condition of SSSI units for the North Norfolk Coast SSSI records an 'unfavourable condition' for Units 16

30 *ibid.*

31 Defra 'The Marine Diversity Contribution to Charting Progress: An Integrated Assessment of the State of UK Seas' (2005) at <http://www.defra.gov.uk/environment/water/marine/uk/stateofsea/chartprogress-3.pdf>.

32 Joint Nature Conservation Committee website at <http://www.jncc.gov.uk/page-1414>.

33 There is also the link between coastal and marine areas which is not fully understood. Defra 'Charting Progress: An Integrated Assessment of the State of UK Seas' (2005).

34 Atmospheric Research and Information Centre (ARIC) Atmosphere, Climate & Environment Information Programme Encyclopedia of the Atmospheric Environment [http://www.ace.mmu.ac.uk/ae/Sustainability/Older/Conservation\\_and\\_Preservation.html](http://www.ace.mmu.ac.uk/ae/Sustainability/Older/Conservation_and_Preservation.html).

35 For example, 'Ramsar Convention Manual: a Guide to the Convention on Wetlands' (2004) [http://www.ramsar.org/lib/lib\\_manual2004e.htm](http://www.ramsar.org/lib/lib_manual2004e.htm).

36 Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitat' Directive 92/43/EEC [http://europa.eu.int/comm/environment/nature/nature\\_conservation/eu\\_nature\\_legislation/specific\\_articles/art6/pdf/art6\\_en.pdf](http://europa.eu.int/comm/environment/nature/nature_conservation/eu_nature_legislation/specific_articles/art6/pdf/art6_en.pdf).

37 Ramsar Sites Information Service database (Wetlands International Site no 3UK068) at <http://www.wetlands.org/RSDB/default.htm>.

38 Assessing and Reporting the Status and Trends of Wetlands (2002) COP8 Doc 20.

39 The information on the Ramsar database was drawn from the 1999 Ramsar Information Sheet and the 2002 National Report to the Ramsar Convention.

and 58 (both supralittoral sediment). The latest assessment date for these units was 21 August 2003. Unit 16 was noted as recovering and formed part of a managed retreat, the reporter stating that a new unit would need to be created to cover the retreat area. The shingle ridge in Unit 58, however, was in unfavourable condition due to inappropriate coastal management by the Environment Agency. Management at the time would appear from the brief report to involve bulldozing shingle 'at the start of the winter and after any events'. Return to a management scheme involving less interference was planned for 2005–2006. Units 16 and 58 cover some 54 ha, being 0.7 per cent of the whole site. As with the Medway Estuary site, these deteriorations have not been notified under the Ramsar Convention.<sup>40</sup>

### GOVERNMENT STRATEGIES/POLICY

The way in which the coast should be managed has been subject to much consideration in recent years.<sup>41</sup> In 2002, the Managed Realignment Review Project Report was published by Defra<sup>42</sup> which considered amongst other things the deliberate realignment of coastal defences. Managed realignment was seen as a necessary element in the sustainable defence of the coast and in the provision of new intertidal habitats under the Habitats Directive. In 'Safeguarding Our Seas',<sup>43</sup> the Government recognised that natural processes should only be disrupted where 'life or important natural or man-made assets were at risk'. The need to develop a regime for managing habitats on changing coastlines was highlighted and a framework for Coastal Habitat Management Plans (CHaMPS) devised to be trialled on some seven sites.<sup>44</sup> The seven CHaMPS would also provide best practice guidance on habitat creation. It is of course relevant to any planning exercise that protected sites are often in multiple use – not only are they important to species and habitat but also to industry and infrastructure.<sup>45</sup> The level of detail in CHaMPS will be much greater than that in Shoreline Management Plans (SMPs) but when revising SMPs any relevant information in a CHaMP will be incorporated into the revision.<sup>46</sup>

The first round of SMPs has been completed for England and Wales and the revision process (SMP2) is now underway. Initially there were three SMP2 reviews (which include the North Norfolk coast) and, as part of the process, they trialled the Interim Procedural Guidance for Production of Shoreline Management Plans, which has now gone out for consultation. Whilst

the SMP process develops and becomes more sophisticated, it does not remove the necessity of making difficult decisions, which are hard enough in the context of harm to individual human interests,<sup>47</sup> without the possibility of preferring the environment in some situations above the loss of human property and livelihoods.

It was also acknowledged in the consultation paper 'Making space for water: developing a new Government strategy for flood defence and coastal erosion risk management in England',<sup>48</sup> that risk of flooding and coastal erosion cannot be removed completely. Even where it is technically possible to manage such risk, infinite funds are not available to meet the management costs. The aim will therefore be to seek solutions which work with natural processes.<sup>49</sup> Cost-benefit analysis will be used to determine whether or not a project can be justified. In the light of responses received, the Government has committed itself to developing measures which take a 'better account of environmental and social consequences',<sup>50</sup> Cost-benefit analysis has become more sophisticated over the years and there are a range of tools that can now be used. Different techniques may provide differing answers, so care will have to be taken when choosing the appropriate method and their application for use in flood and coast defence schemes will need to be assessed.<sup>51</sup>

The need to take into account environmental obligations with regard to protected areas is recognised in the 'Making space for water' consultation,<sup>52</sup> although the mention is rather cursory. The jurisdiction to approve activities which harm a protected site is not explored in the context of the directives nor are the issues surrounding compensation.

As has been seen above, any plans or projects which could have a significant effect upon a Natura 2000 site may only be carried out in limited circumstances. The wording of the Habitats directive is echoed in the Government's policy guidance regarding the implications of coastal squeeze<sup>53</sup> although detailed consideration is not given to definitions. In the context of the Birds Directive, whilst works which included the strengthening of the German coastal defence structures were deemed acceptable in the Leybucht Dykes case,<sup>54</sup> there was a strong presumption against development.

40 Condition of SSSI Units: Medway Estuary and Marshes <http://www.english-nature.org.uk/>.

41 W Howarth 'A Small Island Getting Smaller? A Review of *Making Space for Water*' (2004) 15 WL 242–48.

42 [http://www.defra.gov.uk/science/Project\\_Data/DocumentLibrary/FD2008/FD2008\\_537\\_TRP.pdf](http://www.defra.gov.uk/science/Project_Data/DocumentLibrary/FD2008/FD2008_537_TRP.pdf).

43 'Safeguarding our Seas: A Strategy for the Conservation and Sustainable Development of our Marine Environment' (2002) [http://www.defra.gov.uk/environment/marine/stewardship/pdf/marine\\_stewardship.pdf](http://www.defra.gov.uk/environment/marine/stewardship/pdf/marine_stewardship.pdf).

44 The North Norfolk coast was one of the first CHaMPS.

45 Note 31.

46 Defra 'Shoreline Management Plans: A Guide for Coastal Defence Authorities' (2001).

47 Hansard HC Deb vol 431 col 433WH–442WH (8 March 2005) [http://www.parliament.the-stationery-office.co.uk/pa/cm200405/cmhansrd/cm050308/halltext/50308h05.htm#50308h05\\_head0](http://www.parliament.the-stationery-office.co.uk/pa/cm200405/cmhansrd/cm050308/halltext/50308h05.htm#50308h05_head0).

48 Defra (2004) <http://www.defra.gov.uk/corporate/consult/waterspace/consultation.pdf>.

49 For a discussion on sustainable coast defence see W Howarth *Flood Defence Law* (Shaw & Sons Crayford 2002) ch 12.

50 Defra 'First Government Response to the autumn 2004 Making space for water consultation exercise' (2005) <http://www.defra.gov.uk/enviro/fcd/policy/strategy/1stres.pdf>.

51 MAFF 'Flood and Coastal Defence Project Appraisal Guidance: Environmental Appraisal FCDPAG5' (2000) <http://www.defra.gov.uk/enviro/fcd/pubs/pagn/fcdpag5.pdf>.

52 Paras 26, 27, 70.

53 Defra 'Coastal Squeeze: Implications for Flood Management Requirements of European Bird and Habitat Directives – Policy Guidance' (2005). <http://www.defra.gov.uk/enviro/fcd/policy/csqueeze.htm>.

54 Case C–127/02 *Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw, Natuurbeheer en Visserij* [2005] Env LR 14.

This has arguably been mitigated by the new regime introduced by Article 6 of the Habitats Directive.<sup>55</sup> Under the new regime, the European Commission would appear to demand a thorough investigation into what effects the plan or project<sup>56</sup> will have on the Natura site, whether there are any other suitable locations for the plan or project, and the nature of the 'imperative reasons of overriding public interest' (Article 6(4)) which justifies the approval of the plan in spite of a negative assessment. Thus, the German request for approval of a new industrial and commercial area in North Rhine-Westfalia was refused because, *inter alia*, the alternative sites for the development had not been fully investigated and the proposed plans had been justified using an assessment carried out 10 years previously.<sup>57</sup> It would appear that the state's view of what is an imperative reason is not the deciding matter here and that the European Commission will evaluate the evidence put before it. For example, in another request submitted by Germany, this time for the extension of the Prosper Haniel Colliery, the Commission rejected the long term imperative reason justifying the planned underground extension. It did, however, accept that a refusal would lead to the accelerated closure of the colliery which might have short term significant social and economic effects at local and regional levels.<sup>58</sup>

Any request for approval must also be supported by proposals for compensatory measures.<sup>59</sup> Failure to submit detailed proposals will not be fatal where the applicant is in the process of compiling a more substantial submission for evaluation.<sup>60</sup> It would appear that when evaluating compensatory measures, the European Commission will look at the details and assess whether or not the proposals are feasible (in its

opinion on the Swedish request, it required the submission of 'a comprehensive and realistic compensation package'). Any measures should contain provisions concerning the monitoring, maintenance and timing of compensatory measures.<sup>61</sup>

The issue of compensatory measures has also been addressed by Defra in the context of coastal erosion and rising sea levels.<sup>62</sup> Defra has undertaken to provide guidance on the likely impact of managed retreat and has stated that, on an initial assessment, it will mean the annual creation of at least 100 ha of intertidal habitats. It is anticipated that intertidal loss will mainly occur in the south and east of England and it is in these areas that it is desirable that the 'compensatory areas' should be created, preferably in association with Natura 2000 sites. Although the requirements of the Birds Directive (Article 3) are not identical to those of the Habitats Directive (Article 6), the compensatory measures 'might be expected to contribute to meeting obligations under art. 3'.<sup>63</sup>

## CONCLUSION

Coastal erosion is not new but the impact of climate change has meant that decisions concerning the best way of dealing with it now have to be made in a much shorter time scale. Its impact on sites which are protected by international treaty or EC directive highlights challenges that states face to ensure that environmental issues are considered alongside social and economic policy and not just as an add on. These decisions are difficult enough, but the burden is increased with the shades of meaning between the laws and the different implementing/monitoring bodies.

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55 Bell and McGillivray (n 28).

56 'Plans or projects' are to be given the same meaning as in Directive 85/337/EEC on the assessment of certain public and private projects on the environment, see Case C-127/02 (n 53).

57 Commission Opinion 1 of 24 April 2003.

58 Commission Opinion 4 of 24 April 2003.

59 None were included in the North Rhine-Westfalia request.

60 Commission Opinion 3 of 24 April 2003 (Botniabanan from Nordmaling to Umea Development Plan, Sweden).

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61 Commission Opinions 2 (Project Mainport Rotterdam Development Plan, Netherlands), 3, 4 of 24 April 2003.

62 Note 53.

63 Managed retreat will also have implications for the purposes of the Water Framework Directive and river basin catchment plans, see W Howarth 'From the Water Framework Directive to the Marine Framework Directive' (2005) 16 WL 83.