





# INTRODUCTION

On 15 March 2007, the Department for Environment, Food and Rural Affairs (Defra) published a Marine Bill White Paper that put forward proposals for legislative measures to help deliver the government's vision of "clean, healthy, safe, productive and biologically diverse oceans and seas".

The proposals are based on the results of extensive consultation and a considerable body of evidence on the need for a new approach to the management of activities in UK and developed administration waters.

There are five main elements<sup>1</sup>:

- a new UK-wide system of marine planning;
- a streamlined, transparent and consistent system for licensing marine developments;
- a flexible mechanism to protect natural resources, including marine protected zones with clear objectives;
- improvements to the management of marine fisheries in relation to England, Wales and Northern Ireland and the ability to share the costs of management with commercial and recreational sectors; and
- a new Marine Management Organisation delivering UK, England and Northern Ireland functions.

The marine planning proposals relate to English, Northern Irish and Welsh waters and cover reserved matters relating to Scotland such as oil and gas licensing.

A consultation and Ministerial working group in Scotland have developed ideas for a parallel Scottish Marine Act.

WWF and others have been calling for many of these actions since the early 1990s (see Table 1).

The consultation period for the White Paper closed on the 8 June 2007. This allows enough time for a Marine Bill to be brought to the 2007/08 session of Parliament. Alternatively, there may be further consultation on a draft bill in 2008. If the latter option is pursued, the earliest a Marine Bill could be presented to Parliament would be in the 2008/09 session. This would be four years since the UK government committed to new measures to improve marine conservation, and more than a decade since the first calls for such measures by WWF and other non-governmental organisations.

To highlight the **urgent need for the Marine Bill**, this briefing illustrates how delaying its introduction is having real, negative consequences for marine biodiversity as well as holding back government efforts to meet internationally agreed targets to combat climate change. The examples used focus on the conservation of marine biodiversity and tackling climate change, as these are priority issues for WWF-UK. They illustrate gaps as well as shortcomings in existing statutory provisions to support effective action on these two issues, and hence highlight the continuing urgent need for the Marine Bill.

**Table 1.**

**Key dates, events and WWF publications relevant to the nature conservation proposals within a Marine Bill**

Date	Event
1991	Marine Protected Areas working group of Wildlife Link (now Wildlife & Countryside Link) believes Marine Nature Reserve provisions have proved unsatisfactory. The group proposes a framework for a system of Marine Protected Areas, providing integrated, comprehensive management for the conservation of marine resources for a wide variety of objectives.
1998	The government recognises that creation of a network of Marine Nature Reserves under the Wildlife & Countryside Act 1981 has not been as successful as originally hoped.
1999	The government establishes the Review of Marine Nature Conservation to review options for improving protection for marine sites and species.
2000	WWF calls for a Marine Act for the UK.
2000	WWF publishes its first <i>Marine Health Check</i> .
2002	UK government publishes <i>Safeguarding Our Seas</i> , in which it reiterates an agreement made at the fifth North Sea Conference to identify and designate by 2010 relevant areas of UK's seas as areas of marine protection belonging to a network of well-managed sites. Irish Sea Pilot is launched.
2002	Unsuccessful Private Members Bill (John Randall) to improve marine nature conservation provisions.
2003	House of Commons Environment Select Committee investigates protection of the marine environment, and believes that if current mechanisms are not working, the government should consult on the desirability of a Marine Act.
2004	Irish Sea Pilot completed. Among other things, it concludes that: "identification and appropriate management of an ecologically-coherent network of important marine areas is a crucial element of the framework for marine nature conservation".
2004	Review of Marine Nature Conservation completed. It includes recommendations for an ecologically coherent and representative network of Marine Protected Areas.
2004	The Prime Minister announces commitment to a Marine Bill.
2005	WWF publishes a draft Marine Bill – more extensive than provisions in the unsuccessful Private Members' Bill of 2002.
2005	WWF publishes a second <i>Marine Health Check</i> .
2005	<i>State of Our Seas – Charting Progress</i> published by the UK government. It finds that human activities have resulted in adverse changes to marine ecosystem and continue to do so.
2005	<i>Safeguarding Sea Life</i> – the government's response to the Review of Marine Nature Conservation – includes commitment to a Marine Bill including measures to improve the conservation of marine biodiversity including Marine Protected Areas for nationally important species and habitats.
2006	Marine Bill consultation document published.
2006	WWF publishes <i>Marine Biodiversity Hotspots report</i> .
2007	Marine Bill White Paper published.

# PROTECTED... IN THEORY

The Marine Bill White Paper sets out the following aim for marine nature conservation provisions:

**“To introduce new tools for conservation of marine wildlife that together with existing ones can halt the deterioration in the state of the UK’s marine biodiversity and promote recovery where practicable, support healthy functioning and resilient marine ecosystems, ensure environmental considerations are at the heart of decision-making processes, and provide mechanisms that can deliver current and future European and international conservation obligations.”**

A key proposal is to introduce a mechanism to designate and manage ‘Marine Conservation Zones’ (MCZs) to protect species and habitats of national importance.

This was an urgent task in 2000 when WWF first called for a Marine Bill and is even more so seven years on. Delay has meant damage, deterioration and decline of marine habitats and species of national importance, including those that, in theory, are protected.

## REEF HABITATS IN LYME BAY

The reefs of Lyme Bay were identified more than a decade ago by English Nature (now Natural England) as being of national importance<sup>2</sup>. Areas of bedrock, cobble and boulders overlying and interspersed with gravel and sand support a very rich epifauna. This includes a high diversity of sponges, nationally rare species such as the southern sunset coral, and very high densities of the pink sea fan (*Eunicella verrucosa*) a species protected under the Wildlife & Countryside Act, 1981, and subject to a non-statutory Biodiversity Action Plan.

Since 2000 when WWF first called for a Marine Bill, the reef habitat and associated communities in Lyme Bay have suffered serious damage from scallop dredging. The situation is now critical given the increase in dredging effort reported in 2005/06, and the disregard for voluntary agreements to keep some areas free from such activity.

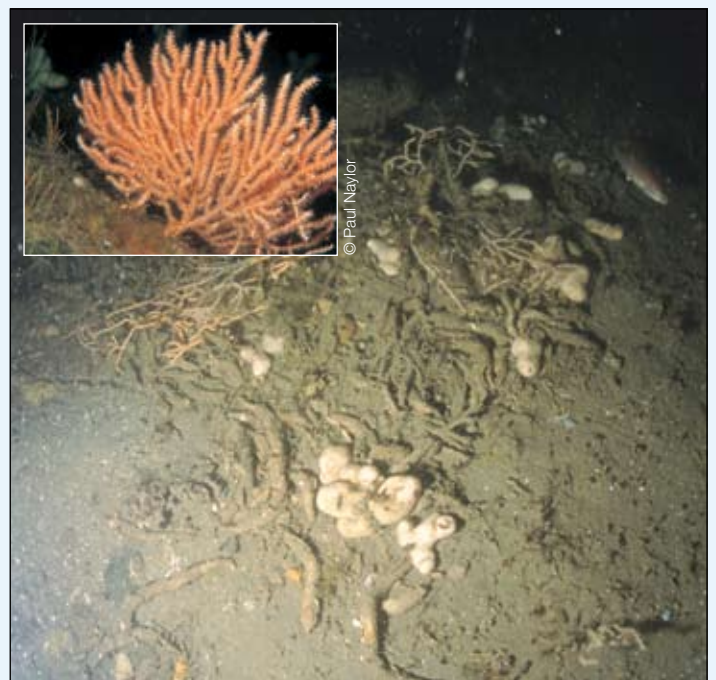
The outcome, nearly two years later, is yet another voluntary ban on scallop dredging in parts of Lyme Bay despite the fact that such an approach has previously been shown to be fundamentally flawed. There is no guarantee of protection,

and experience suggests that although there may not be any incursions into these areas in the near future (given that they have recently been harvested), the desire to dredge within them will return as the scallop population recovers.

Equally worrying is the fact that the presence of sea fans, rather than the protection of reef habitat, has been used as a basis for selecting the voluntary closed areas. This is totally contrary to conservation science, which recognises the importance of maintaining the structure and function of ecosystems if species within these ecosystems are to thrive. This approach also emphasises the failure of existing measures specifically designed to protect sea fans as set out in the Wildlife & Countryside Act, 1981, and the UK Biodiversity Action Plan.

**Provisions proposed under the Marine Bill, which could protect the reef habitat and associated sea fans in Lyme Bay by designating Marine Conservation Zones, are urgently required.**

The Dorset Wildlife Trust first reported damage to the reefs in Lyme Bay in 1991, the year that non-governmental organisations first called for better measures for marine site protection. Attempts to protect these reefs in the intervening 16 years have been ineffective. This situation is unlikely to change to give urgently needed statutory protection to the reefs until the proposed protection for nationally important features in the Marine Bill becomes law.



**Marine conservation zones proposed under the Marine Bill would prevent damage like this to sensitive reef communities – inset image: healthy sea fan.**

<sup>2</sup> English Nature (1994) Important areas for marine wildlife around England. English Nature Campaign for a Living Coast.



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## THE FAN MUSSEL

The fan mussel (*Atrina fragilis*), also referred to as fan shell, is a rare and vulnerable species in UK waters, living partially buried in the seabed. It is predominantly a southern and western species and is believed to have been common in many of the inlets of south-west England in the past. Historical records and past and present hauls from fishing boats that operate gears which make contact with the seabed suggest that populations tended to be dense and form reefs akin to mussel beds. However, since the advent of industrial trawling in the past 50 years, reports from shallow areas are more commonly of single specimens<sup>3</sup>.

The fan mussel is a priority species under the UK Biodiversity Action Plan and protected under the Wildlife & Countryside Act, 1981. Current efforts are focused on getting accurate and up-to-date records of its distribution, particularly of live animals. The Biodiversity Action Plan (BAP) targets include enhancing the distribution and population size of the fan shell if biologically feasible. The main threats are thought to be the use of trawls and dredges, although they are also vulnerable to gravel and sand extraction and anchor damage.

Fan mussels in very small numbers are being reported from surveys revisiting areas where anecdotal and historical populations are said to have occurred. For example, a small number were seen in Plymouth Sound in July 2004 and April 2005 and a voluntary 'no-anchoring zone' is being promoted as a result<sup>4</sup>. A re-survey in 2006 did not locate any individuals; however, further investigation is required to confirm their status in the area. Similarly, four specimens were discovered in April and May 2007 in an intertidal seagrass bed within Salcombe estuary in Devon.

Live specimens are known to survive being moved<sup>5</sup>. This raises the possibility of re-colonisation of previously depleted areas and therefore helping to achieve BAP targets. However, there is little value in carrying out such an exercise if fan mussels cannot be placed in protected areas in their 'reseeded' locations.

**Proposals within the Marine Bill to introduce powers to make by-laws to control currently unregulated activities (such as anchoring), and provisions to establish Marine Conservation Zones including highly protected sites, will be essential to achieving the Biodiversity Action Plan objectives and targets for this species which is protected... in theory.**

<sup>3</sup> UK Biodiversity Action Plan for Fan Mussel (*Atrina fragilis*). <http://www.ukbap.org.uk/UKPlans.aspx?ID=123>

<sup>4</sup> [www.mcsuk.org](http://www.mcsuk.org)

<sup>5</sup> Solandt, J-L (2003). The fan shell *Atrina fragilis*- a species of conservation concern. *British Wildlife*, 14 (number 6): 423-427.

Fan mussels can reach a length of 40cm. If their habitat is disturbed they are unable to re-burrow



# THE MISSING LINKS

The EU Habitats Directive has been a key driver for establishing Marine Protected Areas (MPAs), but only for those few marine habitats and species considered to be of European importance. It will never result in a network of MPAs that represents the full range of marine biodiversity in UK waters. The UK government has made a commitment to establish such a network, but has no effective enabling legislation. Progress depends on the proposals in the Marine Bill.

## PROTECTION FOR THE VARIETY OF MARINE HABITATS IN UK WATER

The UK Biodiversity Action Plan has identified a number of marine habitats that should be prioritised as targets for conservation action. Three examples are: sheltered muddy gravels where current threats include bait digging; sublittoral sands and gravels where the habitat and communities are threatened by scallop dredging and aggregate extraction; and mud habitats in deep water which are threatened by demersal fishing activity<sup>6</sup>.

Sheltered muddy gravels can be very rich in species because of the complex nature of the substrate. Species found in such habitats include the daisy anemone (*Cereus pedunculatus*), which may anchor itself to stones buried in the sediment, and the peacock worm (*Sabella pavonina*) with its feathery fan of tentacles emerging from a slim tube. In areas of deep mud, seapens such as *Funiculina quadrangularis* and *Pennatula phosphorea* stand proud of the surface, while *Nephrops norvegicus* (better known as the valuable langoustine) lives in burrows, coming out to hunt mostly at night. Sublittoral sands and gravels may be colonised by the frond-like hornwrack (*Flustra foliacea*)<sup>7</sup>.

The most recent status report for the species and habitats covered by the UK Biodiversity Action Plan was published in 2005<sup>8</sup>. There are 12 priority marine habitats (see Table 2) and in most cases the trends for these were recorded as 'unknown'.

**Table 2. Marine priority habitats in the UK Biodiversity Action Plan**

Littoral and sublittoral chalk
<i>Lophelia pertusa</i> (a deep water hard coral)
Maerl beds (formed by a calcified red seaweed)
Horse mussel ( <i>Modiolus modiolus</i> ) beds
Mud in deep water
Honeycomb worm ( <i>Sabellaria alveolata</i> )
Ross worm ( <i>Sabellaria spinulosa</i> ) reefs
Seagrass beds
Serpulid ( <i>Serpula vermicularis</i> ) tube worm reefs
Sheltered muddy gravels
Sublittoral sands and gravels
Tidal rapids



**Sheltered muddy gravels support a rich diversity of species such as the beautiful peacock worm seen here in a close-up of its feathery tentacles**

<sup>6</sup> See relevant Biodiversity Action Plans. [www.ukbap.org.uk/habitats.aspx](http://www.ukbap.org.uk/habitats.aspx)

<sup>7</sup> Naylor, P (2005) Great British Marine Animals. Sound Diving Publications.

<sup>8</sup> Second edition.

<sup>8</sup> [www.ukbap-reporting.org.uk/status/priority.asp](http://www.ukbap-reporting.org.uk/status/priority.asp). Viewed 6/6/07.

<sup>9</sup> All from Pembrokeshire Local Biodiversity Action Plan.

The most thorough reporting has come from Wales, where five of the seven habitats for which assessments were made were considered most likely to be declining. For example, surveys in 2005 have not been able to locate previously reported horse mussel beds off north Anglesey; the tidal rapids in Milford Haven are thought to be declining in quality of the tide-influenced communities due to oyster dredging; and the only living maerl bed in Wales is believed to have suffered damage during jetty construction works linked to a Liquid Natural Gas terminal in the Milford Haven waterway<sup>9</sup>.

**Safeguarding the priority habitats identified in the UK Biodiversity Action Plan is dependent on proposals in the Marine Bill to enable focused protection within Marine Conservation Zones.**

### **CONSERVATION OF PELAGIC SPECIES**

The pelagic environment is the water mass of the oceans, with all its associated free swimming and floating marine life. Most, if not all, MPAs include the water column as well as the seabed and therefore incorporate pelagic habitats within

their boundaries. Exclusively pelagic MPAs are less common, but they do exist<sup>10</sup>.

The protection of pelagic habitats using MPAs will be difficult, if not impossible, because pelagic environments are influenced and created by physical processes that operate on a larger scale than most MPAs (such as ocean basins). Despite this, they do play a role in protecting pelagic species in specific locations, as a complement to more general conservation measures that have been introduced to protect highly mobile species such as cetaceans, turtles, seabirds and sharks.

The best locations for pelagic MPAs (which may overlap) are likely to be those that include areas of high ocean productivity, prey concentrations, top predator foraging grounds and other critical habitats such as locations supporting breeding aggregations or nursery grounds<sup>11</sup>. In the north-east Atlantic they might include bathymetric features such as parts of the continental shelf break, as well as permanent or ephemeral features of the water column such as upwellings or frontal systems which separate water masses with different characteristics.

The protective measures will therefore need to be more flexible and dynamic than those currently being used in the UK, for example by being temporary or perhaps relating to areas defined by boundaries that shift with seasons or on other timescales

One species that might benefit from pelagic MPAs is the porbeagle shark (*Lamna nasus*). The range of the porbeagle, which is classified by IUCN as a vulnerable species globally and critically endangered in the north-east Atlantic, includes the waters around the UK. Porbeagles occur singly as well as in schools and are known to form feeding aggregations, but there is still very little data on their movements and status in UK waters. Despite this, licensed longline fishermen are permitted to catch unlimited numbers. In 2003, 129 porbeagle sharks were caught off the Cornish coast in nine days. In August 2007, 60 specimens were landed from a single fishing trip in the Bristol Channel.<sup>12</sup>

**Proposals for Marine Conservation Zones and Marine Spatial Planning in the Marine Bill are an opportunity to design a flexible, dynamic mechanism to help protect these important environments and their associated species in UK waters.**



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<sup>10</sup> Gubbay (2006) Marine nature conservation in the pelagic environment; a case for pelagic MPAs? Report to WWF-UK

<sup>11</sup> Gubbay (2006) Marine nature conservation in the pelagic environment; a case for pelagic MPAs? Report to WWF-UK [www.wwf.org.uk/filelibrary/pdf/marine\\_pelagic\\_sep2006.pdf](http://www.wwf.org.uk/filelibrary/pdf/marine_pelagic_sep2006.pdf)

<sup>12</sup> [www.sharktrust.org/content.asp?did=27874&backto=u\\_search3.asp&curpage=&search=Porbeagle](http://www.sharktrust.org/content.asp?did=27874&backto=u_search3.asp&curpage=&search=Porbeagle), viewed 17/8/07.



# CONTROL OF UNREGULATED ACTIVITIES

More than 90% of respondents to Defra's 2006 consultation exercise on the Marine Bill believed existing species protection measures did not adequately address threats to the conservation of marine species<sup>13</sup>. One of the proposals in the Marine Bill to address this is new powers to make by-laws to control unregulated activities that are having an impact on the conservation status of mobile species.

Activities that pose the highest risk of having an "adverse conservation impact" were considered to be bait digging/ collection, water-based recreation such as the use of motor boats and personal watercraft (jet skis), and unlicensed commercial fishing activities<sup>14</sup>. Unlicensed dredging, wildlife watching/ecotourism, recreational fishing and land-based recreation were considered to pose a medium risk, while diving, military activities, hovercraft, education and research, and low flying aircraft were assessed as being in the lowest risk category.

## CASE STUDY – BASKING SHARKS

Basking sharks (*Cetorhinus maximus*) were first protected from being intentionally killed in UK waters in 1998 under Schedule 5 of the Wildlife & Countryside Act, 1981. Since 2000 it has also been illegal to "recklessly or intentionally disturb" them. Common Fisheries Policy restrictions introduced in December 2006 have made it illegal to land, tranship or sell any part of a basking shark in EC waters.

Another conservation tool is the non-statutory Basking Shark Code of Conduct<sup>15</sup> produced by a group of non-governmental organisations to help boat-handlers and swimmers reduce the risk of killing, injuring or harassing basking sharks. This advises boat users to turn off engines or engage neutral at least 100m away from basking sharks, while the number of swimmers in the water around them should be limited to four. They should keep a distance of 4m from the sharks as well as being particularly wary of the animal's enormous tail<sup>16</sup>.

Despite these attempts to protect basking sharks, incidents of disturbance, harassment and damage to sharks continue to be reported. The most recent of these was in Cornwall in September 2007, where one dead basking shark was washed up on the beach after being entangled in buoy ropes and another is thought to have had its dorsal and tail fins severed as a result of a collision with a power boat<sup>17</sup>.

Seasonal by-laws could give additional protection to basking sharks in the areas they frequent during the summer months, alongside greater awareness of existing legislation and the Code of Conduct.

**Provisions in the Marine Bill for powers to make by-laws to control currently unregulated activities such as water-based recreational activities are needed to give further protection to these vulnerable animals.**



Basking shark surrounded by swimmers in 2006

© Rachel Hoskins

**Even within marine SACs<sup>18</sup>, little can be done to manage either commercial or recreational unregulated activities without modernised powers, duties and supporting mechanisms, which are proposed in the Marine Bill.**

13 Defra (2007) A Sea Change. A Marine White Bill Paper. Para 6.100.

14 Boyes, S, Burdon, D, and Elliott, M (2006) Unlicensed Activities: A review to consider the threats to marine biodiversity. Institute of Estuarine and Coastal Studies, University of Hull.

15 [www.baskingsharks.org/content.asp?did=26602&rootid=6210](http://www.baskingsharks.org/content.asp?did=26602&rootid=6210)

16 MCS Press Release, 9.6.06. Keep your distance from giant sharks!

17 <http://news.bbc.co.uk/1/hi/england/cornwall/6971053.stm>

18 Special Areas of Conservation designated under the EC Habitats Directive 92/43/EEC.

# THE BIGGER PICTURE – IN A CHANGING CLIMATE

The most far-reaching proposed provision in the Marine Bill is probably the introduction of Marine Spatial Planning (MSP). This is intended to ensure that the uses of our seas are better planned and based on a deeper understanding of what impacts the ecosystem can withstand. Such planning and understanding will help sustain the goods and services from the seas as well as the biodiversity value, and will play a vital role among the actions being taken to both mitigate and cope with the consequences of climate change. The proposals are for MSP to be delivered through a system with coordinated and clear policies and objectives, which will be articulated in a UK Marine Policy Statement. It will be put into practice through marine plans covering all UK waters.

There is a considerable body of evidence on the potential benefits of MSP and strong support for such an approach from a wide range of stakeholders<sup>19</sup>. The Marine Bill White Paper therefore recognises MSP and the ecosystem-based approach as key elements of a new approach to marine management and acknowledges that “it will help us secure the maximum sustainable benefits from our marine resources, whilst ensuring appropriate environmental protection”. This is not only relevant to biodiversity conservation but also actions taken by the UK to help tackle climate change.

## MARINE RENEWABLES

The UK needs marine renewables (wave and tidal energy) to help reach both national and international targets for reduction in CO<sub>2</sub> emissions. However, reaching these targets will only work if CO<sub>2</sub> emissions from other sources do not rise. Actions must therefore sit within a UK-wide framework to tackle CO<sub>2</sub> emissions, such as the Climate Change Bill. Marine renewables can also help the UK develop a truly domestic source of energy, which is diverse and reliable. This is particularly important as UK gas reserves diminish and dependency on foreign supplies may lead to security risks.

The British Wind Energy Association (BWEA) estimates that 3GW of wave and tidal capacity could be installed in the

UK by 2020. This capacity could generate the equivalent of 2.1% of UK electricity supply in a year. In the long term, marine renewable energy could meet 15-20% of current UK electricity demand, with 3-5% coming from tidal stream and the remainder from wave energy<sup>20</sup>.

WWF strongly advocates the meeting of the UK 20% CO<sub>2</sub> emissions reduction target by 2010 and urges that the target by 2050 should be an 80% reduction in CO<sub>2</sub> emissions, including emissions from aviation and shipping. WWF is working with the marine renewables industry to promote the development of carefully sited technologies around the UK for the generation of electricity from wave, tidal and offshore wind, to help achieve this critical target.



The UK needs marine renewables to meet international commitments to reduce CO<sub>2</sub> emissions through carefully sited technology

The government's White Paper: *Planning for a Sustainable Future* (May 2007) proposes that decisions on "major marine infrastructures" will be made by an Infrastructure Planning Commission (IPC). However, it also states that those decisions in the marine environment will be made in accordance with the Marine Policy Statement, which is an element of the proposed system of Marine Spatial Planning set out in the Marine Bill. WWF believes that the IPC should work closely with the proposed Marine Management Organisation (MMO) and ensure that an ecosystem-based approach, Strategic Environmental Assessment and full stakeholder dialogue takes place in reaching marine planning decisions to ensure sustainable use of the seas.

The system of Marine Spatial Planning and associated Marine Policy Statements proposed in the Marine Bill would give developers more certainty about where to develop, ensure that the right technology is developed in the right place, and should enable swifter planning decisions. Proposals in the Marine Bill for a simplification of the licensing system, albeit only for small installations, would also benefit the marine renewables industry.

This view is shared by the industry. In its response to the Marine Bill consultation, the BWEA stated that although to date the greatest impediment to the development of the offshore renewables industry has been lack of data, "a well-resourced and managed system of MSP offers fantastic opportunities for rational and transparent decision making, leading to new opportunities for development and increasing certainty and reducing costs and risk for industry".<sup>21</sup> This would be particularly valuable if issues could be resolved surrounding potential delays, accurate and up-to-date data, flexibility, accommodating developing technologies, and conflict resolution.

For example, where two industries find a resource in the same area and would both like to exploit it, the conflict resolution process should be based on a Strategic Environmental Assessment of the Marine Spatial Plan. This would help assess which proposal offers the most sustainable solution.

**The Marine Bill will help to create a level playing field for new industries with more environmentally and economically sustainable uses of the sea, which at present are being held back by the prioritisation of older industries.**

The language and culture within the UK and EU must be modernised to reflect the wider range of industries and environmental threats facing the world. As a result of climate change, it is imperative that low carbon energy, rather than highly polluting hydrocarbons, is developed from the sea.

In the same vein, an overriding theme emerging from a recent study describing hurdles to the development of the wave and tidal industry was the need for clarity over the planning and permitting process for large arrays and significant projects if there is to be large-scale deployment of wave and tidal technologies. It was also concluded that this will take time and resources to achieve<sup>22</sup>.

**Delays with the Marine Bill and the proposed system of Marine Spatial Planning are likely to become an unnecessary hurdle to the further development of the marine renewable industry, potentially putting targets for reduction in CO<sub>2</sub> emissions at risk.**

19 See Marine Bill White Paper.

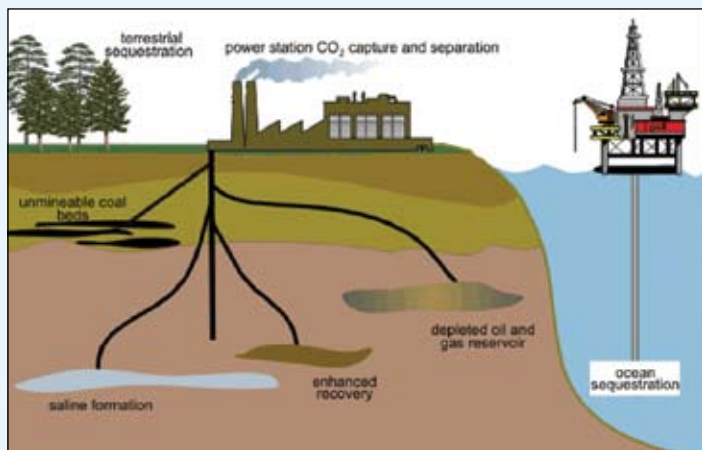
20 BWEA (2006) Path to Power. <http://www.bwea.com/pdf/parthtopower/Stage4.pdf>

21 Consultation on Marine Bill, BWEA response – June 2006.

22 <http://www.bwea.com/pdf/parthtopower/Stage4.pdf>

## CARBON CAPTURE AND STORAGE (CCS)

The capture of carbon generated by industrial process and the transport and subsequent storage by injection of waste CO<sub>2</sub> into geological formations offshore is being promoted by the government as a mitigation measure to help the UK reach CO<sub>2</sub> emission reduction targets.<sup>23</sup>



The Marine Bill White Paper recognises that the regulatory conditions to facilitate CCS are complex and incomplete and that there is scope to address this in the Marine Bill. Two options being considered are to amend or add to the proposed reforms to the marine licensing regime to make it better suited to CCS, or to develop a specific planning regime for CCS.

The planning regime for CCS should be regulated through Defra or the MMO as CO<sub>2</sub> is a waste product being deposited under the seabed. As Defra licenses other waste management practices it would be the fitting institution to regulate this waste management process.

**Delaying the introduction of provisions in the Marine Bill would make this more difficult to achieve and could therefore weaken the usefulness of CCS as a measure to mitigate climate change.**

## IT ALL ADDS UP

The case for a Marine Bill is supported by a considerable body of evidence. This evidence has been presented to Ministers on many occasions and, although the government has given its commitment to introduce new measures, there is no firm timetable for bringing such a Bill to Parliament. Lack of progress is having real, negative consequences for marine biodiversity as well as holding back government efforts to meet internationally agreed targets to combat climate change. WWF believes that there is no case for further delay.







**hurry while stocks last!**

**MARINE STORES**  
For all your Marine Bill needs

KEY HABITATS & SPECIES	<b>*REDUCED*</b>	<b>IN DECLINE</b>
BASKING SHARKS		<b>DISTURBED</b>
HORSE MUSSEL BEDS		<b>DESTROYED</b>
DEEP MUD HABITATS		<b>THREATENED</b>
UK SEA AREA PROTECTED		<b>LESS THAN 2%</b>
COLD WATER CORAL		<b>THREATENED</b>
MAERL BEDS		<b>DAMAGED</b>
LICENSING		<b>UNWIELDY</b>
<b>SEAGRASS BEDS</b>	<b>*REDUCED*</b>	<b>IN DECLINE</b>
FAN SHELL	<b>*REDUCED*</b>	<b>IN DECLINE</b>
RENEWABLE ENERGY		<b>NOT MAXIMISED</b>
HUMAN ACTIVITIES		<b>UNCOORDINATED</b>
PLANNING SYSTEM		<b>NON-EXISTENT</b>
FISHERIES MANAGEMENT		<b>OUT OF DATE</b>
WATER-BASED RECREATIONAL ACTIVITIES		<b>UNREGULATED</b>

**BALANCE OVERDUE**

OUR MARINE ENVIRONMENT IS PAYING THE PRICE

CHANGE **NEEDED NOW!**

\*\*\*\*\*

A UK MARINE BILL WOULD HAVE EARNED YOU POINTS TO USE TOWARDS:

- A NATIONAL NETWORK OF MARINE PROTECTED AREAS
- A MODERN PLANNING SYSTEM FOR OUR SEAS
- A NEW MARINE MANAGEMENT ORGANISATION FOR COORDINATION OF OUR SEAS

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THANK YOU FOR VISITING MARINE STORES

A UK MARINE BILL IS URGENTLY NEEDED NOW!

TO FIND OUT WHAT'S IN STORE, VISIT [WWF.ORG.UK/MARINEACT](http://WWF.ORG.UK/MARINEACT)

At risk from trawling for the valuable langoustine

Provide a refuge for marine life such as the seahorse and a source of food for wading birds

without a marine planning system climate change cannot be dealt with properly in our seas

Horse mussel beds are very slow to recover from damage

streamlining through a Marine Bill is essential!

13 out of 16 key marine habitats and species are in decline

Do we have to wait another year while things get worse?

The mission of WWF is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- reducing pollution and wasteful consumption



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