'UK Marine Protected Areas: Powerful legal protection or paper parks?'

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Abstract

This study addresses the question of whether or not UK marine protected areas (MPA) are designated and managed in accordance with the obligations accepted under international and domestic law. Since first mooted in the 1960's, MPAs have become the most popular tool for the conservation of marine ecosystems and species around the world. Their development has been facilitated through the amending of multilateral environmental treaties introducing legal norms and objectives for marine sites. Additionally, the UK has implemented its own Marine and Coastal Access Act, introducing domestic marine conservation zones.

The goals set for MPAs have widened, as has the level of protection afforded to different sites, leading to a situation where it has been said that 'every MPA is unique'; making it difficult to fully evaluate their effectiveness. Much of the literature on MPAs evaluates their success or failure from a scientific perspective. It does not evaluate whether the success or failure in their designation and management is a reflection of their compliance with international law.

This research returns to first principles and analyses the principal legal obligations in international law, EU law and UK domestic legislation to identify the measures developed for MPAs and applies them to a number of case studies. The case studies revealed significant failings in the UK's approach to designating and managing MPAs in its waters indicating this approach is reasonable. In particular it cannot be said that the UK is not fully compliant with its obligations

because of a fragmented regulatory framework for its MPAs preventing a coherent approach to MPA management.

The research suggests changes to strengthen the provisions of Part 5 of the MCAA by incorporating the most relevant obligations into the Act and makes recommendations on how they should be deployed to improve the effectiveness of the law.

ACKNOWLEDGEMENTS

The impetus for this thesis arose from a visit I made to an area of the Welsh coast after a couple of decades of absence. I was struck by the reduction in the sea bird population and the absence of the once common inshore fishing boats. Although the area was not exactly devoid of wildlife, the scale of the visible decline in the environment was rather unsettling. I then happened to read Charles Clover's book, 'The End of the Line,' which provided me with some answers to my questions, but left others unresolved. I decided that I needed to fully understand if the law provided any remedies to halt the decline of the marine environment, or if other measures were needed. The completion of this thesis is an attempt to move the subject forward.

I would like to record my gratitude to my supervisors, Karen Hume and Thoko Kaime, for their patience and support throughout the production of this thesis. I feel fortunate to have had their reassuring presence throughout my research and for their invaluable challenges to my sometimes tangled thinking. Any mistakes still present in this work are entirely mine.

Last but certainly not least would like to think my family for their patience and forbearance in dealing with my bouts of frustration during the difficult times, and for listening to me when it was going well.

I am indebted to you all.

All of us have in our veins the exact same percentage of salt in our blood that exists in the ocean, and, therefore, we have salt in our blood, in our sweat, in our tears. We are tied to the ocean. And when we go back to the sea -- whether it is to sail or to watch it -- we are going back from whence we came.[1]

[1] John F. Kennedy, Speech given at Newport at the dinner before the America's Cup Races, September 1962. John F Kennedy Library and Museum at https://www.jfklibrary.org/Research/Research-Aids/JFK-Speeches/Americas-Cup-Dinner_19620914.asp accessed 10 February 2017.

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List of Abbreviations

ABNJ	Areas beyond National Jurisdiction
ASCOBANS	Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas
ASSI	Area of Special Scientific Interest
BAP	Biodiversity Action Plan
CBD	Convention on Biological Diversity
CEFAS	CFP Common Fisheries Policy
CITES	Convention on Trade in Endangered Species
CMS	Convention on Migratory Species
CoA	Court of Auditors (EU)
COP	Conference of the Parties
cSAC	Candidate Special Area of Conservation
Defra	Department for Food and Rural Affairs
DWT	Devon Wildlife Trust
EAC	House of Commons Environmental Audit Committee
EAP	Environmental Action Programme (EU)
ECJ	European Court of Justice
EEA	European Economic Area
EEZ	Exclusive Economic Zone
EFZ	Exclusive Fishing Zone
EIA	Environmental Impact Assessment
EMS	European Marine Site

ENG	Ecological Network Guidance
ICES	International Council for the Exploitation of the Seas
ICMZ	Integrated Coastal Management Zones
IFCA	Inshore Fisheries and Conservation Authority
IMO	International Maritime Organisation
IMP	Integrated Maritime Policy
JNCC	Joint Nature Conservation Board
LOSC	Law of the Sea Convention
MARPOL	International Convention for the Prevention of Pollution from Ships
MCAA	Marine and Coastal Access Act
MCZ	Marine Conservation Zone
MEA	Multilateral Environmental Agreement
MMO	Marine Management Organisation
MoU	Memorandum of Understanding
MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
MSP	Marine Spatial Planning
NE	Natural England
OSPAR	Oslo and Paris Convention
PSSA	Particularly Sensitive Sea Areas
RSPB	The Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAD	Site Assessment Document
SCI	Site of Community Importance
SI	Statutory Instrument

SMNR	Statutory Marine Nature Reserve
SMRU	Sea Mammals Research Unit
SNCB	Statutory Nature Conservation Board
SPA	Special Area of Protection
SSSI	Site of Special Scientific Interest
ToR	Treaty of Rome
UNCED	UN Conference on Environment and Development
UNCHE	United Nations Conference on the Human Environment
UNCLOS	United Nations Conference(s) the Law of the Sea
UNEP	United Nations Environmental Programme
UNFAO	United Nations Food and Agricultural Organisation
VMCA	Voluntary Marine Conservation Area
VNMR	Voluntary Marine Nature Reserve
WFD	Water Framework Directive
WoRMS	World Register of Marine Species

CHAPTER ONE
INTRODUCTION

The marine environment has a profound impact on the existence of species across the globe. The oceans cover 71% of the Earth's surface and contain 97 % of the planet's water, yet more than 95% of the underwater world remains unexplored. The oceans play an integral role in many of the Earth's vital systems including climate and weather.[1]

The World Register of Marine Species (WoRMS) shows that currently 228,450 marine animal and plant species are known. In 2014 some 1,451 new-to-science marine creatures were added to WoRMS making an average of four per day. Further, it has been estimated that there are around 2.2 million species of marine life globally of which 91% still await description.[2]

From an anthropological perspective, a 2010 study estimated that US $563 billion–5.69 trillion worth of value is attributable to anti-cancer drugs of marine origin that are still awaiting discovery.[3] The research model used for this study predicted that there are 253,120 to 594,232 novel chemicals in marine organisms of which between 90% and 93% of these compounds remain undiscovered. The authors argue that this demonstrates the true irreversible economic cost of habitat degradation and biodiversity decline.

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[1] 'National Oceanic and Atmospheric Administration' (*United States Department of Commerce*, 2014) <http://www.noaa.gov/index.html> accessed 7 October 2014.

[2] [2] 'World Register of Marine Species' <http://www.marinespecies.org/news.php?p=show&id=4099> accessed 30 March 2015.

[3] Patrick M. Erwin, Susanna López-Legentil and Peter W. Schuhmann, 'The pharmaceutical value of marine biodiversity for anti-cancer drug discovery' 70 Ecological Economics 445.

In addition the oceans are also a major source of food for the human population globally. The UN's Food and Agricultural Organisation (FAO) advises that a 150 gramme portion of fish can provide 50 to 60% of an adult's daily protein requirement. The oceans' yield is not limitless, the proportion of commercial marine fish stocks that have been assessed as fished within biologically sustainable levels declined from 90 % in 1974 to 71.2 percent in 2011. In 2011, of the commercial stocks that were assessed, fully fished stocks accounted for 61.3 % and those that were under-fished were assessed as 9.9 %.[4]

It has been noted that the international legal framework developed on an ad hoc basis focussed on valuable fisheries and iconic species such as whales, rather than the wider marine ecosystems and biodiversity.[5] Birnie argues that this results from a failure to recognise the oceans are an ecosystem that mankind has artificially split into separate jurisdictional zones.[6] This leads Birnie to suggest this arbitrary approach means that fisheries conservation has been the least successful part of the Law of the Sea Convention.[7] In practice, however, it may also have hampered a rational approach to the development of marine conservation law. In recent decades steps have been taken to counter the depletion of marine living resources and to protect the physical environment those species rely upon, by means of the designation of marine protected areas (MPA) subject to specific objectives and management regimes. The FAO has stated that two of the primary reasons for

[4] *The State of World Fisheries and Aquaculture* (Food and Agriculture Organization of the United Nations (Rome 2014).
[5] P.W. Birnie, A.E. Boyle and C. Redgwell, *International Law and the Environment* (Birnie edn, Oxford University Press 2009),2nd para, first sentence, 704.
[6] ibid, 2nd para, third sentence, 704.
[7] Ibid final sentence, third para, 704.

establishing MPAs are for nature conservation and for fisheries management.[8] Despite these developments, in 2005 the World Wildlife Fund suggested that only 2.3 % of the world's oceans were protected, and the vast majority of these existing areas suffered from little or no effective management.[9]

Besides the economic benefits derived from commercial fishing and other extractive industries the coastal and marine environment is also valued by the wider community for other reasons. This has led to calls for policy makers to consider the reasons people care about such protected areas for their non-material and non-tangible values.[10] These non-tangible elements include tranquillity, relaxation, and the experience of nature, beaches and coastal towns, things which have been categorised as representing *spirituality.*[11] Although it might seem to be difficult to quantify what might be termed *feel-good* factors in economic terms meeting these 'needs' form an important part of the economy of coastal towns.

It has been reported that more than 75% of U.S. travellers and 87% of British travellers felt that it is important for their visits to not damage the environment; over one third of both British and U.S. travellers said they were willing to pay more for travel companies committed to environmental protection.[12] There is however some counter evidence to suggest that, despite the move to protect and conserve the

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[8] 'MPAs As a Tool for Fisheries Management' (*UN Food and Agriculture Organization of the United Nations*, 2009) <http://www.fao.org/fishery/topic/4400/en> accessed 15 May 2014.
[9] http://wwf.panda.org/what_we_do/how_we_work/conservation/marine/protected_areas/ accessed 21 June 2017.
[10] Kate Pike and others, 'Social Value of Marine and Coastal Protected Areas in England and Wales' [Taylor & Francis] 38 Coastal Management 412.
[11] Kate Pike and others, 'Seeking Spirituality: Respecting the Social Value of Coastal Recreational Resources in England and Wales' [Coastal Education and Research Foundation] Journal of Coastal Research 194.
[12] D Krantz M Honey, *Global Trends in Coastal Tourism* (Center on Ecotourism and Sustainable Development, Stanford University and Washington, DC 2007) 33.

biological and physiographic resources and associated ecosystems of marine and coastal areas to prevent their over-exploitation, the public lacks understanding and awareness of MPA concept despite the concept being of great importance economically and in terms of conservation and for the tourism industry.[13]

Each of the facts quoted above views the marine environment from an anthropocentric perspective rather than from the viewpoint that conservation is being of value in itself. This is a pragmatic approach on the basis that what does not have a value is not valued.

1 PROTECTED AREAS: A BRIEF OVERVIEW

The use of international agreements as a mechanism for protecting sensitive areas of the environment has grown substantially since the start of the twentieth century. However, the setting aside of 'protected areas is said to have existed in Europe for at least several thousand years,' although these have been terrestrially based.[14] The first modern international example was developed at the 1933 London Convention which defined nature reserves and national parks at an international level.[15] The text of the Convention is interesting in that it distinguishes between the expression 'national parks' and 'strict natural reserve.' The latter tends to forbid any form of hunting or fishing, together with any undertakings connected with forestry, agriculture, or mining, any excavations or prospecting, drilling, and where humans are forbidden to 'enter, traverse, or camp in without a special written permit from the

[13] R. L. Jefferson and others, 'Public perceptions of the UK marine environment' 43 Marine Policy 327.
[14] Lawrence Jones-Walters and Kristijan Čivić, 'European protected areas: Past, present and future' 21 Journal for Nature Conservation 122.
[15] Convention relative to the Preservation of Fauna and Flora in their Natural State Date adopted 11 August 1933, entered into force: 14 January 1936.

competent authorities'.[16] As will be seen below MPAs are designated with differing levels of protection including some, e.g. no take zones, with similar restrictions to the strict natural reserve described in the London Convention in terms of permitted activities.

Further developments took place in the 1950's and early 1960's, when the international community recognised that it needed to develop methods to protect the marine environment and its resources. This recognition led to the establishment of the first World Conference on National Parks, held in Seattle in 1962 at which the subject of inshore marine conservation was first raised formally at an international level by G Carelton Ray.[17] Ray proposed that the practices used for land and fresh water conservation be extended to the marine environment, as an alternative to the laissez-faire over-exploitative approach, which largely existed at that time.[18] This represented a development from the earlier management of individual species.[19] Ray argued that there should be complete protection of all life within designated parks.[20] In his paper, he made no recommendations on the optimal size of such areas citing the difficulties in defining workable sanctuaries or study areas.[21] His original conceptual framework for MPAs was to create areas for sanctuary, recreation and education.[22] Whilst Ray's ideas seem unambitious by current standards, they did represent a paradigm shift in marine conservation policy. Since

[16] Ibid Art 2 (2).
[17] Carelton Ray, 'Inshore marine conservation' in Alexander B Adams (ed), The Proceedings of the First World Conference on National Parks, US Department of the Interior, Washington DC, 1962 available at https://portals.iucn.org/library/sites/library/files/documents/1964-001-pgs. 77 - 87.pdf, accessed 15 April 2017.
[18] At this time, Ray held a doctorate in Zoology from Columbia University and was associated with New York Aquarium. He is currently Research Professor in Environmental Sciences, at the University of Virginia, see See https://med.virginia.edu/faculty/faculty-listing/cr/ accessed 8 January 2019.
[19] Carelton Ray 85 (n 18).
[20] Ray, second para, third sentence, 85 (n 18).
[21] Ibid.
[22] Ibid, last par, second sentence, 83.

that date the goals for MPAs have widened and it has been argued that, due to the diverse range of MPA goals and their degree of protection, it could 'almost be said that every MPA is unique' as each will have been designed to meet the specific circumstances arising from its location.[23]

The International Union for the Conservation of Nature (IUCN) state that one problem with protected areas is the frequent lack of clarity in the wording of their objectives.[24] The IUCN is categorical in its view that only areas where the main objective is the conservation of nature is the priority can be considered as protected areas.[25] The diversity of MPA types comes from the goals set for each area and the degree of protection this affords to the features of an area. For example some MPAs have been stablished as no-take zones where fishing is forbidden, others are designated as multi-purpose sites where features are protected, but some recreational activities are permitted, while others are protected for spiritual or cultural purposes. To illustrate this point it has been stated that the protection afforded to the 14 marine reserves in the U.S. is largely only against oil and gas development.[26] This lack of clarity in the wording of MPA objectives means that understanding the rights and legal obligations a host state has within different areas requires a consistent approach to the analysis of the relevant legal instruments. MPAs differ from terrestrial protected areas in a number of ways, which require a different approach to their designation and management. These differences include

[23] Tundi Agardy and others, 'Dangerous targets? Unresolved issues and ideological clashes around marine protected areas' [John Wiley & Sons, Ltd.] 13 Aquatic Conservation: Marine and Freshwater Ecosystems 353.
[24] IUCN, Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas, IUCN,Gland, Switzerland (2012), 19.
[25] IUCN, Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas, IUCN,Gland, Switzerland (2012, 15.
[26] Al-Abdulrazzak, Dalal, Trombulak, Stephen, Classifying levels of protection in Marine Protected Areas, [2012], 34, Marine Policy, 576583.

the issue of what has been termed as scale-connectivity. This is a reference to the fact that some free-swimming species have large ranges and water currents carry the genetic material of sedentary or territorial species over large distances, often hundreds of kilometres.[27] The range of dispersal is, therefore, often much greater than for terrestrial species. A second difference is the fact that much of the marine environment is 'hidden and alien' and people are unaware of the impact of human activities in marine habitats and species.[28] Therefore, there is the potential for damage to remain unseen and unknown. To aid our understanding of what the unseen damage caused by commercial fishing might look like if it was visible, journalist Charles Clover gave a powerful analogy of a band of hunters stringing a mile of net with a huge metal roller attached to the leading edge between two all-terrain vehicles and dragging it across the African plain. Everything in its way, fauna, flora and landscape features would be smashed leaving behind a bedraggled landscape like a harrowed field. The hunters would then collect the commercially valuable items and discard the rest.[29] A third is that marine ecosystems are generally natural in management terms whereas some valued terrestrial habitats are the result of changes resulting from human activity.[30] This means the marine environment presents additional challenges over and above those pertaining to terrestrial protected sites.

In 2011 a report by the United Nations Environmental Programme on governing MPAs argued that legal incentives need to be developed to encourage actors to

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[27] Ibid section 5, third para.

[28] Wanfei Qui P J.S Jones, Elizabeth De Santo, *Governing Marine Protected Areas - Getting the Balance Right. Technical Report, United Nations Environment Programme.* (United Nations Environment Programme. 2011), 7.

[29] Charles Clover, *The end of the line: how overfishing is changing the world and what we eat* (London : Ebury, 2004 (2005 [printing]) 2004), 1.

[30] Wanfei Qui P J.S Jones, Elizabeth De Santo, (n 19).

behave in a way that will ensure strategic policy outcomes, such as biodiversity and conservation objectives are fulfilled.[31] The approach adopted for this study is to establish what relevant legal obligations are placed on states through international law in protecting the MPAs, and how these can be best used to optimise the protection of the UK's protected marine sites. The concept of protecting the marine environment is an evolving one, the legal framework for protecting valuable marine areas only began to be put in place from the 1970s, but it was given a significant boost by the coming into force of the UK's Marine and Coastal Access Act (MCAA), in 2009.[32]

2 THE RESEARCH QUESTION

The stimulus for this research was a sense that, despite the passing of the MCAA, there remains a gap between the UK's public policy rhetoric and the compliance with international legal obligations in respect of the designation and management of MPAs in UK waters. Much of the current literature seeking to evaluate the effectiveness of MPAs examines them from a purely scientific or cost benefit perspective, which is important, but does not reveal why some sites succeed and others fail.[33] This study adopted a different approach and analysed the legal obligations underpinning MPAs to evaluate whether or not they conform to the obligations agreed by states under international law. This approach adds to our understanding of effective MPA management by suggesting that there needs to be a more robust enforcement of the agreed legal rules. The question to be addressed by this work is therefore,

[31] Ibid vii.
[32] Marine and Coastal Access Act 2009.
[33] See for example McCrea-Strub, Ashley, Zeller, Dirk, Rashid Sumaila, Ussif, Nelson, Jay, Balmford, Andrew Pauly, Daniel, 'Understanding the cost of establishing marine protected areas' [2011], 34, Marine Policy, 1-9 and, H. Glenn and others, 'Marine protected areas—substantiating their worth' 34 Marine Policy 421.

Is the UK implementing a marine conservation policy that fulfils its obligations under international law with particular reference to MPAs and any additional obligations under the provisions of the MCAA?

The overall research question set out above will be most effectively answered by unpacking it into a number of sub-questions as follows,

Does international law clearly set out fundamental obligations for states relating to the designation and management of MPAs?

Does the MCAA and related instruments recognise or explicitly incorporate these obligations?

Does the MCAA related instruments provide an effective legal framework for the designation and management of all types of MPAs in the UK marine area in accordance with those international obligations?

Does the legal framework and how it is applied provide a satisfactory basis for dealing with threats to legally designated MPAs and does this provide redress to stakeholders in cases of regulatory failure?

Can the law regarding the designation and management of MPAs be improved to better protect UK MPAs?

It has been said that international action to protect the environment rests on the reality that environmental problems do not respect borders, pollution travels, and marine living resources, particularly on the high seas, are often seen as common

resources.[34] In some cases, such as the laws protecting the ozone layer or Antarctica, there is a unified legal regime. However, in the case of the marine environment, the legal rules are distributed across a number of multi-lateral environmental agreements (MEA) agreed for specific purposes rather than being set out in a single unified legal framework. Therefore, to measure a state's compliance with international law it is necessary to analyse those MEAs and to identify what obligations appear most relevant to the protection of the marine environment. Because the body of international law is so vast it is necessary to make decisions on which instruments are most relevant to the issue. The selection of the obligations will, therefore, be based on those that appear most frequently in the selected instruments and which can be regarded as having the potential to have a mutually supportive character. These can then be used as a framework for assessing a state's level of compliance.

However, caution is needed in the case of the UK. While customary international law is recognised by the UK domestic courts further domestic legislation is needed to provide powers to confer penalties. This is because UK constitutional practice is based on what has been termed a dualist approach whereby the constitution grants no special status to treaties and the rights and obligations in such treaties have no effect in domestic law.[35] This separation of powers is ancient and means that the power to accede to treaties is a prerogative power of the executive arm of the government whilst the power to legislate on sanctions is almost completely vested in Parliament.[36] Despite this, treaties do have persuasive weight and it is probable

[34] Jane Holder and Maria Lee, *Environmental protection, law and policy : text and materials* (2nd edn, Cambridge University Press 2007).
[35] Anthony Aust, *Modern treaty law and practice,* (Third edition. edn, 2013) 167.
[36] Ibid 167.

that the UK would not want to breach its obligations unless they conflict with a UK statute or previous decisions of UK courts.

3 METHODOLOGY

As stated above, there is no single unified legal regime for the conservation of the marine environment that is equivalent to the laws protecting the ozone layer or Antarctica. Instead, the law governing the designation and management of MPAs has developed incrementally in response to the concerns raised by conservationists and marine biologists as outlined above. Assessing its effectiveness has required the construction of a conceptual framework to provide a systematic analysis of the relevant law to understand what common principles have been implemented to address the concerns of the biologists, conservationists and cultural experts who have generated much of the impetus for action in this area. The conceptual framework will allow a consistent approach to be used in analysing the adequacy of the relevant law as it develops in future.

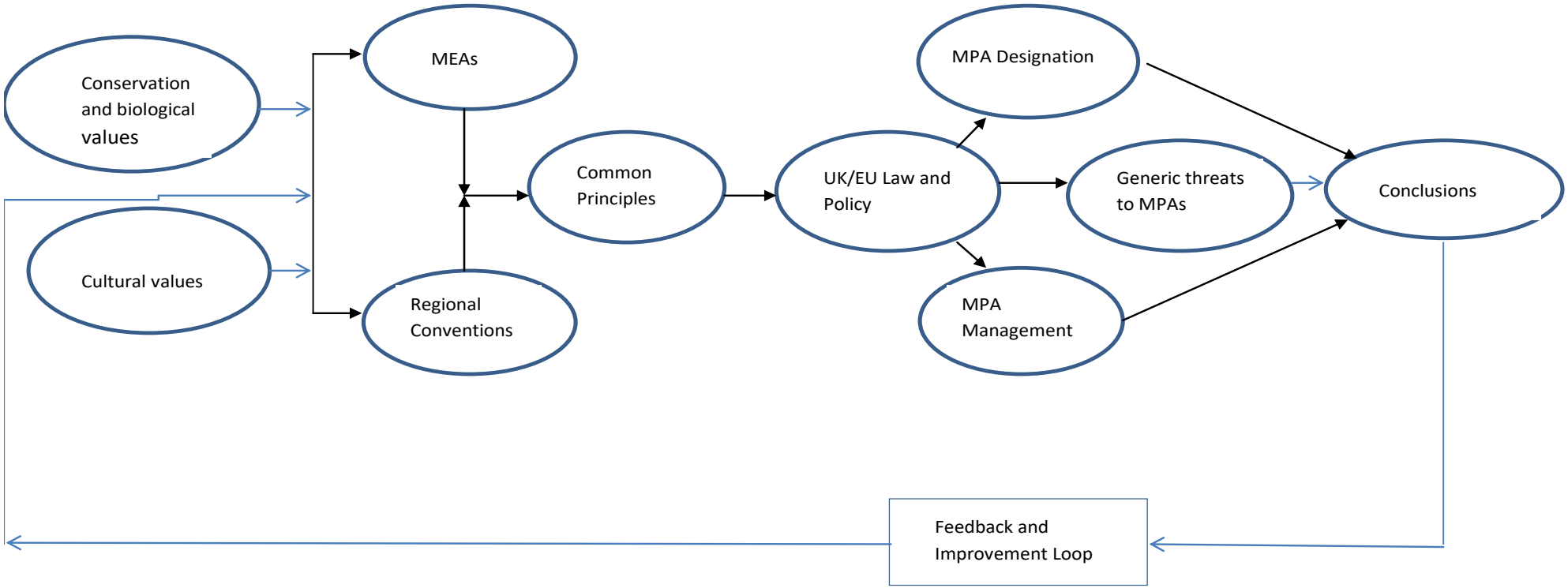

Fig 1. A Conceptual Model for Analysing the Framework of Law Relating to the Designation and Management of Marine Protected Areas

The model adopted for this study was to analyse the MEAs agreed by the international community to address the concerns raised by marine conservationists, biologists and cultural activists on the impact of human activities on marine biodiversity. This analysis identified a number of common obligations relevant to MPAs and marine protection across the selected MEAs. UK and EU law was then analysed to see if these obligations have been correctly incorporated into the laws governing UK waters. This was done by means of a number of case studies of initial MPA designation and post-designation MPA management in UK waters. This approach allowed clear conclusions to be drawn on the UK's fulfilment of its international obligations and to propose areas for improvement.

4 THE STRUCTURE OF THIS STUDY

The rest of this study will be structured as set out below.

The aim of chapter two is to analyse the large body of international environmental law and identify which instruments are most relevant to the protection of the marine environment. It should be noted that the international legal framework for protecting the marine environment was initially developed by amending a number of MEAs designed to protect valuable terrestrial sites. As a result the marine protection provisions of the MEAs are complex and it can be difficult to understand the obligations they place on states, how they relate to one another, and how, or even if they have been correctly incorporated into UK law. The instruments were then analysed to identify key obligations set out in them that are relevant to the protection of UK MPAs. Because of the large number of obligations identified in this way, the method of selection was based on whether they were reiterated across the relevant instruments and whether they are likely to be mutually supportive.

In chapter three a similar exercise covering UK and EU and relevant regional conventions was completed to establish if the obligations identified in international law have been given effect in UK law governing the designation and establishment of MPAs within waters under the UK's control. This will determine if the identified obligations have been transposed into domestic law in such a way as to render them enforceable domestically. The legal situation for the UK is complicated by the supremacy of EU law and how that law is given effect domestically. In simple terms this is because EU Regulations have direct effect, while Directives must be correctly transposed into UK domestic law. For this reason EU legal instruments, case law, and policy will be incorporated in the chapter dealing with the UK as appropriate. At the time of this research Brexit is very much a topic of discussion and the final outcome is likely to impact on the law affecting marine conservation.

In chapter four the common principles were applied to a number of case studies examining the designation and management of MPAs in UK waters. Where available the case studies included an analysis of case law relating to disputes MPAs relating to individual sites. This is necessary because, as Chynoweth states, in common law jurisdictions, such as the UK, statutes and cases cannot in themselves provide a complete statement of the law. This can only be revealed by applying the relevant legal rules to the particular facts under consideration.[1]

Fourth, a review of a number of threats to MPAs was carried out in two parts in chapter five. First an analysis of the threats arising from global warming and ocean

[1] Knight A. Ruddock L. (ed), *Advanced Research Methods in the Built Environment* (Wiley-Blackwell 2008), 29.

plastic pollution was completed. Although these threats are global in nature, and their effects cross national boundaries, it is possible for states to augment international actions to reduce its own contribution to these effects being felt elsewhere. The second part of the chapter reviews the findings from the case studies and the consideration of global threats were than used to provide feedback with recommendations to improve the overall legal framework governing MPAs. Chapter six reviews the effectiveness of the law in the UK in respect of both the designation and management of MPAs in UK waters and suggests improvements to the law and summarises the overall conclusions of this research. Chapter seven contains a summary of the research conclusions.

During the course of this research the UK Parliament's Environmental Audit Committee (EAC) conducted two inquiries into MPAs, and in particular Marine Conservation Zones (MCZs). The first inquiry examined the situation in UK waters following the designation of the first tranche of MCZs under the provisions of the MCAA.[2] The second inquiry followed up on the recommendations made in the Committee's previous reports and to assess the progress that the Government has made in designating, implementing and enforcing MPAs in both the UK and the Overseas Territories.[3] The second inquiry was particularly apposite in view of the Conservative Party's commitment in its 2015 Manifesto to *'establish a new Blue Belt to safeguard precious marine habitats'.*[4] The purpose of the inquiries was not to examine the law in detail, but to assess the progress in designating and managing

[2] *Environmental Audit Committee, Marine Protected Areas, First Report of Session HC 221 (2014/15).* (Marine Protected Areas HC 221 (2014/15), House of Commons 2014) para 7.
[3] *Environmental Audit Committee, 'Marine Protected Areas Revisited' (2016–17) HC 597* (House of Commons HC 597 Published on 25 April 2017), para 6.
[4] *STRONG LEADERSHIP A CLEAR ECONOMIC PLAN A BRIGHTER, MORE SECURE FUTURE* (Promoted by Alan Mabbutt on behalf of the Conservative Party at 4 Mathew Parker Street, London SW1H 9HQ, 2015), 54.

MPAs in waters under the UK's jurisdiction. However, during the course of the inquiries parties who submitted evidence did make references that indicated their views on the adequacy of the law and, therefore, these will be referred to in the appropriate sections of the main chapters of this thesis.

For the reasons given above it is considered that a simple exposition of the existing body of law applicable in the UK would be an inadequate method of answering the research question.

Before proceeding to the analysis of international law two cautions must be raised,

5 TWO CAUTIONS

5.1 THE SHORT PERIOD THE MCAA HAS BEEN IN FORCE

The MCAA came into force in November 2009. This means that there is relatively little case law that informs us of how it is going to be interpreted by the courts. This fact will change over time, but for now it is necessary to consider what Parliament's policy ambitions were in passing this Act. This can, to some extent, be identified by reviewing debates in Hansard; by reviewing any policy documents produced since the passing of the Act, and by reference to the UK's compliance with the principles set out in international law governing marine conservation. This situation will change over time, but for now it is necessary to consider Parliament's policy ambitions in passing the Act. This approach is not uncontroversial. In 1992, in the case of *Pepper v Hart* the House of Lords allowed reference to be made to Hansard

in limited circumstances.[5] The circumstances included where legislation is ambiguous or obscure and might lead to an absurdity or where additional material such as statements by ministers or promoters of the Bill might help with interpretation.[6] Subsequently there was a retreat from accepting the case as providing a sound interpretative technique because it places too much weight on non-statutory material.[7] More recently it has been argued that this might again be changing following the advent of the Human Rights Act, which has resulted in 'pressure on courts to refer to Hansard to see if legislation is compatible with the UK's obligations under the European Convention on Human Rights'.[8]

A degree of caution is wise in approaching the subject in this way. First, it has been noted by the International Law Commission (ILC) that 'the interpretation of documents is to some extent an art, not an exact science'.[9] This, they argue is because many of the maxims and principles set out in international law are guides to what the parties intended to attach to such expressions.[10] This is a result of the need for the draftsmen of international law to take account of competing interests, which can result in unclear or ambiguous wording of treaties.[11] The treaties referred to in this study use wording derived from biology and other sciences and these have to be given legal meaning.

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[5] *Pepper (Inspector of Taxes) v Hart* [1993] AC 593.
[6] James A. Holland and Julian S. Webb, *Learning legal rules* (8th edition. edn, Oxford University Press 2013), 281.
[7] Ibid 286.
[8] Ibid 288.
[9] Report of the Commission to the General Assembly Commentary on Article 28 p218. Draft Articles on the Law of Treaties with commentaries 2005 para 4 .
[10] Ibid para 4, third sentence.
[11] Aust 205 (n 25).

This study addresses a new area of law for which there is a considerably greater quantity of public policy statements than case law, it is submitted that it is, therefore, appropriate to analyse the legislature's intentions in introducing the MCAA and associated secondary legislation as well as analysing relevant case law in order to resolve any ambiguity in the text. For example, the MCAA contains eight references to 'sustainable development'. Neither the Act nor its Explanatory Notes provide a definition of what the phrase means. This is not surprising when one considers Lord Hunt's statement that his officials had 'identified 73 statutes and more than 400 EU instruments in which sustainable development is used but not defined, as there is currently no legally binding definition'.[12] This lack of a definition could, therefore, create problem for the courts in attempting to interpret what the legislation actually requires in terms of the components of 'sustainable development. However, by closely studying Hansard, the court would find that earlier in the debate Lord Greave said the Government had referred to the 'three pillars of sustainable development the economic, environmental and social.' Lord Greave provides several examples of what this concept might mean. [13] Although he does not provide the source for his statement, the reference to the three pillars suggests that these should be balanced when seeking to achieve sustainable development. This approach, therefore, might help a court to interpret the relevant provisions of the MCAA.

Therefore any ambiguities or conflicts that arise because of inconsistent wording could be resolved by considering Parliament's ambition and by reference to principles identified in international law.

[12] HL Deb 21 January 2009 vol 706 col 1695
[13] HL Deb 12 January 2009 vol 706 col 1042

5.2 BREXIT – THE IMPACT OF THE EUROPEAN REFERENDUM ON EU LAW AND THE UNITED KINGDOM

As stated above in addition to national and international law the UK is currently subject to the supranational law of the European Union (EU). Although the EU Commission's early focus was on creating a single market for goods and services, some commentators have argued that the EU also began to develop environmental policy from the time of the 1972 Paris Summit when the Heads of State committed to developing the social dimension of economic integration.[14] However at the time of the Paris Summit the European Community had no competence over environmental policy under its Treaties.[15]

The omission of provisions on the environment in the Treaty of Rome was addressed by the passage of the Single European Act on 1st July 1987. This Act added a new Title VII to Part Three of the EEC Treaty which set out the EC's competence in this area. The obligations this placed on Member States were,

> to preserve, protect and improve the quality of the environment,
> to contribute towards protecting human health,
> to ensure a prudent and rational utilisation of natural resources.[16]

The requirement to integrate a high standard of environmental protection across all areas of competence at Community level was strengthened in 1997 by the insertion of a new provision, Article 130r (2), into the general part of the Treaty of

[14] Erika M. Szyszczak and Adam Cygan, *Understanding EU law.* (2nd edn, Sweet & Maxwell 2008).
[15] P. P. Craig and G. De Burca, *EU law : text, cases, and materials.* (5th edn, Oxford University Press 2008) 187.
[16] Single European Act (SEA), effective 1 July 1987 L169/1. Art 130r to 130t.

Amsterdam.[17] The revision introduced an obligation for Community policy on the environment to be based on the precautionary principle. [18] Throughout this chapter the language and numbering of EU Treaty articles will be consistent with the numbering extant following the Lisbon Treaty. Furthermore, until Brexit, EU law will generally be treated as having direct effect in UK law on the basis provided for following the *Van Gend en Loos* judgment, unless otherwise indicated.[19]

Much of the environmental legislation enacted in the UK in the last thirty years has its origins in EU instruments. These have had a considerable impact on environmental legislation across all Member States and some of its principles have spilled over into other jurisdictions. The significance of this is that much of the EU's environmental law applicable to the governance and management of MPAs have been promulgated in the form of Directives which are then incorporated into UK law by means of domestic secondary legislation. Therefore, unravelling its effects is likely to prove impracticable in the short to medium term even if in the national authorities wished to do so during the period up to 29 March 2019; the date the UK is to leave the EU. The status of EU law in the UK may also continue if a transition period is agreed. It is on this basis that EU law forms part of this study and recommendations on what should happen post-Brexit will not be made.

In the case of marine conservation, the EU Commission has identified the marine environment as a precious asset and expressed concern that Europe's marine

[17] Treaty of Amsterdam Amending the Treaty on European Union, The Treaties Establishing The European Communities and Certain Related Acts [1997] OJ C340/24. Art 130r.
[18] Now found at Title XX (Environment), Articles 191 to 193.Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union OJ C 115/01.
[19] *Van Gend & Loos* v *Nederlandse Administratie Der Belastingen* [1963] ECR 13.

environment has continued to deteriorate.[20] The principal threats to the marine environment identified by the Commission included the effects of climate change; impacts of commercial fishing; oil spills and discharges; introduction of non-native species; eutrophication and the related growth of harmful algal blooms; litter pollution; contamination by dangerous substances and microbiological pollution; radionuclide discharges; and noise pollution.[21] The Commission recognised that the continued deterioration of the marine environment jeopardised the generation of wealth and employment opportunities derived from the Community's seas. Key sectors affected included tourism, and fisheries. In the case of the latter the Commission estimated that the loss of income from over-fishing of cod alone in the North Sea and Baltic Sea was €400 million in 2002.[22]

It is clear that EU legislation has had a profound effect on UK law. In 1974 Lord Denning observed that,

> The Treaty [of Rome] does not touch any of the matters which concern solely England and the people in it. These are still governed by English law. They are not affected by the Treaty. But when we come to matters with a European element, the Treaty is like an incoming tide. It flows into the estuaries and up the rivers. It cannot be held back, Parliament has decreed that the Treaty is henceforward to be part of our law. It is equal in force to any statute.[23]

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[20] Commission (EC), 'Proposal for a Framework for Community Action in the Field of Marine Envronmental Policy' COM (2005) 505 final of 24 October 2005.
[21] Ibid 4.
[22] Commission (EC) 'Thematic Strategy on the Protection and Conservation of the Marine Environment 'COM (05) 504 final, 24 October 2005. Section 2 fourth para.
[23] *H.P. Bulmer Ltd v J. Bollinger SA HP Bulmer Ltd v J Bollinger SA* [1974] Ch 401 at 418.

On 23rd June 2016, the people of the United Kingdom voted to leave the EU. The timetable for leaving is that it would come into effect two years after the UK triggered Article 50 of the European Treaty.[24] This will be on 29 March 2019. During that remaining time the UK will remain subject to the full *aquis communitaire* and as such relevant EU legislation will be referred to in this study. However, the tide that Lord Denning referred to may now ebb although the outcome is far from certain at present.

[24] Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union OJ C 115/01.

CHAPTER TWO
INTERNATIONAL LAW GOVERNING MARINE CONSERVATION

1. INTRODUCTION

The objective of this chapter is to identify and analyse the major multi-lateral environmental agreements (MEA) most relevant to the protection of the marine environment and its living resources to understand what obligations are placed on states with regard to marine protected areas (MPA). A wide range of obligations have been developed by the Parties to the MEAs over many years. This chapter analyses the most relevant of these to marine conservation and then focuses on their legal meaning to states during the designation and management of MPAs. Following this introduction, this chapter has five core sections. Section 2.0 looks at the remarkable growth of environmental law in the post war years with a particular focus on conservation. Next section 3.0, analyses how the international legal and policy response to that growth has developed and how it now underpins the concept of MPAs. Section 4.0 is an analysis of the provisions of the most important legal instrument concerned with the marine environment, the United Nations Convention on the Law of the Sea (LOSC). Then section 5.0 provides an analysis of the various MEAs most relevant to the protection of the marine environment and its living resources and identifies the key common obligations found therein. Section 6.0, is an analysis of the obligations found in three regional conventions, which focus on the protection of marine habitats and species, but within a regional European context. This analysis will be followed by, section 7.0, which is an analysis of what the common obligations identified across the various legal instruments mean, in practical terms, for the UK authorities in terms of meeting their legal obligations. As

part of this process conclusions will be drawn on how the domestic courts should interpret their legal effects.

As stated in section five of chapter one, states are bound by the doctrine of *pacta sunt servanda* which means that 'e*very treaty in force is binding upon the parties to it and must be performed by them in good faith'.*[1] As a general rule the Vienna Convention leaves it to signatories to decide themselves how obligations under other treaties will be reflected in their domestic law. The effects of this provision will be considered in the chapters dealing with UK law.

2. THE REMARKABLE DEVELOPMENT OF ENVIRONMENTAL LAW

The development of modern international environmental law since the 1960's has been described as *"one of the most remarkable exercises in international law making"* comparable only to the development of human rights law and that of international trade.[2] Birnie suggests that use of the term '*environment*' is difficult because it is amorphous due to its wide scope, which could 'encompass anything from the whole biosphere to the habitat of the smallest organism'.[3] Consequently its meaning must be deduced from the wording of the various international treaties and convention provisions, which should specify exactly which elements of the environment they are intended to protect. This is particularly apposite for this study because many of the conventions were developed in response to concerns in respect of the terrestrial environment and have only begun to address offshore

[1] Vienna Convention on the Law of Treaties adopted 23 May 1969, entered into force on 27 January 1980 115 U.N.T.S. 331, 81.LM. 679.
[2] P.W. Birnie, A.E. Boyle and C. Redgwell, *International Law and the Environment* (Birnie edn, Oxford University Press 2009), Preface.
[3] Ibid 5.

problems relatively recently. In order to understand the current state of environmental protection in the marine environment, its successes and the gaps, it is worthwhile recapping the remarkable development of environmental law since the 1960's.

The development of environmental concerns arguably stems from the fact that as post war economies grew citizens became uneasy about the effects of industrial production and increased resource consumption on the environment. This unease really grew in 1962 with the publication of Rachel Carson's seminal work *Silent Spring*.[4] This book helped frame the environmentalist debate for a growing number of people. Although the book was primarily about the use of toxic chemicals in the countryside, Carson did address the effects of pesticide run off in the marine environment, particularly on salmon in rivers,[5] and shellfish, such as oysters.[6] These concerns, resource consumption and pollution, were neatly encapsulated by Garrett Hardin in his examination of the human tendency to ignore the ill effects of pollution and over extraction of resources for short term gain in what he described as the '*tragedy of the commons'*.[7] Economists refer to such effects, which affect third parties without compensating them, as 'externalities,' when no appropriate compensation is paid. The law attempts to address this through concepts such as the 'polluter pays' principle, which can now be found across both international and domestic legal regimes. By way of analogy, Hardin illustrated the problem of taking something out of the commons, for example by unsustainable extraction, or by putting something in, for instance waste, such as sewage and chemical or

[4] Rachel Louise Carson, *Silent spring.* (H. Hamilton 1963).
[5] Ibid 122.
[6] Ibid 140.
[7] Garrett Hardin, 'The Tragedy of the Commons' 162 Science 1243.

radioactive waste. Society's approach, Hardin argues, is to increasingly augment statute law with administrative law even though it is impossible to spell out all the conditions under which an action can be deemed safe.[8]

Shortly after the publication of Carson's book the risks to the marine environment were dramatically brought home to the British public when in March 1967 an oil tanker, the Torrey Canyon, hit a reef off the coast of Cornwall. Although the Torrey Canyon was in UK waters when it became a maritime casualty it transpired that it was an American owned ship, chartered by BP, a British company, but registered in Liberia.[9] At that time there was no provision in international law setting out the legal rights, if any, that states had in such circumstances.[10] This was instead a situation of misadventure. The ship was carrying 120,000 tons of crude oil, which began to leak from the stricken vessel. In response to public concern, as television news showed footage of sea birds covered in oil, the UK Government decided on two courses of action. First, concern was to be countered by the supply 'of reliable information about the state of beaches and the progress of the operations.'[11] The second was that the Government ordered the RAF and the Fleet Air Arm to bomb the wreck in an attempt to set the oil on fire.[12] It has been argued that the UK authorities took this action in the hope of reducing damage by oil pollution from the vessel.[13] The bombing was again broadcast on the evening news and the seriousness of what had happened really struck home with the public.[14]

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[8] Ibid 1245.
[9] HC Deb 20 March 1967 vol 743 cc1054-60.
[10] HC Deb 12 June 1967 vol 748 cc82-4.
[11] HC Deb 10 April 1967 vol 744 cc874-926.
[12] HC Deb 04 April 1967vol 744 cc38-54.
[13] R. R. Churchill and A. V. Lowe, *The law of the sea* (3rd edn, Manchester University Press 1999), 354.
[14] Personal recollection.

Doubts about the legality of the action taken by the UK, which it claimed was legal under customary international law, led the UK Government to refer the matter to the International Maritime Organisation (IMO).[15] The UK might have attempted to argue that its actions were a lawful act of self-defence but, at that time the concept strictly applied to hostile acts utilising force.[16] The IMO recognised that the UK's actions were necessary because such incidents had the potential to cause serious environmental harm. The result was the adoption of the Convention on Intervention on the High Seas in Cases of Oil Pollution Casualties (MARPOL).[17] Despite being adopted in 1973, MARPOL did not enter into force until it had been substantially amended in 1978.[18] Some of the amendments reflected a further series of tanker accidents, including significant disasters such as the Argo Merchant in 1976 and the Amoco Cadiz in 1978.[19]

The Convention permits states to take such measures as are necessary *'to prevent, mitigate or eliminate grave and imminent danger'* to their coastline from oil pollution.[20] MARPOL subsumed the earlier 1954 OILPOL Convention, which had prohibited the dumping of oily waste within a defined distance from land or in environmentally sensitive areas and limited the size of cargo tanks in oil tankers so that in cases of damage only a limited quantity of oil could enter the sea.[21] It is now

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[15] HL Deb 6 April 1967 vol 281 cc1105-58.
[16] A E Utton, 'Protective Measures and the "Torrey Canyon" ' (1968) 9 Boston College Law Review, 613.
[17] International Convention for the Prevention of Pollution from Ships (adopted on 2 November 1972, entered into force 2 October 1973) 12 ILM 1319 (1973); TIAS No. 10,561; 34 UST 3407;1340 UNTS 184.
[18] Convention for the Prevention of Marine Pollution by dumping fro Ships and Aircraft (adopted on 15 February 1972 entered into force 7 April 1974) 932 UNTS 3; 11 ILM 262 (1972.
[19] 'International Maritime Organisation' (2016) <http://www.imo.org/en/OurWork/Environment/PollutionPrevention/OilPollution/Pages/Background.aspx> accessed 10 October 2016.
[20] 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties adopted on 29 November 1969 entered into force on 6 May 1975 970 UNTS 211 Art 1.
[21] International Convention For the Prevention of Pollution of the Sea by oil (As Amended) (adopted on 12 May 1954, entered into force on 26 July 1958 I 4714.).

considered that a better view is that the UK's action, together with an acceptance of it by other states, constituted an emerging rule of customary law and the Convention clarified this point.[22] The passing of MARPOL demonstrated that policy makers are able to respond relatively quickly to public opinion and emergencies when necessary. This could be as a response to the threat of serious environmental harm or with an eye to the political costs at a future election.

The Torrey Canyon incident and others like it were perhaps illustrative of the problem alluded to by Dimitrov who, in establishing his argument that an international regime of protection is needed, said that available information does not portray environmental degradation as a global issue involving elements of interdependence and that scientists and activists *"perceive the problem as primarily local in character".*[23] The pollution caused by the Torrey Canyon was indeed local but the domicile for legal liability was tangled and likely to have delayed the resolution of the problem through negotiation.

Nine years after the publication of Carson's book and five years after the Torrey Canyon incident, the continuing groundswell of public concern about the environment, led to a report being prepared by a group of experts which was published shortly before the first United Nations Conference on the Human Environment (UNCHE) in 1972.[24] The output of the conference was later published in a book, which noted that man appeared to still be '*under the strong influence of*

[22] Churchill and Lowe, (n 14) 355.
[23] Rado S. Dimitrov, 'Confronting Nonregimes: Science and International Coral Reef Policy' 11 The Journal of Environment & Development 53.
[24] Barbara Ward, *Only one earth : the care and maintenance of a small planet* ([S.l.] : Penguin, 1972 (1974) 1972).

the medieval concept of the endless ocean'.[25] Similarly, the potential of the living resources of the oceans was being squandered with at least 50 per cent of fish catch being processed into fish meal to be used for feeding chickens and pigs in the developed world, rather than directly feeding people.[26] The book repeats Carson's concerns about the run off of pollutants via river systems to the oceans where they enter the marine food chain.[27]

The 1972 UN conference was held in Stockholm, Sweden. It attracted representatives from 113 countries, plus others from international non-governmental organisations, intergovernmental organisations, and specialist agencies. The Stockholm conference focussed on the goal of reducing human impact on the environment and how it would require extensive international cooperation because many of the problems affecting the environment are global in nature. UNCHE represented an attempt at a stock taking of the impact of humanity on the environment and an attempt to reach a common perspective on how to preserve and improve the human environment. It must be considered that one of the achievements of UNCHE was that it first made explicit in popular debate the fact that the oceans are completely interlocked and problems such as pollution or the impact of overfishing are ultimately shared by all.[28]

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[25] Ibid 271.
[26] Ibid 271.
[27] Ibid 274.
[28] UNCHE, 'Brief Summary of the General Debate para 59.' (*UNEP*, 1972) <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1497&l=en> accessed 30 June 2016.

A key part of the formal output of UNCHE was the Stockholm Declaration.[29] The Declaration is not legally binding but it has acquired a degree of normative pressure in environmental law. The Declaration set broad environmental policy goals and objectives in the form of twenty-seven principles, which are said to underlie the 'interests of all and protect the integrity of the global environmental and developmental system'.[30] The Declaration requires parties to safeguard ecosystems '*for the benefit of present and future generations through careful planning or management, as appropriate and required'*.[31] This early reference to the importance of ecosystems at a holistic level set the bar for many subsequent environmental treaties.

In terms of the marine environment its provisions include an obligation for States to,

> take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.[32]

The inclusion of this principle is likely to have been influenced by the discussions leading up to the adoption of MARPOL and provides a useful example of a uniformity of practice leading to the recognition of the principle as customary

[29] Declaration of the United Nations Conference on the Human Environment (adopted 5 June 1972 entered into force 16 June 1972) U.N. Doc. A/Conf.48/14/Rev. 1(1973); 11 ILM 1416 (1972).
[30] Ibid Preamble.
[31] Ibid Principle 2.
[32] Ibid Principle 7.

international law. In effect, it is recognition by states that a practice 'is becoming settled enough to become a binding obligation in international law'.[33]

It is significant that despite the non-binding nature of the Stockholm Declaration, the United Nations Environmental Programme (UNEP) was launched following UNCHE. The objective of UNEP was, and is, to encourage other UN agencies to integrate environmental measures into their programmes.

The UN held a further Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in 1992, which resulted in the Rio Declaration.[34] The Declaration declared that human beings are at the centre of concerns for sustainable development and they are entitled to a healthy and productive life in harmony with nature.[35] Although Rio is again a non-binding declaration it sets out some of the key principles that now underlie environmental law.[36] It has been said that Principle 11 of the declaration significantly extends the domestic reach of international environmental law by requiring states to pass effective environmental legislation.[37] The requirement that parties *'shall cooperate to conserve, protect, and restore the health and integrity of the Earth's ecosystem'* while recognising their common but different responsibilities is important in that a heavier burden is potentially placed on developed economies such as the UK.[38] In addition, the Declaration recognises that,

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[33] Anthony Aust, *Modern treaty law and practice* (Third edn, 2013) 9.
[34] The Rio Declaration On Environment And Development (1992) UN Doc. A/CONF.151/26 (vol. I); 31 ILM 874 (1992).
[35] Ibid Principle 1.
[36] Jane Holder and Maria Lee, *Environmental protection, law and policy: text and materials* (2nd edn, Cambridge University Press 2007) 129.
[37] P.W. Birnie, A.E. Boyle and C Redgewell, (n 2) 129.
[38] Rio Declaration, Principle 7 (n 34).

> in order to protect the environment, states ***should*** apply the precautionary principle' and where there are threats of serious harm or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation [emphasis added].[39]

It is not unreasonable, therefore, to argue that although the declaration is non-binding the use of the word '*should*' rather than '*may*' provides a good deal of normative force.

The Rio conference subsequently led to the development of Agenda 21, which is again a non-binding voluntary action plan.[40] Its general nature is said to have rendered it non-justiciable in any international court.[41] It did, however, restate the commitment of the signatories to the concept of *'sustainable development.*[42] Agenda 21 refers to LOSC and chapter 17 of the Agenda deals specifically with the protection of the oceans, seas, and coastal areas and their protection, and the rational use and development of their living resources. It also introduced a requirement for a precautionary approach to the protection of the marine and coastal environments.[43] This widened the focus of concern from just considering pollution towards environmental degradation and the protection of ecosystems. As stated above, Agenda 21 is non- binding on states and cannot amend LOSC. It

[39] Ibid, Principle 15.
[40] Agenda 21: Programme of Action for Sustainable Development U.N. GAOR, 46th Sess., Agenda Item 21, UN Doc A/Conf.151/26 (1992).
[41] Birnie, Boyle and Redgwell (n 2) 609.
[42] Agenda 21 Chapter 2 s2.1, (n 40).
[43] Ibid chapter 17, s17.1.

should, however, be taken into account when interpreting or implementing LOSC and it has had the effect of legitimising 'legal developments based on these new perspectives'.[44] States are required to identify marine ecosystems exhibiting high levels of biodiversity and productivity and other critical habitat areas and provide necessary limitations on use in these areas, by, *inter alia*, designation of protected areas.[45] A list of priority marine ecosystems is provided, which includes coral reef ecosystems, estuaries, temperate and tropical wetlands, seagrass beds, and spawning or nursery areas.[46]

In 2002 the IMO passed a resolution providing for the designation of particularly sensitive sea areas (PSSAs), which require special protection for ecological, socio-economic, or scientific reasons if they are vulnerable to damage by marine activities.[47] The Resolution listed the priority marine ecosystems that had been identified under Agenda 21.[48] All Member States are entitled to participate in adopting resolutions of the IMO, which are agreed by consensus. However, parties to LOSC are expected to conform to the rules and standards subject to particular circumstances in each case. IMO resolutions on technical standards, however, are mandatory on parties.[49] This Resolution should be regarded as an important milestone on the road to the recognition that, like the terrestrial environment, some areas of the marine environment require special protection. By 2016 there were fourteen PSSA's listed of which the Western Europe PSSA is the largest. It is set

[44] Birnie, Boyle and Redgwell (n 2) 384.
[45] Agenda 21 Chapter 17 s17.85 (n 40).
[46] Ibid, paragraph 17.85.
[47] IMO Guidelines for the designation of special areas under MARPOL 73/78 and guidelines for the identification and designation of particularly sensitive sea areas Resolution A.927 (22) adopted 15 January 2002.
[48] Ibid para 2.5.4.
[49] *Implications of the United Nations Convention on the Law of the Sea for the International Maritime Organization LEG/MISC.8 30 January 2014* (IMO Secretariat, 2014), 10.

on the continental shelf and stretches from the coast of Scotland in the North to the seas off Spain in the South.[50]

The Resolution indirectly provides a definition of an ecosystem when describing the ecological criteria an area should meet to be designated as a PSSA,

> Integrity: contains all ecosystem components required for the continued existence of the species within that system. It may be regarded as a biologically functional unit.[51]

This definition of what constitutes ecosystem integrity is important to understanding the obligation placed on states in protecting PSSAs. This is because of its use of the phrase '*all ecosystem components*' which can be interpreted as meaning both the living resources, both prey and predators, and the physical components of the environment e.g. reefs or substrates. In simple terms, it is not sufficient for a state to simply protect a physical feature but not its dependent species and *vice versa*.

In 1995 the Marine Environmental Pollution Committee (MEPC) of the IMO adopted a further Resolution, which contained guidelines on incorporating the precautionary approach in the context of specific IMO activities.[52] This document cross refers to the precautionary approach contained in Principle 15 of the Rio Declaration and the text of Agenda 21. It also states that the precautionary approach should not be

[50] 'Explore the world of PSSAs' (*IMO,* 2016) <http://pssa.imo.org/#/intro> accessed 10 October 2016.
[51] IMO Guidelines for the designation of special areas under MARPOL 73/78 and guidelines for the identification and designation of particularly sensitive sea areas Resolution A.927 (22) adopted 15 January 2002. Annex 2 4.4.9.
[52] Guidelines in incorporation of the precautionary approach in the context of specific IMO activities Resolution MEPC.67 (37) adopted on 15 September 1995.

considered in isolation from other IMO practices, procedures, and resolutions'.[53] This indicates that the parties to the IMO accept that they should place an emphasis on the precautionary principle in their activities in the marine environment.

This formal recognition that areas of the seas needed special protection should be viewed as one of the first steps towards the designation and management of marine protected areas in the modern era.

3. MARINE PROTECTED AREAS - THE INTERNATIONAL LEGAL AND POLICY RESPONSE

Building on its success in reducing the risk of oil pollution, the international community developed other MEAs covering specific problems, such as the phasing out of chlorofluorocarbons,[54] and transboundary air pollution.[55] This development of thematic MEAs has not yet been matched by the development of a single unified legal regime for the designation and management of MPAs. Instead of developing such a legal regime, policy makers have extended the scope of the major MEAs, which have largely been focussed on the protection of terrestrial habitats and ecosystems in a piecemeal way to cover the marine environment. This sub-section will, therefore set out an analysis of the MEAs most relevant to MPAs,

3.1 WHAT IS A MARINE PROTECTED AREA?

[53] Ibid Annex 10. It should be noted that there is a subtle difference in the wording of the precautionary approach in that it recognises that there may be differences in local capabilities to apply the approach, and it allows recognition of any economic and social costs. As such it is somewhat softer than the precautionary principle.

[54] Montreal Protocol on Substances that Deplete the Ozone Layer adopted 16 September 1987, entered into force 1 January 1989 1522 UNTS 3; 26 ILM 1550 (1987).

[55] Convention on Long-Range Transboundary Air Pollution adopted on 13 November 1979 entered into force on 16 March 1983 TIAS 10541; 1302 UNTS 217; 18 ILM 1442 (1979).

From a legal perspective, MPAs are the selected management tool for achieving a range of conservation objectives including protection of critical habitat, the conservation of marine biodiversity, the recovery of threatened and endangered marine species, to facilitate the increased biomass of harvested species, and to allow for simple human recreation.[56] Carleton Ray argues that the differences between these approaches is not so much driven by science as by the culture of the different groups involved in conservation work.[57] Subsequently it has correctly been argued that each of those objectives requires a different approach to site governance and no model for management of MPAs will be universally applicable.[58]

The expression MPA has been described as, 'a historic quilt of meanings that was formed as protected areas began to spring up in coastal and marine areas around the world, each with its own label and implication'.[59] In practice, this has meant there has been a great variation in the names given to what might generically be termed an MPA and to confusion about the degree of protection afforded to different sites. This means that currently there is no single conceptual framework underpinning the concept. Names include,

> marine park; marine reserve; fisheries reserve; closed area; marine sanctuary; marine and coastal protected areas (MACPA); nature reserve; ecological reserve; replenishment reserve; marine management area; coastal preserve; area of conservation concern;

[56] Grafton, R. Quentin, Akter, Sonia, Kompas, Tom, 'A Policy-enabling framework for the ex-ante evaluation of marine protected areas', 2011, 54, Ocean and Coastal Management, 478 – 487.
[57] G Carleton Ray, Reconsidering 'dangerous targets' for marine protected areas, 2004, 14, Aquatic Conservation: Marine and Freshwater Ecosystems,211 – 215, first sentence, para 3, 213.
[58] Ibid second bullet point, first sentence.
[59] Tundi Agardy and others, 'Dangerous targets? Unresolved issues and ideological clashes around marine protected areas' [John Wiley & Sons, Ltd.] 13 Aquatic Conservation: Marine and Freshwater Ecosystems 353 355.

> sensitive sea area; biosphere reserve; 'no-take area'; coastal park; national marine park; marine conservation area; and, marine wilderness area.[60]

Regardless of the name, the primary motivating force behind designating MPAs has correctly been stated as one of conservation of the marine environment.[61] For reasons of simplicity, this study will use the generic term 'marine protected area', or MPA throughout, except when referring to sites designated under specific legal instruments that use their own term. It may seem a statement of the obvious to say that a no-take zone has a higher level of protection than fisheries reserve, but in actuality this is unclear because, as noted by the IUCN, there is frequently a lack of clarity in the wording of objectives for protected areas. It is for this reason that the methodology set out in chapter one has been adopted.

The International Union for Conservation of Nature (IUCN) recognises the link between preserving biodiversity within its definition of a marine protected area:

> any area of inter-tidal or sub-tidal terrain, together with its overlying water and associated flora, fauna, historical, or cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment.[62]

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[60] Ibid 356.
[61] Carelton Ray (n 57).
[62] Kelleher, G. & Kenchington, R. (1992). *Guidelines for Establishing Marine Protected Areas* A Marine Conservation and Development Report. IUCN, Gland, Switzerland. vii+ 79 pp.

Kelleher suggests that the factors or criteria used for MPA designation include the economic importance of existing or potential contributions to economic value through the act of protecting its resources and the benefits derived from protecting an area for recreation, subsistence, use by traditional inhabitants, appreciation by tourists and others, or as a refuge nursery area or source of supply for economically important species. Furthermore, they may have existing or potential value to the local, national, or international communities because of the areas heritage, historical, cultural, traditional aesthetic, educational or recreational qualities.[63]

The IUCN also provides a similar definition for a protected area that encompasses both marine and terrestrial areas in its reference to *cultural resources*,

> An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.[64]

Because the latter definition incorporates the concept of the seas rather than simply as 'overlying water' it is capable of wider reading and will be the one used for the purposes of this study. In the case of the marine environment, associated cultural resources can include shipwrecks and their associated cultural items or other archaeological sites that might be of religious significance. Examples include the protection afforded to shipwrecks under the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage, which is discussed in detail in

[63] Ibid 16.
[64] *Guidelines for Protected Area Management Categories* (IUCN 1994) available at https://portals.iucn.org/library/efiles/documents/1994-007-En.pdf 7 accessed 12 August 2014.

section 5.6 below, and domestic legislation, which is discussed in more detail below. Similarly, it would cover sites such as one on the Norfolk coast of England, which has been dubbed Seahenge.[65]

It has been noted that there has been a rapid growth in papers and books discussing the need for MPAs and the science of designing and managing them and that there is an, as yet unresolved, debate about the governance of MPAs.[66] This question of governance will be addressed later in this study through the examination of a number of UK MPAs.

This study is concerned with MPAs and it is now time to move from the general development of environment law to analyse the MEAs most directly relevant to this topic. The objective is to identify any recurring obligations that Contracting Parties have accepted.

The first to be examined is LOSC. This will be followed by a similar examination of the other major MEAs that are applicable in the protection of marine living resources and the protection of marine habitats. These treaties will be analysed to establish if there are any common and developing obligations placed on parties and which can be used as a reference point to assess the performance of states in meeting those obligations.

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[65] 2016, 'Seahenge' Timber Circle, Norfolk ' (2016) <http://www.megalithic.co.uk/mm/eng/seahenge.htm> accessed 12 October 2016.

[66] Peter J. S. Jones and Earthscan, *Governing marine protected areas : resilence through diversity* (Routledge 2014) 1.

4. THE 1982 CONVENTION ON THE LAW OF THE SEA (LOSC)

4.1 INTRODUCTION

LOSC is the most significant legal instrument in defining the responsibilities of states in respect of the sea. Its provisions include obligations placed upon the parties concerning the protection and preservation of the marine environment and its living resources.[67]

The first United Nations Conference on the Law of the Sea (UNCLOS 1) was held in 1958. The Conference codified the rules of customary law into four separate Conventions, which were adopted.[68] No mention was made in the 1958 documents of the need for conserving the marine environment. UNCLOS 1 gave clear guidance on the degree of sovereign control by coastal states in each of the four areas of marine waters defined during the development of the Conventions. The failure of the 1958 conference to agree on the width of certain maritime zones, and the need to resolve a number of fisheries disputes led to a second conference, UNCLOS 2 in 1960. However, this also proved to be unsatisfactory in resolving many outstanding issues.

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[67] United Nations Convention on the Law of the Sea adopted 10 December 1982, entered into force 16 November 1994 1833 UNTS 3; 21 ILM 1261 (LOSC) Arts 61 & 116 to 120.

[68] 1958 Convention on the Territorial Sea and the Contiguous Zone adopted on 29 April 1958, entered in to force 10 September 1964 15 UST 1606 / 516 UNTS 205 ; 1958 Convention on the Continental Shelf adopted on 29 April 1958, entered in to force 10 June 1964 UKTS 39 (1964), Cmnd 2422 / 15 UST 471 / 499 UNTS 311; 1958 Convention on the High Seas 13 UST 2312 / 450 UNTS 11;adopted 29 April 1958 entered into force 30 September 1962; Convention on Fishing and Conservation of the Living Resources of the High Seas adopted on 29 April 1958, entered in to force on 20 March 1966 UKTS 39 (1966), Cmnd 3028/ ATS 12 (1963)/ 17 UST 138 / 559 UNTS 285.

The breakthrough came with the convening of UNCLOS 3 in 1982 (LOSC).[69] The LOSC text in its 1982 formulation repeated many of the principles enshrined in the earlier instruments together with some others, which had subsequently become customary law. There was an attempt to introduce some new rules but it was envisaged that some states might not adhere to the 1982 Convention; so the 1958 rules remain important.[70] LOSC, unlike its predecessors, incorporates binding procedures for the settlement of disputes.[71]

The Preamble to LOSC commits states that are party to the Convention to recognising the desirability of establishing a legal order for the seas and oceans. The Preamble is, of course, merely a scene setter for the subsequent text of the convention, which deals with topics as diverse as international communication; the peaceful uses of the seas and oceans; the equitable and efficient utilisation of the oceans resources; the conservation of the living resources; and the study, protection and preservation of the marine environment.[72] The important provisions for this study are those governing the conservation of living resources and the protection and preservation of the marine environment and these will be analysed in more detail below in sections 4.3 and 4.4 of this chapter.

LOSC is, however, largely silent on the concept of MPAs. It has been suggested that LOSC allows for the creation of MPAs in the Exclusive Economic Zone (EEZ) where coastal states have reasonable grounds for believing that a particular clearly defined area under their jurisdiction is an area where the adoption of special

[69] LOSC, (n 63).
[70] Malcolm Shaw, International law (6th edn, Cambridge University Press 2008), 556.
[71] LOSC, s XV (n 63).
[72] ibid Preamble 4th para.

mandatory measures for the prevention of pollution from vessels is required.[73] Goodwin argues that LOSC only makes specific reference to the creation of MPAs in Article 194 (5). This Article places a clear obligation on states to take measures to protect and preserve rare or fragile ecosystems, as well as the habitat of depleted, threatened, or endangered species and other forms of marine life.[74] However, as will be discussed at section 4.4 below, the obligation may in practice require a wider reading of the Article rendering the requirement that states 'shall refrain from unjustifiable interference with activities carried out by other states in the exercise of their rights and in pursuance of their duties in conformity with this Convention' less restrictive.[75]

The provisions governing the conservation of the marine environment and its living resources are found in four separate parts of LOSC and each will be addressed separately below. The first are set out in Part V, which establishes the basic law relating to a coastal state's control over its EEZ. The recognition of the EEZ was to have a significant impact on the UK's approach to marine conservation in later years following the determination of the *Darwin Mounds* case at the European Court of Justice. This will be explored in detail in chapter three. The second is set out in Part VII Section 2 and deals with the conservation and management of living resources of the High Seas. The third, Part XII, establishes a general obligation on states to protect and preserve the marine environment. The fourth is Part XIII, which sets out extensive provisions on the rights of states to conduct scientific research.

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[73] Edward J. Goodwin, 'International law and the promotion of marine protected areas for the conservation of coral reef ecosystems' (*University of Nottingham*, 2006) 103.
[74] LOSC Art. 194 (5) (n 63).
[75] Ibid Art. 194 (4).

In addition, there are a number of agreements relating to LOSC, the most relevant of which to this study is the Straddling Fish Stocks and Highly Migratory Fish Stocks Agreement.[76] Adopted in 1995, the agreement established core principles for the conservation and management of such stocks, including the requirement that management must be based on the precautionary approach,[77] and the best available scientific information.[78]

4.2 THE EXCLUSIVE ECONOMIC ZONE

The formalisation of the EEZ can be seen as the significant innovation of the 1982 Convention. The EEZ is an area beyond and adjacent to the territorial sea, subject to a specific legal regime, under which the rights and jurisdiction of the coastal state and, the rights and freedoms of other states, are governed by the relevant provisions of LOSC. Birnie states that it should be seen as a functional zone rather than one where the coastal state can exercise its territorial sovereignty.[79] It does have a *sui generis* character, being situated between the territorial sea and the high seas, with three principal elements covering the rights of the coastal state, the Convention rights and duties of other States and for the regulation of activities not covered by either of these definitions.[80] Of these, the exploitation and conservation of living resources is the most relevant for this study. Whilst LOSC does not

[76] United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks 34 ILM 1542 (1995); 2167 UNTS 88 adopted 4 August 1995 entered into force 11 December 2001.
[77] Ibid Art 6 and Appendix II.
[78] Ibid Art 5 (b) and Art 16 (1).
[79] Birnie, Boyle and Redgwell, (n 2) 716.
[80] Churchill and Lowe, (n 14) 167.

mandate the creation of MPAs within EEZs, Birnie argues that in determining the total allowable catch of a stock within its EEZ the state exercising jurisdiction must ensure through proper conservation and management measures that stocks are not threatened by over-exploitation.[81] This approach could therefore include protective measures such as the temporary or permanent closure of areas of sea. Such measures meet one definition of the verb to 'conserve', which is to prevent wasteful overuse of a resource, but 'conserve' has other meanings including 'to protect something of environmental importance from harm'. It can therefore be argued measures to protect, or aid stock recovery, may entail different approaches to marine conservation more broadly.[82]

It has been said that in establishing the EEZ that the negotiators at the third UN Conference on the Law of the Sea were seeking to provide a more effective basis for the conservation of marine living resources and it is considered as having provided a better approach to this than the 1958 Fisheries Conservation Convention.[83] The economic importance of the EEZ can be seen in the fact that ninety per cent of commercially exploitable fish stocks and eighty-seven per cent of submarine oil deposits lie within the 200 mile EEZ of coastal states.[84]

A coastal state which has declared an EEZ has extensive sovereign rights in regard to,

> exploring and exploiting, *conserving and managing the natural resources, whether living or non-living*, of the waters superjacent to the

[81] Birnie 717.
[82] Oxford English Dictionary available at https://en.oxforddictionaries.com/definition/conserve accessed January 2019.
[83] Ibid 162.
[84] Ibid 162.

> seabed and of the seabed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds [emphasis added].[85]

Churchill suggests that the reference to non-living resources is a question of drafting rather than substance.[86] The exploitation of living resources is not unlimited and coastal states must 'ensure through proper conservation and management measures that the living resources in the EEZ are not endangered by over-exploitation'.[87] Consequently, sovereign rights of exploitation are modified by the duties set out in LOSC to promote the optimum utilisation of the living resources using the best available scientific evidence.[88] To avoid over-exploitation of stocks in the EEZ, the coastal state is required to co-operate with competent international organisations 'whether sub-reginal, regional or global'.[89] The scientific advice should allow the coastal state to calculate a total allowable catch (TAC) for the target stock through proper conservation and management measures.[90] Furthermore, there are provisions governing situations where a coastal state does not have the capacity to harvest the entire allowable catch and where stocks straddle national limits or the high seas and a coastal state's waters. Birnie is surely correct in asserting that optimal utilisation does not necessarily mean full utilisation and a coastal state can restrict catches to ensure conservation. This could remove

[85] LOSC, Art 55 (1) (a) (n 63).
[86] Churchill 166 (n 14).
[87] LOSC Art 61 (2) (n 63).
[88] ibid 61 (2).
[89] ibid Art 61 (2).
[90] Birnie Boyle Redgwell (n 2) 717.

any tension between the idea of conservation of stocks to restore populations and their optimum utilisation.[91]

In addition, coastal states have a duty to adopt measures to limit pollution and to facilitate marine research within their EEZ.[92] It has been argued that Article 9(3) of MARPOL makes clear that the jurisdiction of coastal states, when dealing with pollution, should be construed in the light of international law in force at the time of interpretation, or application, of the Convention.[93] These rights contrast with those of other states who continue to have rights of overflight, navigation and the laying of submarine cables.

As stated above, LOSC is largely silent in terms of MPAs other than imposing a general, but unspecified, obligation to protect and preserve the marine environment.[94] LOSC does, however, contain detailed provisions on the conservation of living resources within the EEZ.[95] Where states wish to utilise living resources, LOSC mandates that such exploitation be based on research and regulation.[96] LOSC also sets out detailed rights and obligations for coastal states in respect of stocks occurring within the EEZ of two or more coastal states or both within the EEZ and the area beyond and adjacent to it[97] highly migratory species;[98] marine mammals;[99] anadromous stocks;[100] catadromous species;[101] and sedentary

[91] Birnie 717.
[92] Ibid 168.
[93] Shaw (n 66) 408.
[94] LOSC, Art 56 1 (b) (iii) (n 63).
[95] Ibid Art 61.
[96] Ibid Art 62.
[97] Ibid Art 63.
[98] Ibid Art 64.
[99] Ibid Art 65.
[100] Ibid Art 66.
[101] Ibid Art 67.

species.[102] The reference to anadromous and catadromous species is notable because of the importance of estuarial waters to these creatures.[103]

The provisions governing the exploitation and management of marine living resources within an EEZ, therefore, provide helpful assistance to the concept of protecting areas of the marine environment albeit in a broad form. This may be asserted on the basis that the right of a coastal state to explore and exploit both the living and non-living resources is counter-balanced by the obligation to conserve and manage those resources.[104]

4.3 THE CONSERVATION AND MANAGEMENT OF LIVING RESOURCES OF THE HIGH SEAS

Part VII of LOSC sets out the provisions that apply to the High Seas, which consist of all parts of the sea that are not included in a state's EEZ, territorial sea, or internal waters.[105] One estimate suggests that sixty-four percent of the oceans are located in areas beyond national jurisdiction (ABNJ) and this represents fifty percent of the earth's surface.[106] However, there are no provisions for establishing MPAs in ABNJ in Part VII of LOSC other than the general requirement to protect and preserve the

[102] Ibid Art 68.

[103] During important phases of their life cycle individuals must rest to prepare to make the transition from salt water to freshwater and *vice versa*. At this point they are highly vulnerable to predation because their locations can be easily identified.

[104] Ibid Art 56 1 (a).

[105] Ibid Art 86.

[106] Kimball A, *The International Legal Regime of the High Seas and the Seabed Beyond the Limits of National Jurisdiction and Options for Co-operation for the Establishment of Marine Protected Areas (MPAs) in Areas Beyond the Limits of National Jurisdiction. Secretariat of the Convention on Biological Diversity Technical Series no.19.* (Secretariat of the Convention on Biological Diversity Technical Series . 2005) Foreword iii (CBD ABNJ document).

marine environment.[107] This is logical since under LOSC the High Seas are open to all states.[108]

Despite the lack of explicit powers in LOSC the Parties to the Convention on Biological Diversity (CBD) have agreed to address the options for international co-operation to establish MPAs in ABNJ.[109] As part of this exercise the Parties have set themselves the task of analysing the international legal regime for such areas and the options for co-operation to establish MPAs in those areas. Some, such as the International Commission for the Conservation of Atlantic Tuna (ICCAT) cover single species[110], while others such as the North East Atlantic Fisheries Commission (NEAFC) protect a broader range of fish stocks and seek to protect their parts of the marine environment from the negative impacts of fisheries.[111] This work is continuing. In 2005 a report noted that some regional fisheries management organisations (RFMO) have established geographically-based protective measures, including closed areas, and interim prohibitions on destructive fishing practices, such as bottom trawling, that adversely impact vulnerable marine ecosystems.[112] It is to be seen non-party states comply with these measures or whether a specific MEA with available enforcement measures is needed if such protected areas are to conform to best international practice.

The work of the RFMO governing waters adjacent to the UK will be discussed further at section six of this chapter. The creation of MPAs in ABNJ has led to some

[107] LOSC Art 192.
[108] Ibid Art 87.
[109] CBD ABNJ document,, 111 (n 103)
[110] See https://www.iccat.int/en/ accessed January 2019.
[111] See About the Work of NEAFC about us page available at https://www.neafc.org/about, accessed January 2019.
[112] Ibid para 148 first sentence, 41.

de-facto reduction in the freedom of the high seas through international co-operation for a common purpose.

4.4 GENERAL PROVISIONS ON THE PROTECTION AND PRESERVATION OF THE MARINE ENVIRONMENT

Part XII of the LOSC sets out a general obligation on states to protect and preserve the marine environment.[113] The provisions are largely related to pollution of the marine environment and, in many cases, echo the obligations set out in related conventions and treaties, such as MARPOL.

The provisions acknowledge sovereign rights to exploit their natural resources in line with their environmental policies, but this must be in accordance with their duty to protect and preserve the marine environment.[114] This is, of course, entirely in accordance with the basic precept of international law that states are free to determine how to give effect to those obligations in their domestic law. In effect, it wills the ends, but not the means. The provisions also include a raft of measures to prevent, reduce and control pollution of the marine environment. In fact, on closer reading, these measures constitute obligations, as evidenced by the requirement that '*states **shall** take all measures necessary to ensure that activities under their jurisdiction do not cause damage or pollution to other states or their environment' [emphasis added]*.[115] In particular, measures 'shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life'.[116] In this instance, the duty is expressed as 'shall' rather than the more vague expressions

[113] LOSC, Art 19 2 (n 63).
[114] Ibid Art 193.
[115] Ibid Art 194 (2).
[116] Ibid Art 194 (5).

'may' or 'can' found elsewhere in LOSC. The pollution prevention and control measures should be read in conjunction with those of MARPOL, including the Protocol on PSSAs, to understand the full duties placed on a coastal state under LOSC. In practice, each PSSA has its own specific 'Associated Protective Measures' regime, which may include rules such as compulsory ship routing, ship reporting, or areas to be avoided.[117]

Birnie describes Part XII of LOSC as one of the most important environmental agreements currently in existence.[118] Placing the obligation to protect and conserve before the right to exploit natural resources in the sentence is arguably an indication of the heavier weight the law gives to the former obligation.

4.5 MARINE SCIENTIFIC RESEARCH

Part XIII sets out extensive provisions in respect of the rights of states to conduct marine scientific research. All states, regardless of their geographical location, and competent international organisations, have the right to conduct marine scientific research subject to the rights and duties of other states under the Convention. This is important because the extension of the territorial sea to 12 miles, together with the establishment of the 200-mile EEZ, meant that the area open to unrestricted international scientific research could have been circumscribed. The formalising of this right to carry out marine research was important in helping to avoid restrictions adversely affecting the advancement of science, denying its potential benefits to all nations in fields such as weather forecasting, and limiting the study of effects of

[117] 'Explore the world of PSSAs' Quick Facts about Particularly Sensitive Sea Areas available at http://www.imo.org/en/OurWork/Environment/PSSAs/Pages/Default.aspxaccessed 12 December 2017 .
[118] Birnie, Boyle and Redgwell, (n 2) 3.

ocean currents and of the natural forces at work on the ocean floor.[119] Many developing countries had initially been wary of the possibility of scientific expeditions being used as a cover for intelligence gathering or economic gain in areas that were relatively unexplored.[120] Often, such programmes of scientific research had led to the acquisition of knowledge of potential economic significance, particularly in respect of fish stocks and mineral resources. These concerns about the intention of other states were, to some, extent allayed by agreement that in the event that a developing state could demand *"prior consent"* before a research vessel of another state to carries out research within its area of continental shelf or within its EEZ and to share any data pertinent to offshore resources.

4.6 SETTLEMENT OF DISPUTES

Unlike its predecessors, the 1982 revision of the LOSC incorporated mechanisms for the settlement of disputes within the main text.[121] It is, therefore, mandatory for parties to LOSC to go through its settlement procedures when disputes arise with another party. The provisions regarding the settlement of disputes are detailed and complex, and of the twenty-five cases submitted to the International Tribunal for the Law of the Sea up to June 2015 only three have concerned with marine living resources.[122] In the absence of specific provisions on the designation and management of MPAs it is perhaps unsurprising that the cases concerning the

[119] LOSC, Art 56 (n 63).
[120] Churchill and Lowe, (n 14) 403.
[121] LOSC, Part XV (n 63).
[122] 'International Tribunal for the Law of the Sea: List of Cases' (2016) <https://www.itlos.org/en/cases/list-of-cases/> accessed 10 October 2016.

exploitation of marine living resources, illegal fishing, and scientific research of the seabed are of only peripheral relevance to this research.[123]

The LOSC provisions for the settlement of disputes have hitherto been relatively unimportant for the UK. This is because the marine areas under the jurisdiction of individual coastal states, and their marine living resources, have effectively been treated as a common space and common resource and subject to the jurisdiction of the ECJ. Post-Brexit this is unlikely to continue to be the case and disputes between the EU and UK will require a forum in which they can be settled.

4.7 SUMMARY

The protective measures for the marine environment and its living resources set out in the general building blocks of fundamental maritime law such as LOSC or MARPOL are needed, but arguably they lack the specificity necessary to protect endangered species or the fabric of rare habitats. This focussed protection is provided by more conventions focussing on specific regimes, such as biodiversity and *in-situ* conservation measures, and the most relevant of these will now be considered in more detail.

5. OTHER INTERNATIONAL CONVENTIONS DIRECTLY RELEVANT TO THE MARINE ENVIRONMENT AND ITS ECOSYSTEMS.

5.*1* CONVENTION ON WETLANDS OF INTERNATIONAL IMPORTANCE ESPECIALLY AS WATERFOWL HABITAT (THE RAMSAR CONVENTION ON WETLANDS) (1971)

[123] International Tribunal for the Law of the Sea Cases https://www.itlos.org/en/cases/ accessed 23 June 2016.

During the 1950's and 1960's concern was growing about the rapidity with which large stretches of marshland and other wetlands in Europe were being reclaimed or destroyed causing reductions in the numbers of waterfowl. Following an initial conference organised in the French Carmargue, a period of eight years was spent in detailed discussion and negotiation. The text of the Convention was finally agreed at Ramsar in Iran.[124] It has been described as being *'among the older environmental Treaties and one of the few with global application".*[125] However, in the same paper, Ferrajolo observes that state obligations under Ramsar are very general in nature and often lack effectiveness.[126] Its implementation is, therefore, largely dependent upon national law, policy, and action by a state's domestic authorities.

The relevance of Ramsar to MPAs can be seen in the wide definition of wetlands used by the Convention, which reflects their variety and their status as one of the world's 'most productive environments; cradles of biological diversity that provide the water and productivity upon which countless species of plants and animals depend for survival'.[127]

The Parties to the Convention are required to consider the fundamental ecological functions of wetlands as regulators of water regimes and as habitats supporting a

[124] Convention on Wetlands of International Importance especially as Waterfowl Habitat adopted on 3 February 1972 entered into force December 1975 996 as amended by the Protocol of 3 December 1982 and the Amendments of 28 May 1987 UNTS 245; TIAS 11084; 11 ILM 963 (1972).
[125] Ornella Ferrajolo, 'State Obligations and Non-Compliance in the Ramsar System' 14 Journal of International Wildlife Law & Policy 243.
[126] Ibid.
[127] 'Ramsar Website' (*Ramsar Convention*, 2015) <http://www.ramsar.org/> accessed 16 July 2015: 'The importance of wetlands' page.

characteristic flora and fauna, especially waterfowl and to stem the encroachment on and loss of wetlands in future.[128]

Wetlands are defined as,

> areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.[129]

The definition of wetlands as areas incorporating riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands makes Ramsar relevant to the concept of MPAs.[130] Since 'wetlands' includes marine areas not exceeding six metres at low tide the Convention covers areas of UK territorial and inland waters, including many important environmental features, such as estuaries, some natural harbours and reefs. Examples in the UK include sites such as Poole Harbour and Chesil Beach and the Fleet, which are both in Dorset and which have both been designated as MPAs under multiple instruments.

The key obligation on Ramsar contracting parties is to identify and place suitable wetlands on to the List of Wetlands of International Importance, using nine criteria

[128] Ramsar Convention opening recitals (n 120)
[129] Ramsar Convention Art 1.1 (n 120).
[130] ibid, Art 2.1 (1987 text).

known as the Ramsar Sites Criteria.[131] Eight of the criteria are biodiversity criteria emphasising the importance placed on sustaining diversity through the designation of wetlands. These could arguably provide a mechanism to assess a contracting party's management of a designated site to meet its obligations under the Convention. Contracting Parties to the Convention also commit to the *'wise use'* of migratory stocks of waterfowl,[132] and wetlands in their territory.[133] However, '*wise use'* was not defined until 1987, when COP 3 defined it as *"the sustainable utilization of wetlands for the benefit of mankind in a way compatible with the maintenance of the natural properties of the ecosystem".*[134] COP 3 also helpfully defined the natural properties of the ecosystem as *"those physical, biological or chemical components, such as soil, water, plants, animals and nutrients, and the interactions between them".*[135] This definition of an ecosystem is consistent with the definition used by the IMO in reference to PSSAs. By adopting the wise use approach to the management of wetlands, contracting parties would achieve sustainable utilisation by ensuring that human use of a wetland yields the "*greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations.*[136]

The fact that there are 169 Ramsar Contracting Parties could lead to widely differing interpretations in how to interpret and implement the Convention in different territories. An attempt has been made to reduce this risk by the issue of guidance to

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[131] 'Ramsar Website' Ramsar Sites Criteria available at https://www.ramsar.org/sites/default/files/documents/library/ramsarsites_criteria_eng.pdf accessed 15 July 2015.
[132] Ramsar Convention, Art 2 (6) (n 119).
[133] Ibid Art 3.
[134] Ibid COP 3 Recommendation 3.3.
[135] Ibid Summary Report of the Plenary Session Agenda item XV.
[136] Recommendation 3.3 Ramsar 3rd Meeting of the Conference of the Contracting Parties Regina, Canada 27 May - 5 June 1987.

states on reviewing their laws and institutions relating to wetlands.[137] The aim is to develop appropriate legal and institutional frameworks for implementing the Convention. In effect, this can be regarded as a method for the approximation of laws and standards across a diverse set of cultures.[138] In addition, it is intended to provide better clarity on the legal effects of the Convention.[139] The Ramsar Handbook provides guidance on possible sources of law to be included in the review. The range of potential sources of law is drawn widely and includes *'relevant religious norms'* alongside the more typical *'customary laws.* The handbook also suggested that states should use planning legislation to create ecological corridors to combat habitat fragmentation, as well as floodplains, riparian protection strips along watercourses and non-development zones along the coast and around lakes.[140]

In reviewing their principles, standards and techniques the parties are required to apply a number of fundamental principles. For example, in looking at their laws and principles, parties should establish if these incorporate the precautionary principle, although the term is given no precise definition.[141] It is also implied that parties must consider the ecological functions of coastal areas and the need for ecological corridors to combat habitat fragmentation.[142] The general tenor of the Handbook places a clear obligation on the parties to ensure their laws and principles not only

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[137] David Pritchard (ed), *Ramsar Handbook 3 Laws and Institutions* (4th edn, Ramsar Convention Secretariat, Gland, Switzerland 2010).
[138] *Ramsar handbook, Laws and Institutions*, vol 3 (David Pritchard ed, Laws and Institutions: Reviewing laws and institutions to promote the conservation and wise use of wetlands
4th edn, Ramsar Convention Secretariat 2010).
[139] Ibid s2.2 (11) states, *"that the team should include at least one person with legal expertise"* while simply suggesting examples of other disciplines that might be considered, 10.
[140] Ibid para 49.
[141] Ibid paragraph 32 © 17.
[142] Ibid 36.

protect designated sites, but also to provide for the restoration of degraded wetlands.[143]

It has been said that the general nature of imprecise terminology used in Ramsar's provisions has given rise to problems of interpretation and weakness of obligation.[144] This can be attributed to the imprecise terminology which is, in essence, exhortatory rather than legally prescriptive. This creates a sense of vagueness in much of the wording due to the tendency to use expressions such as, *inter alia*, "*as far as possible*", "*to encourage*", *to "promote*." This vagueness, whilst allowing flexibility in interpretation, is to some degree allayed by the more precise wording in COP resolutions and decisions.

In addition to being one of the earliest wildlife Conventions to achieve global co-operation it was the first to be solely concerned with habitat.[145] The effect of Ramsar has been significant and the international community has learned lessons from its approach.

5.2 CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FLORA AND FAUNA (1973)

The genesis for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was a resolution adopted in 1963 at a meeting of members of International Union for Nature Conservation (IUCN). The Convention was adopted in 1973 and commits the Parties to recognise that wild flora and fauna

[143] Ibid Foreword.
[144] Birnie, Boyle and Redgwell, (n 2) 673.
[145] Ibid 673.

are irreplaceable parts of the earth's natural systems that must be protected from over-exploitation through international trade.[146] Whilst CITES is correctly regarded as one of the most effective conservation instruments because it provides sanctions for non-compliance, its provisions are limited and do not contribute to furthering wider biodiversity.[147]

All species of cetaceans are protected under CITES, including whales, although the latter are also covered by the earlier International Convention for the Regulation of Whaling.[148] CITES requires parties to the Convention to strictly regulate trade in species threatened with extinction so as not to threaten their survival.[149]

A list of species at risk is maintained by the CITES Secretariat in three appendices.[150] Appendix 1 lists the species deemed most at risk of extinction, and trade in such species is prohibited except for non-commercial purposes, such as scientific research. Appendix II lists species not currently at risk of extinction, but which are likely to become so if trade is not strictly controlled. Appendix III lists species regulated to prevent over-exploitation. In addition, parties are obliged to restrict trade in all species which, although not necessarily currently threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation.[151] This differentiation in the level of protection afforded to endangered species of flora and fauna may be seen as precautionary in nature.

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[146] Convention on International Trade in Endangered Species of Wild Fauna and Flora entered into force on 1 July 1975 27 UST 1087 TIAS 8249 993 UNTS 243 (CITES) opening recitals.
[147] Birnie 685
[148] International Convention for the Regulation of Whaling (adopted 2 December 1946, entered into force 10 November 1948) UNTS 62 Stat. 1716; 161 UNTS 72.
[149] CITES, Art III (n 140).
[150] CITES, Appendix I, II, III (n 140).
[151] Ibid, Art IV.

However, some commentators have observed that permitting the approval of any trade in species listed in the appendices is to legitimise such trade even when controlled by a permit or grant system.[152]

In legal terms the foregoing means that parties must comply with their obligations under the Convention through the implementation of appropriate policies, legislation and procedures.[153] To facilitate this process in 1992, CITES established a National Legislation Project to ensure approximation of national laws between the Parties. The aim is to identify Parties whose domestic measures do not provide them with the authority to meet the actions needed for effective implementation of CITES.[154] If a Party does not taken such measures then the CITES Standing Committee may suspend their right to trade.[155] This approach is analogous to the one adopted under Ramsar.

The relevance of CITES to the concept of marine conservation has come through its listing of marine species, including many species of cetaceans, marine turtles, and corals.[156] Under the Convention, trade '*means export, re-export, import and introduction from the sea'*.[157] The listing was expanded in 2002 when the parties agreed to list important commercial marine fish species including basking sharks, whale sharks, and all 28 species of seahorses. These can now be found listed at Appendix II. The listing of commercially valuable species continued when the

[152] David M. Ong, 'The Convention On International Trade In Endangered Species (Cites, 1973): Implications Of Recent Developments In International And Ec Environmental Law' 10 Journal of Environmental Law 291.
[153] CITES COP 15 Resolution Conf. 8.4 (Rev. CoP15) Kyoto, fourth recital.
[154] Ibid Art 1.
[155] Ibid Art 2.
[156] The listing for Appendix II for example includes *lophelia pertusa* a cold water coral found in UK waters and which will be referred to later in this work.
[157] CITES, Art 1 © (n 140).

parties agreed at the 13th COP in October 2004 to list two additional fish species on Appendix II: the great white shark and the hump head wrasse, both of substantial commercial value.

Commentators have asserted that the tenor of Articles II, III, and IV meant that the Convention was implicitly precautionary in nature.[158] This is particularly the case for those species listed in Appendix III as these are not yet considered to be at risk of extinction.[159] Whether or not this was the case, a form of the principle was adopted at its Ninth COP at Fort Lauderdale in 1994.[160] This was to ensure that in cases of uncertainty regarding the status of a species, or the impact of trade on the conservation of the species, the parties act in the species' best interest of the conservation of the species concerned and adopt measures that are proportionate to the anticipated risks to the species.[161] The key point about Resolution 9.24 is that it requires range states to provide details of programmes that they put in place to manage populations of the listed species in question. Examples include *inter alia* controlled harvest from the wild, captive breeding or artificial propagation, reintroduction, ranching, quota and systems. In this way, the CITES regime requires a detailed management approach by states towards listed species within their jurisdiction. The provisions of the Resolution may in part be an indication, therefore, that the Parties consider that examples of specific management measures needed to be provided to avoid any ambiguities in the interpretation of the Convention; and

[158] Barnabas Dickson, 'The Precautionary Principle in CITES: A Critical Assessment' (1999) Vol. 39 Natural Resources Journal.
[159] CITES, Art 2 (n 140).
[160] Ibid, Resolution 9.24, 9th COP Appendix 4, Fort Lauderdale 1994 http://cites.org/sites/default/files/eng/res/09/E-Res-09-24R16.pdf accessed 12 November 2014.
[161] Ibid Annex 4 first para.

this precision in management practices has undoubtedly aided the effectiveness of the regime.

The Resolution provides detailed criteria for changing the lists of species on Appendices I and II, which set out the detailed criteria for listing species under the Convention's provisions. Annex 6 sets out very detailed requirements for a Party wishing to amend the appendices to the Convention. However, the Annex does recognise that scientific knowledge about a species may be incomplete and therefore allows data to be based on a summary of surveys, literature searches, and relevant studies.[162] This may not be sufficient for vulnerable marine species, but it does represent an attempt to provide an objective basis for decision making. The expression used in the resolution is 'precautionary measures' and the circumstances when precautionary measures should apply are given in an appendix to the Resolution.[163] CITES operates a system of strict adherence to limiting or forbidding trade based of listed species on advice from approved scientific authorities.[164] In doing so, the Scientific Authority must ensure that the export of specimens of any such species is limited. This is in order to maintain that species, throughout its range, at a level consistent with its role in the ecosystems in which it occurs. It is also intended to ensure that its population level remains above that which would warrant inclusion in Appendix I.[165]

It may, therefore, be concluded that CITES places more stringent obligations on the parties than its sister convention, the Ramsar Convention.

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[162] Ibid Annex 6 para 3.
[163] Ibid, Annex 4.
[164] ibid Art 9.
[165] Ibid Art 4.

5.3 THE CONVENTION ON MIGRATORY SPECIES (1979)

The Convention on Migratory Species (CMS) provides a global platform for the conservation and sustainable use of migratory animals and their habitats.[166] The Convention was adopted in 1979 and commits the Parties to recognise that wild animals in all their forms are irreplaceable particularly those that those species of wild animals that migrate across or outside national jurisdictional boundaries and that states must protect those species within their national boundaries.[167]

The CMS website states that the importance of CMS is that it 'brings together the states through which migratory animals pass i.e., the *'Range States'*, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range.[168] The Convention text defines Range States as 'states that exercise jurisdiction over any part of the range of that migratory species, or a flag vessel of a state which is engaged outside national jurisdictional limits in taking that migratory species'.[169] It is described as a framework Convention under which a number of agreements have been reached.[170] These range from legally binding treaties known as Agreements, to less formal instruments, such as Memoranda of Understanding (MoU). The MoU can be adapted to the requirements of a particular region in a way that is unique to CMS when compared with the other MEAs selected for this study. Examples of the MoUs agreed to date, which concern marine species

[166] Convention on the Conservation of Migratory Species of Wild Animals 1651 UNTS 333; 19 ILM 15 (1980); ATS 1991/32; BTS 87 (1990), Cm. 1332 adopted 23 June 1979, entered into force November 1983 (CMS).
[167] Ibid summarised from the opening recitals.
[168] 'Convention on the Conservation of Migratory Species of Wild Animals' (2015) <http://www.cms.int/en/legalinstrument/cms> accessed 29 July 2015 Introduction page.
[169] CMS Art 1 (1) (h).
[170] CMS website Introduction page fifth para (n 167)

including, *inter alia*, Atlantic Turtles, Monk Seals in the Atlantic and sharks can be found on the CMS website.[171]

The objective of CMS is to ensure that migratory species are preserved across their range and to take particular steps in respect of vulnerable species to ensure they remain a viable component within their ecosystem. [172] If scientific evidence indicates they are endangered then they can be listed as such in Appendix I together with migratory species which, though not endangered, have an unfavourable conservation status. In circumstances where the conservation and management of species would significantly benefit from international co-operation the Convention stipulates that states should implement international agreements that benefit the species and give priority to those species in unfavourable conservation status.[173] Marine species listed in the two Appendices include small cetaceans and marine turtles, together with a preponderance of migratory seabirds. A number of the listed species occur in UK waters on occasion and are also listed under CITES and regional agreements, the most relevant is for cetaceans and this is explored at 6.2 below.

It should be noted that agreements on Appendix II species should encompass habitat protection and provide for the maintenance of a network of 'suitable habitats appropriately disposed in relation to the species' migration routes' and these are important components in designating and managing MPAs and, in this, the CMS

[171] Convention on the Conservation of Migratory Species of Wild Animals www.cms.int/en/document/memorandum-understanding-concerning-conservation-measures-marine-turtles-atlantic-coast. Accessed 12 August 2015.
[172] CMS. Art 1(1) © (1) (n 204).
[173] Ibid Art 4 (3).

echoes the obligation already seen under CITES.[174] This idea of preserving migration routes would facilitate the designation and management of a network of MPAs by providing the opportunity for intermingling of populations and allowing ecological coherence to be preserved. If a species listed in Appendix I is in significant danger of extinction throughout all or a significant portion of their range then *'range states'* must take immediate action to protect them.[175] As such, controls should be placed on activities such as hunting, fishing, capturing, harassing, deliberate killing, or attempting to engage in such conduct involving listed species.[176]

CMS does not explicitly specify that the parties must adopt a precautionary approach. Instead, the Preamble states that contracting parties should be aware that 'each generation of man holds the resources of the earth for future generations and has an obligation to ensure that this legacy is conserved and, where utilised, is used wisely'.[177] It could therefore be argued that the call to conserve or sustain and develop the relevant resources the Parties should adopt a precautionary approach. Further in the same vein the contracting parties must;

> [RECOGNISE] that wild animals in their innumerable forms are an irreplaceable part of the earth's natural system which must be conserved for the good of mankind.[178]

[174] Ibid Art 5.5 (f).
[175] Ibid Art 3 b).
[176] Ibid Art 1 (h) and (j).
[177] Ibid Preamble second recital.
[178] ibid first recital.

CMS does not completely forbid the exploitation of listed animals, but rather provides that where utilised, it is to be done sustainably so as to protect the value of wild animals from 'environmental, ecological, genetic, scientific, aesthetic, recreational, cultural, educational, social and economic points of view'.[179] Additionally, the Convention recognises that migratory species need to be seen within the context of their wider ecosystem. Again the Convention recognises the principle that states should maintain networks of suitable habitats appropriately disposed in relation to migration routes to facilitate migration.[180] Although the Convention text does not explicitly use the phrase 'ecologically coherent network' it can be reasonably argued that the text reflects the obligation, previously seen under Ramsar and CBD.

The most significant marine agreement concluded under the framework of CMS for this research is the Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS). This will be considered in more detail at section 6.2 below.

5.4 CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE (1975)

The Convention was adopted by UNESCO in 1972.[181] Its purpose is to address the increasing destruction of items of cultural and natural heritage, not only through decay, but also by changing social and economic conditions which aggravate the situation with even more formidable phenomena of damage or destruction. This

[179] Ibid Preamble third recital.
[180] Ibid Art 5 (f).
[181] Convention Concerning the Protection of the World Cultural and Natural Heritage adopted on 23 November 1972 entered into force on 15 December 1975 1037 UNTS 151; 27 UST 37; 11 ILM 1358 (1972).

approach would facilitate an effective system of collective protection of natural heritage sites of *'outstanding universal value'* could be organised on a permanent basis in accordance with modern scientific methods.[182] The impetus for the Convention was international concern in the 1950's that the raising of the Aswan Dam in Egypt would flood the valley containing sites dating back to the time of Ancient Egypt.

The Convention defines natural heritage as,

- natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
- natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.[183]

It is submitted that each of the above bullet points should be read as protecting reefs and species with reef forming behaviours, such as certain corals. Indeed the Convention lists a number of marine sites as World Heritage Sites including the Great Barrier Reef in Australia and the Galapagos Islands in Ecuador. The

[182] Ibid opening recitals.
[183] Ibid Art 2.

protected area around the Great Barrier Reef includes shallow coastal waters, and offshore areas with water up to 2,000 metres deep.[184] A UK site, the Dorset and Devon coast includes the inter-tidal area to the mean low water mark.

The Convention linked nature conservation and the preservation of cultural sites and encourages parties to ensure emergency and long-term protection is given to sites of *'outstanding universal value'*.[185] As of April 2018, 1073 sites were listed forming part of the cultural and natural heritage, which the World Heritage Committee considers as having outstanding universal value. These include 206 natural sites, As of June 2016, 192 states have ratified World Heritage Convention.[186]

In a clear indication of the importance of species and habitat conservation the governing body, the World Heritage Committee, has a representative of the IUCN among its number.

5.5 CONVENTION ON BIOLOGICAL DIVERSITY (1992)

The Convention on Biological Diversity (CBD) was adopted in 1992.[187] Its objectives include the conservation of biological diversity, the sustainable use of its components and the 'fair and equitable sharing of the benefits from the utilisation of genetic resources, including appropriate access to genetic resources and appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies whilst recognising rights over these

[184] World Heritage Convention website Great Barrier Reef page http://whc.unesco.org/en/list/154 accessed 14 February 2017.
[185] ibid seventh recital.
[186] World Heritage Centre' (*UNESCO*, 2016) <http://whc.unesco.org/en/conventiontext/> accessed 10 October 2016. States Parties Ratification Status page.
[187] The Convention on Biological Diversity adopted 5 June 1992 entered into force on 29 December1993 1760 UNTS 79; 31 ILM 818.

resources.[188] CBD recognises the right of sovereign states to exploit their own resources in line with their own environmental policies and places obligations on them to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States, or of areas beyond the limits of national jurisdiction.[189] Its significance is in the fact that rather than focusing on single species or habitats it significantly enhanced the international legal regime for conserving the earth's biodiversity.[190]

The format of the treaty has been described as having broad objectives of exceptionally wide scope expressed in broad terms.[191] This vagueness results from the complex negotiations leading to its adoption. However, a great deal of material is provided by the bodies of CBD on how it should be applied.[192] Perhaps the most important of these is the CBD Handbook, which helps to clarify the relationship of the decisions of COP both to each other and to the individual provisions of the Convention, and to develop and enlarge upon the general obligations set out in the Convention.[193] This echoes the intention found under Ramsar and CITES, of seeking the approximation of laws across the parties, and is now being extended to seeking 'complementarities' in the manner of operation of the other biodiversity Conventions. This objective would require an approximation of the legal interpretation of the Conventions. For example, when describing the scientific and technological aspects of conservation and the sustainable use of marine and coastal

[188] Ibid Art 1.
[189] Ibid Art 3.
[190] Birnie 612.
[191] Birnie 617.
[192] 'Convention on Biological Diversity ' (2016) <https://www.cbd.int/information/parties.shtml> accessed 10 October 2016.
[193] Secretariat of the Convention on Biological Diversity, *Handbook of the Convention on Biological Diversity Including its Cartagena Protocol on Biosafety* (3rd edn, 2005).

marine biological diversity, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) mandates that marine and coastal area management shall be based on both the precautionary approach and ecosystem approaches.[194]

It has been said that the general aim of the CBD is to achieve an equitable balancing of the interests of developed and developing states.[195] Under the Convention states have a duty of co-operation including the provision of finance, technology and other forms of support. The obligation to provide support is particularly important for developing countries that need assistance in developing *in-situ* conservation.

In-situ conservation requires the establishment of protected areas, which requires contracting parties, as far as, is possible, 'to establish a system of protected areas where special measures need to be taken to preserve biological diversity'.[196] Contracting parties are required to, 'develop guidelines for the selection and establishment of such areas, and to regulate biological resources both within and *outside* protected areas' [emphasis added].[197] Of particular importance to this research is the obligation on the parties to, 'implement CBD with respect to the marine environment consistently with the rights and obligations of States under LOSC, if otherwise exercising their Treaty rights would cause serious damage to biological diversity'.[198] The Convention defines biodiversity as including, 'terrestrial,

[194] CBD SBSTTA 1 - First Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice Recommendation 1/1 (n 161).
[195] Birnie (n 2) 616.
[196] ibid Art 8 (a).
[197] Ibid, Art 8 (c).
[198] Ibid Art 22 (1) and (2).

marine and other aquatic ecosystems and the ecological complexes of which they are part'.[199]

CBD requires contracting parties to introduce procedures to allow environmental impact assessment (EIA) and a requirement to minimise adverse impacts in respect of projects likely to have significant adverse impacts on biological diversity.[200] It also introduces an obligation, where appropriate, to allow for public participation in such procedure.[201] This should mean that the obligation to consult on environmental matters will continue to apply in the UK after Brexit, even in the unlikely event of the UK refusing to be bound by the Aarhus Convention.[202] Contracting Parties can meet their obligations in respect of other international Conventions except where the exercise of those rights and obligations would cause serious damage or threat to biological diversity.[203]

CBD notes that, '*Where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat'*.[204] This formulation is not identical to that of the precautionary principle set out in the Rio Declaration, but it does contain the same three key elements i.e., a threat of severe or irreversible harm, scientific uncertainty and the availability of preventative measures. CBD restated their position in 1995 when COP 2 decided that work relating to the

[199] Ibid Art 2 first recital.
[200] Ibid Art 14 (1) (a).
[201] Ibid Art 14 (1) (a).
[202] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (adopted on 28 June 1998 entered into force on 30 October 2001) 2161 UNTS 447; 38 ILM 51

[203] CBD, Art 22(1) (n 161).
[204] ibid Preamble 9th recital.

conservation and sustainable use of marine and coastal biological diversity, *'should not be impeded by the lack of full scientific information and will incorporate explicitly the precautionary approach in addressing conservation and sustainable use issues*'.[205] This repetition of the precautionary principle suggests that it is regarded as an integral provision of the CBD approach to biodiversity conservation.

The current text of the CBD, which deals with the use of terms, defines an ecosystem as follows,

> Ecosystem means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.[206]

This definition is entirely consistent with those found under Ramsar and CITES.

Having set out in the text what an ecosystem is, the Handbook refers to the use of an ecosystem approach to the management of biological diversity on the basis of the definition agreed at COP 5.[207] Consequently, an ecosystem approach is defined as one which is,

> based on the application of appropriate scientific methodologies focused on levels of biological organization, which encompass the essential structure, processes, functions and interactions among

[205] ibid COP 2 Decision II/10 Jakarta in November 1995.
[206] ibid Art 2.
[207] ibid COP 5, Decision V/6.

> organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of many ecosystems.[208]

The similarity and differences in these definitions compared with those found in other MEAs and in UK law will be discussed in detail later, together with those of the other common principles found in the selected MEAs.

CBD also defines what is meant by biodiversity, stating that it is,

> the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems".[209]

Holder argues that 'the concept of biodiversity has broadened the focus of conservation law and policy from protecting rare or endangered habitats to maintaining the variability and population of species across the ***full*** range of life forms' [emphasis added].[210] This is, it is argued, a move away from an enclave approach towards a greater integration of conservation issues with other policy areas.[211] If so, it is a significant advance in the field of species conservation because it reinforces the need to provide migration routes to enable species to move between protected areas as was seen under Ramsar and CITES.

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[208] Ibid Section A, Description of the ecosystem approach, clause 2.
[209] ibid Art 2
[210] Holder and Lee (n 36) 673.
[211] Ibid 673, (n 36).

The expressions '*ecological*' and '*ecology*' are used throughout the CBD Handbook, but not defined. However, in defining biological diversity the Handbook states that this includes, '*inter alia*, *terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems*.' From this we can deduce that 'ecological' means a complex process of interactions between a coherent set of living and non-living resources. The importance of ecological coherence to biodiversity can be found in the COP's decisions identifying the need for mitigation options, such as *'ecological corridors'* and *'buffer zones'*, as areas for further research.[212] This is reiterated in the CBD Handbook, which expresses concern about habitat fragmentation and population viability and as such requires remedial measures.[213] This concept of ecological corridors was seen earlier in the Ramsar Laws and Institutions Handbook and its repetition in a second MEA suggests that the concept is important in the context of the creation of *coherent* networks of protected areas. In the marine environment, which lacks linear terrestrial features such as hedges, this function may be provided by reefs, both natural and artificial. The latter may include wrecks and it is here that the Convention on the Protection of the Underwater Cultural Heritage becomes relevant. This concept suggests that to reduce habitat fragmentation, and improve population viability, parties designating MPAs, or licencing marine activities near MPAs, should also take into account the role of currents in species dispersal.

The text of the CBD states that, 'each shall, as far as possible and, as appropriate, rehabilitate and restore degraded ecosystems and promote the recovery of

[212] CBD COP 4 (1998) *decision IV/7, annex, paragraph 53* (n 161).
[213] CBD, Handbook on Biodiversity, 128.

threatened species, *inter alia*, through the development and implementation of plans or other management strategies'.[214] The use of vague riders, such as '*as possible*' and '*could*' in Article 8 (f) could, arguably, detract from the obligation to restore degraded ecosystems, but may not nullify it, in view of the *pacta sunt servanda doctrine.* However, restoration to some unknowable pristine state, particularly in the marine environment, may not be a feasible objective, in which case recovery may be a better idea.

At its fourth meeting, held in 1998, COP adopted a number of principles for ecosystem management based on the output of a workshop on the ecosystem approach. These are generally known as the Malawi Principles.[215] Principle one explicitly states that cultural and biological diversity are a matter of societal choice and management should take this into account. In particular, ecosystems should be managed for their intrinsic values and for the tangible or intangible benefits for humans in a fair and equitable way. This emphasis on cultural diversity, and the need to manage ecosystems for the benefit of humans in this way, gives grounds for arguing that excluding humans from an ecosystem may be unacceptable if their impact is unavoidable for cultural or economic reasons. When designating MPAs the socio-economic consequences of complete enclosure of an area should be considered if a less drastic solution for exploiting any resources can be identified, for example changing the technology used. Principle eleven provides that, when applying an ecosystem approach, states should consider all forms of relevant information, including scientific, indigenous and local knowledge, innovations and

[214] ibid Art 8 (f).
[215] 'Convention on Biological Diversity - Ecosystem Approach' (*COP 9 Decision IX/7* 1998) <http://www.cbd.int/ecosystem/principles.shtml> accessed 12 June 2016 document UNEP/CBD/COP/4/Inf 9.

practices.[216] Utilising information from all sources in this way is critical to arriving at effective ecosystem management strategies. COP considers it desirable that we gain better knowledge of ecosystem functions as well as the impact of human use, and such knowledge needs to be shared with all stakeholders and actors.[217] In particular, proposals should be explicit and checked against available knowledge and views of stakeholders. Principle eleven states that Parties adopting the ecosystem approach should 'consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices' This is important because it allows local populations to be involved in the designation of MPAs as an *in-situ* conservation measure thereby protecting traditional usage of sites.

All of this prior work led to the COP at its seventh meeting in February 2004, to adopt a programme of work on protected areas.[218] A decision was made to establish a working group on protected areas to support the implementation of the programme of work and report back on a regular basis. The programme of work was to look at both terrestrial and marine areas. The intention was to compile and synthesise ecological criteria to facilitate the future identification of potential sites for protection in ABNJ.[219] This is a key development in the law relating to marine conservation in that it opens the way for the restriction of certain activities on the High Seas, even if such an arrangement would require a new MEA.

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[216] CBD Malawi Principles page, Principle 11 https://www.cbd.int/ecosystem/principles.shtml accessed 14 October 2017.
[217] Ibid.
[218] CBD *COP IV Decision VII* (2004) (n 161)
[219] Ibid para 29(a).

At the ninth meeting of COP, collaboration was agreed between national and international organisations to establish the Global Ocean Biodiversity Initiative (GOBI) with the aim of helping countries meet the goals adopted under CBD and at the 2002 World Summit on Sustainable Development based on chapter 17 of Agenda 21.[220] GOBI is a key development in the protection of the marine environment and the conservation of its species.[221] GOBI's has a number of objectives, which include, *inter alia*, promoting international scientific collaboration to assist governments and relevant regional and global organisations to identify ecologically and biologically significant areas of ocean using the best available scientific data, and, to provide guidance on how the CBD's ecologically or biologically significant marine areas (EBSA) criteria and UN resolutions can be interpreted and applied to inform management, including the designation of representative networks of MPAs.[222]

The selection of sites under EBSA requires the parties to consider seven criteria some of which advance the law relating to MPAs. For example the Parties are to consider sites which have special importance in the life stages of species or areas with a comparatively higher degree of 'naturalness' due to the low level of human induced disturbance or degradation.[223] As a result, GOBI represents a significant development in the law relating to the designation and management of MPAs.

The aim is to reduce the rate of biodiversity loss by applying ecosystem approaches, and establishing representative MPA networks in marine ABNJ based

[220] UNEP/CBD/COP/DEC/IX/20.
[221] The Global Biodiversity Initiative http://gobi.org. accessed 10 April 2018 accessed 10 April 2018.
[222] ibid
[223] 'Special places in our oceans' published by the Convention on Biological Diversity. November 2016. 3.

on the 2010 target.[224] As noted above, CBD has provided a detailed definition of what is meant by both biodiversity and an ecosystem approach in general and these can be applied in the governance of a *representative network* of MPAs. COP 9 noted that,

> The ecosystem approach remains a useful normative framework for bringing together social, economic, cultural and environmental values. The needs are to translate this normative framework into methods for further application which are tailored to the needs of specific users.[225]

COP 9 did, however, provide scientific criteria to be used when selecting areas to establish a representative network of MPAs in open ocean waters and deep-sea habitats.[226] The framework is based around five required network properties and components to be considered when selecting sites for a network of MPAs, including in open ocean waters and deep-sea habitats.[227] In summary these are as follows,

- They should be ecologically and scientifically significant areas.
- They should be representative of different biogeographical subdivisions of the global oceans and regional seas that reasonably reflect the full range of ecosystems, including the biotic and habitat diversity of those marine ecosystems.

[224] Ibid Preamble fifth paragraph.
[225] CBD, COP 9/20. IX/7 (a) (161).
[226] Ibid Annex 1.
[227] Ibid Annex 2.

- There must be connectivity in the design of the network to enable larval and/or species exchanges and functional linkages from other sites in the network.[228]
- There should be replication of ecological features. This means that more than one site should contain examples of a given feature in the given biogeographic area. The term feature is to mean that *'species, habitats and ecological processes*' that naturally occur in the given biogeographic area. This will help deal with uncertainty, natural variation and the possibility of catastrophic events.
- The selected sites should be adequate and viable, which means that sites within a network have sufficient size and protection to ensure their ecological viability and integrity of their features. The adequacy and viability of a site will depend on its context in terms of threats; surrounding environment, physical constraints; scale of features/processes; spill-over/compactness.

It can reasonably be asserted that the third bullet point stresses the need for migration routes to allow connectivity between protected areas. The availability of such routes will ensure that protected areas do not become mere enclaves or refuges with isolated remnant populations with the consequential reduction in genetic diversity. This connectivity would contribute to the ecological coherence in the identification and designation of MPAs by a party to the Convention. This connectivity through the recognition of migration routes is of particular importance to highly mobile marine species, such as cetaceans and sea birds. The importance of

[228] The links may be by means of currents, gyrs, and migration routes and species dispersal.

the principle of ecological coherence in MPA designation will be developed further in subsequent chapters.

The 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is a supplementary agreement to the Convention on Biological Diversity. The purpose of the Protocol is to provide a transparent legal framework for one of the CBD's core objectives, namely, the fair and equitable sharing of the benefits arising from the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components.[229]

At the closing session of the Nagoya Conference, the CBD adopted a new-ten year strategic plan, the Aichi Target, designed to provide guidance for national and international efforts to preserve biodiversity. The strategic plan has 20 headline targets, organised under five strategic goals. These are designed to stem the underlying causes of biodiversity loss. The most significant obligations arising from the Aichi targets for this study are the following;

> By 2020 all fish and invertebrate stocks and aquatic plants are to be managed and harvested sustainably, legally and applying ecosystem based approaches so that overfishing is avoided; recovery plans and measures are

[229] The Nagoya Protocol on ABS (adopted on 29 October 2010, entered into force on 12 October 2014). Art 1.

> in place for all depleted species. Parties are obliged to ensure that fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.[230]
>
> By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.[231]

The first target above recognises the issue of sustainable fisheries, but the second requirement, to provide *'ecologically representative and well connected systems of protected areas'* under the Aichi target should be noted, particularly as it echoes the obligation already identified under Ramsar and the concept of ecological corridors linking sites under the main provisions of CBD. Again, it is made clear that parties to the Convention are obliged to ensure ecological coherent networks when identifying and designating sites. The effect of this provision is to highlight it is the *network* of sites that is important.

In summary, the basic text of the CBD restates a number of fundamental environmental obligations seen previously seen in other MEAs. These include the obligation to adopt an ecosystem approach, to establish a representative network of

[230] UNEP/CBD/COP/DEC/X/2 Strategic Goal B Target 6.
[231] Ibid Strategic Goal C Target 11.

MPAs, and to restore degraded ecosystems. Additionally, Contracting Parties must provide scientific and technical advice where necessary to aid the implementation of the Convention.

5.6 UNESCO CONVENTION ON THE PROTECTION OF THE UNDERWATER CULTURAL HERITAGE (2001)

The Convention defines underwater cultural heritage as,

> 'all traces of human existence having a cultural, historical or archaeological character which have been partially or totally under water, periodically or continuously, for at least 100 years such as:
> (i) sites, structures, buildings, artefacts and human remains, together with their archaeological and natural context;
> (ii) vessels, aircraft, other vehicles or any part thereof, their cargo or other contents, together with their archaeological and natural context; and
> (iii) objects of prehistoric character.[232]

The Convention is to be interpreted and applied in a manner consistent with LOSC.[233]

It is useful to recall that shipwrecks and other '*introduced'* objects of a historical or cultural nature serve to attract the settlement of species and can lead to the

[232] UNESCO Convention on the Protection of the Underwater Cultural Heritage 2001 (adopted 11 February 2001, entered into force 1 February 2009) 41 ILM 40 (2002). Art 1 (a) (i), (ii), (iii).
[233] Ibid, Art 25 (3).

development of rich biodiversity areas. As such, the provisions of the Convention are of value in the indirect contribution they make to the conservation and protection of the marine environment and associated cultural resources. This reflects the IUCN Guidelines for Protected Area Management discussed in section 3.1 above.

6. REGIONAL AGREEMENTS

In addition to the main body of international law referred to above there are three regional instruments which are important for the conservation of the marine environment in UK waters.

6.1 THE BERN CONVENTION

Convention was established under the auspices of the Council of Europe.
The Convention recognises the intrinsic value of wild flora and fauna, which need to be preserved and passed to future generations.[234] As such its objective is to 'conserve wild flora and fauna and their *natural habitats*, especially those species and habitats whose conservation requires the co-operation of several states, and to promote such co-operation [emphasis added]'.[235] Contracting Parties are, therefore, required to take appropriate and necessary legislative and administrative measures to ensure the conservation of the habitats of the wild flora and fauna species, especially

[234] Convention on the conservation of European wildlife and natural habitats 1284 U.N.T.S. 209; Eur. T.S. No. 104 (1982); 1982 Gr. Brit. T.S. No. 56 (Cmd. 8738) adopted on 19 September 1979 entered into force 1 June 1982. Preamble 4th para (Bern Convention).
[235] Ibid Art 1 (1).

those listed in the Appendices.[236] The EU, as a party to the Convention, seeks to meet its obligations by means of the Habitats Directive thereby binding all Member States to the Convention.

The organisational structure of the Bern Convention is very similar to that found in other major MEAs including the concept of groups of experts. Currently, the expert groups cover the conservation of amphibians and reptiles, including marine turtles; invertebrates; plants; birds; alien species; carnivores; climate change; alien species; and biological diversity on European islands.

The Convention's real significance for this study is two-fold, first is that it provides strict protection to all species of cetaceans found in UK waters and, second, in Article 4 (3) it obliges the Parties:

> 'to give special attention to the protection of areas that are of importance for the migratory species specified in Appendices II and III and which are appropriately situated in relation to migration routes, as wintering, staging, feeding, breeding or moulting areas'.[237]

In all essential respects Art 4 (3) is a restatement of the obligation previously seen under Ramsar, CITES and CBD. Second, it is important because it also protects certain fish species, including, basking sharks, long snouted and short snouted seahorses, sea lamprey, Atlantic salmon, and Atlantic blue fin tuna.[238]

[236] Ibid Art 4.
[237] Ibid Art 4 (3).
[238] Ibid Appendices II and III.

The obligations of the Convention were originally transposed into UK law by means of the 1981 Wildlife and Countryside Act. It is, therefore, a key instrument underpinning how protected areas are designated and managed in terms of responding to threats and will form part of the analysis of the UK's performance in meeting its legal obligations.

6.2 AGREEMENT ON THE CONSERVATION OF SMALL CETACEANS IN THE BALTIC, NORTH EAST ATLANTIC, IRISH AND NORTH SEAS (ASCOBANS) (1992)

6.2.1 Background

ASCOBANS was concluded under the framework of the CMS.[239] As such, it is one of several international legally-binding instruments and other agreements among range states of single migratory species.[240] These agreements may be adapted to take account of the differing needs of particular regions with the aim of enhancing the effects of the Convention.[241]

The text of the Convention recalls that all small cetaceans regularly present in the Baltic and North Seas are listed in its Appendix II as strictly protected species.[242] Its relevance to research into MPAs stems from the obligation on range states to 'locate areas of special importance to their (listed cetaceans) survival', and which implies a clear obligation to ensure the protection of such marine areas where they

[239] Agreement on the Conservation of Small Cetaceans in the Baltic, North East Atlantic, Irish and North Seas (adopted 17 March 1992, entered into force 29 March 2004) 1772 UNTS 217 (ASCOBANS Convention).
[240] CMS Family Portal' (*UNEP/CMS Secretariat*, 2016) <http://www.migratoryspecies.org/en/content/about-cms-family> accessed 30 October 2016.
[241] All Parties to the Agreement are Member States of the EU.

[242] Bern Convention. Recital 10 (n 220).

are identified. In addition, range states are to 'identify present and potential threats to the different species'.[243]

There are twenty-eight species of whales, dolphins and porpoises (cetaceans) that are known to occur in north-west European waters.[244] In UK waters, eleven species including minke, fin and sperm whales, harbour porpoises and four species of dolphin, bottlenose, common, Atlantic white-sided and white beaked may be seen regularly throughout the year.[245] All of which are listed.

6.2.2 THE AGREEMENT

Parties to the Agreement are required to apply the conservation, research and management measures prescribed in the Annex to the Agreement. These include the development of new methods to establish stock identity and to estimate abundance, trends, population structure and dynamics, and migrations and should focus on locating areas of special importance to breeding and feeding.[246] The Convention provides that studies should not involve the killing of animals and should include the release in good health of animals captured for research.[247]

In addition, to protection under ASCOBANS, all of the above species are listed under other EU legislation, which requires that there are regular assessments on their conservation status. Of the listed species two, namely bottlenose dolphins and

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[243] Ibid Annex clause 2.
[244] Atlas of Cetacean distribution in north west European waters http://jncc.defra.gov.uk/page-2713 accessed 15 October 2017.
[245] Whales, dolphins and porpoises page.' (*Joint Nature Conservation Committee (JNCC)*, 2016) <http://jncc.defra.gov.uk/default.aspx?page=1554> accessed 27 October 2016.
[246] Bern Convention. Annex clause 2 second paragraph (n 220).
[247] ASCOBANS, Annex s2, second para (n 225).

harbour porpoises, require the identification and designation of specially protected areas. These special areas are implemented through EU law and this will be explored in the chapters below.

At their 5th meeting, the Parties to the Agreement recommended holding a one-day workshop to establish criteria and guidelines for the identification of sites of importance for small cetaceans.[248] The workshop identified a need to protect high-density areas, feeding or breeding sites, and migration corridors and their value if designated as MPAs for conserving cetaceans.[249] This reflects the provisions found in Ramsar, CITES and CBD.

As a member of the CMS family, ASCOBANS implicitly incorporates the provisions of the framework treaty itself, thereby rendering their repetition in the text of the subsidiary Convention.

6.2.3 ASCOBANS MPAS IN UK WATERS

In 2015 there were 36 MPAs designated for the protection of Harbour Porpoise and Bottlenose Dolphins in UK waters.[250] All the sites were designated as Special Area of Conservation (SAC) under the provisions of EU law and are also included in the list of European Marine Sites (EMS) under the EU's Natura 2000 programme.[251] In

[248] 'Proceedings of the 5th Meeting of the Parties to ASCOBANS ' (5th Meeting of ASCOBANS, Egmond aan Zee, Netherlands, 18 - 20 September 2006) Resolution 7.
[249] 'Selection Criteria for Marine Protected Areas for Cetaceans.' (European Cetacean Society's 21st Annual Conference, The Aquarium, San Sebastian, Spain, 22nd April 2007).
[250] *2015 ASCOBANS Annual National Reports (UK)* (2015) 9.
[251] EMS consist of areas designated under either the Habitats Directive or Birds Directive for the protection of marine species of community importance

addition, they are on the UK list of OSPAR designated MPAs.[252] . The effect of the legislation underpinning EMS will be analysed in chapters three and four. At present, EMS in UK waters include three SACs designated for bottlenose dolphin, Cardigan Bay, the Moray Firth and Lleyn Peninsula and the Sarnau. The UK's Joint Nature Conservation Committee (JNCC) noted that all are inshore, because analysis of existing data for bottlenose dolphin indicates that it is not currently possible to identify suitable SACs in UK offshore waters.[253]

In the early part of this century, analysis of available data failed to find any sites that would meet the selection requirements of the Habitats Directive. As a result in 2013, JNCC contracted further work to determine whether persistent high density areas for harbour porpoise could be identified. As a result, five sites were consulted on in 2016, and subsequently designated in 2017, joining the Inner Hebrides and Minches a candidate Special Area of Conservation (cSAC), under the provisions of the Habitats Directive, in Scotland. The continuing work to identify and designate sites indicates a high degree of commitment to the objectives of the Convention.

6.2.4 NATIONAL REPORTING

Parties are required to submit an annual report covering progress made and setting out difficulties experienced during the year in implementing the agreement.[254] National reporting should be considered as a mechanism for ensuring that MPAs designated for the protection of cetaceans are actively managed post designation.

[252] OSPAR Commission Data Sheets.' (2015) <http://mpa.ospar.org/home_ospar/mpa_datasheets> accessed 30 October 2016.
[253] Joint Nature Conservation Committee (JNCC) Website' (*Joint Nature Conservation Committee, Monkstone House, City Road, Peterborough, PE1 1JY*, 2016) <http://jncc.defra.gov.uk/Default.aspx> Additional Annex II Marine Species SACs.
[254] ASCOBANS, Art 2.5 (n 225).

The report must also cover progress made and difficulties experienced during the past calendar year in implementing the agreement.[255] This seems a sensible mechanism for monitoring the compliance of states with the provisions of the Convention.

6.3 THE OSPAR CONVENTION

6.3.1 BACKGROUND

The UK is an individual contracting party to OSPAR and it is also collectively committed through its membership of the EU.

OSPAR has five main areas of work,

Protection and conservation of ecosystems and diversity

Hazardous substances

Radioactive substances

Eutrophication

Environmental goals and management mechanisms for offshore activities.[256]

6.3.2 THE CONVENTION

In addition to the main body of the Convention there are currently five Annexes of which Annex V on the protection and conservation of the ecosystems and biological diversity of the maritime area is the most relevant to this study. An initial list of

[255] ibid para 2.5.
[256] Convention for the Protection of the Marine Environment of the North-East Atlantic' <http://www.ospar.org/> website accessed 20 September 2015.

threatened and/or declining species and habitats was developed and ratified in 23 June 2003.

The Convention recognises the principles contained in the 1972 Stockholm Declaration,[257] and the 1992 Rio Declaration as set out in section 2.0 above.[258] As such, it is guided by the ecosystem approach to an integrated management of human activities in the marine environment. This obliges Contacting Parties to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected. For the purposes of the Convention an ecosystem approach is defined as,

> 'the comprehensive integrated management of human activities based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity'.[259]

This definition is broadly in line with the definition found in CITES, CBD, and CMS earlier.[260] The Parties must apply the precautionary principle where there are reasonable grounds to believe that an activity could harm the marine environment.[261] There is also an obligation on Contracting Parties to apply the

[257] OSPAR Convention. Preamble para 5 (n 240).
[258] Ibid Preamble para 6.
[259] Convention for the Protection of the Marine Environment of the North-East Atlantic' Ecosystem Approach page http://www.ospar.org/ accessed 20 September 2015.
[260] OSPAR Convention, Art 2. 1 (a) (n 240).
[261] Ibid Art 2. 2 (a).

polluter pays principle.[262] The method of work adopted by the Convention is to advance its strategy by means of decisions which are legally binding on the Contracting Parties and to make recommendations and other forms of agreements setting out the actions to be taken by the Parties.[263]

The Convention adopts the definitions for 'biological diversity', 'ecosystem' and 'habitat' found in the CBD.[264] Parties are expected, both individually and jointly, to take measures to protect the maritime area against the adverse effects of human activities. The reasons for doing so can include safeguarding human health, to conserve the marine ecosystems and, where practicable, to restore marine areas which have been adversely affected. In addition, the Parties are required to meet their obligations under CBD to develop strategies, plans or programmes for the conservation and sustainable use of biological diversity.[265] This wording emphasises the way in which each of the selected MEAs restates the obligations found in the others and, in effect, the MEAs are mutually reinforcing.

6.3.3 THE CONTINUING DEVELOPMENT OF OSPAR

In 1998, working within the OSPAR framework, the EU committed to '*promote the establishment of a network of marine protected areas to ensure the sustainable use and protection and conservation of marine biological diversity and its*

[262] Convention for the Protection of the Marine Environment of the North-East Atlantic' Principles page accessed 20 September 2015. Preamble para 5.
[263] OSPAR Convention, Art 13 (n 240).
[264] Ibid Annex V Art 1.
[265] Ibid Annex V Art 2.

ecosystems'.[266] This was later augmented by the issuing of a joint statement from the Helsinki and OSPAR Commissions setting out a joint approach to conserving marine ecosystems.[267] The Parties committed to the, 'establishment of MPAs consistent with international law and based on scientific information, including representative networks by 2012'.[268] The OSPAR Commission subsequently issued its own statement committing the Parties to completing the network of well-managed marine protected areas that, together with the Natura 2000 network, is ecologically coherent'.[269]

An OSPAR Recommendation on how the network was to be implemented became effective from 27 June 2003.[270] The Recommendation provides useful definitions for some of the concepts underlying MPAs as a conservation approach. For example an MPA is defined as,

> an area within the maritime area for which protective, conservation, restorative or precautionary measures, consistent with international law have been instituted for the purpose of protecting and conserving species, habitats, ecosystems or ecological processes of the marine environment.[271]

In addition, ecologically coherent means that the network should include, '*sites representative of all biogeographic regions in the OSPAR maritime area, and be*

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[266] *Sintra Statement of Ministers on Protection of the Marine Environment of the North-East Atlantic.* (University of Oregon International Envronmental Agreements (IEA) Database Project, 1998).
[267] *Joint Statement of Helsinki and OSPAR Conventions, Statement on the Ecosystem Approach to the Management of Human activities "Towards an Ecosystem Approach to the Management of Human Activities" Annex 5 Agenda item 6.1 (25-26 June 2003).* (OSPAR and Helsonki Conventions, Bremen, Germany 2003).
[268] Ibid Para 6 f (vi).
[269] *Ministerial Meeting of the OSPAR Commission, Bremen Statemen. Annex 33 (Ref: B-3-26). 25 June 2003.* (OSPAR Convention, 2003) para 11.
[270] OSPAR Recommendation 2003/3 on a Network of Marine Protected Areas adopted by OSPAR 2003 (OSPAR 03/17/1, Annex 9), amended by OSPAR Recommendation 2010/2 (OSPAR 10/23/1, Annex 7).
[271] Ibid para 1.1.

consistent with the CBD target for effectively conserved marine and coastal regions'.[272] Biogeographical regions include areas of animal and plant distribution, but which have similar or shared characteristics, rather than focussing on individual species or types of habitat as found in other legal instruments. In 2012 it was noted that OSPAR and HELCOM had agreed to develop common theoretical and practical aspects of what would constitute an ecologically coherent network of marine protected areas.[273] To be ecologically coherent the network should,

- interact with and supports the wider environment;
- maintain the processes, functions, and structures of the intended protected features across their natural range; and
- function synergistically as a whole, such that the individual protected sites benefit from each other to achieve the two objectives above.[274]

The purpose of the network is to,

a. protect, conserve and restore species, habitats and ecological processes which have been adversely affected by human activities;

b. prevent degradation of, and damage to, species, habitats and ecological processes, following the precautionary principle;

c. protect and conserve areas that best represent the range of species, habitats and ecological processes in the maritime area.[275]

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[272] Ibid para 2.1. a.
[273] Kerstin Kröger, *2012 Status Report on the OSPAR Network of Marine Protected Areas*, vol 618/2013 (OSPAR Commission 2013,) 32, 2nd para.
[274] Ibid 32
[275] OSPAR Recommendation 2003/3 Art 2.1.

There is also a requirement on the Contracting Parties to undertake and publish at regular intervals joint assessments of the quality status of the marine environment and of its development, for the maritime area or for regions or sub-regions thereof; include in such assessments both an evaluation of the effectiveness of the measures taken and planned for the protection of the marine environment and the identification of priorities for action.[276]

By 2016 the idea was that the network was to be well managed (i.e. coherent management measures should have been set up and be implemented for such MPAs that have been designated up to 2010).[277] In summary, this meant that the network should protect, conserve and restore habitats, species and ecological processes that have been damaged by human activity prevent degradation of the sites following the precautionary principle, and to protect and conserve areas that best represent the range of species, habitats and ecological processes in the maritime area.[278] Unfortunately, whilst there has been considerable progress, the overall objective has not been met according to the 2016 Status Report on the OSPAR Network. Further, Recommendation 2003/3 does not provide a definition of what is meant by ecological coherence. For this it is necessary to refer to a supporting recommendation, 2003-17.[279]

The criteria for selecting areas for consideration as MPAs are to be found in Appendix 2 of this document. They state that for a site to qualify they should meet

[276] The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) 2354 UNTS 67; 32 ILM 1069 (1993). Art 6.
[277] OSPAR Recommendation 2003/3 para 2.1 b.
[278] Ibid para 2.1 c, d, and e.
[279] Guidelines for the Identification and Selection of Marine Protected Areas in the OSPAR Maritime Area OSPAR Agreement: 2003-17.

several of the criteria but not necessarily all of them.[280] One particularly useful inclusion in this document is detail on how to assess the ecological significance of an area. A site is deemed to be ecologically significant if it has four characteristics;

- a high proportion of a habitat/biotope type or a biogeographic population of a species at any stage in its life cycle,
- it contains important feeding, breeding, moulting, wintering or resting areas,
- important nursery, juvenile or spawning areas,
- a high natural biological productivity of the species or features being represented.[281]

In 2006, the Commission issued further guidance on the development of an *ecologically coherent* network of MPAs.[282] This guidance is useful in that it provides a number of definitions recognised by OSPAR for concepts expressed in both international and in EU law as will be seen below. For example,

- Network: A network is characterised by coherence in purpose and by the connections between its constituent parts,[283] and,
- Connectivity: Connectivity between different MPAs enables the mutual support of MPAs within the network and will contribute to providing ecological

[280] Ibid Appendix I opening para.
[281] Ibid para 3.
[282] *Guidance on Developing an Ecologically Coherent Network of OSPAR Marine Protected Areas (Reference number 2006-3)* (OSPAR Coherent Network Development, 2006).
[283] OSPAR Agreement: 2003-17 para 5.

coherence in a network through the consideration of ecological connections between marine areas.[284]

The second bullet point is essentially the same concept as the ecological corridors found earlier under Ramsar, CITES, CMS and CBD and, as such, it provides useful guidance on assessing how well a Contracting Party is fulfilling its obligations under the Convention.

The document sets out thirteen key guiding principles that Contracting Parties might 'wish to take into account when undertaking the selection of sites to be contributed to the OSPAR MPA network and considering the network as a whole'.[285] Principles eight to ten provide clear guidance on the reasons why connectivity should be incorporated into the selection and designation of the OSPAR MPA network.[286] Taking this work forward, in 2007 OSPAR published a rapid self-assessment checklist based on the World Commission on Protected Areas (WCPA) and the World Conservation Union's own self-assessment checklist.[287] Together these documents should enable the UK to assess its level of compliance with its obligations in respect of marine protection. Unfortunately, while the UK is showing on the OSPAR website as preparing checklists for its sites, it has not been possible to locate examples on that website. It would be very useful if the for the UK authorities published these if they exist, or to commission their completion if they do not.

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[284] *Guidance on Developing an Ecologically Coherent Network of OSPAR Marine Protected Areas (Reference number 2006-3)* para 19.
[285] Ibid para 3 third sentence, 1.
[286] Ibid para 20, 7.
[287] *Guidance for the design of the OSPAR Network of Marine Protected Areas: A self-assessment checklist Refernce Number 2007-6* (OSPAR Commission, Ostend 2007, 2007).

In 2017, the OSPAR Commission published a status report on the OSPAR Network of Marine Protected Areas for the period up until 1 October 2016. This showed that 448 MPAs, including 10 areas beyond national jurisdiction (ABNJ), had been reported to the Commission in relevant waters.[288] Collectively, the sites covered around 806,472 km² or 5.9% of the OSPAR maritime area in the North-East Atlantic, which appears to indicate good progress.[289] The vast majority of sites were designated in the territorial waters of the contracting parties, which means that coverage of OSPAR MPAs within coastal waters was high at 16.7%.[290] It also noted that coverage across the five OSPAR Regions was imbalanced, and this resulted in major gaps in the MPA Network.

Despite the obligation on Contracting Parties to provide reports on the management of the OSPAR MPAs the 2017 report noted that there remain institutional barriers and resource issues to both the implementation and evaluation of effective management measure for OSPAR MPAs.[291] As a result the Commission found that it remained impossible at that time to comprehensively conclude on the extent to which OSPAR MPAs are well-managed. The absence of management plans means that at present the MPAs are not likely to achieve the objectives set by the Commission. In effect the MPAs exist only as 'paper parks'. However, the report noted that the objective to protect OSPAR waters by establishing an ecologically coherent MPA network is far from being accomplished. Further, it was felt that it is

[288] Kirsten Kroger and others, *2012 Status Report on the OSPAR Network of Marine Protected Areas*, vol 618/2013 (OSPAR Commission 2013) 4.
[289] 2016 Status Report on the OSPAR Network of Marine Protected Areas. The OSPAR Convention, Publication Number 693/2017.
[290] Ibid 3.
[291] Ibid 2.

important to be able to evaluate whether the MPAs are doing the job that was intended. This is to be done by means of a pilot assessment of MPAs, which suggests that the Commission had some concerns about whether or not they were being effectively managed.[292]

6.3.4 NATIONAL REPORTING

Contracting Parties are required to report at regular intervals to report to the Commission or other measures taken by them for the implementation of the provisions of the Convention and of decisions and recommendations adopted, in particular, measures taken to prevent and punish conduct in contravention of those provisions and any problems encountered.[293] National reporting should be considered as a feature of the management of MPAs and will be explored further below.

7. SUMMARY OF OBLIGATIONS

As stated in the introduction to this chapter, a wide range of obligations have been developed by the Parties to the various MEAs over many years. After analysing the MEAs it is argued that there is a common set that is the most relevant to marine conservation.

As was seen above, the transposing of the obligations across the selected MEAs has happened as a result of a number of things. First, the Parties to MEAs have

[292] Ibid 1
[293] OSPAR Convention, Art 22 (n 240).

implicitly incorporated them from earlier agreements such as the Rio Declaration and second, as was seen in the case of the three Rio Conventions, CBD, UNFCC and UNCDD the secretariats have established liaison groups to promote their complementarities despite their separate legal status. The five key obligations to be used in subsequent chapters together with their sources can be summarised as follows;

7.1 A PRECAUTIONARY APPROACH

Implicit references to the precautionary approach and precautionary measures can be found in the provisions of LOSC concerning the conservation and management measures of living resources in the EEZ. However, direct references to the application of the principle can be found in closely linked agreements, such as the Straddling Stocks Agreement. As stated above, Article 6 of the Straddling Stocks Agreement provides detailed guidance on how the precautionary principle should operate in that context. In addition, MARPOL as amended by the 1978 Protocol obliges parties to recall Principle 15 of the Rio Declaration concerning the precautionary approach. Whilst the declaration is not binding it does state that '*the precautionary approach* ***shall*** *[emphasis added] be widely applied by States according to their capabilities'*. The use of the word '**shall**' cannot be described as vague, which would allow uncertainty to creep in. This is particularly so as the declaration is non-binding. However, the fact that the IMO has 'recalled' it under MARPOL and the IMO incorporated it into its resolutions on technical standards suggests that it is gaining some weight as *emerging* customary law and as such is

mandatory. By way of contrast both CMS and CITES can be said to be implicitly precautionary in nature.

7.2 AN ECOSYSTEM APPROACH

References to *'ecosystems'* have been found in environmental law for some time now but its presence in instruments such as LOSC, MARPOL as amended by the 1978 Protocol; the guidelines on PSSA, the Straddling Stocks Agreement, the Rio Declaration, CITES, CBD, and CMS are of particular importance to this research. The original text of Ramsar does not make any explicit mention of the term 'ecosystem' but this was remedied by COP 3.

As discussed above, Part II of LOSC requires that measures taken in accordance with that part **shall** include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life. It does not, however, define what is meant by an ecosystem. The Straddling Stocks Agreement makes three passing references to 'ecosystem' but again the term is not defined. MARPOL, as amended by the 1978 Protocol, makes two references to ecosystems in the context of prevention of avoiding damage due to pollution but does not define an ecosystem. By contrast the MARPOL Guidelines for PSSA's mentions the term twenty times in various contexts and, as shown above, provides a clear definition of what constitutes an integrated ecosystem. CMS uses the term in the sense that the conservation status of a species will be considered good when it is maintaining itself as 'a viable component of its ecosystems' and a population maintains its historic coverage and

numbers 'to the extent that potentially suitable ecosystems exist and to the extent consistent with wise wildlife management'. As a result, it is necessary when relying on international law to rely on the definition of an ecosystem provided in Ramsar, the MARPOL guidelines for PSSA's and CBD as set out above.

There can be minor differences in the definition of what constitutes an ecosystem, so for the sake of simplicity this study will use the CBD definition which is that an ecosystem is the '*dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit".*[294] It, therefore, should be understood to include both the biotic and abiotic components of the environment. [295]

7.3 AN ECOLOGICALLY COHERENT NETWORK OF MPAS

The principle of an ecologically coherent network is less developed in the basic text of the selected MEAs. Indeed, there are no references to the term *'ecologically coherent network'* in LOSC, the Straddling Stocks Agreement, or the MARPOL instruments including the resolution on PSSA's.

Ramsar is concerned with the designation and protection of wetlands and sites are selected, inter alia, on account of the international significance of their ecology. The Convention implies that sates should consider ecological corridors as a means of preventing habitat fragmentation and to help the ecological functions of wetlands.

[294] Convention on Biological Diversity' (2014) <http://www.cbd.int/> Art 2 of the Convention text.

[295] Abiotic factors are the non-living physical and chemical elements in the ecosystem such as water, air, soil, and the physical fabric of the environment. Biotic factors are living or once-living organisms in the ecosystem such as animals, birds, plants, and similar organisms.

In addition the Ramsar Handbook on laws provides additional guidance on measures to support wise use, which includes protected areas implying an obligation to create ecologically coherent networks of protected areas. Similarly, the basic text of CBD requires parties to establish a 'system' of protected areas. This is again supplemented by a decision of the CBD COP 4 that a programme should be completed, admittedly relating to forest diversity, to reduce gaps about habitat fragmentation and including mitigation options such as ecological corridors and buffer zones. More pertinently, as discussed above, the CBD COP 7 adopted a work programme on protected areas and marine and coastal biological diversity. Both of which support the establishment and maintenance of MPAs that are effectively managed, ecologically based and contribute to a global network. This approach is further endorsed by the basic text of CMS which mandates parties to ensuring the maintenance of a network of suitable habitats appropriately disposed in relation to the migration routes so that there is for the foreseeable future, sufficient habitat to maintain the population of the migratory species on a long-term basis. This, as we have seen, is supported by the requirement that 'range states' maintain a network of suitable habitats appropriately disposed in relation to the migration routes. In effect this provision will ensure the ecological coherence of the network of sites. This approach is the key to conservation and reflects the fact that, since at least the 1960s, there has been a consistent trend towards protecting biodiversity at a networked level, rather than on the basis of individual enclaves for single species.

Although the phrase 'an ecologically coherent network' is less frequently used in full in international law, its importance as a component of a mutually reinforcing framework of fundamental principles will be demonstrated in later in this work.

7.4 A RESTORATIVE APPROACH

The principle of restoration of the marine environment is now mandated in the following instruments relevant to marine conservation law and policy, the Rio Declaration,[296] Ramsar, CBD,[297] and CITES.[298] The idea of restoration is sometimes conflated with the idea of recovery. This is not mere semantics as in legal terms the knowledge of what constitutes an undisturbed marine environment is incomplete because of the scale of interference from human activity. Therefore, to assess the importance of the principle of restoration/recovery it is a premise of this thesis that the principle will need to be deployed as part of a wider framework of related principles.

7.5 THE USE OF SCIENTIFIC EVIDENCE

The provision and use of scientific information is mandated in the following instruments relevant to marine conservation law and policy, LOSC and its associated Fishing Stocks Agreement, the Rio Declaration; CBD, CMS, MARPOL's PSSA guidelines, and CITES. The quality of the scientific evidence is often described in these instruments as needing to be the 'best scientific evidence available'.

It can, therefore, be positively stated that a clear set of obligations exist in international law which the UK must comply with in respect of the conservation of

[296] Rio Declaration, Principle 7.
[297] CBD Art 8 (n 161).
[298] CITES, Art 11 (3 c) (n 140) .

the marine environment by means of MPA designation. As such these obligations should guide national policymakers and legislatures to comply with the obligations they have made and allow the courts to assess if a nation is fulfilling its obligations in respect of MPA designation and management. The selected obligations will be used in later chapters to assess whether the UK meting its obligations under international law when designating or managing MPAs with particular focus on the new marine conservation zones.

Furthermore, the *Iron Rhine* case provides a relevant example of how Courts and Tribunals are willing to recognise the spirit of the obligations Parties have accepted under international legal instruments and to use them in making judgements in environmental cases.[299]

8 CONCLUDING REMARKS

It is clear that the provisions of the selected MEAs and Regional Conventions are built around these common core obligations, which are designed to be applicable in the designation and management of MPAs. The obligations are woven into the treaties in this area and help to provide the benchmarks against which the design of UK law can be measured. They are not all, however, legal obligations or to use Fishers phrase, '*bright line autonomous rules'* that dictate a particular outcome in a certain set of circumstances.[300] Therefore, when using the selected obligations as a tool to assess the UK's performance, it will be necessary to decide if they have

[299] *Belgium v Netherlands* Iron Rhine Arbitration, Belgium v Netherlands, Award, ICGJ 373 (PCA 2005), 24th May 2005, Permanent Court of Arbitration [PCA].
[300] Elizabeth Fisher, 'Precaution, Precaution Everywhere: Developing a Common Understanding of the Precautionary Principle in the European Community ' (2002) 9 Maastricht J Eur & Comp L 7 (2002) 7.

achieved the status of customary law or made binding on the UK in some other way. For example, the precautionary principle, as will be seen in chapter three, and has been accepted as a general principle of EU law.

The next chapter will consider the process for identifying and designating all types of MPAs in UK waters including a new type of MPA created under the provisions of the 2009 Marine and Coastal Access Act. In doing so, the question will be asked, does the UK act in accordance with the five obligations/principles, identified above, in the designation and management of MPA sites.

CHAPTER THREE
DESIGNATING MPAS IN UK WATERS

1. INTRODUCTION

The purpose of this chapter is to examine the UK's domestic laws under which marine protected areas (MPAs) are designated within the UK marine area. They will be analysed to assess how, or if, they incorporate the five obligations on the UK under the international and regional legal instruments covered in chapter two. There are a number of legal instruments applicable in the UK that are related to the designation and management of MPAs. First, as was seen in chapter two, there are a number of instruments dealing with the designation of MPAs, which the UK has signed, and these will be referred to where appropriate to establish if and how they have been given legal effect in UK domestic law. Second, the UK enacted the Marine and Coastal Access Act (MCAA) in 2009, which contains detailed provisions for a new type of MPA in UK waters, the marine conservation zone (MCZ).[1] Third, there is also an extensive body of EU law relevant to the conservation and preservation of the marine environment and its living resources. The differences and any conflicts between these different regimes will be considered where relevant. The management of MPAs post-designation will be dealt with in chapter four.

This chapter has four core sections. The first will examine the development of a voluntary approach to MPAs in UK waters during the 1970s. This will address the reasons behind how and why this approach was not entirely satisfactory and which led to it being superseded by a statutory approach at the start of the 1980s. This

[1] Marine and Coastal Access Act 2009 (MCAA 2009).

will include reviewing the use of Ministerial powers under 1967 Sea Fish Act to review the development of the UK's marine policy from the late 1990's onwards up to the coming into force of the MCAA. This will be followed by a section analysing the passing of the MCAA, which brought about the creation of the Marine Management Organisation (MMO), the body which has a role as the principal licencing body for marine activities in the UK marine area. The MCAA also enabled the designation of marine conservation zones in English waters by an appropriate authority as defined under the Act[2] This means that the MMO and its Scottish equivalent do not have a role in MPA designation, but it does have responsibility for activities such as marine licencing and marine planning, which may have an impact upon MCZ/MPAs. The establishment of the MMO under the provisions of the MCAA will therefore be described in section five below while the management of UK MPAs, particularly the MMO's licencing responsibilities and the impact of licenceable activities on MPA/MCZs will be more fully explored in chapter four. The final part of the chapter will address the designation of MPAs in the UK under other legal regimes.

2 EARLY STEPS IN ESTABLISHING MPAS IN UK WATERS

The absence of a suitable statutory mechanism for designating and protecting important marine waters led to the development of a number of voluntary, largely community-driven initiatives known as Voluntary Marine Nature Reserves (VMNR) in the UK in the 1970s. These were initiated by the local County Wildlife Trusts, although later local planning authorities became involved. At one stage there were eighteen VMNRs, including, Lundy, Skomer, and Helford Voluntary Marine

[2] S126 of the Act defines the appropriate authority as , Welsh Ministers, Scottish Ministers and the Secretary of State depending upon the location of the site. It should be noted that under the MCAA the additional protected areas created under the Scottish provisions use the generic term MPA rather than MCZ.

Conservation Area (VMCA).[3] Lundy and Skomer were designated to protect areas of exposed reef, whilst Helford's designation was because of various estuarine habitats particularly its beds of seagrass.[4] The objectives of VMNRs focused on interpretation and awareness raising in an attempt to encourage users, particularly recreational users, to comply with codes of conduct etc., and thereby conserve the marine ecological interest of the area.

The selection of sites as VMNRs focussed on the conservation of areas of marine ecological interest that were considered important by stakeholders such as marine scientists and the local Wildlife Trusts for research and monitoring programmes. This ad-hoc approach meant that many of the sites selected were rocky areas that were felt to be in need of protection from divers and tourists with whom they were popular.[5] In the case of Lundy, species protection was also a key driving factor. The site had become a popular venue for divers in the 1960s, but this led to a growing trend of exploitation by divers, attracted to the site, who took sea fans and other animals as mementoes or for sale as curios. Also, spear fishing and hunting of lobster, crawfish and scallop posed a noticeable threat by targeting the largest individuals in the breeding population.[6]

The sites were all within the UK's inshore waters and were created based on the voluntary principle. This resulted in a cautious and co-operative approach in the

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[3] S Prior, *Investigating the use of voluntary marine management in the protection of UK marine biodiversity: A Report for the Royal Society for the Protection of Birds.* (Royal Society for the Protection of Birds, Sandy, UK, 2011).

[4] Peter J. S. Jones, 'Marine nature reserves in Britain: past lessons, current status and future issues.' (1999) 23 Marine Policy 375.

[5] Ibid.

[6] 'Lundy Marine Conservation Zone Website' (2017) <http://www.lundymcz.org.uk/conserve/history-of-marine-protection> accessed 20 July 2017 History of Marine Protection page.

absence of statutory provision. This approach has since been superseded by stricter regulatory regime since the 1980s as scientific knowledge of the UK's marine environment improved. One driver of the move to a statutory approach was that it would allow sites to be selected on the basis of their national importance, and statutory control measures to be implemented for the protection of the features present rather than simply by local sentiment, and voluntary codes of conduct.

3 STATUTORY DESIGNATION OF UK MPAS

The most significant change, prior to the MCAA, came with the passing of the Wildlife and Countryside Act 1981 (WCA 1981).[7] The original impetus for the Act was the need to transpose the EU Birds Directive into UK law. The Act conferred powers upon the Secretary of State, on the advice of the Nature Conservancy Council (NCC), [8] to issue orders for the creation of statutory marine nature reserves (SMNR) in the case of any land covered by tidal waters or parts of the sea (continuously or intermittently) in or adjacent to Great Britain up to the seaward limits of territorial waters.[9] Such orders had to be accompanied by a copy of any byelaws made for the protection of the area designated.[10] The purpose of the reserves was two-fold:

> To conserve marine flora or fauna or geological or physiographical features of special interest in the area;[11] or

[7] Wildlife and Countryside Act 1981 (WCA 1981).
[8] In 1991 the NCC was replaced by bodies representing the three nations of Great Britain and which are now co-ordinated by the Joint Nature Conservation Committee.
[9] WCA 1981 s36 (1) (n 6).
[10] Ibid s36 (2).
[11] Ibid s36 (1) (a).

> To provide, under suitable conditions and control, special opportunities for the study of, and research into, matters relating to marine flora and fauna and the physical conditions in which they live, or for the study of geological and physiographical features of special interest in the area.[12]

It should be noted that the above grounds for designating a marine nature reserve were very similar to those for designating a terrestrial site of special scientific interest (SSSI) under the Act.[13] This stems from the fact that SSSIs can only be designated to the mean low water mark in England and Wales and to low water spring tide in Scotland. Northern Ireland has a similar but separate designation for areas of special scientific interest (ASSI).

Management of a reserve after designation was the responsibility of the NCC. To assist in meeting this objective, the NCC was granted strong powers to make further byelaws for purposes such as restricting entry or movement of persons or vessels in the designated area, killing, taking, destruction, molestation or disturbance of animals or plants of any description in the reserve, or the doing of anything therein, which interferes with the sea bed or damaged or disturbed any object in the reserve; or the depositing of rubbish in the reserve. The powers to make and enforce such byelaws provided a much stronger basis for regulating potentially harmful activities within SMNRs compared to their predecessors the VMNRs. This included statutory powers for the NCC to make and enforce byelaws for the protection of sites designated as marine nature reserves under the Act.[14]

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[12] Ibid s36 (1) (b).
[13] Ibid s28 (4) (a).
[14] WCA 1981 s36 (1) (n 6).

The 1981 Act was also important because it was the mechanism by which the UK transposed the 1979 EU Birds Directive into domestic law.[15] This resulted in the provision of powers for the Secretary of State to designate areas of special protection analogous to the special areas of protection (SPA) found in the Birds Directive. The Act also transposed the species listed under the EU Birds Directive into domestic law, including many species of migratory and native marine species of birds whose habitats included estuaries and mudflats.[16]

The powers to designate SMNRs were not widely used, however, and only three SMNRs were designated under this Act; Skomer in Wales; Strangford Lough in Northern Ireland; and Lundy in England. Lundy and Skomer, which had previously been VMNRs, were designated as SMNRs in 1986 and 1990 respectively.[17] A further six have subsequently been designated as marine special areas of conservation under EU law, a process that may to continue in the coming years depending on the outcome of the Brexit negotiations. The Act was an important step for the conservation of marine species including, for instance, restrictions on the methods used to take certain cetaceans including Bottle Nosed and Common Dolphins.[18]

There had, however, existed powers under the 1967 Sea Fish Act to close areas of sea to commercial fishing to allow stocks to recover.[19] In 2008 these powers were exercised by the Secretary of State to close an area of Lyme Bay to a particular type

[15] Council Directive (EEC) 79/409 on the conservation of wild birds [1979] OJ L 103, 25.4.1979 (Directive79/409 EEC).
[16] WCA 1981 schedule 2 (n 6).
[17] Jones PJS, 'Marine nature reserves in Britain: past lessons, current status and future issues.' (1999) 23 Marine Policy 375.
[18] Ibid schedules 5 & 6.
[19] Sea Fish Act 1967.

of commercial fishing, which used a spring loaded dredge known as a rock hopper.[20] The spring loaded dredges were found to be causing damage to high value reefs and their associated fauna. Other types of fishing, such as potting for lobsters and crabs were still permitted. The closure subsequently led to the creation of an MPA, which has now been adopted under the EU's Habitats Directive. The management of this site will be discussed in chapter four.

4 UK MARINE POLICIES

Over recent decades there have been many government reviews of nature conservation, both terrestrial and marine, and a choice has to be made about which have had the most influence on marine conservation. This thesis will now analyse five, published since 1999, that are considered most pertinent to this study because of the impact they have had on current marine conservation law and policy.

4.1 REVIEW OF MARINE CONSERVATION (1999)

In 1999 the UK Government established a Review of Marine Nature Conservation to carry out a thoroughgoing review of the options for improving protection for marine sites and species. The objective was to examine how effectively the UK system for nature conservation in the marine environment is working and make proposals for improvements. A cross sectoral working group, which included the Joint Nature Conservancy Council (JNCC),the national Statutory Nature Conservation Bodies (SNCBs) and non-statutory organisations, industry and user groups with a particular interest in the marine environment was convened to undertake the Review with a

[20] Lyme Bay Designated Area (Fishing Restrictions) Order 2008.

remit focused on territorial waters of England and Wales. This was subsequently extended in 2000 to cover the continental shelf and superjacent waters under UK jurisdiction (usually up to 200 nautical miles from the coast).[21]

The final report was presented to the Government in July 2004 and contained a comprehensive summary of the international and EU context together with the obligations the UK has accepted for the management, conservation and protection of marine biodiversity.[22]

In summary the review stated that,

- The Government's vision would be pursued in a way that promotes the precautionary principle, and the document referred to the existence of the precautionary principle in a number of international instruments and, of particular relevance to the UK; Art 174 (now Art 191 of the post- Lisbon consolidated EU Treaty).[23]
- To enable the UK to meet its international obligations an ecologically-coherent and representative network of MPAs should be identified and established, and appropriate and proportionate measures applied to ensure their conservation needs are met.[24]
- The emphasis has shifted from one focusing on the protection of specific species and habitats to one focusing instead on an ecosystem approach.

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[21] Joint Nature Conservation Committee (JNCC) Website' Review of Marine Conservation page, http://jncc.defra.gov.uk/page-1540 accessed 1 August 2017.
[22] *Review of Marine Nature Conservation. Working Group report to Government.* (Department for Environment, Food and Rural Affairs London, PB 9714 2004), 5.
[23] The Treaty on European Union OJ C 325/33.
[24] *Review of Marine Nature Conservation. Working Group report to Government.* Key recommendation 8.

This requires the better integration of marine conservation, sustainable social goals and economic growth to address national objectives for conserving marine nature conservation alongside the full range of human activities and demands they place on the marine environment.[25]

- The vision will be based on robust science.[26]
- The conservation and, where appropriate, restoration of the ecosystem structure processes is of greater significance for the long-term maintained conditions and, accordingly, management should be appropriately cautious.[27]

Perhaps the most significant recommendation set out in the Report was how the Government should prioritise its activities to take forward the recommendations of the Panel.[28]

However, before the final report was published in 2004 the Government and devolved administrations issued a further strategy document, *Safeguarding our Seas* in 2002.

4.2 SAFEGUARDING OUR SEAS 2002

At first glance, the Safeguarding our Seas Strategy appears to be disconnected from the general thrust of policy development for the UK's marine environment because the working group carrying out the review of marine conservation had not

[25] Ibid Executive Summary, para 3, third sentence.
[26] Ibid Section 3.10 iv.
[27] Ibid Appendix 5b, Principle 5. This Appendix provides a useful summary of twelve principles recommended for an ecosystem approach.
[28] Ibid 59.

yet reported.[29] However, despite this the *Safeguarding Our Seas Strategy* provided a useful summary of the UK Governments views marine conservation strategy, which, *inter alia*, included the adoption of an ecosystem approach whereby social goals were to be integrated with marine protection objectives.[30] There is recognition in the document that management of the seas had often been fragmented, sectorally-based and driven by short-term economic gain.[31] Significantly it was recognised that previously action to deal with problems had been taken only when scientific evidence proved beyond reasonable doubt that there was a problem. As a result, it was often too late to devise and implement a solution.

The Strategy required that the resources of the marine environment should be utilised in a way that protects ecological processes of the oceans and seas under the jurisdiction of the UK and its overseas territories in a manner consistent with the concept of sustainable development.[32] To achieve this, UK policy for its marine area was to be underpinned by the output of the then forthcoming 2002 World Summit on Sustainable Development, which was the follow up to the 1992 Rio Earth Summit. It was also intended, to emphasise the contribution that sustainable marine management can make to food security, poverty eradication and wider development.[33] The Strategy explicitly states that a key element in improving marine conservation is an ecosystem approach to the conservation and, where possible, the improvement of marine ecosystems.[34]

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[29] *Safeguarding our Seas. A Strategy for the Conservation and Sustainable Development of our Marine Environment* (Defra Publications, PB 6187 Admail 6000, London, SW1A 2XX, 2002).
[30] Ibid 6.
[31] Ibid chapter 1, Our vision and its delivery, para 1.16.
[32] Ibid Executive Summary, first paragraph 4.
[33] Ibid Executive Summary, 4, fifth bullet point.
[34] Ibid 9, para 1.32.

The Strategy reaffirmed the UK's commitment to a number of principles from international law, in addition to the CBD's Jakarta Mandate on marine protected areas including on the High Seas.[35] The Jakarta Mandate committed parties to adopt six key principles,

- An ecosystem approach;[36]
- the precautionary approach;[37]
- the importance of science;
- that full use should be made of the roster of experts;[38]
- the involvement of local and indigenous communities (traditional knowledge);[39] and
- three levels of programme implementation i.e. at national, regional and global levels.

In addition, the Strategy refers to the UK working through OSPAR at a regional level in the North East Atlantic.[40] This included the requirement to take measures to '*restore marine areas which have been adversely affected".*[41] Similarly, the Strategy references EU initiatives, such as the EU's input to the World Summit on Sustainable Development.[42] The report states that the principles underpinning UK policy on the marine environment include the application of the precautionary

[35] 'Convention on Biological Diversity - Conservation and Sustainable Use of Marine and Coastal Biological Diversity COP 2 Decision II/10. Jakarta, Indonesia, 6 - 17 November 1995. ' <https://www.cbd.int/decision/cop/default.shtml?id=7083>, accessed 10 February 2016.
[36] Ibid para 2 (a).
[37] Ibid Para 3(a).
[38] ibid para 8 (b).
[39] Ibid para 8 ©.
[40] Safeguarding our Seas, para 2.28, (n 27).
[41] Ibid para 1.30.
[42] Ibid para 7.34.

principle and the use of robust science in conserving biological diversity.[43] The document also makes reference to international initiatives, such as the legislation to apply the Habitats and Birds Directives beyond territorial waters.[44]

The document states that the five obligations identified in chapter two, namely the use of both the precautionary and the ecosystem approaches; the designation of a coherent network of MPAs; and the restoration of damaged areas, where possible based on the best scientific information, underpin UK policy on the marine environment.[45] It does not, in itself, provide full definitions of these obligations instead it refers to their presence in other legal instruments that the UK has ratified. It can, therefore be assumed that these internationally derived definitions are the ones which should be deployed in the assessment of the UK's performance in meeting its legal obligations.

The Strategy included a pledge to review all the institutions, laws and stakeholders influencing the UK's coastline before starting consultation on coastal strategies for each of the national administrations. The principal failure of the document is that it was really little more than a summary of general aims and objectives without any substantive or meaningful recommendations. As a result, the Strategy did not break any new ground.in terms of its contribution to marine conservation policy.

4.3 ENVIRONMENT, FOOD AND RURAL AFFAIRS COMMITTEE REPORT ON THE MARINE ENVIRONMENT (2004)

[43] Ibid Executive Summary, 3.
[44] Sibid para 2.22, (n 27).
[45] Ibid Executive Summary, 3.

In 2004 the Environment, Food and Rural Affairs Committee published a report into the marine environment.[46] The Committee's primary role was not to publish a new marine conservation policy, but rather to review the then current legislative and institutional framework governing marine environmental protection and to make recommendations to the Government. It is therefore not focused on implementation of policy. On this basis an analysis of its findings should form part of this section.

Much of the content of the report has been superseded in the intervening years, i.e. from 1999 to 2017, but three of its recommendations are relevant to this study. First, the Committee's view that was the 'Government should review the international agreements on the marine environment to which the United Kingdom is a signatory to ensure that they are not just fine words but that they contain practical measures that contracting parties will implement'.[47] This point is central to understanding how, or if, the obligations in the international agreements actually been implemented in UK law in the fourteen years since the report. Second, the Committee concluded that 'the current patchwork of national, European and international laws, Directives and agreements is not fully capable of providing proper protection for the marine environment in the 21st century, subject as it is to increasing commercial exploitation'.[48] With the benefit of hindsight this seems a statement of the obvious, but it is none the less true for that. Third, and most significantly, the Committee recommended that if the, then, current reviews found that changes were needed to improve the legal regime, but felt that they could not be achieved in the existing framework then the Government should publish a

[46] *Marine Environment. Sixth Report of Session 2003–2004* (Environment, Food and Rural Affairs Committee HC 76 (including HC 1285-i Session 2002-03), Published on 21 March 2004 .
[47] Ibid para 42 and Conclusion 2.
[48] Ibid para 43.

consultation paper exploring the desirability of a Marine Act.[49] This seems to be the genesis for what later became the MCAA, which is a key element in this research.

4.4 CHARTING PROGRESS (2005)

In 2005 the Government issued what it described as the first integrated assessment of the state of the seas across the whole of the UK continental shelf.[50] The approach is described as 'integrated' because it was an attempt to understand how all the various natural and anthropogenic pressures on the seas act together in order to be able to assess how clean, safe, healthy, productive and biologically diverse the marine ecosystem really is.[51] The main purpose of preparing the Charting Progress report has therefore been to get beyond the traditional piecemeal approach and make a first integrated assessment of the environmental status of the UK seas. The report brought together scientific data from a range of specialist Government Agencies and laboratories, on topics such as climate change and sea temperatures, the physical and biological status of the seas, and human impacts on marine environmental quality, and provided an evaluation of what that data indicated about the environmental status of the UK's seas. It was also intended to be a first step towards adopting an ecosystem approach to managing the impact of human activities on the seas.[52] The report predates the passing of the MCAA and focuses on the scientific evidence with only passing reference to national and international

[49] Ibid Recommendation 3.
[50] *Charting Progress. An integrated assessment of the state of UK seas* (Defra Publications, PB9911 London SW1A 2XX, 2005).
[51] Ibid 103 para 6.1
[52] ibid 1, (n 48).

legislation governing habitat protection.[53] Therefore, the contents of the report will only be referred to where relevant in other sections of this study.

4.5 SAFEGUARDING SEA LIFE 2005

In 2005 Defra, the Scottish Executive, the Welsh Assembly Government and the Northern Ireland Office published their joint response, S*afeguarding Sea Life,* to the 1999 review of marine conservation discussed at section 4.1 above.[54] Unsurprisingly, the report again confirmed that the UK committed itself to the international obligations underpinning marine stewardship including an ecosystem approach, an ecologically coherent network of important protected areas, and that the MPAs were to established in a manner that was consistent with international law.[55]

The document repeats the obligations identified in the MEAs referred to in chapter two, but does not indicate how they will be applied. That can only be understood by analysing how a state implements them when designating and managing its MPAs and this will be addressed in the next chapter, which deals with the management of MPAs in UK waters. The report was arranged into ten main themes.[56] This section focusses on the theme concerning MPAs and the other themes in the report will only be referred to where appropriate.

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[53] Ibid 27.
[54] Department for Environment Food and Rural Affairs, *Safeguarding Sea Life The joint UK response to the Review of Marine Nature Conservation* (2005).
[55] *Review of Marine Nature Conservation. Working Group report to Government.*, Table 1 (section 3.2), 5.
[56] Safeguarding Sea Life seventh, bullet point, 6 (n 52).

With respect to the designation of MPAs, early in the report it was noted that the UK had, at that time, a large number of marine areas protected under various designations. These included the particularly sensitive sea areas (PSSA) designated under IMO regulations, sixty-five Special Areas of Conservation (SAC) designated under the EU's Habitats Directive and seventy-eight SPAs (Special Areas of Protection) designated under the EU's Birds Directive.[57] No mention is made in the document of the three statutory marine nature reserves designated under the WCA 1981. The overall objective of the designation of networks of MPAs is to maintain and restore biodiversity in line with the various international agreements.[58] This aim is expanded upon in the recommendations section of the document where it is stated that an ecologically coherent network of MPAs should be identified and established.[59] The recommendation also notes the work being carried out under the auspices of OSPAR.[60]

In respect of the designation and management of the MPAs and the wider marine environment this was to be achieved through an ecosystems approach which integrated management of human activities such as dredging or coastal development will be based on knowledge of ecosystem dynamics to achieve sustainable use of natural resources, and maintenance of ecosystem integrity.[61] This approach would require the use of robust science if it was to be achieved.[62] Where the scientific evidence is uncertain a precautionary approach was to be

[57] ibid They are strategic goals, policies for the wider seas, regional seas, scientific understanding, ecosystem objectives, management measures, marine protected areas, organisational arrangements, monitoring and implementation, 6.
[58] Ibid para 60.
[59] Ibid Recommendation 8.
[60] Ibid fifth para.
[61] Ibid Key Recommendation, 2.
[62] Ibid 4.

adopted in a proportionate manner to ensure that the basic functioning and resilience of marine ecosystems is not irreparably damaged.[63]

The report specifically referenced marine areas already protected as PSSAs, SACs and SPAs. The latter two are designations under European legislation and their specific details are discussed in more detail below. The sheer variety of possible designations could create confusion but as will be seen later in this chapter it is not unusual for a site to be designated under two separate regimes. The significant point to note is that the UK signalled its commitment to the concept of MPAs within its marine area.

An important recommendation in the Safeguarding Sea Life document was, that 'Government should introduce the necessary measures, including policy and legislation as appropriate, to underpin the application of the marine nature conservation framework throughout waters under UK jurisdiction'.[64] This is something that has happened since in the form of the MCAA.

The MCAA will now be explored to assess how well it aligns with the ambition set out in the above policies especially the five key concepts.

5 THE MARINE AND COASTAL ACCESS ACT

5.1 INTRODUCTION

The MCAA entered into force on the12th November 2009. The scale of the ambition behind the Act can be gauged from Lord Hunt's comments at the time of

[63] Ibid Part 1 para 26.
[64] Ibid Recommendation 9.

the Second Reading of the Bill in the House of Lords. He said that the Bill is "*ground breaking legislation and that the provisions to designate a network of marine conservation zones to conserve rare and threatened habitats and species, together with those to provide recreational access to England's coastline, will deliver important elements of [our] vision for making the most of the UK's seas and coastline"*.[65] Part 9 of the Act contains the provisions dealing with recreational access to the coastline of England by means of the creation of one or more routes for public access, but this will not form part of this study.

Lord Hunt said that the general aim of this legislation was to address the whole management cycle from setting policy objectives for managing pressures on the marine environment to ensuring that certain permitted activities in the marine environment are correctly licenced, e.g. dredging, and to ensure that what people actually do under the licence is consistent with the conditions of the licence and in accordance with policy. The primary vehicle for achieving this aim was to be a new organisation, the Marine Management Organisation (MMO) in England, together with a sister organisation, Marine Scotland, north of the border. The objectives were to be:

- promoting marine conservation and protecting and enhancing biodiversity and habitats,
- conserving and enhancing the marine landscape including the seabed and geological features,

[65] HL Deb 15 December 2008, vol 706 col 648.

- promoting the study, understanding and enjoyment of the marine environment,
- undertaking research and providing information and advice to the Secretary of State and other public bodies, and generally on all aspects of the UK marine area and the social and economic uses which take place in it.[66]

In promoting its general objective, the MMO was expected to work closely with coastal communities.

The Act was, therefore, to contain powers to designate a network of MCZs to conserve rare and threatened habitats and species, and to provide recreational access to England's coastline.[67] At this point, it should be noted that s123 (4) of the Act, which deals with the creation of a network of conservation sites, states that the authorities should have regard to any obligations under EU or UK law. It is, perhaps, a statement of the obvious to say that to achieve this objective the individual sites would also need to comply with those obligations. They can therefore be used in the assessment of the UK's performance in how it designates and manages MPAs within its waters.

The provisions for designating and managing UK MPAs are set out in Part 5 and Schedules 11, 12 and 13 of the Act. These provisions replace the powers previously available under the WCA 1981. The UK Government intended that the network of new MCZs will complement the pre-existing Natura 2000 network of European sites and help to fulfil the UK's commitments, including under the OSPAR

[66] HL Deb 21 January 2009, vol 76 col 1682.
HL Deb, 15 December 2008, Vol 706 col 648.

Convention.[68] The reference to the idea of '*complementing*' indicates that the Government recognised that there would be a number of different designations of MPAs in UK waters.

It is perhaps an unnecessary confusion that the MCAA introduced the expression MCZ to refer to sites in English and Welsh waters in place of the more widely used term MPA, which the Act uses for Scottish waters.[69] The grounds for designation are, however, the same so the term MCZ should be read as including sites designated as MPAs under this section of the Act.

In addition to MCZs, the MCAA also amended the provisions of the WCA 1981 and created powers for the appropriate national SNCB to designate SSSIs on land covered by estuarial waters.[70] S148 provides powers to the SNCB that a site which lies above the mean low water mark, or which is covered by estuarial waters, to be designated as an SSSI, unless it had instead been designated as an MCZ. This is a significant strengthening of the law relating to coastal SSSIs. The powers to protect areas in transitional/estuarine waters are important in respect of anadromous species, such as salmon, and catadromous species, such as eels that move between fresh and salt water during their life cycles. This is to allow their bodies to adjust their as they migrate between the water types. The extension of SSSI concept offshore was an important step in marine species conservation.

[68] HL Deb 15 December 2008, vol 706 col 650.
[69] MCAA 2009 s116 (n 1).
[70] Ibid, s148 and schedule 13. The definition of estuarial waters given under Schedule 13 of the MCAA is any 'waters within the limits of transitional waters'.

Once an MCZ is designated, the Act imposes a general obligation on any public authority exercising its functions in a way that best furthers, or least hinders those objectives so the level of protection afforded to individual sites can vary.[71] There are, for instance, three no take zones in UK waters. These are the Lundy MCZ, Flamborough Head special area of conservation in England and Lamlash Bay closed to bottom trawling and fishing with static gear to protect cold water coral under the North East Atlantic Fishing Commission.[72]

Before considering the management of all types of MPA in English waters in more detail in chapter four, the provisions for designating and managing MCZs under the Act, the role of the new regulatory body created by the Act, the MMO, and the role of other relevant authorities to licence certain activities in the marine area need to be understood.

5.2 THE MARINE MANAGEMENT ORGANISATION

Part 1 of the Act established the MMO and set outs its general objective together with the transfer of functions to the new organisation.[73] The MMO describes its own role as helping 'the Government achieve its vision for clean, healthy, productive and biologically diverse oceans and seas'.[74] It does this by licencing, regulating and planning specified marine activities in the inshore waters around England to ensure

[71] MCAA 2009 s125 (n 1).
[72] How many No Take Zones are either already operating or planned for UK waters. Joint Nature Conservancy Council, written answer Number FOI/EIR 201114 available at http://jncc.defra.gov.uk/pdf/EIR_201104.pdf.
[73] ibid Ss 4 – 13, (n 1).
[74] 'Marine Management Organisation Website.' (2015) <https://www.gov.uk/government/organisations/marine-management-organisation> About us page accessed 15 July 2017.

that they are carried out in a sustainable way.[75] The regulated activities include managing and monitoring fishing activities, dredging and marine construction and dealing with marine pollution emergencies, including oil spills, and enforcing wildlife legislation and issuing wildlife licences. In addition, the MMO has powers to make marine nature conservation byelaws. It should be noted that these are all characteristic management activities and do not include the power designate MPAs. Such powers lie with other bodies as will be shown in chapter four.

Under the Act, the power to designate MCZs does not lie with the MMO but with the Secretary of State, or the equivalent post in the devolved administrations.[76] The principal duties of the MMO are of a regulatory nature and are concerned with the management of marine activities such as fishing or aggregate extraction. However, the MMO was granted powers to make byelaws for the protection of MCZs in the inshore region to help further conservation objectives.[77] The Inshore Fisheries and Conservation Authorities (IFCA), created under the Act, can also exercise similar powers to make and enforce byelaws to ensure that the conservation objectives of MCZs are furthered.[78]

This division of responsibilities where the MMO does not select sites for designation as an MPA, but is one of a number of bodies responsible for managing those in inshore waters to further their conservation objectives and its other unrelated regulatory responsibilities, has the potential to create problems. It is, therefore,

[75] Ibid, 'About us' page, accessed 15 July 2017.
[76] MCAA 2009 116 (n 1).
[77] Ibid Ss 129 – 133.
[78] Ibid Ss 155 – 166.

worth briefly considering two of the main regulatory activities placed on the MMO to provide context for chapter five below.

5.2.1 MARINE LICENCES

Certain activities can only be carried out by parties who have been granted a licence by the appropriate licencing authority.[79] The MMO is responsible for marine licensing in English inshore and offshore areas and for Welsh and Northern Ireland offshore areas. The inshore areas include any area which is submerged at mean high water spring tide up to the territorial limit, estuaries and any river or channel where the tide flows at mean high water spring tide.[80] The offshore areas include waters beyond the territorial limit in so far as they comprise the EEZ and the UK sector of the continental shelf, i.e. up to the limit of EEZ of the coastal state.[81]

Licensable activities include, *inter alia*, dredging, the deposit of substances or objects within the UK licensing area, and the construction, alteration or improvement of any works within the UK marine licensing area either in or over the sea, or on or under the sea bed.[82] In the case of dredging, the licencing process was intended to be simplified by the transfer of this function to the MMO from the Department for Communities and Local Government. However, the potential for dredging to damage the marine environment, particularly the sea bed, was raised at the second reading of the Marine Bill during its passage through the House of

[79] Ibid S 65 (1).
[80] MMO website Do I need a marine licence? Page, https://www.gov.uk/guidance/do-i-need-a-marine-licence accessed 20 April 2018.
[81] 'Marine Management Organisation Website.' (2016) <https://www.gov.uk/topic/planning-development/marine-licences> accessed 5 October 2016.
[82] [82] MCAA 2009, s 66, (n 1).

Lords.[83] At that time it was noted that extractive dredging for aggregates or the dumping at sea of any associated waste materials could potentially be carried beyond the boundaries of a particular marine plan area through the effects of currents and tides into a protected area.[84]

The effectiveness of the provisions on dredging and the disposal of the material in relation to MPAs formed the background to a case involving maintenance dredging at Devonport in Devon which will be discussed in more detail in chapter five below.[85]

5.2.2 MARINE PLANNING

The provisions of Part 3 of the Act govern the UK's Marine Plans and its Marine Policy Statement and how these are to be implemented. The MMO was given responsibility for marine planning in England by the Secretary of State in 2010.[86] The process was described as a new way to address the challenges emerging from the growth in competing uses of the sea by helping public authorities and stakeholders to co-ordinate their policies and actions in the marine environment to further the aim of long-term sustainable development.[87]

The question of the interface between marine planning and terrestrial planning was a source of debate during the Committee stages in the House of Lords. The UK's seas are subject to many harmful, or potentially harmful, pressures, both in the

[83] HL Deb 15 December 2008, vol 706 col 671.
[84] HL Deb 12 January 2009, vol 707 col 1092.
[85] *R (Stop Dumping in Whitsand Bay v Marine Management Organisation and Westminster Dredging Comany and Department for Rural Affairs Claim No: CO/2656/2014 (High Court)*.
[86] 'Marine Management Organisation Website.'Marine Planning' pages, accessed 12 November 2016 (n 79).
[87] HL Deb 15 December 2008, vol 706 col 649.

water column and on the seabed. It is therefore necessary for the state to ensure there is a balance between those activities and the protection of the marine flora and fauna. The planning process is the means to achieve that balance. The Act was designed to integrate marine planning with other plans, at what the Government called the land-sea interface. This was to be done through the relationship between the Infrastructure Planning Commission and the MMO on big projects, and the relationship with local authorities along the coast.[88] The MMO has issued brief fact sheets on marine planning, including how the system fits in with MPAs.[89] The relevant fact sheet states that once an MPA is formally designated by the Government, the MMO will be responsible for monitoring and enforcement of these zones, together with the IFCAs and other regulators where appropriate.

The provisions of the Act in respect of designating MPAs will now be considered.

5.3 POWERS TO DESIGNATE AN MCZ UNDER THE MCAA

Following the devolution process, the MCAA's provisions on MCZs do not apply to the Scottish or Northern Irish inshore regions i.e. up to 12 nm. The devolved legislatures have enacted their own legislation on this matter. For this reason, the rest of this chapter will focus on the arrangements in English and Welsh marine areas.

[88] HL Deb December 2008,vol 706 col 657.
[89] 'Marine Management Organisation Website.' Marine planning factsheets' page https://www.gov.uk/government/publications/marine-planning-factsheets accessed 2 January 2016.

The Act contains substantial powers concerning the conservation and protection of the marine environment.[90] The power to designate an MCZ is an important one. In practice, the 'appropriate authorities' with power to designate an MCZ under the Act are the Secretary of State (Defra), Welsh Ministers, and Scottish Ministers.[91] These roles are among the highest levels of governmental authority as might, perhaps, be expected for an act which can have a major impact of users of the marine environment. Under the Act, the appropriate authority is provided with powers to designate areas as MCZs by means of local "designation orders".[92] In all cases this is done through secondary legislation in the form of Ministerial Orders. The Orders do not, of course, stand alone but must be interpreted in accordance with the meaning that appears in the parent Act unless a contrary meaning is given;[93] in this case it means the MCAA. This is of particular importance in relation to the management of an MCZ once designated as will be seen in chapter four.

Although it is not stipulated in the MCAA, in practice the appropriate authority will consider advice from the SNCBs before approving a designation. This can be evidenced by the fact that in 2008 the JNCC and NE set up a project to give users of the sea the opportunity to recommend possible MCZs to the Government. For MCZs in English waters the recommendations were relayed to Defra.[94] As was seen in chapter two, states have made a commitment under a number of MEAs to use the best scientific evidence available when developing their environmental laws and policies. In the case of English waters, the bodies with statutory responsibility

[90] MCAA 2009 Part 5 (n 1).
[91] Ibid s116.
[92] Food and Rural Affairs Department for Environment, *Marine Conservation Zones Designation Explanatory Note November 2013* (2013), para 2.
[93] Interpretation Act 1978 s11.
[94] JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones July 2012. Available at http://archive.jncc.gov.uk/PDF/MCZProjectSNCBAdviceBookmarked.pdf.

for providing such information are Natural England (NE) and the JNCC. JNCC is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. Its role is to co-ordinate the work of the UK's four SNCBs, Natural Wales, NE, Scottish Natural Heritage and the Northern Ireland Environment Agency. Membership of the JNCC is defined in the Natural Environment and Rural Communities (NERC) Act 2006 and consists of 14 members selected from bodies listed in the Act.[95] Similarly, the membership of the SCNBs is determined by the Secretary of State who, in the case of NE, has the power to appoint a chairman and not less than 8, or more than 15, other members.

The MCZ designation applies if the area is within the seaward limit of the territorial sea i.e. within 12 nm of the baseline, within the EEZ i.e. within 200nm of the baseline, or part of the UK sector of the continental shelf not falling within the UK's EEZ.[96] The Act delimits all these marine areas in accordance with LOSC. This was done to simplify the management of the United Kingdom's offshore maritime areas and bring the United Kingdom into line with accepted international good practice.[97] In addition, this change removed inconsistencies in the maritime zones claimed by the UK and replaced pre-existing zones, including British fishery limits, the Renewable Energy Zone, the Pollution Zone, and the Gas Importation and Storage Zone.[98]

The two grounds for designation of an area as an MCZ are clear. The appropriate authority can make an order under the Act for the purpose of,

[95] Natural Environment and Rural Communities Act 2006, Schedule 4.
[96] MCAA 2009 s116 (2) (n 1).
[97] Marine and Coastal Access Act Explanatory Notes, Para 132
[98] Ibid para 132.

- conserving *species* of marine flora and fauna, particularly if they are rare or threatened, or
- for conserving or protecting marine *habitats* or *features* of geological or geomorphological interest.

An MCZ may also be designated for the purpose of conserving the diversity of marine flora or fauna or habitat, whether or not they are considered rare or threatened. This section of the Act extends beyond simply protecting threatened species or features, and also provides for sites to be designated to conserve the diversity of marine flora or fauna or habitat, when they are considered rare or threatened.[99]

There is also an obligation upon the appropriate authority when designating an MCZ to conserve any species that is rare or threatened because of the limited number of individuals of that species, or the limited number of locations in which that species is present, when considering the flora and fauna to be protected.[100] This provision seems sensible in that it requires the designatory authority to obtain and consider the scientific evidence relating to the site.

The Act permits the appropriate authority to pay regard to any economic or social consequence of designating an area as an MCZ.[101] The purpose of this provision is that it allows MCZs to be designated in such a way as to conserve biodiversity and

[99] MCAA 2009 s117 (1) to (5) (n 1).
[100] Ibid s117 (4).
[101] Ibid s117 (7).

ecosystems whilst minimising any economic and social impacts.[102] In practice, this provision is that where an area contains features that are rare, threatened or declining, or forms a biodiversity hot spot, greater weight might be attached to ecological considerations. Conversely, where there is a choice of alternative areas, equally suitable on ecological grounds, socio-economic factors could be considered more significant in deciding which areas may be designated as an MCZ.[103] This approach seems eminently sensible because it provides space for a debate between parties most likely to be affected by the decision on whether or not to designate an area as an MCZ

The grounds for selecting a site for designation as an MCZ, as set out in s117 (1) and (2) of the MCAA, self-evidently depend upon the availability of scientific evidence which demonstrates the importance of the site. It was to this end the JNCC and NE set up a project in 2008 to give stakeholders the opportunity to recommend possible MCZs to UK Government. The MCZ Project had four regional projects covering the inshore waters around England and the offshore waters around England, Wales and Northern Ireland (known as the Defra marine area). The Governments in Wales, Scotland and Northern Ireland had similar projects to identify MPAs in their inshore waters.[104] The four regional groups were made up of sea users and interested groups from marine industries to recreational users. The involvement of stakeholders in the designation process was an excellent one in principle, but one which could lead to disillusionment if the criteria for site selection were altered, as happened subsequently. Importantly, guidance from Defra

[102] MCAA Explanatory Notes, para 335 (n 94).
[103] Ibid para 335.
[104] *Marine Conservation Poject. JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones July 2012* (2012), Executive Summary, 1 (n 94).

indicated that sites should be selected on the 'best information currently available' and that the lack of full scientific certainty should not be a reason for postponing proportionate decisions on site selection: In essence this is a precautionary approach. JNCC and NE provided support to these regional MCZ projects to help them make recommendations that would meet the Government's needs under the MCAA. The support included the provision of guidance in the form of the Ecological Network Guidance (ENG) report which provides seven network principles and five further considerations for the regional stakeholder groups to use.[105] The network design principles can be summarised as follows,

- Representativity: This requires the MPA network to be representative of the range of marine habitats and species through protecting all major habitat types and associated biological communities present in the UK marine area.[106] The guidance identifies 23 broad-scale habitats and 22 habitats of conservation importance that should be protected in the network.[107] The concept of representativity is only mentioned in the MCAA in the context of the creation of a network of conservation sites, but it would be an absurdity to assume it did not therefore apply in the selection of individual sites.[108]

[105] *JNCC and NE Marine Conservation Zone Project Ecological Network Guidance* (JNCC and Natural England, 2010) (JNC and NE ENG 2010).
[106] The network should also provide protection for 29 low or limited mobility species and 3 highly mobile species.[106] The three species listed are Smelt, European eel and Undulate ray rather than species such as cetaceans or seabirds, as might be expected.
[107] Ibid Tables 1 and 2.
[108] MCAA 2009 s123 (3) (b) (n 1).

- Viability: The network should include self-sustaining geographically dispersed component sites of sufficient size to ensure that species and habitats persist through periods of natural variation.[109]
  - Adequacy: The network should be of a size to be capable of delivering ecological objectives and to ensure the ecological viability and integrity of populations, species and communities.
- Connectivity: The network should maximise and enhance linkages among individual MPAs using best current science. For certain species this will mean that sites should be distributed in a manner such as to ensure protection at different stages of their life cycles. There is some uncertainty in the research about what is the optimum distance between MPAs is. The ENG advice suggests that MPAs should be spaced at 40 to 80 kilometres apart to reduce the number of features that are left isolated.[110] Other research has suggested that this may be too great a distance for some species. Scientists examining the implications for 31 rare or scarce benthic invertebrates found that more than half had a larval dispersal range of 1km or less. On that basis the connectivity between MCZ sites would be low if they are 40 or more kilometres apart.[111] This approach is fundamental to meeting the obligations the UK has made because without connectivity the protected areas become mere refuges due to their isolation from each other.[112]

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[109] The question of whether or not the network is self-sustaining can only be answered if there is high quality base-line scientific evidence on the designated features against which changes in their condition can be assessed.

[110](JNCc and NE ENG 2010., 46 third para, n 102.

[111] P. J. S. Jones and A. Carpenter, 'Crossing the divide: The challenges of designing an ecologically coherent and representative network of MPAs for the UK' 33 Marine Policy 737.

[112] It is for this reason that connectivity is promoted by instruments such as LOSC, CITES, CMS, and CBD because it prevents habitat fragmentation and creates ecological corridors for mitigation and dispersal of protected species.

- Protection: The network should include sites with a range of levels of protection. This requires sites of high protection where no extractive, depositional or other damaging activities are allowed to areas with minimal restrictions designed to protect features. The 'reference areas' proposed by the regional MCZ projects would have provided the opportunity to impose high levels of protection as might the development of other types of 'no take zones'.
- Use of best science: The network design must be based on the best information currently available. The ENG advice provides a useful summation of the precautionary principle when it specifies that the lack of full scientific certainty should not be a reason for postponing proportionate decisions on site selection. This principle is a simple restatement of the precautionary approach referred to elsewhere in this study.[113]

The regional MCZ project groups reported in September 2011 and recommended 127 sites for designation as MCZs, which included 65 areas proposed for high levels of protection and to be known as 'reference areas.' Such areas were to have the highest level of protection from impacts such as extraction, disturbance, and human impacts. This higher level of protection would require the limiting of some activities, such as fishing, dredging and anchoring.[114] The ENG also stated that knowing the reference condition would be important 'in helping us understand the value of the marine environment and the impacts of activities'.[115] The proposed sites covered approximately 15% of the Defra marine area.

[113] JNCC and NE ENG 2010. 3 (n 102).
[114] David Hirst, *Marine Conservation Zones in England* (House of Commons Library, London Briefing Paper: Number 06129 , 17 July 2015 2015), 7.
[115] JNCC and NE ENG 2010. 49 (n 102).

The final recommendations were independently assessed by the Science Advisory Council (SAC).[116] This led to a joint report, which was presented to Defra in 2012.[117] The full report ran to over 1,500 pages including technical annexes and detailed assessments for each site and provided a summary of the advice. It also set out the key messages for Defra. Whether or not an MCZ and all of its features were then considered ready for designation depended upon the degree of confidence in the scientific evidence. The 127 recommended sites were, therefore, reviewed using the JNCC MCZ Advice Protocols in line with JNCC's Evidence Quality Assurance Party.[118] This process resulted in 31 of the recommended MCZs being included in the public consultation in December 2012 in preparation for designation in 2013, but two of the candidate sites were initially excluded due to questions about the underlying scientific data, and it was decided that two sites would not be designated. No MCZs were designated from the sites selected as reference areas.

This approach appears to meet the commitment agreed by the UK under various international conventions by using the 'best scientific advice available' to preserve valuable sites in the marine environment. This conclusion is, of course, dependent upon the actual designation of some MCZs. However, failure to designate sites as

[116] The SAC's terms of reference are to provide independent and scientific support, advice and challenge to Defra. The Science Advisory Council assists the Defra Chief Scientific Adviser (CSA) in assuring and challenging the evidence that Defra uses in its policy development.[116] Defra then asked JNCC and NE to review the recommendations to see if they met the relevant scientific standards.

[117] *Marine Conservation Poject. JNCC and Natural England's advice to Defra on recommended Marine Conservation Zones July 2012*.

[118] Joint Nature Conservation Committee (JNCC) Website' Marine Protected Areas section, MCZ Advice Protocols page http://jncc.defra.gov.uk/page-6849, accessed 19 November 2017.

reference areas meant that the UK did not meet the threshold for selecting sites on the basis of best available scientific evidence, at least in the initial stages.

At the time of the designation of the first tranche of MCZs the UK adopted a precautionary approach to site selection. Unfortunately, the UK Government shifted its position and, instead of following the commonly understood formulation of the principle, it decided that lack of full scientific certainty ***could*** be a reason for postponing action to protect some sites. This can be contrasted to the pre-MCAA situation where the Government implemented a preventative measure, through the closure of an area of Lyme Bay to certain fishing methods. However, despite the good overall progress in the designation of MPAs under all instruments, the designation of only 50 of the 127 recommended MCZ sites by January 2017 has resulted in criticism from the Environmental Audit Committee (EAC). It considered that the slow pace of MCZ designations was suggestive of a lack of Government commitment to this initiative, and it called on the Government to bring forward proposals as soon as possible.[119] As a result, the EAC recommended that the Government must adopt a precautionary approach to the selection of the third tranche of MCZs and, that designations should be made taking note of the SNCB 'gap analysis' to ensure it fills all the gaps identified. In particular, the third tranche should include the designation of sites to protect both sand and mud habitats and sites for mobile species.

5.4 CONSULTATION WITH AFFECTED PERSONS

[119] *Environmental Audit Committee Marine Protected Areas Revisited*, s2 para 8 and conclusion 3 (n 179).

Prior to making an Order to designate an MCZ there are detailed requirements for consultation placed on the appropriate authority.[120] These include publishing its proposals for making an Order and, more onerously, publishing it in such manner as the appropriate authority thinks is most likely to bring the proposal to the attention of any persons likely to be affected by the making of the Order.[121] Further, the authority must consult any persons who they think is likely to be interested in, or affected by, the making of the Order.[122] This latter requirement to consult interested individuals and make them aware of the publication is more onerous than merely being required to publish a notice, which suggests some forethought is needed on the part of the appropriate authority about who the interested parties might be. The obligation to consult is of particular importance in terms of ensuring that any economic or social consequence of designating an area as an MCZ is fully explored. For example, sites containing the remains of any vessel, aircraft or marine installation, which is of historic or archaeological interest as defined under the Act, may be of great cultural significance to local people. The effectiveness of this clause will be more fully considered in chapter five below, which deals with threats to MPAs.

There are powers under the Act exempting the appropriate authority from the requirement to comply with the consultation requirements under 119 (2) to (4) if it thinks that there is an urgent need to protect an area to be designated.[123] In such cases of emergency the Order designating the area as an MCZ remains in force for a period not exceeding two years, during which time the appropriate authority must

[120] MCAA 2009 s117 (1) to (5) (n 1)
[121] Ibid s117 (1) to (5).
[122] ibid s119 (2).
[123] Ibid s119 (11).

publish a notice of the Order and to consult with anyone likely to be affected by the order. There are provisions for an appropriate authority to makes a further Order before the end of that period confirming the designation.[124] The Act and its Explanatory Notes do not indicate what might constitute an emergency and no evidence of the provision being used was found during this study.

The evidence produced by JNCC and NE resulted in 31 MCZs being included in the public consultation in December 2012 as possible sites for designation in 2013. Following the ending of the consultation period, 27 of the 31 sites proposed were designated, 2 were subject to further consideration and possible designation in the future, and 2 would not be designated. This reduction from 127 recommended MCZ sites to only 27 actually being designated suggests that the UK is not fully adopting a precautionary approach as required under both EU and international law.

5.5 THE DESIGNATIONOF THE FIRST TRANCHE OF MCZs

The 27 sites selected for designation in 2013 were implemented by means of Ministerial Orders in Council as described in section 5.3 above. They were selected on the basis that Defra had the highest degree of confidence in the scientific evidence for these particular sites. Each of the local Orders states the area designated as an MCZ.[125] The position of the MCZ and its limits are specified using the World Geodetic system.[126] Boundaries of the area are designated by, or with

[124] Ibid s119 (12).
[125] For an example please see The Whitsand and Looe Bay Marine Conservation Zone Designation Order 2013 MO 27/13 Schedule 1.
[126] The World Geodetic System is a standard used in cartography and navigation. It creates a standard co-ordinate system for the Earth, and is the basis of global positioning systems (GPS) The current standard is

reference to, mean high water spring tide.[127] From a legal perspective the use of the geodetic system provides legal certainty, but such a technical definition of the boundaries makes it questionable as to how useful this is to the average member of the public to understand where the boundaries lie. It might be helpful if Defra commissioned the placing of a small number of distinctive marker buoys on the site boundaries to provide a visual cue to the public.

The protected features and marine fauna covered by the order are normally set out in Schedule 2 of an order together with the conservation objectives for that site. These include geomorphological features such as reefs and rare or threatened marine fauna. The Act also gives scope to include 'references to conserving the diversity of such flora, fauna or habitat, ***whether or not*** any or all of them are rare or threatened [emphasis added]'.[128] The conservation objectives require that each of the features being protected be in favourable condition which, for a habitat, is defined as:

- its extent is stable or increasing; and
- its structures and functions, its quality, and the composition of its characteristic biological communities are such as to ensure that it remains in a condition which is healthy and not deteriorating.[129]

WGS 84 which was established in 1984 and last revised in 2004. Accessed at http://www.thegreenwichmeridian.org/tgm/articles.php?article=7.

[127] MCAA 2009 s118 (n 1).

[128] Ibid s117 (5).

[129] For example see The Whitsand and Looe Bay Marine Conservation Zone Designation Order 2013 MO 27/13. S5 (2) (a).

This seems to indicate that sites considered for designation as MCZs should already be relatively healthy, which means that the underlying scientific evidence for the site is strong. It does not, however, provide an opportunity to select less healthy sites to allow them the opportunity to recover.

Neither the MCAA nor its Explanatory Notes offer any further guidance on the term *favourable condition* and instead it is necessary to seek further guidance by reference to the Defra document, 'Marine Conservation Zones Designation Explanatory Note,' to understand what this means.[130] The Defra document specifies that the wording, included in paragraph 7i of that document, and which is identical to the wording in the individual Orders, is expressed in *absolute terms*. This means that certain attributes of habitats being protected are such as to ensure that the habitats remain in a condition which is "healthy and not deteriorating". Further, the definition is meant to cover a range of different circumstances, the specific requirements will depend on the habitat in question and prevailing physiographical, geographical and climatic conditions.[131] The absolute nature of this obligation sets a high bar for public authorities involved in managing MCZs because any activity with the potential to cause deterioration of the site would need to be forbidden or, at minimum, subjected to intense surveillance. The practical implications of this will be considered in the next chapter.

[130] Department for Environment, Food and Rural Affairs Marine Conservation Zones Designation Explanatory Note November 2013' (*DEFRA PB14078* 2013) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/259972/pb14078-mcz-explanatory-note.pdf>

[131] Ibid para 8.

The Order designating the Lundy Island MCZ for example, has the protected feature, the spiny lobster (*Palinurus elephasis)*.[132] This Order requires that the quality and quantity of the habitat of the protected feature within the zone and the composition of its population in terms of number, age and sex ratio are protected to such an extent as to ensure that the population is maintained in numbers which enable it to thrive.[133] However, no reference is made to the protection of specific marine habitat features, such as reef or sediments, in this Order. The Lundy Order may be contrasted with the Order designating the Poole Rocks MCZ.[134] Here the protected features include two marine species, Couch's goby (*Gobius couchi*) and the Native oyster (*Ostrea edulis*) and two types of broad scale marine habitat, and moderate energy circa-littoral rock.[135] The listing of only two species of marine fauna does not suggest that an ecosystem approach is being adopted unless it is assumed that their listing also protects species that they prey upon or any species that prey upon them, which might be expected if a true ecosystem approach had been adopted.

The first tranche of 27 MCZs covered nearly 9,700 square kilometres of seabed.[136]

5.6 DESIGNATION OF THE SECOND TRANCHE OF MCZs

Before the designation of the second tranche of MCZs in 2016, the JNCC and NE were asked by Defra to provide updated advice on the designation of tranche one

[132] Ibid s4 Protected features and conservation objectives.
[133] Ibid s4 (3).
[134] The Poole Rocks Marine Conservation Zone Designation Order 2013 SI 2013/18.
[135] Ibid schedule 2 2. 4.
[136] Department for Environment, Food and Rural Affairs Website' (*Defra, London*, 2016) <https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs> Consultation on the Second Tranche of Marine Conservation Zones page sixth para accessed 15 June 2016.

MCZs following data and new evidence from recent Defra contracts.[137] The output from this exercise was a new paper intended to inform the selection process for the second tranche of MCZs through the addition of a third technical protocol.[138] The new methodology had additional questions designed to fully understand whether a site/feature has enough evidence to support its designation. It was stated that this approach would ensure that all types of evidence available are used when considering whether there are justifiable reasons for a feature and/or site to be designated a MCZ[139] Whilst seeking more robust data may appear to be the correct approach, it could be deemed to be contrary to the philosophy of a precautionary approach if the inevitable delay results in the features of conservation interest in a candidate MCZ being damaged.

In its review of Marine Science in 2012, the House of Commons Science and Technology Committee reviewed the Government's approach to marine science including its use during the selection of potential sites for the first tranche of MCZs.[140] The Committee heard evidence from a number of organisations and individuals concerned about the changing of the evidential basis for site selection in this way.[141] A number of those submitting written evidence commented that the ENG document stated that the design of the network should be based on the 'best information' currently available and the lack of full scientific certainty should not be a

[137] *MCZ Levels of Evidence. Advice on when data supports a feature/site for designation from a scientific, evidence-based perspective.* (Written jointly by the Joint Nature Conservation Committee and Natural England January 2015).
[138] Ibid s1, Purpose.
[139] Ibid s3, Determining when a feature should be designated.
[140] *Science and Technology Committee 'Marine science' Ninth Report of Session hc (2012–13).* (House of Commons 25 March 2013).
[141] Ibid The Wildlife Trusts Ev 101 and the Marine Conservation Society Ev 137.

reason for postponing proportionate decisions on site selection'.[142] The Committee also heard an oral submission from a witness regarding how the requirement for '*best evidence*' had been widened during legal arguments.[143]

The requirement from Defra for increased confidence in the data relating to protected features does seem to be consistent with fulfilling the UK's commitment to use the 'best scientific advice possible' when selecting marine sites for protection. However, raising the bar in this way does not comply with the obligation to adopt a precautionary approach where there is not complete scientific certainty. In effect raising the bar in this way runs counter to the commitment under the MEAs analysed in chapter two, and EU law, that uncertainty due to incomplete scientific evidence should not prevent a state from taking action. As a result it must be concluded that the UK authorities put undue weight on the views of its own scientists, rather than those in other organisations, and for more certain scientific evidence rather than ensuring a better balance between their obligations under international law.

The 23 sites designated in the second tranche cover a total area of 10,810 square kilometres[144].

5.7 THE OBLIGATION TO CREATE A NETWORK OF CONSERVATION SITES

[142] JNCC and NE ENG 2010).s4 (n 102).
[143] *Science and Technology Committee 'Marine science' Ninth Report of Session hc (2012–13).* Ev55.
[144] Department for Environment, Food and Rural Affairs Website' 'Consultation on the Second Tranche of Marine Conservation Zones' page, sixth para, accessed 15 June 2016.

The Act requires that the MCZs designated by the appropriate authority under section 116 should form a network with other relevant conservation sites.[145] The latter are defined as Ramsar sites, SSSIs, and European Marine sites (EMS).[146] The network must contribute to the conservation and improvement of the UK marine area, the features which are protected by the sites comprised in the network represent the range of features present in the UK marine area, and the designation of sites comprised in the network reflects the fact that the conservation of a feature may require the designation of more than one site.[147] It has been argued these provisions are said to draw heavily upon the key elements of an ecologically coherent network developed for OSPAR.[148] Whilst Pieraccini may be correct, the text of the MCAA omits the term 'an ecologically coherent network,' which instead is only used within the Explanatory Notes to the Act.[149] The omission of such a fundamental term from the main body of the text of the Act is regrettable. This is because a court will now need to consider both the wording of the Act and its Notes to understand Parliament's intentions, which may lead to additional costs and inconsistencies in approaches. The other relevant conservation sites are subject to their own designation requirements rather than the provisions of the MCAA and are discussed below in sections 8 to 10 of this chapter.

This section of the MCAA places a duty on the appropriate authority to have regard to 'relevant obligations under EU and international law'.[150] This reference provides

[145] MCAA 2009 s123 (2) (n 1).
[146] Ibid s123 (4).
[147] Ibid s123 (3).
[148] Margherita Pieraccini, 'Establishing an Ecologically Coherent Network of Marine Protected Areas in English Waters: What Does the Designation of Marine Conservation Zones under the Marine and Coastal Access Act 2009 Add to the Picture?' [Vathek Publishing, Ltd] 15 Environmental Law Review 104.
[149] MCAA Explanatory Notes, para 349.
[150] MCAA 2009 s123 (5) (n 1).

a legal basis for using the selected obligations as a tool for assessing the UK's performance in meeting its international legal obligations when designating and managing MPAs within its national waters.

In June 2010 the JNCC and NE published their statutory advice on the components in an ecological network of sites to Defra. The document set out what was needed to achieve the goals set out in the MCAA and associated policy on how to establish an ecological network of MPAs, which Defra accepted.[151] The advice was provided to the regional stakeholder groups and regional MCZ project teams to enable them to identify MCZ sites. Interestingly, the guidance does not cover the consideration of socio-economic interests and related information in identifying MCZs.[152] This guidance was provided in a separate document.

The ENG protocol described at section 5.3 above has seven design principles based on guidance developed under OSPAR.[153]

The 50 MCZs designated in English waters to date are unlikely to collectively meet the 40 to 60km spacing recommended under the ENG or the much smaller gaps thought to be necessary by scientists studying the larval dispersal ranges of a number of selected rare/scarce benthic species. There are some areas such as Lyme Bay where a number of MPAs, designated under different instruments, are located in close proximity to one another. This is likely to facilitate the larval dispersal of species that can only successfully travel over very small distances.

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[151] Ibid 14 second para.
[152] Ibid 14 first para.
[153] *Guidance on Developing an Ecologically Coherent Network of OSPAR Marine Protected Areas (Reference number 2006-3)* (n 102).

There appears to be no evidence that the need for migration corridors for mobile species has been incorporated into the designation process to date. Furthermore, it has been noted by the EAC among others that there are still gaps in the network for highly mobile species and certain types of habitat which has resulted in the UK not yet achieving the designation of an ecologically coherent network of MPAs as required under international and EU law.

5.8 REPORTING ON THE DESIGNATION OF A NETWORK OF PROTECTED AREAS

In order to ensure that the MCZs contribute to the improvement of the marine environment, the MCAA places an obligation on the appropriate authority to publish a report no later than 31 December 2012 and then every six years setting out the extent the MCZs, together with other relevant sites, are meeting the objective set out in s123 (2) of the Act.[154] The objective of s123 (2) is to ensure that the MCZs, when taken together with any other relevant conservation sites in the UK marine area, form a network which contributes to the conservation or improvement of the marine environment in the UK marine area and that they represent the range of features present in the UK marine area, including the designation of more than one site if necessary to protect such features. It is significant that when designating the network of sites the appropriate authority must have regard to any obligations under international and EU law that relate to the conservation or improvement of the marine environment because this transposes those obligations into domestic law.[155]

[154] MCAA 2009 s124 (1) (n 1).
[155] Ibid s123 (5).

In practical terms the responsibility rests with Defra who may direct the SNCBs to carry out the necessary monitoring.[156]

5.9 EXAMPLES OF MCZ DESIGNATION

The MCZ designation process set out in the MCAA is clearly defined. Space does not allow the review of all designation Orders so only four will be examined at this stage to give a flavour. Of the four, two were selected because their management has since been the subject of legal challenge by concerned citizens, and two were selected as examples of MCZs on the basis of their physical characteristics alone. This is because in addition to designating sites to conserve species of marine fauna and flora, the MCAA provides for the conservation of features solely for their geological or geomorphological interest and their value as habitats. As such they will require different management approach to sites designated for species of fauna and flora. None of the MCZs designated in the first two tranches incorporate 'no take zones' or 'closed zones'. First, this shows that the designation does not routinely or mandatorily require the imposition of such approaches as a no-take or a 'no entry zone'. Instead controlled exploitation of the resources can be granted by the relevant public authorities.

5.9.1 WHITSAND AND LOOE BAY MCZ

Whitsand and Looe Bay MCZ is an inshore area located off the south coast of Cornwall. The landward site boundary follows the coastline along the mean high water mark, from Hore Stone near Talland Bay in the west, to a point between

[156] Department for Environment, Food and Rural Affairs Marine Conservation Zones Designation Explanatory Note November 2013,' para 30.

Queener Point and Long Cove on Rame Head in the east. The seaward boundary is formed by a straight line across the bay, with a small extension jutting out to the south around Looe Island. The site covers an area of 52 square kilometres and is 25 metres deep at the deepest point.[157]

The site was designated as an MCZ on 21st November 2013 in the first tranche of 27 sites.

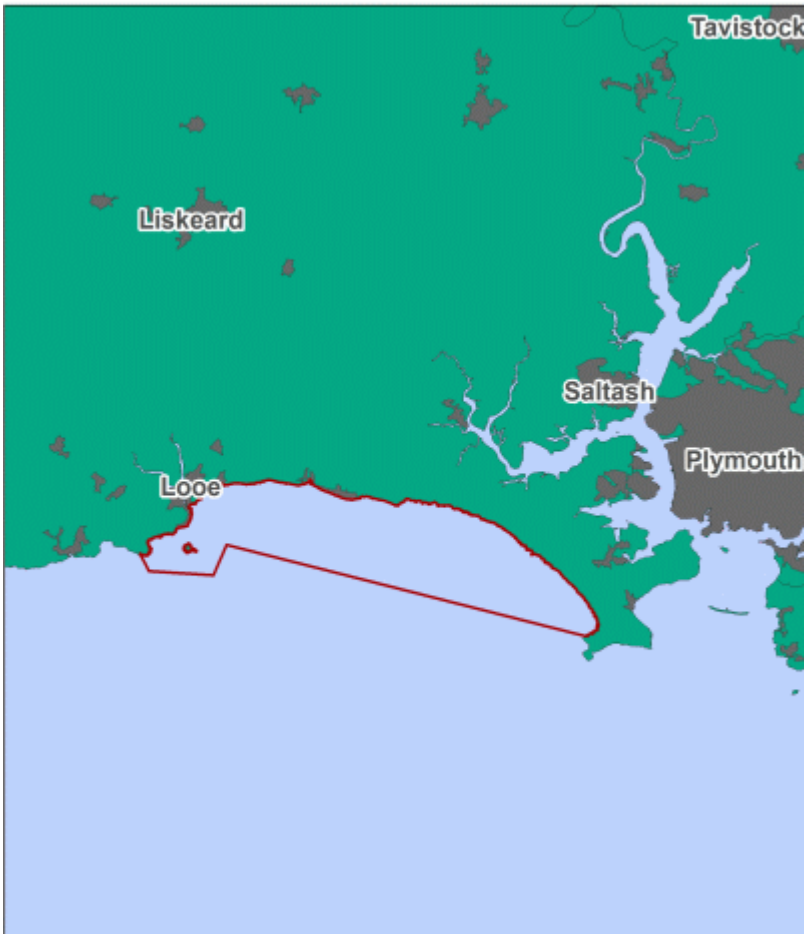

Diagram 1: Whitsand and Looe Bay MCZ map. Courtesy of the Wildlife Trusts.

[157] *Whitsand and Looe Bay MCZ Factsheet (MCZ048)* (DEFRA 2013).

In addition to its designation as an MCZ under the MCCA the site is listed as an OSPAR MPA.

5.9.1.1 THE EVIDENCE BASE FOR MCZ DESIGNATION

The Designation Order for the site lists the protected features as seven Broadscale marine habitats together with Seagrass beds. In addition, the Order lists four species of marine fauna, namely Ocean quahog (*Artica islandica*); Pink sea-fan (*Eunicella verrucosa*), Sea-fan anemone (*Amphianthus dohrnii*) and the Stalked jellyfish (*Haliclystus auricula*) as protected features of the MCZ.[158] It is not clear why the Order does not list the long snouted seahorse (*Hippocampus guttulatu*) despite it being a feature of conservation importance (FOCI) in the ENG document.[159] On this basis, there appears to be little explicit evidence of an ecosystem approach being adopted in the listing of these species such as what they feed upon or what, if any, predators rely upon them.

Originally a Site Assessment Document (SAD) for the site was compiled as part of the Regional MCZ Project. This summarised the available evidence for the presence and extent of the various habitat, species and geological features specified under the ENG protocol.[160] However due to the scarcity of survey-derived seabed habitat maps in UK waters, these assessments were necessarily made using best available evidence, including historical data, modelled habitat maps and

[158] The Whitsand and Looe Bay Marine Conservation Zone Designation Order 2013 MO 2013/27. Schedule 2.
[159] JNCC and NE ENG 2010. 839 (n 102).
[160] Ibid.

stakeholder knowledge of the areas concerned.[161] This led Defra to initiate a number of measures aimed at improving the evidence base, one of which was a dedicated survey programme, implemented and coordinated by the Centre for Environment, Fisheries and Aquaculture Science (CEFAS). The aim was to collect and interpret new survey data at selected sites recommended for MCZs. The survey found ten broadscale habitats in the area, eight of which were listed in the order designating the MCZ.[162] Designating the site on the best available evidence is a much better approach than delaying designation, and risking the site, while gathering additional data.

The survey noted evidence of the wrecks of HMS Scylla and the James Eagen Layne on the seabed.[163] HMS Scylla is a former Royal Navy Frigate that was scuttled on 27 March 2004 to form the first artificial reef in Europe.[164] The aim was to provide a suitable dive experience in shallow waters and to create an underwater laboratory for local scientists to carry out long term studies on colonisation and the effect of artificial reefs on the environment. The ecological survey noted that there was no evidence of human activity within the MCZ other than these wrecks and some marine litter/debris at one point.[165] The surveys also revealed species of low or limited mobility at the site plus three highly mobile species, Smelt, European Eel and Undulate Ray.[166]

5.9.2 THE MANACLES MCZ

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[161] Chris Jenkins & Matthew Curtis, *Report No 24. Title: Whitsand and Looe Bay MCZ Summary Site Report* (Defra Project Code: MB0120 Version 3 March 2015 2015). 5.
[162] The Whitsand and Looe Bay Fact sheet, (n 151).
[163] Curtis 4, (n 155).
[164] 'Dives Directory, HMS Scylla page.' (2016) <http://www.divesitedirectory.co.uk/dive_site_uk_england_southwest_wreck_hms_scylla.html> accessed 15 December 2016.
[165] Curtis, s 5.4, (n 155).
[166] Ibid Appendix 4.

The Manacles MCZ is an inshore site located on the southern coast of Cornwall. It extends 2 km from the coastline to encompass a series of large underwater rocky outcrops. The depth of the site ranges from 14 to 57 metres which creates a diverse seafloor landscape. The site is described as a high quality rocky reef extending from the shoreline out through shallow into deep waters. It contains nine habitats and four species of marine fauna of conservation interest. These different areas are classified as the intertidal, infralittoral and circalittoral zones. [167]

The site was designated as an MCZ on 21st November 2013 in the first tranche of 27 sites.

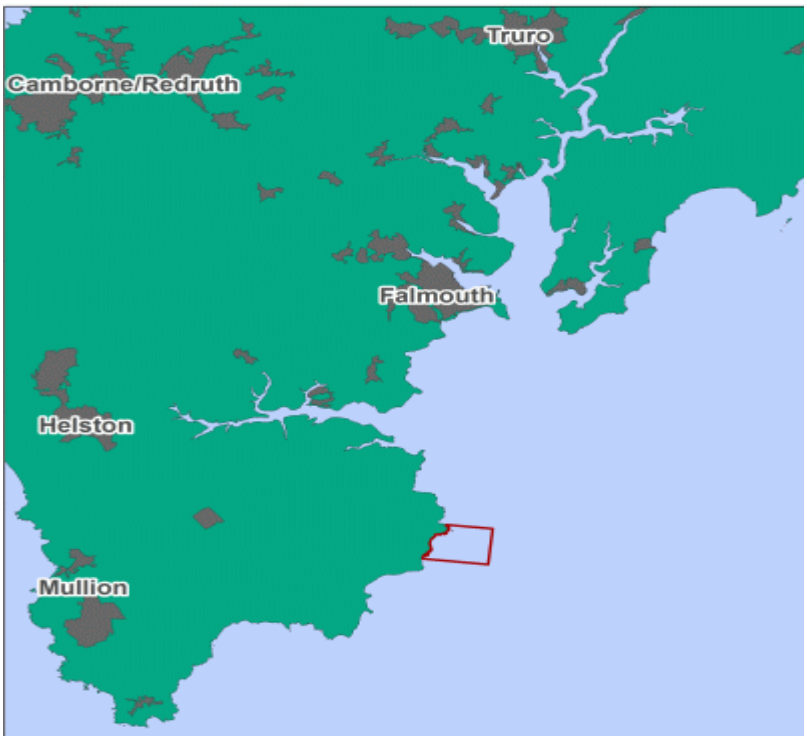

Diagram 2: The Manacles MCZ. Map courtesy of the Wildlife Trusts.

[167] *The Manacles Marine Conservation Zone Factsheet* (DEFRA 2013).

In addition to its designation as an MCZ under the MCCA the site is listed as an OSPAR MPA.

5.9.2.1 THE EVIDENCE BASE FOR MCZ DESIGNATION

The Designation Order lists the protected features as six Broadscale marine habitats plus Maerl beds that support important marine communities.[168] In addition, the Order lists three species of marine fauna for protection, Sea –fan anemones, Spiny lobsters, and Stalked Jellyfish for protection.[169] The spiny lobster (*Palinurus elephas*) is a heavily armoured crustacean with strong spines that protect it from predators. Spiny lobsters are no longer a target fishery because of dwindling numbers, but are sometimes landed when fishing for other animals. The animals that are caught tend to be smaller, and they seem to have disappeared entirely from areas of south-west England in which they were common during the 1970s.[170] Research from the Mediterranean suggests that spiny lobster numbers recover well in MPAs and that this helps to support neighbouring spiny lobster fisheries.[171] This finding provides a strong argument for the continuing designation of MCZs. The stalked jellyfish (*Haliclystus auricula*) found within the site actually spends all of its life on the seabed, usually attached to seaweed. Small sea-fan anemones (*Amphianthus dohrnii*) can also be found. All three species are listed under the UK Biodiversity Action Plan as a species of Principle Importance/Priority Species. The

[168] Maerl is a collective term for several species of red seaweed. It is unlike many other species of seaweed due to its hard, chalky skeleton which is brittle and prone to damage. Juvenile animals are often found sheltering within the branched structures while other species such as urchins, anemones and sea cucumbers can burrow into the gravelly under layer.
[169] The Manacles Marine Conservation Zone Designation Order 2013 SI 2013/13, schedule 2.
[170] Joint Nature Conservation Committee (JNCC) Website' Spiny Lobster page, third para http://jncc.defra.gov.uk/page-5539 accessed 10 December 2016.
[171] Ibid, fourth para.

site is a commercially fished area for a number of species, including common lobsters and crabs.

In addition to the MCZ, the area is classified as highly sensitive and is subject to a variety of protective designations in respect of its terrestrial features. These include among others, the Trebarveth Settlements Sites Scheduled Monument; the Lizard SAC and the Cornwall Area of Outstanding Natural Beauty, and the Coverack to Porthoustock Site SSSI. In addition, the South West Coast Path runs along the foreshore.[172]

The evidence submitted by JNCC and NE recommended not including two species, the Basking shark (*Cetorhinus maximus*) and Harbour porpoise (*Phocoena phocoena*) as protected features on the grounds that the site is too small to offer meaningful protection for them despite their strict protection under other international and EU laws.[173] It is not clear why the Order does not list the long snouted seahorse (*Hippocampus guttulatu*) despite it being a feature of conservation importance (FOCI) under the ENG document.[174] On this basis there appears to be little explicit evidence of an ecosystem approach being adopted in the listing of these species such as what they feed upon or what if any predators rely upon them.

5.9.3 THE OFFSHORE BRIGHTON MCZ

[172] Visit Cornwall website, The Lizard Peninsula page https://www.visitcornwall.com/places/the-lizard accessed 5 May 2017.
[173] JNCC and NE ENG 2010. s4.4.4, (n 102).
[174] Ibid, 839.

The Offshore Brighton MCZ is an offshore site in the deep waters of the mid English Channel. Its south-eastern and south-western corners meet the median line with French waters, due south of Brighton. The site covers an area of 861 km².

The site was designated as an MCZ on 29 January 2016 in the second tranche of 23 sites.

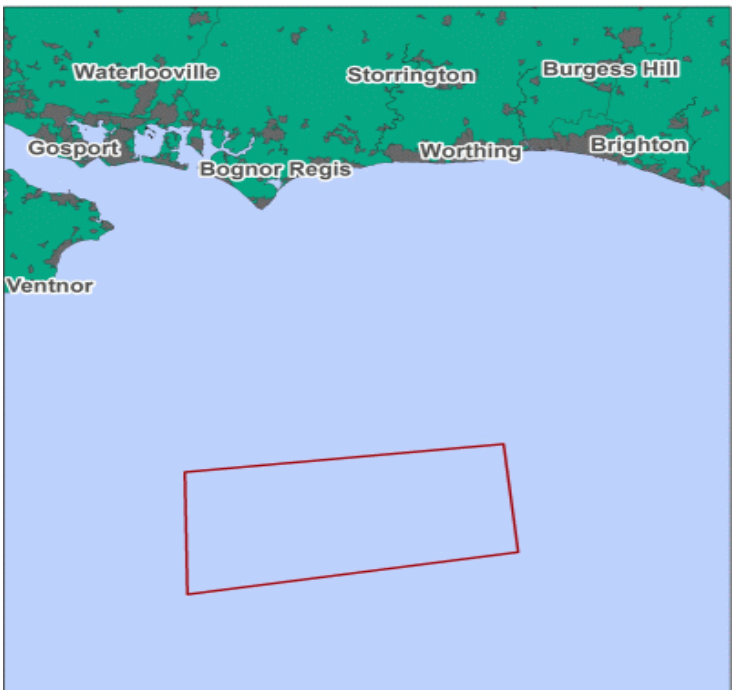

Diagram 3: Offshore Brighton MCZ. Map courtesy of the Wildlife Trusts.

In addition to its designation as an MCZ under the MCCA the site is listed as an OSPAR MPA.

5.9.3.1 EVIDENCE BASE FOR MCZ DESIGNATION

The Designation Order lists the protected features as three types of broadscale marine habitat, high energy circalittoral rock, Subtidal coarse sediment, and

sediments.[175] The protected features qualify as features of geomorphological interest under s.17 1 (c) of the MCAA.

The associated factsheet for the site states that the 'importance of the site stems from the fact that it fills a network gap for deep water (circalittoral) rock and protects deep water habitats which support a range of animal species'.[176] It describes an area of deep water rocks, dominated by animal communities because there is not enough sunlight for plant growth. However, no species of fauna are considered important enough to list on the Order, which suggests that the site designation was not principally based on an ecosystem approach. If an ecosystem approach had been adopted then it might be expected that it would cover both the *abiotic* and the *biotic* elements of the ecosystem if present.

5.9.4 THE WESTERN CHANNEL MCZ

Western Channel is an offshore site to the south of Cornwall, which covers about 1,614 km². The northwest tip of site is closest to land, at 54km south-east of the Lizard Peninsula. The depth of this site in mostly between 50 and 100 metres, but in the west it is more than 100 metres deep.[177]

The site was designated as an MCZ on 29 January 2016 in the second tranche of 23 sites.

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[175] The Offshore Brighton Marine Conservation Zone Designation Order 2016 MO 2016/15, Schedule 2.
[176] Offshore Brighton Marine Conservation Zone Factsheet' (2016) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/492442/mcz-offshore-brighton-factsheet.pdf>.
[177] *Western Channel Marine Conservation Zone Factsheet* (Defra, London 2016 PB 1439, 2016).

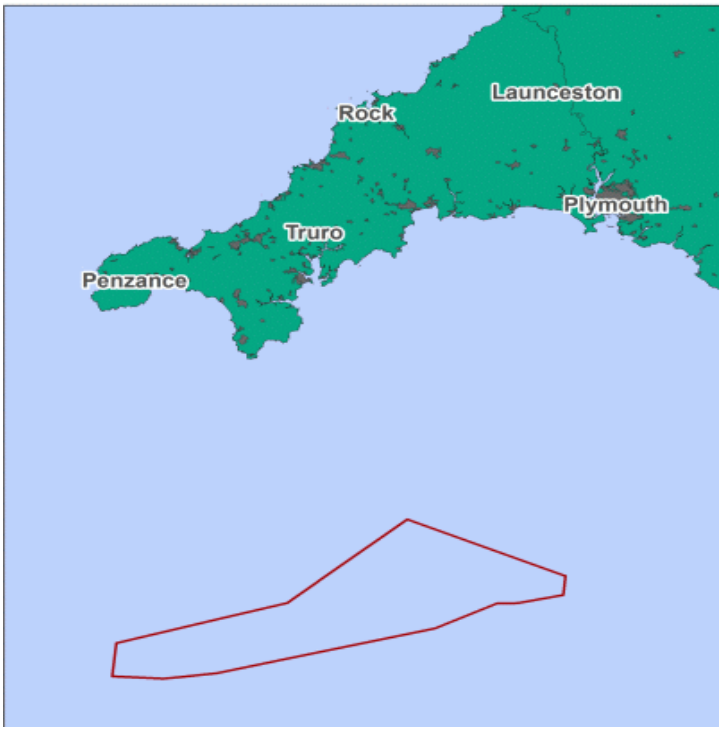

Diagram 4: Western Channel MCZ. Map courtesy of the Wildlife Trusts.

In addition to its designation as an MCZ under the MCCA the site is listed as an OSPAR MPA.

5.9.4.1 EVIDENCE BASE FOR DESIGNATION

The Designation Order lists the protected features as two types of broadscale marine habitat, Subtidal coarse sediment, and Subtidal sand.[178] The Order does not list any species of marine fauna as a protected feature. This reflects the data set out in the JNCC and NE advice to Defra.[179]

[178] The Western Channel Marine Conservation Zone Designation Order 2017 O 2016/23, Schedule 2.
[179] *JNCC and NE Marine Conservation Zone Project Ecological Network Guidance,* Table 152, n 100.

The site is important in protecting coarse sediment on the seabed of which only a small amount is currently protected in existing marine protected areas in the region. This type of sediment habitat provides connectivity between sites in the region for the species that use these habitats. The other examples of protection for this habitat are at least 80km away.[180]

The absence of any species of marine fauna from the Order, despite references to some in the Factsheet for the site the Designation Order, suggests that the site designation was not principally based on an ecosystem approach. As with the Brighton Offshore MCZ, if an ecosystem approach had been adopted then it might be expected that it would cover both the abiotic and the *biotic* elements of the ecosystem if present. It is, therefore, likely that such sites are designated as sites of features of geological or geomorphological interest under the provisions of s.117 (1) (c) of the MCAA.

6 PROGRESS IN THE DESIGNATION OF MCZS SINCE THE ACT CAME INTO FORCE

As stated above in section 5.1, s123 (4) of the MCAA requires that MCZs are to be designated in such a way as to create a network of protected conservation sites with regard to any obligations under EU or international law.[181] Consequently, it is not unreasonable to use them as part of the assessment of the UK's performance in how it designates and manages individual MPAs within its waters.

The key points from the review of the designation process to date show that;

[180] *Western Channel Marine Conservation Zone Factsheet.*
[181] MCAA 2009 s123 (5. (n 1).

Although the Act does not specify that a precautionary approach must be applied when selecting or designating sites as MCZs, the designation process for the first tranche of MCZs can be said to be characterised as a precautionary measure, because it was based on the best available evidence at that time. The designation process for the second tranche moved away from a precautionary approach after Defra required a higher degree of confidence in the scientific evidence considered for their designation.

The MCAA mandates the creation of a network of conservation sites consisting of MCZs, (EMS, SSSIs and Ramsar sites. The text of the Act does not make any reference to the network being ecologically coherent. However, the Explanatory Notes make it clear that s123 (3) requires that the network must achieve three conditions that are based on the key elements of the definition of an *ecologically coherent network* developed under OSPAR.[182] The three conditions are that together, i) the sites contribute to the conservation or improvement of the marine environment in the UK marine area, ii) the features which are protected by the sites comprised in the network represent the range of features present in the UK marine area, and iii) the designation of sites comprised in the network reflects the fact that the conservation of a feature may require the designation of more than one site.[183] As the programme of MCZ designation is still under way a conclusion cannot be made on whether the third condition has been met.

[182] MCAA Explanatory Notes, para 349.
[183] MCAA s123 (3) (n 1).

Although neither the MCAA nor its Explanatory Notes explicitly refer to the use of the best available scientific evidence, it is implicit in the sections of the Act dealing with the selection of sites for designation.

A key concern about the designation of MCZs is that considering that the MCAA has now been in force for eight years the progress in designating MCZs in English inshore waters and offshore waters in the Defra marine area has been very slow. Of the 127 sites originally recommended by the four regional projects only 50 have so far been formally designated.

The MCZs designated in the first two tranches appear to be biased towards the conservation of features with less emphasis on vulnerable marine species. This conclusion is endorsed by the EAC of the House of Commons, which to date, has held two inquiries into MPAs in UK waters. The first inquiry reported in 2014,[184] and the second in 2017.[185] In its first report the EAC noted that the MCZ selections up to that date had been 'criticised from all sides, for lacking environmental protection ambition and for gaps in the biodiversity covered, but also for the potential harm they could cause to business and leisure activities'.[186] The Committee felt that it was difficult to assess whether such gaps and uncertainties will be a consistent feature of the programme, or if difficulty in gathering evidence of a standard that meets the Government's requirements has skewed the initial selections.[187] The Committee was critical of the slow pace of MCZ designation based on the evidence it heard during the first inquiry. This was based on the fact that only 27 sites had

[184] *Environmental Audit Committee, Marine Protected Areas, First Report of Session HC 221 (2014/15).*
[185] Environmental Audit Committee, Marine Protected Areas Revisited, Tenth Report of Session HC 597 (2016/17).
[186] *Environmental Audit Committee, Marine Protected Areas,* Summary *3* (n 178).
[187] *Environmental Audit Committee, Marine Protected Areas, Summary,* (n 178).

been designated in 2013. The Committee noted that there was a prospect of a further 37 being designated by the end of 2015.[188] It considered the rate of progress to be, 'disappointing and suggestive of a lack of Government commitment to the programme'.[189] The evidence, namely that it has taken eight years since the MCAA came into force to designate fifty sites, rather than the one hundred and twenty seven originally proposed, cannot be regarded as anything other than very disappointing.

During the second inquiry held by the EAC, it was noted that the UK Government received extensive scientific evidence from the SNCBs in respect of the identification of suitable sites for MCZs but then continued to fail in following its own scientific advice, as outlined in the ENG document to inform the delivery of an ecologically coherent network, as required under MCAA. [190] In effect, the UK Government failed to adhere to its own network design principles to 'create an MPA network that promotes the resilience of marine ecosystems'. This was in part because the Government decided to take a tranched approach to designation and designate the less controversial MCZs. The EAC concluded that that means the Government will need to take some tough decisions with Tranche 3. The EAC argued that those sites should include both sand and mud habitats for mobile species and the continuing delays and absence of reference areas meant that an ecological network was not complete.[191] Of course, it should not be overlooked that MCZs are to form part of a network of conservation sites which includes sites designated under Ramsar, EMS and marine SSSIs. The Wildlife Trusts raised this

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[188] *ibid,* Conclusion 2.
[189] *ibid* (n 178).
[190] *JNCC and NE Marine Conservation Zone Project Ecological Network Guidance* third para 19.
[191] EAC MPA Revisited Conclusion 3 (n 183).

in their evidence to the EAC, stating that they understand that a new gap analysis in the MPA network has been produced. They felt it to be frustrating that this analysis was not publicly available, thereby achieving a transparent and open process.[192] The EAC considered it vital that the third and final tranche of MCZs fills ecological gaps in the network. The Trusts found that the peer-reviewed ENG document, produced to guide the stakeholder projects, provided the best set of criteria and that gap analysis should be based on this document.[193]

In the course of its second inquiry the EAC heard evidence that gaps existed in the protection of highly mobile species in the network of MCZs.[194] This third tranche of possible sites in England was to be put out for consultation in 2017 for possible designation in 2018 but this timetable appears to be slipping.[195] As part of the consultation for this tranche third parties have been asked to propose sites for conservation of highly mobile species, which includes marine animals such as whales and dolphins, birds, fish, sharks and rays. Evidence on this omission was submitted to the EAC's second inquiry by number of witnesses.[196] The Royal Society for the Protection of Birds (RSPB) contrasted the situation in English waters with that of Scotland which, under its own related act, has designated a number of sites for 'mobile' species, and they expected Northern Ireland would confirm designations for seabirds in during 2016. The failure to designate sites in English waters was thought to undermine the effectiveness of the MCAA. The RSPB

[192] Written evidence to the EAC second inquiry submitted by the Wildlife Trusts (MPA0029).
[193] *Marine Protected Areas RevisitedPublished written evidence* (MPA 00029) (n 179).
[194] *Environmental Audit Committee 'Marine Protected Areas Revisited'* para 8 (n179).
[195] 'Marine Management Organisation Website.' Marine conservation zone designations in England. https://www.gov.uk/government/collections/marine-conservation-zone-designations-in-england accessed 2 July 2015.
[196] *Environmental Audit Committee 'Marine Protected Areas Revisited',* Published written evidence (MPA0015), (MPA0024), (MPA0029), et al (n 179).

commented that the designation of MCZs to protect the essential aspects of seabird's ecological requirements is a core principle of the MCAA but quoted no authority supporting that view.[197]

The Government had begun consultation on the third tranche in 2016, but the timetable set by the Government was said to have limited the ability of interested parties to respond with the quality of evidence required.[198] The Committee concluded that the Government should not use the excuse of a lack of 'perfect data' as an excuse for delaying the designation of sites. Instead it should adopt a precautionary approach to the designation of the third tranche of sites by using the 'best available data'.[199] The EAC is surely correct in its view because the collection of data in the marine environment is often a slow process and valuable features and species can be harmed if the process is too slow. An approach more in keeping with Lord Hunt's view of the MCAA being ground-breaking legislation designed to conserve rare and threatened habitats and species would be to designate sites on the basis of 'best available data, and to then de-designate the site later if subsequent research proves the site does not justify its status.

7 UK MPAS DESIGNATED UNDER OTHER LEGAL REGIMES

As was demonstrated in chapter two, MCZs are not the only type of MPA designated in UK waters. Sites are also required to be designated under the Ramsar Convention and ASCOBANS. In addition, there are marine sites designated

[197] *Environmental Audit Committee 'Marine Protected Areas Revisited',* Published written evidence (MPA0025) (n 179).
[198] Ibid para 12.
[199] Ibid conclusion 3.

under both the Habitats and Birds Directives. Together, these are known as EMS, which also include MPAs designated to meet the UK's obligations under ASCOBANS and Ramsar. These sites are, in fact, designated under the EU's Habitats Directive. The designation process for each of these types will now be addressed.

7.1 EUROPEAN MARINE SITES

The term European Marine Site (EMS) is not legally defined within the Habitats or Birds Directives but each EU Member State has a responsibility to protect EMS located within territory under their control. The concept is referred to in the Regulations that transposed the Directive into UK law by means of the Conservation (Natural Habitats &c) Regulations.[200] The original Regulations did not use the term EMS but merely referred to European Sites including Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Birds Directive.[201] EMS is now defined in the Habitats Regulations as European sites so far as consisting of marine areas.[202] It is important to note that EMS are currently selected solely on scientific grounds relating to the presence of relevant habitats or species, whereas the MCAA permits consideration of socio-economic impacts[203]

The Conservation (Natural Habitats &c) Regulations point to the Habitats and Birds Directives so some revision may be necessary post Brexit. However for the purposes of this study it is sufficient to review the two EU directives individually in

[200] The Conservation (Natural Habitats, &c.) Regulations 1994 SI 1994/2716, Regulation 2.
[201] Ibid Regulation 10.
[202] Ibid Regulation 8 (4).
[203] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [1992] OJ L206/7.Art 4 (1) (Directive 92/43/EEC).

order to ascertain how the designation processes for EMS consisting of SACs and SPAs works in the UK.

7.1.2 THE BIRDS DIRECTIVE

7.1.2.1 INTRODUCTION

The original EU Birds Directive entered into force in 1979 and has since been revised.[204] The Birds Directive was a response to public concern over the custom of hunting migratory birds in Southern Europe and has been described as the EU's first foray into nature conservation law.[205] As stated above it was originally transposed into UK law by means of the WCA 1981. The Directive was substantially amended over the years and a new codified version was issued in 2009.[206] It is this version that will be referred to from this point forward.

Member States must classify the most suitable territories in number and size as SPAs for the conservation of listed species in the geographical sea and land area where the Directive applies.[207] Species listed in Appendix 1 of the Directive are subject to special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.[208] Areas suitable for designation as marine SPAs are identified by JNCC and the relevant national SNCB. The Secretary of State, or the equivalent in the devolved administrations, must then notify the European Commission who may then formally adopt the site

[204] Directive 79/409/EEC (n 14).
[205] Jane Holder and Maria Lee, Environmental protection, law and policy: text and materials (2nd edn, Cambridge University Press), 627.
[206] European Parliament and Council Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds [2009] OJ L 20/7 (Directive 2009/147/ EC).
[207] Ibid Art 4 (1).
[208] Ibid Art 4 (1)

There is a requirement to ensure the protection of wetlands, and, particularly, wetlands of international importance.[209] Although article 4 is silent on this point it is clear that this could be construed as applying to sites designated under Ramsar despite the EU not being a party to that Convention.[210] Member States must take appropriate steps to avoid pollution or deterioration of habitats or any disturbances affecting the birds.

The Directive specifies that the preservation, maintenance, and the re-establishment of biotopes and habitats through the following measures,

> (a) creation of protected areas;
>
> (b) upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones;
>
> (c) re-establishment of destroyed biotopes;
>
> (d) creation of biotopes.[211]

These measures must take account of migratory species and be coordinated with a view to setting up a coherent whole.[212] This provision reflects the obligation under Ramsar whereas there are currently no designated MCZs for highly mobile species, such as birds.

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[209] Ibid Art 4 (2)
[210] Holder and lee, 627 (n 195).
[211] ibid Art 3
[212] Ibid recital (8).

The relevant provisions of the new Directive were transposed into UK law by means of the amended Conservation of Habitats and Species Regulations.[213]

7.1.2.2 DESIGNATING A MARINE SPA IN THE UK

In the UK an EMS is simply defined as a SPA or SAC with marine components that has been placed on the list of sites notified to the Commission under art 4 (2) of the Habitats Directive,[214] or as classified under Article 4(1) or (2) of the Wild Birds Directive.[215] In the absence of detailed rules on the designation of SPAs in the Birds Directive the designation process in the UK is led by JNCC who published the SPA Selection Guidelines for use in the UK>[216] The guidelines set out a two stage process. The first stage is to identify areas which are likely to qualify for SPA status. This stage is focused on populations in terms absolute number or percentages of a species listed in Appendix 1 of the Directive that use an area. Sites are then assessed using one or more of the judgements in Stage 2.The criteria for stage 2 consider sites on the basis of geographic coverage, breeding success, duration of occupancy and whether the site is comprised on natural or semi-natural habitat among other things.

In its evidence to the 2017 EAC inquiry, Defra reported that there were 102 SPAs within UK waters and 43 within English inshore and offshore waters under the jurisdiction of the Secretary of State (Defra).[217] The total area designated as marine

[213] The Conservation of Habitats and Species Regulations 2010, SI 2010/490.
[214] Ibid S8 (1) (a) to (c).
[215] Ibid Art 8 (d) and (e).
[216] Joint Nature Conservation Committee (JNCC) Website'Special Protection Areas', jncc.defra.gov.ukaccessed 10 December 2016.
[217] *Marine Protected Areas Revisited* Published written evidence submitted by Defra, (MPA0038).

SPAs is currently 1,316,260 hectares.[218] JNCC is currently leading an exercise to identify further areas suitable for consideration as marine SPAs, which is not being reelected in the process of designation of MCZs for such mobile species.[219]

7.1.3 THE HABITATS DIRECTIVE

7.1.3.1 INTRODUCTION

The Habitats Directive came into force in 1992 and was an important further development in the protection of important habitats and species.[220] Under the Directive Special Areas of Conservation (SAC) are defined as,

> sites of Community importance designated by the Member States through a statutory, administrative and/or contractual act where the necessary conservation measures are applied for the maintenance or restoration, at a favourable conservation status, of the natural habitats and/or the populations of the species for which the site is designated;[221]

Areas suitable for designation as marine SACs are identified by JNCC and the relevant national SNCB. The Secretary of State or the equivalent in the devolved administrations must then notify the European Commission who may then formally adopt the site. Until the site is formally adopted by the Commission it is designated as a candidate SAC (cSAC). Sites which have been adopted by the Commission

[218] Joint Nature Conservation Committee (JNCC) Website' Marine Protected Sites Spreadsheets download page http://jncc.defra.gov.uk/page-3408 accessed 23 May 2016.
[219] *Environmental Audit Committee 'Marine Protected Areas Revisited,* para 11, n 182.
[220] Directive 92/43/EEC (n 193).
[221] Ibid Art 1 (l).

but not yet formally designated by governments are known as Sites of Community Importance (SCI).

The Directive obliges a Member State to contribute to the creation of the Natura 2000 network of sites in proportion to the representation within its territory of the natural habitat types and the habitats of listed species.[222] The network is to be made up of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, of the Directive. Annex 1 lists the protected habitat types and the numerical code for each habitat type and its Natura 2000 code. The natural habitat types and the species' habitats concerned are to be maintained or, where appropriate, restored at a favourable conservation status in their natural range.[223]

Member States should endeavour to improve the *ecological coherence* of Natura 2000 by maintaining, and where appropriate developing, features of the landscape which are of major importance for wild fauna and flora, as referred to in Article 10 of the Directive.[224] Ecological coherence is defined as *'the capability of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organisation comparable to that of the natural habitat of the region'.*[225] If this definition is accepted then in, effect, ecological integrity could constitute a legal description of a functioning ecosystem. This strongly suggests that to fulfil its obligations the UK must adopt an ecosystem approach when designating or managing EMS as part of its network of all types of

[222] Ibid Art 3 (2)
[223] Ibid Art 3 (1)
[224] Ibid art 3 (3).
[225] James R Karr and Daniel R Dudley, 'Ecological perspective on water quality goals' [Springer-Verlag] 5 Environmental Management, 55.

MPAs. The aim of the network is 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.[226] It is important to note that the Directive also requires that steps be taken to maintain or restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Community interest.[227]

An echo of the obligation to maintain migration routes set out in CMS and Ramsar is found in the Habitats Directive's request to Member States to preserve certain features whose linear and continuous structure make them essential for the migration, dispersal and genetic exchange of wild species.[228] The purpose of these features is to act as *'stepping stones'* to aid migration and genetic dispersal. The specific features referred to in the article are terrestrial but case law means that the obligations arising from the Habitats Directive now extend into the national waters of Member States.

The Directive was originally transposed into UK law by the enactment of the Conservation (Natural Habitats, &c.) Regulations.[229] The Regulations have since been updated by the means of the amended Conservation of Habitats and Species Regulations.[230] Following the 2010 amendment of the Regulations the definition of EMS by reference to both SPAs and SAC, and SCIs can be considered as analogous.

7.1.3.2 DESIGNATING A MARINE SAC IN THE UK

[226] Directive 92/43/EEC Art 2.1, (n 193).
[227] Ibid Art 2.2.
[228] Ibid Art 10.
[229] Conservation (Natural Habitats, &c.) Regulations 1994.
[230] Conservation of Habitats and Species Regulations 2010.

UK SACs are designated by JNCC on the basis of the criteria set out in Appendix III of the Habitats Directive and the Commission's Guidelines for the establishment of the Natura 2000 network in the marine environment. [231] Full details of the site are submitted to the EU Commission on a Natura 2000 Standard Data Form. The forms set out the site area and characteristics, the ecological information relating to the sites, threats and pressures associated with the site and details of the management plan if available. Management of the sites is the responsibility of the relevant national SNCB.

In 2003 an area known as Darwin Mounds was the first offshore MPA designated. Initially this was by means of the emergency closure measures available under the 2002 Common Fisheries Policy.[232] The site was discovered during explorations for gas and is an extensive area of sandy mounds formed by seabed fluid expulsion, each of which is capped with multiple thickets of *Lophelia pertusa*, a cold-water coral. These thickets qualify as an Annex I Reef under the Habitats Directive. The site has an area of 137, 726 hectares. The detail of the process of the designation of this site is explored more fully at section 8.1.3.3 below.

In the UK conservation advice for all types of MPA, including EMS, situated within territorial waters (i.e. less than 12 nautical miles from the coast) are the responsibility of the relevant SNCB. While for all offshore MPAs (beyond 12

[231] Guidelines for the establishment of the Natura 2000 network in the marine environment. Application of the Habitats and Birds Directives ' (2007) <http://ec.europa.eu/environment/nature/natura2000/marine/docs/marine_guidelines.pdf> accessed 8 April 2014.

[232] Council Regulation (EC) 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy, Art 7.

nautical miles, to the limit of the UK's EEZ, conservation advice is the responsibility of JNCC.[233]

The process for site selection is set out in Article 4 and Annex III of the Directive and consists of two stages. First, the relative importance of sites containing examples of the individual Annex I habitat types and Annex II species must be completed by an assessment of the following,

Habitats

a. degree of representativity;

b. area;

c. degree of conservation of habitat structure and functions and restoration possibilities;

d. global assessment of conservation value (i.e. an overall assessment, based on a-c above).

Species

a. population size and density;

b. degree of conservation of the features of the habitat that are important for the species, and restoration possibilities;

c. degree of isolation of the population in relation to the species' natural range;

d. global assessment of conservation value (i.e. an overall assessment, based on a-c above).[234]

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[233] Joint Nature Conservation Committee (JNCC) Website' Marine protected Areas page, http://jncc.defra.gov.uk/marineprotected areas accessed 13 December 2016.

[234] Ibid Special Areas of Conservation (SAC) page, section 1.3.2, The collective EU process and criteria for site selection, http://jncc.defra.gov.uk/page-23 accessed 10 December 2015.

Perhaps unsurprisingly, a number of these factors, such as representativity, adequacy (size), and degree of isolation of populations (connectivity) reflect those set out in the ENG document and suggest a common objective between different types of MPA. Secondly, the site must be assessed in regard to the overall importance of the sites in the context of the appropriate biogeographical region and the EU as a whole. The criteria for this stage require the consideration of the relative value of the site at national level; its relationship of the site to migration routes or its role as part of an ecosystem on both sides of one or more Community frontiers; the total area of the site; the number of Annex I habitat types and Annex II species present; and the sites global ecological value of the site at the level of the biogeographical region and/or EU as a whole.[235]

7.1.3.3 THE HABITATS DIRECTIVE GOES OFFSHORE

In 1999 Greenpeace claimed that the UK Government had incorrectly transposed the Habitats Directive into UK law by limiting its scope to the 12 mile limit of the UK's territorial waters. This, Greenpeace argued, was contrary to the scope and overall aim of the Habitats Directive in that the Directive properly construed states that the Directive applies to the *'European Territory'* of Member States.[236] The Secretary of State counter argued that the Directive's reference to the '*European territory'* of a Member State must be the accepted meaning of 'territory' in international law i.e., territory extending only to the limit of a country's territorial waters. The court adopted a *'purposive or teleological approach'* on the basis that a Directive, which

[235] Ibid The collective EU process and criteria for site selection page, accessed 10 December 2016.
[236] Dir 2009/147/EC Art 2.1 (n 196).

included in its aims *the 'protection of inter alia, lophelia pertusa and cetaceans'* will only achieve those aims if it is given a purposive construction and it extends beyond territorial water.[237]

This case is important for this research for a number of reasons. First, it is helpful that the court set out the legal context by reference to international, European and domestic law, and then synthesised the resultant binding obligations. Second, in reaching its decision to extend the geographical scope of the Directive, and the Regulations, the court referred to the obligations arising from LOSC, which unambiguously extends the sovereignty of a coastal state beyond its land territory and internal waters to a distance not exceeding 12 nautical miles. However the court then went further and determined that although at that time the UK had not formally declared an EEZ, it had declared a 200 nautical miles exclusive fishery zone (EFZ).[238] This conclusion was arrived at because the court found that the balance of the Community, international and domestic materials referred to, 'militates substantially in favour of the wider construction of geographical scope', even though the indications were not all one way.[239] Third, it is significant that though Greenpeace based at least part of its arguments on the presence of *Lophelia pertusa* in the area the species is not specifically referred to in the Directive. The court, however, accepted that *Lophelia pertusa* is reef forming and that once that is accepted then its presence falls within the scope of *'natural habitat*

[237] *R. v Secretary of State for Trade and Industry Ex p. Greenpeace Ltd. R v Secretary of State for Trade and Industry Ex p Greenpeace Ltd* (No1) [2000] 2 CMLR 94, para 38.
[238] Ibid para 15 Fisheries Limits Act 1976. s 1 (1). The previous Fisheries Limits Act 1964 had set the limit at 12 miles, s 1 (1).
[239] *R. v Secretary of State for Trade and Industry Ex p. Greenpeace Ltd. R v Secretary of State for Trade and Industry Ex p Greenpeace Ltd (No1)* [2000] 2 CMLR 94 para 8 © second paragraph.

types of Community interest'.[240] Fourth, the court accepted Greenpeace's argument that other relevant international laws apply beyond territorial waters and address much of the same subject matter as the Habitats Directive, such as UNCLOS, CMS, ASCOBANS, CBD, and the Convention on the Protection of the Marine Environment of the North Sea of 1992.[241] Fifth, the Court recognised the obligation under the Habitats Directive to establish,

> A coherent European ecological network of special areas of conservation shall be set up under the title Natura 2000. This network, composed of sites hosting the natural habitat types listed in Annex I and habitats of the species listed in Annex II, shall enable the natural habitat types and the species habitats concerned to be maintained or, where appropriate, restored at a favourable conservation status in their natural range.[242]

Although the court did note that while Member States were unlikely to complete this task within the allotted six years after the adoption of the Directive, the subject remained one of continuing Community interest. On these grounds the court had no doubt that the more important aids to construction substantially favour the wider geographical scope.[243]

In 2005, the Commission took action against the UK for its failure to correctly transpose the Habitats Directive into its national law. [244] The UK responded by extending its jurisdiction beyond its territorial sea to 200 nautical miles from the

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[240] Directive 92/43/EC Art 3 and Annex1 (n 193).
[241] *R. v Secretary of State for Trade and Industry Ex p. Greenpeace Ltd.* para 22,)n 226).
[242] Directive 92/143/EC Art 3.1 (n 193).
[243] *R. v Secretary of State for Trade and Industry Ex p. Greenpeace Ltd.* para 22.
[244] *Case C-6/04 Commission v United Kingdom* [2005] ECR I - 9017

United Kingdom's coastal baseline by means of the new Offshore Marine Conservation (Natural Habitats &c) Regulations 2007 and it had to revisit and revise the Conservation (Natural Habitats, &C.) (Amendment) Regulations 2007.[245]

In the final analysis it is perhaps ironic that in this case the evidence for the existence of *Lophelia pertusa* in offshore waters came from surveys by the oil industry, so often seen as the *bête noire* of environmental protection which detected previously unknown reef sites of deep-sea coral now referred to as the Mounds.

The Habitats Regulations were again amended in 2007 to create greater legal certainty in the interpretation of terms such as 'deliberate' disturbance or killing of protected species.[246] This amendment followed action by the EU Commission against the UK based on the grounds that the 2004 Regulations did not accurately transpose Article 6 (2) of the Habitats Directive into UK law.[247] The ECJ ruled that Member States are obliged to adopt not only measures intended to avoid external man-caused impairment and disturbance, but also measures to prevent 'natural developments that may cause the conservation status of species and habitats in SACs to deteriorate.[248] In addition a new set of Regulations, the Offshore Marine Conservation (Natural Habitats, &c) Regulations were introduced to ensure that activities in marine areas where the UK has jurisdiction beyond its territorial waters are carried out in compliance with the Habitats Directive.[249] The new Regulation

[245] The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007, SI 2007/1842 The Conservation (Natural Habitats, &c.) (Amendment) Regulations SI 2007/1843.
[246] Habitats Regulations (Amended) 2007, Reg 39.
[247] *Case C-6/04 Commission v United Kingdom [2005] ECR I - 9017.*
[248] Ibid.
[249] The Offshore Marine Conservation (Natural Habitats, &c) Regulations 2007.

was a direct response to actions against the UK by the Commission.[250] The Explanatory Memorandum accompanying the amended Regulations states that the amendments were intended to ensure that plans and projects in terrestrial areas, internal waters and territorial sea do not affect the integrity of European offshore marine sites.[251]

Both sets of Regulations were again amended in 2009, in part to achieve conservation objectives by ensuring improved surveillance and monitoring of protected species.

In 2012 the Offshore Marine Conservation Regulations were once again amended to ensure the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including in the offshore marine area.[252]

There are currently 105 SACs with marine components covering 14% of the UK's marine area 80 of which are in inshore waters i.e. within 12 nautical miles of the coast and 16 are located in offshore waters i.e. beyond 12 nautical miles. The others include both inshore and offshore waters.[253] The percentage of the UK's marine area is greater than the target set by the Convention on Biological Diversity.

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[250] C-6/04 *Case C-6/04 Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland [2004] ECR 9056.* and Case C- 131/05 *Commission of the European Communities v United Kingdom of Great Britain and Northern Ireland* [2005] unpublished.

[251] Explanatory Memorandum to the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 2007 no. 1842; The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 2007 no. 1843; The Town and Country Planning (General Development Procedure) (amendment) (England) order 2007 2007 no. 1844.

[252] The Offshore Marine Conservation (Natural Habitats &C.) (Amendment) Regulations 2012 2012, SI 2012/1928.

[253] Joint Nature Conservation Committee (JNCC)' website, SACs with Marine Components page accessed 10 December 2016.

Defra reported slightly different numbers to the 2017 EAC inquiry saying that there were 99 existing SACs with marine components in UK waters and 37 in English inshore and offshore waters under the jurisdiction of the Secretary of State (Defra).[254] The difference seems to be the result of counting at different dates. In the view of JNCC this means that the SAC network for the UK is largely complete, with all sites now submitted to the European commission or approved, except for the one close to Anglesey Area of Search.[255] The total area designated as marine SACs is currently 13, 43,072 hectares, which is an excellent outcome in terms of the statutory protection of the marine environment.[256]

8 RAMSAR

Sites proposed for designation on the advice of Proposals for designation of areas as UK Ramsar sites are co-ordinated through JNCC who are guided by the criteria set out in the Convention.[257] The UK has a national Ramsar Committee composed of experts who provide further advice as required.[258]

It should be noted that Criterion 5 of the Ramsar site selection rules requires that a site should be considered internationally important if it regularly supports 20,000 or more water birds. This is the same threshold for the designation a marine SPA under Stage 1 (3) of the SPA guidelines developed by JNCC for use in selecting a

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[254] *Marine Protected Areas Revisited,* para 10, (n 179).

[255] *Progress towards completion of the UK network of marine Special Areas of Conservation for Annex I qualifying features (v1.1).* (JNCC 13 P03 v11 March 2013 2013) s 9.

[256] Joint Nature Conservation Committee (JNCC) Website,' Marine Protected Sites Spreadsheets, download page.

[257] Ramsar Website' The Ramsar Sites Criteria page - The nine criteria for identifying Wetlands of International Importance, https://www.ramsar.org/sites/default/files/documents/library/ramsarsites_criteria_eng.pdf accessed 24 August 2016.

[258] Joint Nature Conservation Committee (JNCC) Website' Ramsar sites in the UK, its Overseas Territories and Crown Dependencies page http://jncc.defra.gov.uk/page-1389 accessed 25 January 2017.

marine SPA under the Birds Directive. Consequently many Ramsar sites are also SPAs. This strongly indicates that a high level of protection should be afforded to such sites in view of their double designation.

The first UK Ramsar sites were designated in 1976. Compared to many countries, the UK has a relatively large number of Ramsar sites, but they tend to be smaller in size than in many other countries.[259] As at 7 September 2015 there were 149 sites listed on the JNCC website in the UK with a further 25 designated in the UK overseas territories and Crown Dependencies.[260] In total the surface area of these sites was 1,281,989 hectares in total.[261]

Some Ramsar sites have also been designated as EMS. As a result, the UK is currently reviewing its network of SPAs in conjunction with an assessment to update avian interests on the UK Ramsar site network so as to promote further harmonisation between these two site networks.[262] It can be seen from the above that selection for Ramsar listing or as an EMS requires strong scientific evidence and monitoring of the sites.

9 OSPAR

The JNCC again plays an active role in providing advice to Government to support OSPAR obligations, particularly in relation to implementation of Annex V on

[259] Ibid.
[260] Ibid 'UK Ramsar Site' page, https://www.ramsar.org/wetland/united-kingdom accessed 25 January 2016.
[261] ibid, accessed 27 November 2016.
[262] *UK National Report on the implementation of the Ramsar Convention on Wetlands.* (UK National Report to the 11th Meeting of the Conference of the Contracting Parties, Romania, June 2012 S2 9. , 2012)

Biodiversity Strategy.[263] A major focus of this advice includes work on MPAs which are defined as, *areas "within the [OSPAR] maritime area for which protective, conservation, restorative or precautionary measures, consistent with international law have been instituted for the purpose of protecting and conserving species, habitats, ecosystems or ecological processes of the marine environment."*[264]

A total of 267 sites in UK waters have been submitted to OSPAR all of which meet at least one of the OSPAR MPA ecological criteria. In its evidence to the EAC Defra noted that of the 15 OSPAR Convention Contracting Parties in the North East Atlantic, the UK is leading the way with 60% of the total number of MPAs in the OSPAR network.[265] The UK sites formed part of the wider OSPAR Network, which comprised 448 MPAs including seven MPAs which are situated in ABNJ. The sites cover an area of 806,472 km^2.or 59% of the OSPAR Maritime Area with good coverage of coastal waters (16.7%). In the EEZs of OSPAR countries, 2.3% of waters are covered and 8.9% are covered in areas beyond national EEZs.[266]

The OSPAR MPA Network cannot yet be considered ecologically coherent because, although the network is well distributed in the Greater North Sea and Celtic Seas, substantial gaps remain in Arctic Waters and the Wider Atlantic. This assessment of ecological coherence was derived using the following criteria,

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[263] Joint Nature Conservation Committee (JNCC) Website' The Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention) page Joint Nature Conservation Committee (JNCC) Website' The Convention for the Protection of the Marine Environment of the North-East Atlantic (the OSPAR Convention) http://jncc.defra.gov.uk/page-1370 accessed 15 April 2017.

[264] (OSPAR 2003 Annex 9 A-4.44a).

[265] *Marine Protected Areas Revisited,* para 2, (n 179).

[266] OSPAR Commission 2016 Status Report on the OSPAR Network of Marine Protexcted Areas, 5.. Publication Number: 693/2017. ISBN 978-1-911458-33-3 Publication Number: 693/2017.

The geographic ecological coherence of the OSPAR Network is assessed on the basis of five core principles, features, representivity, connectivity, resilience, and management.[267] The assessment concluded that MPAs in the Greater North Sea and the Celtic sea were considered to be geographically well distributed while there were small gaps in the network in the Bay of Biscay and off the Iberian coast. There were, however, concerns that there were significant gaps in Arctic waters and the wider Atlantic.[268] It would, therefore, seem reasonable to conclude that Contracting Parties have focussed on MPAs in waters under their own jurisdiction. The report noted that there remained institutional barriers and resourcing issues relating to the implementation and evaluation of effective management measures across the OSCAR maritime area.[269] The extent to which OSPAR listed habitat and species are protected

The JNCC evaluated existing MPAs designated under the Birds and Habitats Directives (SACs and SPAs) and, as a result, these have been included in the MPA list submitted to OSPAR by the UK. Consequently, some MPAs in UK waters have designations as EMS, Ramsar, and OSPAR listing, suggesting they are areas of high importance for the conservation and protection of the marine environment.[270]

10 SUMMARY

The purpose of this chapter was to examine the legislative framework under which all types of MPAs are designated in UK waters and how, or if, the designation process incorporates the five obligations accepted by the UK under international law

[267] Ibid 17.
[268] Ibid 31.
[269] Ibid s 3.8, Conclusions and next steps, second para.
[270] Examples of sites with Ramsar, EMS, and OSPAR designations include the Alde-Ore Estuary and Chesil Beach and the Fleet.

and provide a method of assessing the UK's MPA process complies with its relevant legal obligations under international law.

It can be seen from the above that the UK appears to have a comprehensive legal framework for the designation of MPAs within the UK marine area based on both international and domestic law. Each of these instruments use a different name for what are generically termed MPAs in the IUCN definition set out in section 3.1 of chapter two.

The power to designate MPAs and to regulate activities in them, together with the advisory bodies that provide the necessary scientific information can be summarised as follows;

Bodies with powers to designate UK MPAs

Designation type	Country	Designating Authority	Inshore/ offshore	Responsible SNCB
Ramsar sites with marine components	England	UK Government	Inshore	Natural England
	Wales	National Assembly for Wales	Inshore	Natural Resources Wales (NRW)
	Scotland	Scottish Government (Marine Scotland)	Inshore	Scottish Natural Heritage
	Northern Ireland	Northern Ireland Assembly	Inshore	Department Agriculture Environment and Rural Affairs (DAERA)
SSSIs with marine components	England	UK Government	Inshore	Natural England
	Wales	National Assembly for Wales	Inshore	Natural Resources Wales (NRW)
	Scotland	Scottish Government	Inshore	Scottish Natural Heritage (SNH)
ASSIs with marine components	Northern Ireland	Northern Ireland Assembly	Inshore	Department Agriculture Environment and Rural Affairs (DAERA)
SACs	England	UK Government	Inshore	Natural England
	UK	UK for offshore England, Wales and Northern Ireland. Scottish Government for offshore Scottish waters.	Offshore	JNCC
	Wales	National Assembly for Wales	Inshore	Natural Resources Wales
	Northern Ireland	Northern Ireland Assembly	Inshore	Department Agriculture Environment and Rural Affairs (DAERA)
	Scotland	Scottish Government	Inshore	Scottish Natural Heritage
SPAs		UK Government	Inshore	Natural England
		UK for offshore England, Wales and Northern Ireland. Scottish Government for offshore Scottish waters.	Offshore	JNCC
	Wales	National Assembly for Wales	Inshore	Natural Resources Wales
	Northern Ireland	Northern Ireland Assembly	Inshore	Department Agriculture Environment and Rural Affairs (DAERA)
	Scotland	Scottish Government	Inshore	Scottish Natural Heritage
MCZs	UK	UK for offshore England, Wales and Northern Ireland	Offshore	JNCC
	England	UK Government	Inshore	Natural England
	Wales	National Assembly for Wales	Inshore	Natural Resources Wales
	Northern Ireland	Northern Ireland Assembly	Inshore	Department Agriculture Environment and Rural Affairs (DAERA)
MPAs	Scotland	Scottish Government	Offshore	JNCC
	Scotland	Scottish Government	Inshore	Scottish Natural Heritage

Table 1 Developed with the assistance of the JNCC

The legislation and associated policy documents behind designation recognise the obligations identified earlier under international law and it may be reasonably assumed that the UK is committed to meeting its international obligations in providing a legal framework for the designation of sites as MPAs.

11 CONCLUDING REMARKS

The first point to make is that the UK has made significant progress in designating MPAs under both international law and domestic law. The designation of any type of MPA is the responsibility of a single authority in each of the four countries constituting the UK based on the advice of the appropriate SNCB. At the time of the second EAC inquiry into MPAs, over 17% of UK waters and almost a third of English inshore waters were within MPAs, which consist of EMS, SPAs, SACs and MCZs.[271] By the time the Government published its twenty-five year Environmental Improvement Plan in 2018, Defra announced that 35% of England's seas were now within designated MPAs.[272] Both of these figures are well in excess of the obligation under the Convention on Biological Diversity to protect 10% of coastal and marine areas as discussed in chapter two.[273] The EAC, quite correctly, considered that the time taken to designate MCZ sites to date was unacceptable.

[271] *Marine Protected Areas Revisited,* para 2 (n 179).
[272] *A Green Future: Our 25 Year Plan to Improve the Environment* (Defra, 25 Year Environment Plan, Area 1C, Nobel House, 17 Smith Square, London, SW1P 3JR, 2018) 21. The difference between the figure quoted in this document and the figure quoted by the EAC is not explained in either source.
[273] CBD COP X Strategic Goal B Target 6.

Moving to the details of those designations, the grounds for designating an MCZ under the MCAA provide a clear statement that any reference to a thing (to be conserved) includes a reference to enabling or facilitating its recovery or increase.[274] However, this does not seem to be at the forefront of the way in which the Orders are drafted. This needs to be addressed in the drafting of future Orders by the inclusion of explicit management measures for the site. Additionally, the variety of MCZs is limited with only three no-take zones designated to date.

In terms of the creation of an ecologically coherent network of MPA sites as required under international law, the overall conclusion must be that the UK has fallen short of this goal due to the lack of reference areas required under the ENG guidance document. Similarly, the evidence at present suggests that the obligation under the MCAA itself to designate a coherent network of MCZs in conjunction with EMS and Ramsar sites must be regarded as incomplete at this stage. In part this may be because of the fact that the term 'ecologically coherent network' is not used in the MCAA, being found only in the Act's Explanatory Notes and in reference to OSPAR. Instead, the fact that the MCAA refers to a 'coherent network' rather than an ***ecologically*** coherent network creates a potential lacuna in UK law *viz a vis* international law e.g. OSPAR. This is because the latter expression contains two separate concepts, each of which, given the ordinary meaning of the words, could be achieved separately, while the other remains incomplete. For example a site could be *ecologically coherent* but not be part of a *coherent network* of sites. It must, therefore, be concluded that the UK has not fulfilled its obligation to create an ecologically coherent network of MPAs. At present, it can be argued that the UK has at best created a network of representative sites.

[274] MCAA 20099 ,s117 (6) (b) (n 1).

The overwhelming majority of sites of all types have been selected by the designatory authority on the basis of the scientific evidence provided by the relevant SNCB. The balance of evidence indicates that the designation process for the different types of MPA in the UK marine area the relevant authorities gather and consider the best available scientific evidence in line with the obligation the UK has accepted in international law. However, concerns have been raised, and noted by the EAC, that 'the evidence bar for site selection (for MCZs) has been set too high'.[275] This despite the fact that the Committee considered that the UK has one of the best marine evidence bases in the world. This policy change means that some features in original site recommendations as MCZs cannot reach the standards now set by Defra. This has been further exacerbated by Defra's unwillingness to provide adequate investment for the gathering of further evidence.[276] The EAC commented that this suggested that the Government was 'making perfection the enemy of the good'.[277] This criticism was despite both the EAC and the Science and Technology Committee recommending that sites were selected on the basis of 'best available data instead of awaiting perfect data'.[278] The Committee, therefore, recommended that the Government must adopt a precautionary principle approach to Tranche 3 site selection and designations which should be made using 'best available' data.[279] It also stated that in selecting the third tranche of MCZs, Defra Ministers must take note of the statutory nature conservation bodies' 'gap analysis' and ensure it fills all the gaps identified.[280] This

[275] *'Marine Protected Areas Revisited,'* para 10 (n 179).
[276] *ibid para 16 and conclusion 1.*
[277] Ibid Recommendation 3.
[278] Ibid, conclusion 8.
[279] Ibid conclusion 3.
[280] Ibid.

must include designation of sites to protect both sand and mud habitats and sites for mobile species. The Committee concluded that the third tranche must be considerably more ambitious and larger than the two previous tranches, bringing the total number of MCZs much closer to the 127 zones originally recommended.[281]

The designation of sites does not appear to have involved an ecosystem approach. As shown in chapter two, an ecosystem should be read as including both biotic and abiotic components. However, many MCZ Designation Orders list a very limited number of species of marine fauna (biotic components) together with a greater number of abiotic features. Some list no biotic elements and concern only abiotic components, such as Subtidal coarse sediment, and Subtidal sand. The Orders do, however, provide further definition on what is meant by the term *'conservation objectives'* found in the parent Act, the MCAA. In essence, this requires that the broadscale marine habitat within the zone remains in favourable condition and that the composition of its characteristic biological communities are such as to ensure that it remains in a condition which is healthy and not deteriorating. As discussed, the selections for designation in the 2014 tranche were widely criticised as lacking environmental protection ambitions and for gaps in the biodiversity covered. The gaps in biodiversity protection, therefore, rather negate the objectives of the Act and thus need to be addressed with some urgency.

From the above analysis, it is clear that the evidence to show that the UK has adopted a restorative approach to designating MPAs is weak. The failure to designate any of the 65 highly-protected reference areas recommended by the

[281] Ibid conclusion 18.

regional stakeholder groups means that the opportunity to monitor the recovery of the marine environment objectively has not been taken. In 2011 the JNCC interpreted no take zones as a management tool for nature conservation and could only identify three such areas, Lundy, Flamborough Head and Lamlash Bay.[282] The conclusion is, therefore, that the UK has achieved minimal compliance with its international obligations due to the very small number of control areas.

Returning to the issue of the potential impact of Brexit on MPAs, it can be argued that the UK's approach to the designation of MPA's should not, in the short to medium term, be impacted by the Brexit process, because much EU law in this area has already been transposed into UK law. Any remaining EU legislation will be transposed when the European Union (Withdrawal) Bill is enacted into UK law. For matters concerning the conservation and protection of the marine environment it is the case that, in general, EU law reflects the international legal order in this area. Additionally, the UK is also an individual signatory to those international legal instruments. Perhaps the main post-Brexit risk in this area will be the loss of enforcement by the ECJ which has been very much an activist in enforcing environmental law across the Member States.

This chapter has set out the underpinning principles for designation of MPAs, and so the next chapter will move to consider the regulation and management of MPAs in UK waters once designated under both international and national law.

[282] *JNCC Resonse to a question on how many No Take Zones are either already operating or planned for UK waters.* (JNCC Peterborough 2011) available at http://jncc.defra.gov.uk/pdf/EIR_201104.pdf.

CHAPTER FOUR
MANAGEMENT OF UK MPAs

1. INTRODUCTION

The previous chapter has shown that UK MPAs can be designated by the UK Government, or the relevant devolved administration, under five different legal regimes at national, EU and international levels. The designation process for each type is underpinned by scientific advice from the relevant Statutory Nature Conservancy Bodies (SNCB). However, this multiplicity of designation types creates a degree of complexity that could hamper the effective management of those sites. This is particularly so where individual sites are designated under more than one regime, as seen in chapter three, and each of the designation types might have different management rules for their governance.

This overall objective of this chapter is to assess if the UK is effectively managing each type of MPA in its waters according to the management rules specified for its type. The objective of management has been described as a means 'to deliver the conservation objectives contained in advice provided by the relevant UK conservation agencies'.[1] Of course the powers available to the various management and regulatory bodies do not exist in isolation, but are part of a wider legal environment that has a major impact upon their work. Consideration will also be given to whether or not a simpler unified approach to MPA management can be more beneficial. This assessment will be carried out by assessing whether the UK's management for all types of MPA fulfils the five obligations identified in chapter two, i.e., a precautionary approach, an ecosystem approach, the designation of an

[1] Roger K. A. Morris and others, 'Managing Natura 2000 in the marine environment – An evaluation of the effectiveness of 'management schemes' in England' 87 Ocean & Coastal Management 40

ecologically coherent network, a restorative approach and the use of sound scientific evidence.

This chapter therefore has six sections. The first is to consider the wider regional legal context in which UK law and policy is framed. The second considers the management rules for each type of MPA and provides an analysis of the effectiveness of the UK's approach in achieving the conservation objectives required by that type of designation. The third part of the chapter consists of an analysis of the management approach adopted in an area of Lyme Bay that was closed to demersal trawling and shellfish dredging by Ministerial Order, because it inadvertently allowed a successful bottom-up approach to management to be developed. The fourth part of the chapter will address which bodies have been granted management powers in respect of marine conservation zones (MCZ) under the MCAA. The fifth part considers the management regimes for three marine conservation zones designated under the provisions of the MCAA. The sixth part of the chapter will discuss the management regimes for UK MPAs designated under other instruments.

Conclusions will then be drawn about how comprehensive are the powers available to the authorities, how effectively they are exercised, and will identify any areas requiring improvement if the UK is to meet its international obligations.

2. THE WIDER LEGAL CONTEXT GOVERNING THE MANAGEMENT OF UK MPAs

2.1 INTRODUCTION

There have been many actors in the formulation of marine conservation law and this has led to marine policy having a number of different dimensions. This wider legal context is important for this study because the regulation of MPAs in the UK marine area is not simply a matter of mechanistic management rules but is instead about how their effective management can contribute to the health of the UK's marine area. The sources of the most significant regional instruments that constitute this wider legal context are derived from the EU. In general, the EU has approached this subject by means of issuing Directives, which then have to be correctly transposed into national law, and Regulations, which have general effect and are directly applicable in all Member States. A number of these instruments, such as the Habitats and Birds Directives, support the UK's approach to conservation whilst as will be shown in the analysis below others constrain the UK's freedom of action.

To facilitate an understanding of this wider legal context the next section will analyse six legal instruments, agreed by the EU's Member States, that must be complied with and which influence all activities, including conservation, in the marine environment. The intention at this stage is to provide context to the EU law in this area, but not to provide a detailed analysis of that law. That will occur as necessary in the discussion on the management of MCZs and other types of MPA in the UK marine area later in the chapter.

2.2 INTEGRATED COASTAL ZONE MANAGEMENT (ICZM)

The concept of ICMZ is derived from the 1992 UN Conference on Environment and Development in Rio where both the UK and the EU committed themselves to a voluntary action plan on sustainable development.[2] It is, however, significant because it committed parties to a new approach to marine and coastal area management and development, at the national, sub-regional, regional and global levels.[3] In response, in 2000, the EU Commission noted that coastal zones were still facing serious problems of *inter alia* habitat destruction, water contamination, coastal erosion and resource depletion.[4] Setting out how nature should be protected under ICMZ, the Commission explained that the EU's nature policy, including the Birds and Habitats Directives and the programme to create the Natura 2000 network, though designed to protect habitats and species deemed to be of Community importance, might not actually provide sufficient protection to ecosystems or natural areas as might be desirable from a local or national perspective. It was, therefore, proposed to monitor the implementation of Article 6 of the Habitats Directive with a view to ensuring that designation of a site as part of the Natura 2000 network does not discourage economic (or non-economic) activities that do not have a negative impact on the status of the target species or habitats.[5] The reference to discouraging economic activities suggests that the Commission does not want to see designation result in economic dislocation in a locality unless absolutely justified under Article 6 (4) of the Habitats Directive. It does not detract from the underlying conservation focus of ICMZ.

[2] Agenda 21: Programme of Action for Sustainable Development U.N. GAOR, 46th Sess., Agenda Item 21, UN Doc A/Conf.151/26 (1992).
[3] Ibid Chapter 17.
[4] Ibid s1.
[5] Ibid part III (b) para 10.

Despite this plan to monitor the implementation of the Habitats Directive, in 2002 the EU Parliament and Council issued a Recommendation concerning ICZM in Europe.[6] Recommendations are non-binding on Member States, but this one is important because it set out the principles of the EU's approach to ICZM to ensure good coastal zone management.[7] This included adopting a long term perspective on ICZM which required Member States to base their ICZM practice on an ecosystems approach.[8] Further, Member States were recommended to take a long term perspective taking into account the precautionary principle.[9] For those concerned with the socio-economic impact of official policies it is encouraging that Member States are recommended to 'Use appropriate and ecologically responsible coastal protection measures, including protection of coastal settlements and their cultural heritage'.[10] In addition Member States were encouraged to use adaptive management to allow adjustment to policy as problems emerge and knowledge develops. This, the Recommendation states 'implies a need for a sound scientific base concerning the evolution of the coastal zone'.[11] The real problem with the Recommendation is its apparent flexibility may result in indecision when economics and conservation are opposed.

In 2008, prior to the passing of the MCAA, the UK Government published its strategy for an integrated approach to the management of coastal areas in England

[6] European Parliament and of the Council (EC) 2002/413 Recommendation 'concerning the implementation of Integrated Coastal Zone Management in Europe' [2002] OJ L148/24 (Recommendation 2002/143/EC).
[7] Ibid Chapter 2.
[8] ibid chapter I (a) and II (e).
[9] Ibid chapter II (b).
[10] Ibid chapter I ©.
[11] Ibid chapter 2 ©.

in response to the 2002 Recommendation[12] The UK strategy promised regular progress reports to show how an 'ecosystem approach' will provide a better understanding of the marine environment in English waters.

2.3 MARINE SPATIAL PLANNING (MSP)

In 2008 the Commission issued a Communication in 2008 setting out its roadmap for achieving common principles for marine spatial planning (MSP) across the EU.[13] Increased activity levels in European waters were leading to competition between sectoral interests such as shipping, fisheries and aquaculture, and environmental concerns. MSP was to be a tool for improved decision making under which competing human activities, such as those listed above, could be managed to control their impact on the marine environment. The Commission explicitly stated that MSP will need to be legally binding if it is to be effective. The Communication listed the relevant EU instruments underpinning MSP as the Marine Strategy Framework Directive (MSFD), the Water Framework Directive (WFD), the Habitats and Birds Directives, the Strategic Environmental Assessment Directive, the Common Fisheries Policy (CFP), and the Integrated Coastal Management Zone (ICZM Recommendation). The Commission noted that the UK was preparing to introduce a Marine Act that would be 'an overarching legislative policy framework which sets up a maritime planning system for all UK waters' together with summaries of activities by other Member States.[14] The Commission envisaged that work on MSP at EU level would provide an appropriate forum for Member States to

[12] *A strategy for promoting an integrated approach to the management of coastal areas in England* (DEFRA, London, PB13199, 2008).
[13] Commission (EC), 'Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU' Communication (08) 791 final, of 25 November 2008.
[14] Ibid s 3.1. first paragraph.

discuss and develop a holistic approach to the management of maritime activities in line with ecosystem requirements.[15]

The approach adopted, using MSP as a tool for managing competing demands, and supporting it by the enacting of a number of related Directives, as shown above, is likely to provide some weight to the concept of reducing pressures on the marine environment in general and marine protected areas in particular. This idea is consistent with Lord Hunt's statement, referred to in chapter three, that the general aim behind the introduction of the MCAA was to manage pressures on the marine environment.

2.4 INTEGRATED MARITIME POLICY (IMP)

The EU's 6th Environmental Action Plan (EAP) stipulated that a thematic strategy for the protection and conservation of the marine environment, known as IMP should be developed, and in 2002 the Commission issued a Communication proposing how to move towards such a strategy.[16] The Commission acknowledged that when measures to control and reduce the pressures on the marine environment had been developed it had been on a sector-by-sector basis and this approach had unfortunately created a patchwork of policies.[17] The Commission noted that a particular feature of this area of the regulation of the marine environment is the large and diffuse number of organisations, regional Conventions and international bodies,

[15] Ibid Clause 2.2 sixth para.
[16] Commission (EC), 'Towards a strategy to protect and conserve the marine environment' (Communication) (02) 539 final, 2 October 2002.
[17] Ibid para 2.

in addition to the EU itself, which are concerned with its protection,[18] and that this institutional and legal complexity of marine protection was one of the main challenges to be confronted in developing an EU strategy for the protection of the marine environment.[19] Furthermore, compounding the complexity the Commission itself noted that most of the Community legislation that contributed to the protection of the marine environment was not actually designed specifically for that purpose.[20] And so, the Commission concluded that the new Marine Strategy should set out in a specific instrument designed for the marine environment an ambitious, clear and coherent set of objectives with a view to promoting sustainable use of the seas and conserving marine ecosystems and set out a number of elements that would help achieve the objectives.[21]

Returning to the issue only a few years later in 2005, the Commission returned to this theme and established that the strategy was to be seen within the broader context of the EU's emerging Maritime Policy.[22] Here the Commission concluded that despite the ambition set out in the 2002 Communication there still remained institutional barriers to improving Europe's marine environment.[23] Unsurprisingly, the Commission did not acknowledge that conflict between some of its own environmental objectives and policies such as CFP might need to be addressed. As with ICMZ and MSP, the strategy was to be a key element in building the new *ecosystem-based approach* whereby human activities affecting the marine environment would be managed in an integrated manner.[24] In addition IMP was

[18] Ibid para 9.
[19] Ibid s 1.1.
[20] Ibid para 66.
[21] Ibid para 70.
[22] Commission (EC) ,'Thematic Strayegy on the Protection and Conservation of the Marine Environment' COM ()%) 504 final, 24 October 2005, Section 1 fourth para.
[23] Ibid s 3 first para.
[24] Ibid s5.2.

aimed at fostering long-term support for the restoration of habitats designated under the Habitats and Birds Directives.[25] The Commission undertook to review the strategy in 2010 as part of the final evaluation of the 6th EAP. The Commission concluded that if it was to achieve its marine conservation objectives then a new policy instrument was needed. It proposed that a new legally binding commitment was needed and this would be delivered through the MFSD.[26]

On 7th June 2006 the Commission issued a Green Paper with the aim of launching a debate about a future maritime policy for the EU.[27] The Green Paper launched a one year consultation period on the principle of the EU adopting an overall policy.[28] After the completion of the consultation period the Commission issued a Communication in 2007 laying out the foundations for a governance framework and the cross-sectoral tools necessary for an IMP and the main actions that the Commission would pursue during the course of this mandate.[29] These actions were to be guided by the principles of subsidiarity and competitiveness, the ecosystem approach, and stakeholder participation in response to the comments it had received.[30] Accompanying the Communication was a staff working document setting out the actions that the Commission proposed to take as a first step towards the implementation of a new, integrated maritime policy for the EU.[31] The working document is a comprehensive listing of the various sectors that would be affected by

[25] Ibid s 6.2.1 fourth indent.
[26] Ibid s 5.3 fourth para.
[27] Commission (EC), 'Towards a future Maritime Policy for the Union: A European vision for the oceans and seas' (Green Paper) COM (2006) 275 final, 7 June 2006.
[28] Ibid s7.
[29] Commission (EC), 'An Integrated Maritime Policy for the European Union' COM (2007) 575 final, 10 October 2007.
[30] Ibid, s1 tenth paragraph.
[31] Commission (EC), 'Commission Staff Working Document Accompanying document to the Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions An Integrated Maritime Policy for the European Union' SEC (2007) 1278 final, 10 October 2007.

the strategy. The most relevant for this study are sections 4.8, dealing with the situation of fishermen at sea; 4.9, setting out how the 'ecosystem' approach was to be implemented in European fisheries; and 4.10, setting out proposals on the protection of fisheries resources in international waters.

In 2008 the Commission issued a further Communication setting out guidelines for the implementation of IMP across the EU.[32] The Communication was clear that IMP is a basic tool of policy making rather than a legal instrument. A particular priority was the 'adoption and implementation of the ecosystem approach and the MSFD.[33] The aim was to progress towards an integrated approach to maritime affairs by the end of 2009.

A progress report on IMP was provided to the EU Parliament and Council in 2009.[34] This led to the enacting of a Regulation which provided a method of financial support for those areas of the IMP seen as priorities and goals that were not covered by other instruments, such as the cohesion fund with the objective of establishing a programme to support the further development of an IMP.[35] The document reported that Member States and regions had set up governance structures to link marine policies and ensure that they take account of synergies and connections between them. It also noted that initiatives such as MSP and ICMZ had achieved some success. A related Communication was issued at the same date

[32] Commission (EC), Guidelines for an Integrated Approach to Maritime Policy: Towards best practice in integrated maritime governance and stakeholder consyltation' (Communication) COM (08) 395 final, 26 June 2008.
[33] Ibid s3 third bullet point.
[34] Commission (EC), 'Progress Report on the EU's Integrated Maritime Policy' (Internal Document) COM (09) 540 final, 15 October 2009.
[35] Parliament and Council Regulation (EU) No 1255/2011 of 30 November 2011 establishing a Programme to support the further development of an Integrated Maritime Policy [2011] OJ L321/1.

regarding the international dimension of IMP.[36] This document provided a useful summary of the EU's policy agenda for the coming period.[37]

The results of all this effort were not universally praised. Indeed it has been observed that while IMP sets out a constitution for European seas this would be severely tested during its implementation because, 'an integrated governance would be relatively straight-forward if the different interests and actors were operating on the basis of shared values, but they are not'.[38] Wakefield argued that this is because the fisheries sector, regardless of scale, is driven by commercial pressures which demand the greatest extractive effort possible while environmentalists champion the removal of human impacts apart from those seeking to remedy harm. This is of course true and the division of responsibility for fisheries and environmental protection between two Directorates in the EU Commission makes this difficult to resolve. Perhaps more crucially in 2010, prior to the 2014 CFP reforms, it was argued that:

> the greatest impediment to an integrated approach is the failure to subject the EU's Common Fisheries Policy to the objectives of the Integrated Maritime Policy. Instead, all decisions concerning fisheries will continue to be made in accordance with the Fisheries Regulation which demands exploitation of the fragile resource. Attention needs to be given to how EU fisheries policy is to acquire values beyond that of commercial extraction for immediate economic benefit so that it may

[36] Commission (EC) Developing the international dimension of the Integrated Marine Policy of the European Union', (Communication) COM (09) 536 final, 15 October 2009.
[37] Ibid s4 EU Policy Agenda.
[38] Jill Wakefield, 'Undermining the Integrated Maritime Policy' 60 Mar Pollut Bull 323.

> cohere with objectives of the Integrated Maritime Policy and aid the regeneration of the seas.[39]

The effect of what Wakefield seems to be saying is that the pre-eminence of the CFP prevents a truly integrated approach to spatial planning for other purposes consequently; it is a conclusion of this research that the CFP is a risk to the concept of MPAs while fisheries and environmental protection are not fully integrated under one body.

In 2011 the UK Government issued its own domestic Marine Policy Statement (MPS) as required by the MCAA.[40] In addition, the Commission issued a new Regulation to establish a Programme to support measures intended to promote the further development and implementation of the Union's Integrated Maritime Policy.[41] IMP should therefore be regarded as a useful enabling tool to support the objectives underlying the MFSD rather than a duplication.

2.5 THE MARINE STRATEGY FRAMEWORK DIRECTIVE

2.5.1 BACKGROUND

Like IMP, the origins of MSFD are to be found in the EU's 6th EAP which called for the development of a number of thematic strategies. One of which was to establish a strategy for the protection and conservation of the marine environment through the development of a strategy to cope with the pollution and degradation of marine habitats and coastlines. The strategy was published in 2005 with the stated aim of

[39] Ibid.
[40] *UK Marine Policy Statement.* (The Stationery Office 2011).
[41] Regulation 1255/201/EU (n 39).

promoting 'sustainable use of the seas and conserve marine ecosystems'.[42] The focus of the MSFD is on regulating and managing activities in the marine environment. The Commission adopted the definition of an ecosystem as set out in the CBD.

The vision behind the MSFD was to,

> protect, preserve and, where practicable, restore the marine environment with the 'ultimate aim of maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive'.[43]

The Commission also issued a Communication setting out how it proposed to address the integration of marine strategy across a variety of sectors.[44] Criticism of the proposal followed swiftly, on the basis that it was regarded as 'a highly inadequate approach to the long term protection of the European Seas'.[45] This was on the basis that the proposed Directive would allow Member States to develop their own environmental objectives and marine protection activity programmes rather than to work towards an integrated EU wide strategy, which Salomon described as a 'renationalisation'.[46] In a related Communication the Commission noted that related

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[42] COM 05/504, (n 24).
[43] European Parliament and Council Directive 2008/56/EC of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) [2008] L 164/19. recital 3 (Regulation 2008/56/EC).
[44] Commission (EC), 'Proposal for a Directive of the European Parliament and of the Council establishing a Framework for Community Action in the field of Marine Environmental Policy' COM (05) 505 final, 24 October 2005.
[45] Markus Salomon, 'The European Commission proposal for a Marine Strategy: Lacking substance.' 52 Mar Pollut Bull 1328.
[46] Ibid.

pressures on the seas included: commercial fishing, oil and gas exploration, shipping, water borne and atmospheric deposition of dangerous substances and nutrients, waste dumping, physical degradation of the habitat due to dredging and extraction of sand and gravel.[47]

The Directive was finally issued in 2008.[48] It recognised that achieving the objectives set out in the Directive, such as establishing marine protected areas, and enabling the integrity, structure and functioning of ecosystems to be maintained or restored, would require the 'full closure to fisheries of certain areas' and, where appropriate, in order to safeguard, inter alia, spawning, nursery and feeding grounds'.[49] It mandated that programmes of measures to achieve good environmental status in Community waters would be based on the precautionary principle.[50] Making this mandatory is a significant step forward in the protection of marine species, particularly at key stages in their lives.

One of the principal aims of MSFD was to be the establishment of marine protected areas to be designated under the Habitats or Birds Directives.[51] In the case of the MSFD this would require programmes of measures including spatial protection measures that would contribute to a coherent and representative network of MPAs covering a diversity of the constituent ecosystems, including SACs and SPAs as agreed by Member States under the framework of international or regional agreements to which they are parties.[52] The focus on an integrated strategy to cope

[47] COM 05/504. Table 2, (n 24).
[48] Directive 2008/56/EC, (n 47).
[49] Ibid recital 39.
[50] Ibid recitals 27 and 44.
[51] Ibid recital 6.
[52] (ibid) Art 13 (4).

with the pollution and degradation of marine habitats and coastlines can, arguably, be said to mean that potentially harmful but legitimate activities such as dredging and aggregate extraction should be managed in such a way as to avoid the deterioration of water quality in the general marine environment thereby protecting them from the consequences likely to affect an MPA.

The Directive defines the good environmental status of water as meaning the environmental status of marine waters is such that 'it provides ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions'.[53] To achieve this, Member States must ensure that the 'structure, functions and processes of the constituent marine ecosystems, together with the associated physiographic, geographic, geological and climatic factors, allow those ecosystems to function fully and to maintain their resilience to human-induced environmental change'.[54] In addition, marine species and habitats are to be protected so that human-induced decline of biodiversity is prevented and diverse biological components function in balance.[55] Anthropogenic inputs of substances and energy, including noise, into the marine environment should not cause pollution to the hydro-morphological, physical and chemical properties of those ecosystems.[56] The aim behind the Directive was to drive Member States to implement significant improvements in their approaches to water management.

The Directive's effectiveness has been the subject of a Strengths, Weakness, Opportunities and Threats analysis of European marine governance structures and

[53] Ibid Art 3.
[54] Ibid Art 3 (4)
[55] Ibid Art 3(a).
[56] Ibid Art 3 (b).

how they relate to MSFD.[57] The analysis was completed by means of an on-line survey and programme of interviews and focus groups. The findings of the survey indicated that respondents felt that MSFD had the potential to be the most effective policy to achieve and maintain healthy waters in the EU marine regions.[58] The survey's findings supported the findings of previous research, which had found differences in the levels of ambiguity in the governance of Europe's four regional seas. The Baltic Sea had the lowest level of institutional ambiguity and the Mediterranean Sea the highest.[59] This situation of institutional ambiguity suggests that Brexit may have relatively little impact on the UK in this area of law if OSPAR is effectively achieving the objectives of the MSFD in Northern seas. There will however remain a question as to whether all EU Member States will be able to meet the deadlines as proposed by the MSFD.[60] In addition, a study of progress in achieving the objective of Good Environmental Status in the four EU marine regions,[61] found that MSFD has the potential to be the most effective policy initiative.[62] This conclusion seems to be inarguable and Defra will need to ensure that the UK remains aligned with the aims of this legislation if the waters of the UK maritime area are to remain healthy.

2.5.2 THE MARINE STRATEGY REGULATIONS

[57] Lucio Carlos Freire-Gibb and others, 'Governance strengths and weaknesses to implement the marine strategy framework directive in European waters' 44 Marine Policy 172.
[58] Ibid 177.
[59] Judith van Leeuwen, Luc van Hoof and Jan van Tatenhove, 'Institutional ambiguity in implementing the European Union Marine Strategy Framework Directive' 36 Marine Policy 636.
[60] Ibid 642.
[61] .[61] Baltic Sea, Black Sea, Mediterranean Sea and North-east Atlantic
[62] P. Breen and others, 'An environmental assessment of risk in achieving good environmental status to support regional prioritisation of management in Europe' 36 Marine Policy 1033.

The Marine Strategy Regulations were implemented to transpose the MSFD into English law.[63] They require the Secretary of State to protect and preserve the marine environment, prevent its deterioration or, where practicable, and restore marine ecosystems in areas where they have been adversely affected. This is to be achieved by preventing and reducing inputs into the marine environment, with a view to phasing out pollution. This to be done so as to ensure they do not give rise to any significant impacts on or risks to marine biodiversity, marine ecosystems, human health or legitimate uses of the sea.[64] It is to be based on an ecosystem-based approach to ensure that the collective pressure of human activities within the marine strategy area is kept within levels compatible with the achievement of good environmental status. There is also a general duty is placed upon the Secretary of State to 'protect and preserve the marine environment, prevent its deterioration or, where practicable, **restore** marine ecosystems in areas where they have been adversely affected [emphasis added]'.[65]

2.5.3 THE MARINE STRATEGY REGULATIONS AND MPAS

The Regulations define an MPA. Under the Regulations, any programme of measures must include spatial protection measures, to contribute to coherent and representative networks of MPAs and by 31st December 2013 and the competent authority was required to publish information on progress.

The Regulations require that marine waters achieve good environmental status in terms of their structure, functions and processes and that the hydro-morphological,

[63] The Marine Strategy Regulations SI 2010/1627.
[64] ibid Regulation 5 (1).
[65] Ibid part 5 (a).

physical and chemical properties are protected. To achieve this requires an ecosystem approach and the designation of MPAs.[66]

2.6 THE WATER FRAMEWORK DIRECTIVE (WFD)

WFD came into force in 2000.[67] Its principal purpose is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater to prevent further deterioration and to protect and enhance the status of aquatic ecosystems, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems. The standard set for water status comprises both '*ecological status',*[68] 'and '*chemical status'.*[69] Coastal waters are defined as surface water within 1 nm of seaward side of the baseline used to measure a state's territorial waters.[70] The Directive is, therefore, of importance for Ramsar sites and parts of inshore MCZs. It is also important for this study because it requires Member States to establish a national register all Natura sites designated under the Habitat or Birds Directives.[71] Surprisingly, the purpose of the register is not explicitly set out in the Directive, although Article 21 of the Directive empowers the Commission to establish a regulatory committee, which suggest an intention to assert its control.

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[66] Ibid 17.
[67] Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000 establishing a framework for Community action in the field of water policy.
[68] Recital 21 defines ecological status as an expression of the quality of the structure and functioning of aquatic ecosystems associated with surface waters.
[69] Chemical status means the chemical status required to meet the environmental objectives of the types of water set out in the directive.
[70] Directive 2000/60/EC, (n 69).
[71] Ibid Annex IV (v).

The WFD classification scheme for water quality includes five status categories: high, good, moderate, poor and bad.[72] 'High status' is defined as the conditions associated with no or very low human pressure. This is also called the 'reference condition' as it is the best status achievable, i.e., the benchmark. These reference conditions are type-specific, so they are different for different types of rivers, lakes or coastal waters so as to take into account the broad diversity of ecological regions in Europe. Assessment of quality is based on the extent of deviation from these reference conditions, following the definitions in the Directive. 'Good status' means 'slight' deviation, 'moderate status' means 'moderate' deviation, and so on. These definitions are expanded in Annex V to the WFD. In the protected water bodies Member States were expected to achieve compliance with any standards and objectives by 2015, unless otherwise specified in the Community legislation under which the individual protected areas have been established. Where more than one of the objectives relates to a given body of water it was determined that the most stringent shall apply.[73] Identifying what the 'reference conditions' should be would be greatly facilitated if reference areas had been established during the process of MCZ designation.

The Directive requires that environmental objectives should be set by Member States to ensure that good status of surface water and groundwater is achieved throughout the Community and that deterioration in the status of waters is prevented at Community level.[74] The aim is to establish a framework for enhanced protection and improvement of the aquatic environment in continental, transitional, and coastal

[72] Ibid Annex 1.4.2 Annex V (ii).
[73] Ibid Art 4 © (2).
[74] Ibid recital Art 2 (7).l 25.

waters.[75] Member States are required to comply with the Treaty provisions on the environment and as such policy in this area should be,

> based on the precautionary principle and on the principles that preventive action should be taken, environmental damage should, as a priority, be rectified at source and that the polluter should pay.[76]

In order to achieve the environmental objectives, the WFD foresaw the development of a programme of measures as part of a wider river basin management plan. The first such plans focussed on the river basin district, comprising one or several neighbouring river basins together with their associated coastal waters. Public participation from all stakeholders should be encouraged by the competent authorities. The WFD therefore is another consideration for Member States in the management of waters under their control.

2.6.1 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Under EU law an EIA must be carried out before a licence can be granted for a project that is likely to have a significant impact on the environment.[77] Examples of the types of projects listed within the marine environment include trading ports,[78] intensive fish farming,[79] and harbours, including fishing harbours.[80] The original Directive has been updated several times and the most recent version widens the

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[75] Ibid.
[76] Water Environment (Water Framework Directive). (England and Wales) Regulations 2003 SI 2003/3242, recital 11.
[77] 'Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment [1985] OJ L 175/40.'
[78] Ibid.
[79] ibid (n 80).
[80] Ibid Annex II 10 (d).

scope of the concept by requiring Member States to pay particular attention to coastal zones and the marine environment in terms of the effects of projects that might impact on environmentally sensitive areas.[81]

The Environmental Impact Assessment Directive was transposed into domestic law largely by means of the Town and Country Planning (Environmental Impact Assessment) Regulations.[82]

The EIA legislation was strengthened in respect of projects in the marine environment when the Marine Works Regulations came into force.[83] These Regulations place a particular obligation on the authorities in respect of coastal zones, wetlands and areas designated by any EEA State under the Wild Birds Directive or the Habitats Directive.[84] The applicant for a licence must include a comprehensive Environmental Statement which, importantly, must include a description of the likely significant effects of a project including the direct and *indirect* effects and the cumulative effects.[85] The requirement to consider the indirect effects suggests the need to adopt a precautionary approach, because the scientific knowledge of likely impact may not be complete, and this should prevent the application process from being a mere tick box exercise.

The MMO is specified as the body to be consulted in any case where a proposed development would affect, or would be likely to affect, any of the following areas (except for those in which the Scottish Ministers have functions),

[81] ibid .
[82] The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 2011/1924.
[83] The Marine Works (Environmental Impact Assessment) Regulations 2007 SI/1518.
[84] Ibid Schedule 1 2 (i) (ii), and (vi).
[85] Ibid Schedule 3 3 © and (e).

waters in or adjacent to England up to the seaward limits of the territorial sea;

an exclusive economic zone

a Renewable Energy Zone

an area designated under section 1(7) of the Continental Shelf Act 1964(f),[86]

3. THE MANAGEMENT OF AN MPA CREATED BY MINISTERIAL ORDER

In chapter two, mention was made of the closure of an area of Lyme Bay to a type of commercial fishing under the provisions of the 1967 Sea Fish Act. Following the closure, the Secretary of State did not introduce any other measures for management in the area, and a degree of conflict developed between different users operating legally in the area. However, research into the environmental features of the Bay had been taking place for a number of years under the auspices of the Devon Wildlife Trust (DWT). As a result of this research three things happened. First, the research became an exemplar of how marine science can increase public awareness of the value of the features of the Bay and its associated species. This led to a charity, Blue Marine, becoming involved in resolving conflict between users of the Bay by establishing a successful bottom-up approach to governance. The third thing was that the approach has been so successful it has led to the area being recommended to the EU Commission as a marine special area of conservation. Each of these will now be addressed in turn.

3.1 THE RESEARCH PROGRAMME IN THE BAY

[86] Environmental Impact Assessment Regulations 2011, s2.

Prior to the statutory closure of the area of Lyme Bay under the 2008 Order, DWT had carried out a series of dives and the findings of this research had led them to recommend that all of the reefs within Lyme Bay, with the exception of an area known as the Exeters, should be included in a Voluntary Marine Nature Reserve (VMNR) with codes of conduct to control activities that would further damage the reefs. This approach to site management was the only option based on the legislation available at the time.[87]

DWT then successfully negotiated a voluntary agreement with local fishermen whereby bottom towed fishing gear would not operate within two vulnerable reef areas known as Lane's Ground and Saw-tooth Ledges. This agreement came in to effect in 2001. Two other reef areas, known as Beer Home Ground and the East Tennants Reef, were subsequently added in 2006. The agreement was considered a partial success with many fishermen abiding by it. However, it appeared that not all fishermen were doing so and damage continued to be recorded. The voluntary nature of the agreement did seem to indicate that an approach based on independent scientific evidence could influence local stakeholders into accepting a precautionary approach to the exploitation of the marine environment.[88] The direction of travel at this time might have led to the creation of a VMNR under the provisions of the Wildlife and Countryside Act.

During this period the Southern Sea Fisheries Committee, the predecessor body of Southern Inshore Fisheries and Conservation Authority (IFCA), investigated the

[87] *Lyme Bay Reefs A 16 year search for sustainability* (Devon Wildlife Trust, Registered charity no 213224 Commercial Road, Exeter, EX2 4AB October 2007, 2007) 6.
[88] P. J. S. Jones, 'Marine protected areas in the UK: challenges in combining top-down and bottom-up approaches to governance' (2012) 39 Environ Conserv 248.

feasibility of introducing a byelaw to protect reef features. However, because of opposition, the Committee decided that a voluntary approach was more likely to succeed. However, the agreement for the voluntary closure of two areas to mobile bottom gears lasted only until 2005/6. It is thought that the increase in the price of diesel, higher prices for scallops, and limitations of days at sea for the white fish fleet led to a rapid increase in unregulated scallop dredging and further damage so ending support for the initiative.[89]

Because of concern over the damage to the reefs, the 2008 Order came into force and it simply prohibited demersal trawling and dredging within the area specified. To understand how the area was to be managed in future it is necessary to refer to the Explanatory Memorandum that accompanied the Order. This specified that fisheries management measures be introduced that best protect the biodiversity of Lyme Bay. The objective was to maintain the conservation value of the reef habitat, and the benefits derived from it, to allow the recovery of associated biological communities by excluding Scallop dredgers and bottom trawlers. Fishing using static gear and other activities (diving for scallops, scuba diving and sea angling for example) would be able to continue.[90] Fishing was to be managed according to an ecosystem approach, including use of the precautionary approach to make sure that healthy ecosystems are maintained and rare, vulnerable or valued species and habitats protected.[91] This was intended to protect the majority of Habitats Directive Annex I quality habitat recently identified within the area by Natural England (NE) and would provide a good basis for the management of the area following the

[89] T Appleby, 'Damage by Fishing in the UK's Lyme Bay - A Problem of Regulation or Ownership?' (2007) 18 The Jounal of Water Law 39.
[90] Explanatory Memorandum to the Lyme Bay Designated Area (Fishing Restrictions) Order.
[91] Ibid para 2.2 second bullet point.

Government recommending the area to the EU Commission as a candidate Special Area of Conservation.

Following the closure of the area the University of Plymouth and project partners, the Marine Biological Association of the United Kingdom, were commissioned by NE and Defra to undertake a comprehensive analysis of the effects of the closure Order on the recovery of sessile benthic fauna and potential spillover effects and also the socio-economic impacts relating to the closure.[92]

The first report set out eight objectives for the research that would provide an indication of whether or not the closure led to a recovery of the areas ecosystems.[93] This included the need to identify and select a number of representative species within the study area that could signify changes within the closed area. The species selection could be considered for their wider application in the monitoring of MPAs. The research was also to quantify the recovery of the indicator species within the closure compared to areas which continue to be fished using bottom towed gear. In addition the researchers were required to assess any socio-economic impacts e.g. diversification, gear changes, changes to areas fished, or effort changes resulting from the closure restrictions.[94]

The first and second reports followed broadly the same format while the third was slightly different. Inevitably the focus of the reports is on the scientific evidence for

[92] Austen MC Attrill MJ, Bayley DTI, Carr HL, Downey K, Fowell SC, Gall SC, Hattam C, Holland L, Jackson EL, Langmead O, Mangi S, Marshall C, Munro C, Rees S, Rodwell L, Sheehan EV, Stevens, J. Stevens, TF. Strong S, *Lyme Bay – a case-study: measuring recovery of benthic species; assessing potential "spillover" effects and socio-economic changes, 2 years after the closure. Response of the benthos to the zoned exclusion of bottom towed fishing gear and the associated socio-economic effects in Lyme Bay. Final Report 1* (University of Plymouth Enterprise Ltd, 2011), Executive Summary, 3.

[93] Ibid 14.

[94] Ibid, s 1.4 Aims and Objectives para 1.13 (7).

recovery of the reef areas in ecological terms but in doing so they provide important insights into what scientists actually mean when they use terms such as ecological coherence or restoration of a site. These insights are important in that they should inform the courts and policy makers as to how the key obligations identified in chapter two should be interpreted when assessing if the UK is meeting its international commitments in terms of designating and managing MPAs.

Such species needed to include representatives from the full range of benthic species in the study area.[95] The effects of the closure on these benthic species rich sites were to be identified by surveying four different sub-areas of the bay. These were,

- sites which have been protected under a voluntary agreement (Closed controls)
- sites which were fished using bottom-towed gear and are inside the new closure, but outside of previously voluntary closed areas New closure)
- sites which continue to be fished using bottom-towed gear located < 5 km from the new closure (Near controls) and,
- sites which are > 5 km from the new closure, which continue to be fished using bottom towed gear (Far controls). [96]

[95] Fowell S Attrill MJ, Hall-Spencer J, Hattam, C, Jackson EL, Langmead O, Mangi S, Marshall C, Munro C, Rees, S, Rodwell, L, Sheehan EV, Stevens, TF, *Lyme Bay - A case study: measuring recovery of benthic species, assessing potential spill-over effects and socio-economic changes* (Report to the Department of Environment, Food and Rural Affairs from the University of Plymouth-led consortium Plymouth: University of Plymouth Enterprise Ltd, 2009), 8, indent (1).
[96] Ibid 6.

The 2011 report concluded that it was critical that the sampling time-frame of the project was extended to ascertain whether locations currently showing no recovery do recover over the coming years, or whether the no-recovery state is fixed. This would be important to determine whether any early recovery that had been identified was more than a short-lived phenomenon. If the latter, it would have major implications for the continued exclusion of towed fishing activity from the area. This could lead to demands from the fishing community to recommence dredging and trawling at these sites.[97] This commissioning of further research on the effects of the closure on the wider ecosystem should be regarded as an exemplar of good practice in terms of the obligation to base policy on sound science.

3.2 WHY THE RESEARCH IS RELEVANT TO THIS THESIS

The closure of the area would be more correctly described as a preventative measure rather than precautionary one. On this occasion the damage to the reef had already occurred, it had been measured and analysed, and the cause established. Despite the evidence of the earlier damage the closure did not result in the creation of a strict no-take zone but it did end the most destructive techniques used for exploiting the fishery. The important point here is the subsequent establishment of a science driven monitoring programme which could provide an evidential base for taking precautionary measures, thereby reducing future risks to the protected area and other MPAs.

The research output suggests that an ecosystem should be interpreted as something much wider than merely the assemblages of benthic and pelagic species

[97] Attrill MJ *et al*, section 8 Conclusions, para 8.3., (n 95).

in a particular habitat. At the broadest scale, the ecosystem of Lyme Bay was seen to include the human communities that exploit its resources either in an extractive way, such as fisheries, or by utilising the area to provide opportunities for recreation. The closure of the reefs was expected to have an immediate and long term social and economic impact for this wide range of user groups including fishermen, fish merchants, fish processors, dive boat owners etc., which needed to be quantified. To achieve an understanding of the effects of the closure the design specification for the monitoring programme required data collection on both ecological and socio-economic changes from both primary and secondary data.[98]

In terms of the socio-economic consequences of the closure, the study reported that these depended upon the occupations of those affected. Most fish merchants claimed that there were no major impacts that they could attribute to the closure.[99] Hotel owners, on the other hand, were split in their opinion.[100] The researchers also found that scallop and demersal trawl fishermen 'lost' valuable fishing grounds and had to fish elsewhere, possibly incurring larger fuel costs.[101] Demersal fishermen living close to the protected area may have borne most of the cost in the short run because the displacement of their activities led to higher costs in terms of fuel and time spent.[102] This factor was because many of the smaller fishing vessels could not safely move to more distant fishing grounds, even elsewhere within the Bay, and

[98] Stephen C Mangi, Lynda D Rodwell and Caroline Hattam, 'Assessing the Impacts of Establishing MPAs on Fishermen and Fish Merchants: The Case of Lyme Bay, UK' [Springer Netherlands] 40 AMBIO 457.
[99] Bayley DTI Attrill MJ, Gall SC, Hattam C, Jackson EL, Langmead O, Mangi S, Marshall C, Munro C, Rees S, Rodwell L, Sheehan EV, Stevens, TF. Strong S, *Lyme Bay – a case-study: measuring recovery of benthic species; assessing potential "spillover" effects and socio-economic changes, Annual Report, December 2010* (Report to the Department of Environment, Food and Rural Affairs from the University of Plymouth-led consortium Plymouth: University of Plymouth Enterprise Ltd, 2010) section 5.3.6.
[100] Ibid, section 5.3.7.
[101] SC Mangi, LD Rodwell, C Hattam Assessing the Impacts of Establishing MPAs on Fishermen and Fish Merchants: The Case of Lyme Bay, UK, Ambio 2011, 457.
[102] Ibid.

it was felt to be clear that this factor could be seen as a disturbance to the wider ecosystem.[103] The researchers considered that it was difficult to see how this disturbance in fishing practices could be avoided because the impacts on the marine environment, particularly benthic species, differ greatly according to the gear type and the fishing location used by the fishermen.[104]

There had been a history of conflict between the various stakeholders, each conflict slightly different in its nature. Examples include the conflict resulting from the increase in scallop potting once the area was closed to mobile trawls and recreational divers blaming commercial fishermen for damaging marine organisms, such as corals. This was important because of the high value of recreational activities, diving, charter boats and sea anglers within the closed area which were dependent on the diversity of sites.[105] The researchers concluded that the impacts for fishermen were dependent upon the type of gear they used. Static gear fishermen who fished inside the closed area saw changes in terms of increased fishing effort, often because they were able to increase the number of crab and whelk pots they deployed.[106] The effects of the closure on static gear fishermen fishing outside the closed area indicated increased conflict with towed gear fishermen who now fished regularly in their traditional grounds. Despite this, fishing in Lyme Bay had remained profitable after the closure, implying that the loss of access to fishing grounds in the closed area has been compensated for by the remaining fishing grounds.[107]

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[103] Ibid.
[104] Austen *et al*, Section 1.7, Objective 7, (n 95).
[105] Sian E. Rees and others, 'The value of marine biodiversity to the leisure and recreation industry and its application to marine spatial planning' 34 Marine Policy 868.
[106] Mangi, Rodwell and Hattam, (n 101).
[107] Ibid.

It is, of course, relatively simple to calculate the economic benefits from fishing activities by comparing the value of landings with the industry's cost, it is less easy to estimate the value of marine biodiversity to the leisure and recreation industry. This requires decision makers to be aware that focussing only on the value of ecosystem services that are amenable to valuation may end up managing only those that are economically valuable at the expense of the rest.[108] This insight has led commentators to argue that decision makers need to develop a framework that provides information on the intricacies of social issues if they are to uncover the trade-offs and hard choices that are the real impact when 'property rights' are realigned following the designation of an MPA.[109] In essence this means that decision makers need to ensure that they understand how decisions affect individuals in different ways i.e., in this case, all fishermen did not have equivalent agency in resolving the problems caused to them by the closure. In the absence of such evidence it would be unsurprising if the value of commercial fishing activities were to be privileged over uncosted environmental benefits.

The fishermen's views may, to some extent, be a reflection of the way in which the Lyme bay closure was introduced and their objection to the process was overruled. This was seen as a top-down intervention from Government, at a time when a bottom-up process had failed to protect the marine environment in the bay.[110] Rees argues that the then current policy climate demanded that a case be made to balance conservation with economic and social interests, which she describes as an

[108] Sian E. Rees and others, 'A thematic cost-benefit analysis of a marine protected area' 114 Journal of Environmental Management 476.
[109] Ibid.
[110] SE Rees, and others, SE 476, (n 108).

ecosystem approach, and on this basis the marine and leisure industry should be valued as well as the fishing activities.[111] However, given that many fishermen in Lyme Bay felt that the marine environment was a common resource and that rights of access should be granted to all, it is perhaps understandable that they found it difficult to accept that this was no longer the case. However, the dilemma still remains whereby conservationists claim that access to the resources of the sea is a privilege, while recreational users believe it is their right to enjoy them and fishermen their right to exploit them. In the case of Lyme Bay, the multiplicity of direct and indirect interests means that there is a need to include more people in the decision making process, such as recreational users and local businesses. This suggests that policy makers need to involve a wider and more diverse community of stakeholder when considering what constitutes an ecosystem approach if the approach is to work.

One of the key findings of the research was that regeneration of some species is dependent on larval dispersal than others.[112] If this is correct then connectivity between the closed area and appropriate sites would be required to ensure successful dispersal of larvae. Such dispersal is likely to be dependent upon currents and tides so the designation of protected areas should consider this as a factor if an ecologically coherent network of sites is to be successfully created. If this interpretation was adopted then a network of ecologically coherent sites could provide the necessary conditions for the 'spill over' into the areas at the edges of the

[111] Rees and others, The value of marine biodiversity to the leisure And recreation industry in its application to marine spatial planning, Marine Policy 34, 868.

[112] Attrill MJ, Austen MC, Bayley DTI, Carr HL, Downey K, Fowell SC, Gall SC, Hattam C, Holland L, Jackson EL, Langmead O, Mangi S, Marshall C, Munro C, Rees S, Rodwell L, Sheehan EV, Stevens, J. Stevens, TF. Strong S. Lyme Bay - A case study: measuring recovery of benthic species, assessing potential spill-over effects and socio-economic changes; 2 years after the closure: Response of the benthos to the zoned exclusion of bottom towed fishing gear and the associated socio-economic effects in Lyme Bay. Final Report 1, section 7.2.

closed areas. This factor may indicate the potential for wider ecosystem benefits including those to commercial fisheries.[113]

Furthermore, the research provides an additional definition of what ecological coherence means. It has been suggested that a related concept, ecological integrity means 'the ability of a system to maintain a biological community which displays species compositions, diversity and functional organisation analogous to a system which is undisturbed'.[114] However, as Rees notes, the term 'integrity' is only used once in the Habitats Directive and that it is as 'site integrity', rather than species or specific habitats that must not be adversely affected.[115] However, when the research team looked at both sedimentary and reef habitats they revealed a mosaic of sedimentary and reef habitats and which indicated that sessile species were colonising sedimentary habitat.[116] It was concluded by Sheehan, that 'reef' was present, which meant that the functional extent of the reef was potentially greater than its visual boundary. This led the Sheehan to conclude that, 'without knowing the natural state of the benthos without human disturbance is it illogical to assume that feature boundaries can be drawn'.[117] This finding suggests that the law should not focus simply on designating an area on a map as an MPA, because it is species rather than visually observed habitats that can inform the functional extent of features such as a reef. Sheehan has concluded that before feature boundaries and buffer zones can be established, the MPA should be protected at the scale of

[113] Stevens TF Sheehan EV, Gall SC, Cousens SL, Attrill MJ 'Recovery of a Temperate Reef Assemblage in a Marine Protected Area following the Exclusion of Towed Demersal Fishing' PLoS ONE 8(12) e83883 doi:101371/journalpone0083883.
[114] Siân E. Rees and others, 'A legal and ecological perspective of 'site integrity' to inform policy development and management of Special Areas of Conservation in Europe' 72 Mar Pollut Bull 14.
[115] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [1992] OJ L206/7Art 6.3 (Directive 92/43/EEC)
[116] Ibid.
[117] Ibid Conclusions.

the site around observable features to allow species to recover and therefore demonstrate functional feature extent.[118] This predicament suggests that feature based MPA designation and management may not adequately protect targeted features and species, whereas site-based management would allow for adjusting approaches to management as the ecosystem begins to recover. Policy makers will need to take these findings on board if ecologically coherent networks of MPAs are to be established.

The research acknowledges that full restoration may be unlikely because knowledge of what represents an undisturbed ecosystem is incomplete, and such ecosystems are arguably non-existent today.[119] As a result, it is suggested that it may be more appropriate to substitute, at least in the medium term, the term recovery in place of restoration of the marine environment. This would suggest improvement over time rather than a shift towards a pristine state, and the legal obligations, placed on relevant authorities under the MCAA, should include this aim in its provisions[120]

The decision to close the area to demersal trawling was reached after the presentation and consideration of independent scientific advice and demonstrates how the courts should expect decisions on protecting the marine environment to be made. The subsequent Defra monitoring programme should provide the necessary information on whether or not closed or protected areas that were previously

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[118] Ibid.

[119] E.L Jackson, Langmead, O., Barnes, M., Tyler-Walters, H. & Hiscock, K, *Identification of indicator species to represent the full range of benthic life history strategies for Lyme Bay and the consideration of the wider application for monitoring of Marine Protected Areas.* (Report to the Department of Environment, Food and Rural Affairs from the Marine Life Information Network (MarLIN) Plymouth: Marine Biological Association of the UK Defra Contract No MB101 Milestone 2, 2009) Section 4.19.

[120] T. F. Stevens and others, 'Monitoring benthic biodiversity restoration in Lyme Bay marine protected area: Design, sampling and analysis' 45 Marine Policy 310.

damaged are capable of recovery. If this proves to be the case then it would help the courts in determining whether or not a precautionary approach to conservation will succeed. This would require the courts to be prepared to issue stop orders or injunctions to prevent potentially harmful activity until sufficiently robust scientific evidence is available.

The closure created an opportunity to study how the area and its ecosystems responded to the change. As was seen earlier the precautionary approach requires parties to take protective or preventive measures to protect the environment from potentially damaging activities *even if no causal link has yet been conclusively established between an activity and damage to the environment* [emphasis added] On this occasion the damage to the reef had already occurred, had been measured and analysed, and the cause established. The important point here is the subsequent establishment of a science driven monitoring programme which could provide an evidential base for taking precautionary measures thereby reducing future risks to the protected area and other MPAs.

The restrictions that come with an MPA designation can have both positive and negative social impacts for stakeholders including both commercial fishermen and recreational users such as divers or sea anglers. The negative themes identified by the research seem to fall disproportionally on commercial fishermen using towed gear and included lengthening fishing trips, tension and conflict. A particularly contentious aspect of closures is the way it affects what some stakeholders regard as their property rights and failure to interpret stakeholder responses correctly may lead to poor decision making and worse stakeholder compliance than might

otherwise have been achievable.[121] The data on the likelihood of recovery at the end of the monitoring period will, therefore, need to be publicly available to all users of the bay if stakeholders are to be persuaded that it is not simply a ploy by environmentalists to deny them their 'property rights'.

Following the closure it was felt by a number of parties that government monitoring was failing to register the near doubling of static gear, pots and nets, within the closed area.[122] It might have been difficult to gain the co-operation of groups such as fishermen who see controls on their activities or restrictions due to area closures as an assault on their traditional way of life. In short, policy makers must understand and quantify the view of all stakeholders to avoid conflict and the potential reduction in the level of support for the measures. Rees stresses the importance of managing marginalised groups, such as those whose vessels have been displaced as a result of the closure and who then cause economic, social and environmental costs elsewhere.[123] In effect, the goal of an outright win–win scenario may be short sighted, particularly if the precautionary principle is used in these circumstances. [124]

This outcome strongly suggests that it is not sufficient to designate an area as an MPA without putting in place a robust management programme for the site. Designation, as an act, disrupts traditional usage patterns, causing dislocation between types of stakeholders and the availability of resources. While MPAs are

[121] C. E. Hattam and others, 'Social impacts of a temperate fisheries closure: understanding stakeholders' views' 45 Marine Policy 269.
[122] 'Lyme Bay Fisheries and Conservation Website.'Project Overview page accessed 15 August 2015.
[123] SE Rees and others, A thematic cost-benefit analysis of a marine protected area, Journal of Environmental management 114, 476.
[124] Rees and others, Is there a win-win scenario for marine nature conservation? A case study of Lyme Bay, England. Ocean & Coastal Management 53, 135.

designated on the grounds of their biological and ecological significance, limiting access to those that have traditionally used the area with such designation can have profound socio-economic consequences, as seen in Lyme Bay. This disruption of traditional usage patterns can lead to the potential failure of the site to meet its objectives and this suggests that there should be a periodical post-designation evaluation of the site by Defra appointed scientists to assess the site's ecological significance and its economic consequences and feasibility at regular time intervals.[125]

The output of this research illustrated a problem with the top-down approach to governance and a new approach was needed.

The conclusion to be drawn from above case study is that the closure of an area of Lyme Bay to one type of activity did not prevent exploitation of the area by other types of user, but it did create a limited form of MPA. However, the evidence from the research programme suggests that the complete or partial closure of an area is unlikely to be sufficient unless the area is subject to some form of management plan. This could be done on a statutory basis, by including explicit post-closure management measures in the Ministerial Order.

3.3 LYME BAY FISHERIES AND CONSERVATION RESERVE

The situation in Lyme Bay improved greatly from 2012 when the charity Blue Marine Foundation intervened with the aim of forming links between 'fishermen, conservationists, regulators and scientists in order to maintain a healthy, productive

[125] Grafton, R. Quentin, Akter, Sonia, Kompas, Tom, 'A Policy-enabling framework for the ex-ante evaluation of marine protected areas', 2011, 54, Ocean and Coastal Management, 478 – 487.

and sustainable marine reserve within the bay.[126] The aim was to achieve three wins,

1. to implement best practice in protecting the biodiversity of Lyme Bay,
2. to implement best practice in managing fish and shellfish stocks and to,
3. create long-term benefits for coastal communities around the bay.[127]

The success of the bottom-up approach adopted in Lyme Bay may be judged by the fact that on 20 August 2010, Defra notified the European Commission of the status of the designation of an area of inshore waters of Dorset and Devon as a candidate SAC (cSAC). The site covers an area of 31,248 ha and includes 14,289 ha of reef and at least 85 caves split into two sections: Lyme Bay Reefs, and Mackerel Cove to Dartmouth Reefs and Sea Caves. The conservation value of the reefs is said to lie in the fact that they have a much greater diversity of habitats (geologically and topographically) than is found in the other existing or proposed SACs in the same Regional Sea.[128]

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[126] Blue Marine Foundation website https://www.bluemarinefoundation.com/project/lyme-bay/ accessed 9 July 2019.

[127] 'Lyme Bay Fisheries and Conservation Website.' Lyme Bay Working Group Inaugural Meeting on 25th October 2011 Working Group Meeting Minutes Page http://lymebayreserve.co.uk/download-centre/files/Lyme_Bay_1st_Meeting_Minutes.pdf accessed 12 October 2016.

[128] 'Lyme Bay and Torbay candidate Special Area of Conservation cSAC' (*Joint Nature Conservation Committee*, 2016) <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030372> accessed 11 April 2016 section 3.2.1.

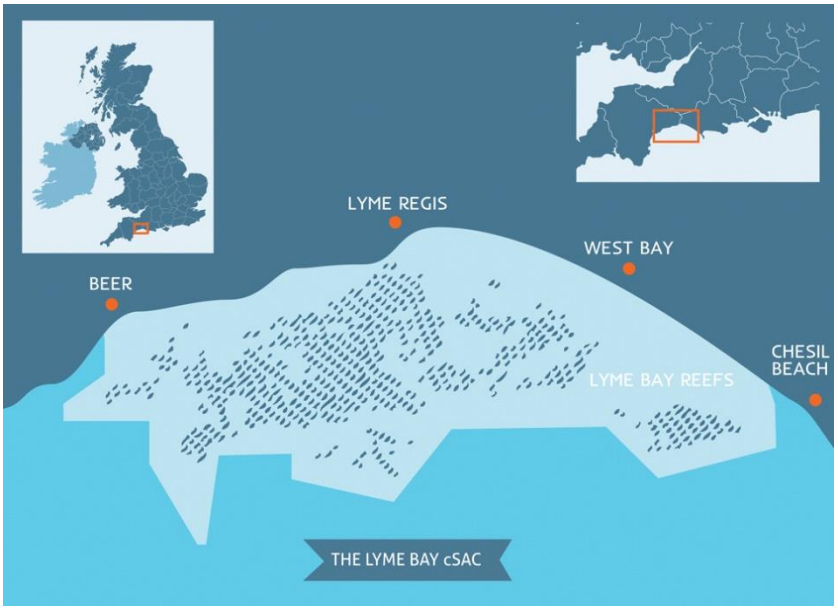

Diagram 5: Lyme Bay cSAC. Courtesy of Lyme Bay Fisheries and Conservation Reserve.

NE prepared the formal advice for the cSAC. In its assessment it lists a wide range of species supported by the reefs and caves noting that pink sea fans (*Eunicella verrucosa)* and the nationally rare sunset cup coral (*Leptopsammia pruvoti),* which are present and both of which are priority Biodiversity Action Plan (BAP) species.[129] The bay is one of only five areas in the British Isles where the sunset cup coral (*Leptopsammia pruvot)* is known to occur. The nationally scarce sponge (*Adreus fascicularis*) is also resident on these reefs and the nationally rare southern cup coral (*Carophyllia inornata*) can be found in small crevices in the Mackarel Cove reefs. The animals found vary between caves and many of the caves are large and complex. The assessment document notes that the reefs are highly sensitive to physical damage through abrasion from trawled fishing gear and the risk of removal of key species from the biotope.[130] The advice also noted that three main types of

[129] Ibid 11.
[130] Ibid section 5.1.2 .

reef: bedrock reef; stony reef; and biogenic reef were present within Lyme Bay and Torbay cSAC in all areas.[131]

The formal advice document provides helpful guidance on the UK Government's definition of three of the four themes identified as obligations that exist under the three legal regimes of international, EU, and UK law. This document states that *'all forms of environmental risk should be tested against the precautionary principle*' and sets out a fairly standard definition of the principle.[132] There is also a useful definition of what is meant by a *restorative* approach in terms of the conservation objectives of underlying the designation.[133] The submission also commits the UK to reviewing the advice contained within the document on the basis of new evidence that subsequently becomes available, and improved scientific understanding.[134]

The site is intended to form part of the Natura 2000 coherent European Marine Site network of SACs. Despite designation of the site as an SAC the UK fisheries authorities' jurisdiction to protect it will be limited. This is because most fishing around the UK is directly regulated by the European Commission under the CFP the exclusive rights to fishing grounds are limited to within 6 nm of the coastline. Outside this area, CFP quota for certain stocks and equal access rights for fishermen from all Member States will still apply.

[131] Ibid section 3.2.1.
[132] Ibid section 2.5.
[133] Ibid 14, footnote 20.
[134] Ibid section 1.

The Commission adopted the site in November 2011 as a Site of Community Importance (SCI). The cSAC is within the territories of both the Southern Inshore Fisheries Conservation Authority and Devon & Severn IFCA.

3.4 SUBSEQUENT DEVELOPMENTS IN LYME BAY

Since the 2008 closure a number of additional areas of the bay have been protected under a number of different designations. In 2013 an MCZ was designated in Lyme Bay at Chesil Beach and Stennis Ledges under the provisions of the MCAA.[135]

4. THE LEGAL FRAMEWORK FOR THE MANAGEMENT OF MCZs

This section will first analyse the powers the MCAA provides to the appropriate authorities for the management of MCZs in English waters. The provisions are broadly similar for the devolved administrations so will not be discussed here. The second section, will consider three brief case studies looking at the management of three selected MCZs in English waters.

The MCAA places a number of duties on any public authority[136] exercising a function that is capable of affecting (other than insignificantly) the protected features of the site, and any ecological or geomorphological processes that the MCZ depends upon.[137] This means that both the biotic and abiotic elements of the site must be considered by public authorities when exercising their functions. The Act

[135] The Chesil Beach and Stennis Ledges Marine Conservation Zone Designation Order 2013 SI 2013/5.
[136] The term 'public authority' is fully defined in s322 (1) of the MCAA and includes, *inter alia*, government departments, the Environment Agency, and local authorities. A comprehensive list of 'public authorities' is also contained in schedule 1 of the 2000 Freedom of Information Act.
[137] Marine and Coastal Access Act 2009) s125 (1) (MCAA 2009)

draws a distinction between public authorities, public bodies, and public office holders, which could create a degree of confusion.[138] For the purposes of this study, public authorities include government departments such as Defra, while public-bodies refers to non-departmental organisations, such as the MMO and IFCAs. This lack of a single regulatory body creates unnecessary complexity which should be resolved by amendments to the MCAA.

Public authorities have a general duty to exercise their functions, such as marine licencing or marine developments, such as breakwater construction or infrastructure development, in a manner which the authority considers best furthers the conservation objectives stated for the MCZ and, where this is not possible to exercise its functions in a manner which it considers will least hinder the achievement of those objectives.[139] Where an authority thinks the exercise of its functions will or might significantly hinder the conservation objectives of an MCZ, it has to notify the appropriate SNCB body of the fact.[140] There is a provision freeing the authority from this duty if there is standing advice from the SNCB for routine activities such as certain harbour works.[141] This provision would suggest that the various bodies acting in the marine environment should establish management plans for activities affecting, or with the potential to, affect an MCZ. However, this is not explicitly stated in s5 of the MCAA, and no detailed management plans could be located other than a brief document on the MMO website.[142]

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[138] Ibid s322.
[139] Ibid S125 (2).
[140] Ibid s125 (3).
[141] Ibid s125 (4) to (8).
[142] Marine protected areas: strategic management table page, MMO website, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/543755/MMO_Strategic_Man_table_March_2016.pdf accessed 20 November 2017.

Once notification has occurred the public authority must wait for 28 days from the date of the notification before commencing the proposed act.[143] There is, however, a provision allowing the authority to proceed as planned if the SNCB does not respond within 28 days.[144] Further the rule does not apply if the public authority regards the situation as '*urgent*'.[145] The Act, and its Explanatory Notes, do not provide any guidance on the definition of urgent, which could result in decisions being made, or challenged, on matters of opinion and interpretation. This may change as the Act matures and case law refines what the terms mean in law. The requirement on the authority to notify the relevant SNCB and to wait for a set period will only prevent harm to the MCZ or its protected features if the SCNB responds in a timely manner. In times of straitened public finances the SCNB may well struggle to respond if its workload is high or their resources are constrained. The section could, therefore, be strengthened by the addition of a duty on an SNCB to formally place a stop order on the proposed activity until it is able to respond more fully. This requirement does not apply where the statutory nature conservancy body has already given the authority advice or guidance on the matter.[146]

The MCAA also sets out the duties **f**or the relevant public authorities in relation to making certain decisions concerning activities, such as proposed infrastructure development or a dredge, that can affect a protected feature or any geological or geomorphological process that may affect an MCZ.[147] This provision means that they must notify the relevant SNCB and to have regard to any advice the SNCB may give. The provisions of s126 cover all types of consent, including activities such as

[143] Ibid, s125 (7).
[144] MCAA Explanatory Notes, para 357.
[145] Ibid para 357.
[146] MCAA 2009 s 125 (6) (n 137).
[147] Ibid s126.

dredging or infrastructure development and commercial fishing licensed by the MMO or IFCAs under Part 1 of the MCAA. It also catches planning permissions granted by local planning authorities, such as developments in the inter-tidal zone, which may impact on the MCZ.[148] What this actually means can only really be gauged by referring to the Explanatory Notes. These, unfortunately, contain a significant weakening of the section by specifying that the duty only applies '*so far as is consistent with the proper exercise of the authority's functions*' and only where this is likely to have a *significant* effect on the MCZ.[149] Unfortunately, this section does not apply where the effect is insignificant. This is purportedly to avoid capturing very '*minor matters*'.[150] This creates a potential loop hole in the legislation in that *significant* and/or *minor* are relatively imprecise terms. For example, is a significant effect on an MCZ one that passes a threshold in terms of the percentage of the area of an MCZ at risk of harm, or does it refer to the rarity of a protected feature? Whilst the courts may be skilled at weighing evidence of significance in other areas of legal endeavour, the gaps in the knowledge of the marine environment require a much more precautionary approach. Similarly, the question of the exclusion of insignificant effects as minor matters could turn on a matter of opinion in the sense that concerned citizens may view a particular risk of harm to an MCZ they value in a very different way to that of a public authority.

For example, an authority such as the Department of Business Energy and Industrial Strategy (BEIS) will have public policy objectives set for it by Government, such as the reduction of carbon emissions from energy production and offshore windfarms will form part of that role. The powers of consent for the construction of

[148] MCAA Explanatory Notes, para 360.
[149] Ibid para 355.
[150] Ibid para, 360.

generating stations had been vested in the Secretary of State of what is now BEIS.[151] The consent powers for electricity functions in the marine area were transferred to the MMO with the entry into force of the MCAA.[152] BEIS could argue that the best location for a wind farm, based on wind patterns, is within the boundaries of an MCZ and argue that its licencing of such a development is consistent with public policy. However, an MCZ is likely to enjoy great local support and in terms of public opinion any intrusion might be regarded as significant. Similarly, the requirement that exercise of a public authority's functions is only caught if it may have a *significant* effect on the MCZ ignores the fact that if a number of actions are permitted under this section they may have a cumulative effect that results in damage to the MCZ.

The power of the MMO to refuse to licence or otherwise permit an activity is also restricted if there is no other means of proceeding with the activity if three conditions are met:

1. the act cannot be carried out in any other way;
2. the benefit of the act to the public clearly outweighs the risk of environmental damage; and
3. the person seeking authorisation will take measures of equivalent environmental benefit to the damage that will be, or is likely to be, caused.[153]

In principle, the licencing regime should address these points, but the third of the above provisions is unsatisfactory in that it could be argued that in some cases the

[151] The Electricity Act 1989 s36.
[152] MCAA 2009 S12 (n 137).
[153] Ibid s126 (7).

licencing authority will require the advice from the relevant SNCB on what 'equivalent environmental benefit to the damage' means.

4.1 ACTIVITIES THAT COULD DAMAGE THE CONSERVATION OBJECTIVES OF MCZs

Although s126 of the MCAA does not specify the type of activities that may affect the ecological or geomorphological processes in an MCZ, NE has provided an indication of the pressures associated with the most commonly occurring marine activities and gives a detailed assessment of the feature/subfeature or supporting habitat sensitivity to these pressures.[154] Such activities have the potential to harm the environment in general, and that of MPAs in particular, so they are permitted on the grounds of necessity for economic and social reasons only where appropriate and require approval by the appropriate licencing authority. The main activities include aggregate extraction, including dredging and beach sand extraction. These can damage the fabric of the marine environment and disrupt the geomorphological processes of protected sites. In addition, dredging and aggregate extraction has the potential to affect the water quality of the marine environment and need to be managed to meet the objectives of the WFD.[155] Similarly, all commercial fishing activity in UK waters requires a licence. The MMO manages these activities through the marine licencing process, in the English inshore and offshore regions and the

[154] 'Natural England Website' (*Natural England*, 2016) <https://designatedsites.naturalengland.org.uk/Marine/FAPMatrix.aspx?SiteCode=UK0030373&SiteName=start point&SiteNameDisplay=Start+Point+to+Plymouth+Sound+and+Eddystone+SCI&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>.

[155] Directive 2000/60/EC.

Welsh and Northern Ireland offshore regions and it is also responsible for enforcement of any conditions attached to the licence.[156] .

Further powers exist under the MCAA to issue byelaws to prevent recreational activities such as bait digging and anchoring leisure craft within protected areas.[157]

4.2 AUTHORITIES WITH MANAGEMENT POWERS UNDER THE MCAA IN RELATION TO MCZS

Under the MCAA the two new bodies were established with responsibility for managing aspects of MCZs in in terms of furthering the conservation objectives of the sites and regulating potentially harmful activities. These are the MMO and the IFCAs and the responsibilities of these bodies will be analysed below.[158]

In addition, a number of other public authorities have some management responsibilities relating to MCZs but these will be discussed in relation to specific MCZs.

4.2.1 THE MARINE MANAGEMENT ORGANISATION

As was seen in section 5.2 of chapter three while the MMO has no powers to designate MCZs, it does have powers to help further the conservation objectives stated for an MCZ. It does this by regulating harmful activities by means of a licencing process for certain activities in English waters and by making byelaws

[156] 'Marine Management Organisation Website.' Do I need a marine licence page? https://www.gov.uk/guidance/do-i-need-a-marine-licence Accessed 1 September 2017.
[157] MCAA s129 (clauses c, d and e)
[158] IFCAs were established under s149 of the MCAA.

specifically for the protection of MCZs and SCs) in England.[159] In practice, the MMO leads on management between six and twelve nautical miles, and the relevant Inshore Conservation and Fisheries Authority (IFCA) leads within the nought to six nautical mile area.[160]

The MCAA placed specific duties on the MMO in respect of its marine licencing functions if a proposed activity is 'capable of affecting (other than insignificantly) the protected features of an MCZ or any ecological or geomorphological process on which the conservation of any protected feature of an MCZ is (wholly or in part) dependent'.[161] For example, bottom-towed fishing gear can damage reef-forming corals, and dredging can affect ocean currents. This change in currents or other damage may result in harm to valuable sediments, which may be listed as a protected feature in an MCZ Designation Order. In exercising its licencing powers the MMO must comply with the requirements of the Water Framework Directive and must ensure that any marine licence decision is compatible with the requirements of that Directive. This requirement of compatibility includes adopting a precautionary approach to ensure that water quality is maintained in coastal waters at a high level. In effect, conditions must be attached to marine licences, and other consents, to limit any deterioration.

Coastal developments, such as ports, slipways, or jetties have both marine and terrestrial components and, as a consequence, are subject to more than one authority having a regulatory function. This dual regulatory function arises from the

[159] MCAA 2009 s129 (1) (n 137).
[160] Marine Management Organisation website Understanding marine conservation byelaws https://www.gov.uk/guidance/marine-conservation-byelaws accessed 13 April 2017.
[161] MCAA 2009 S 126 (b) (n 137).

fact that local authority planning control extends to any part of the sea-shore to the low water mark.[162] These responsibilities, therefore, overlap with the marine planning powers of the MMO, which could result in the applicants for such developments in having to seek consent from more than one organisation

To simplify this process, a Coastal Concordat has been developed to provide a basis for agreements between the main regulatory bodies and coastal local planning authorities including Defra, the Department for Communities and Local Government (DCLG), the Department for Transport (DfT), the MMO, the Environment Agency, NE and the Local Government Association's Coastal Special Interest Group.[163] The aim is to, 'provide a single point of entry to the regulatory system so that applicants only have to contact one of the signatory bodies'. The single contact then signposts applicants to other bodies, or contacts them itself. This approach is intended to be the means of achieving a more efficient and effective way of working.[164] As such it is intended to be a mechanism by which the production of evidence supporting decision-making can be streamlined by using, where appropriate parallel tracking of assessments.[165] All parties with responsibilities connected with any consent are still required to give consent where relevant but the individual consents can be managed by the body acting as the single entry point.

The Concordat contains five high level principles which can be summarised as,

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[162] Local Government Act 1972, s72.
[163] 'A Coastal Concordat for England 11 November 2013 ' (*Department for Environment, Food and Rural Affairs* 2013) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/256234/coastal-concordat-20131111.pdf> 9.
[164] Ibid para 3.1.
[165] Ibid para 3.2.

- Applicants seeking regulatory approval should be provided with a single point of entry into the regulatory system for consenting coastal development that guides them to the organisations responsible for the range of consents, permissions and licences required for their proposed development.
- Regulators should agree a single lead authority for coordinating the requirements of EIA and or Habitats Regulations Assessments.
- Where opportunities for dispensing or deferring regulatory responsibilities are legally possible and appropriate, they should be taken.
- Where possible, at the pre-application stage, competent authorities and statutory advisors should agree the likely environmental and habitats assessment evidence requirements of all authorities at all stages of the consenting process.
- Where possible, regulators and statutory advisors should each provide coordinated advice to applicants from across their respective organisations.[166]

[166] Ibid Executive Summary 1.

There is no advice in the Concordat on what course of action other parties can take if the agreed lead body adopts a supine stance with regard to evidence supplied by an applicant other than a statement that the process does not remove any of the statutory responsibilities or duties from any of the other bodies involved in the process. The effects of such a situation will be examined in chapter five by examining a coastal development proposal that has the potential to impact upon The Manacles MCZ.

4,2.1.1 ENVIRONMENTAL IMPACT ASSESSMENT AND MARINE CONSERVATION ZONES

The MMO assesses licence applications for their impacts on MCZs. This assessment process has only two stages. In stage one; the MMO considers the question of whether there is a significant risk of the proposed activity hindering the conservation objectives of an MCZ.[167] The wording of this section implies that if the conservation objectives cannot be furthered then the applicant should consider if the activity can be carried out using other methods or in a different location.[168] In such circumstances the activity, if licenced, should be carried out in a manner which 'least hinders the achievement of the objectives'. That is to say, the Act will permit some harm in some circumstances.

The second stage of the assessment requires the applicant to demonstrate that the benefit to the public of granting the licence outweighs the risk of damage to the

[167] MCAA 2009 s125 (2) (n 137).
[168] 'Marine Management Organisation Website.' Marine Licencing: Impact assessment page, accessed 20 June 2017.

environment and that they will carry out measures of equivalent environmental benefit that will mitigate any damage.[169] This part of the assessment process will be carried out in conjunction with the MMO and the relevant SNCB.[170]

For waters from the mean low water mark up to 1nm mile from shore the MMO must make sure that any marine licence decision, for example in connection with dredging, is compatible with the WFD and any river basin management plan.[171] In practical terms, this means that any licensed project or activity should not cause or contribute to deterioration in water body status or jeopardise the water body achieving good status. For licence applications in this zone, the Environment Agency is the competent authority for the WFD and it advises the MMO on WFD issues before a licensing decision is made. Its assessments and conclusions inform the MMO decision.

As stated above, it is a requirement of the marine licence applications process that projects are to be carefully assessed with a view to understanding the likely impact of the proposed activity on the marine environment. Because of the nature of marine developments the MMO is the authority empowered to assess marine licence applications for their impact on MCZs. There is no required format for the environmental statement, but it must include the information set out in the 2007 Marine Work Regulations.[172] The information required is,

[169] MCAA 2009 s126 (7) (b).
[170] Ibid s127.
[171] Directive 2000/60/EC, Art 2 (7) (n 69).
[172] The Marine Worsks (EIA) Regulations 2007, Part 3.

I. comprehensive and includes a map identifying the location where the regulated activity will be performed and the extent of any operations which it would involve,
II. a description of the regulated activity which it would involve and,
III. a statement of the proposed working methods to be used in carrying out the activity,
IV. an environmental statement regarding the project,
V. a copy of the environmental statement must be provided to any other consenting authority.

Once an EIA consent decision has been made the MMO places a copy on the public register and a copy is given to the applicant and any other interested party.

In determining how to apply s126 in undertaking its marine licensing function, the MMO introduced an MCZ assessment process, to be integrated into existing marine licence decision making procedures. This applies to all new marine licence applications. This process is applicable to MCZs proposed by Defra up until the point they are designated.

The assessment process also addresses the general duties placed on the MMO in s25 of the MCAA with respect to furthering the conservation objectives of MCZs. As well as consulting with the SNCBs a wider consultation with other advisers may also be undertaken at this stage, in particular to provide additional and specific advice on socio-economic matters.

The duties placed on SNCBs under s127 of the MCAA are a critical component in the MMO"s ability to fulfil its duties in relation to ss 125 and 126. The MMO must notify the relevant SNCB, such as NE or if the MCZ is outside the seaward limits of the territorial sea, the JNCC and wait 28 days before considering the application and any advice given. There is no need to wait 28 days if (i) the SNCB so notifies, or (ii) the situation is urgent. [173] If EIA consent is given, a decision on whether to grant a marine licence can then be taken. If EIA consent is refused, the application may not be granted.

Throughout this process the MMO consults both the applicant and the SNCBs to identify changes if required that can be made to bring an environmental benefit equivalent to the likely damage. The MMO can also request that applicants to make proportionate environmental enhancement although this is to a degree weakened by a commitment on the part of the MMO to avoid disproportionate costs to the applicant.

The second EAC inquiry heard concerns from some witnesses that the ability of the MMO to perform its functions had been reduced, because the MMO's budget has been cut at a time its regulatory role is increasing as additional MCZs are designated.[174] The budget cuts may limit its ability to manage potential threats to MPAs resulting from the adequately assess licencing applications affecting MPAs.

The byelaws apply in any area in England and can be for the purposes of restricting activities, which are not controlled, for example, by the formal licensing regime.

[173] *Marine Conservation Zones and Marine Licencing* (Marine Management Organisation April 2013).
[174] MPAs revisited EAC

Therefore, the MMO does have the power to control some harmful activities. The acts that can be controlled by use of byelaws are those that threaten biodiversity, such as motorised recreation e.g. jet skiing, and wildlife watching if it disturbs sensitive species.[175] The Act also contains powers to make byelaws which prohibit or restrict the doing of anything in an MCZ that would interfere with the sea bed or damage or disturb any object in the MCZ.[176] Currently, there are byelaws in place to protect reef features by prohibiting the use of bottom towed fishing gear in four SCI around the English coast.[177] The prohibition in these areas applies only to bottom towed gear and other activities, such as potting, can presumably continue subject to the normal licencing regime. No evidence could be found on the MMO website, or elsewhere, of byelaws created to control motorised recreation such as jet skiing, and wildlife watching in sensitive areas, such as nursery areas for seals, and ground nesting areas for seabirds. The only evidence of enforcement actions found relate to transgressions of fisheries law e.g. use of illegal fishing gear or quota violations.

The EAC found that since 2013 the MMO and IFCAs have been working to implement over 30 byelaws.[178] However, the evidence submitted to the inquiry contained concerns about the adequacy of current management arrangements. One witness to the second EAC inquiry commented that '*there is virtually no management in them and there is very low ambition for management*' and that '*the*

[175] MCAA Explanatory Notes, para 368.
[176] MCAA 2009 s129 (f) (n 137).
[177] MMO Understanding marine conservation byelaws page https://www.gov.uk/guidance/marine-conservation-byelaws.
[178] *Environmental Audit Committee 'Marine Protected Areas Revisited' (2016–17) HC 597* ,para 19.

most damaging activities continue in most marine conservation zones'.[179] Examples quoted by the witness included aggregate dredging on the Goodwin Sands, breakwater construction at the Manacles and cable installation at Cromer Shoal.

In circumstances where there is an urgent need for a byelaw to protect an MCZ the MMO can make a byelaw without notifying the Secretary of State.[180] These powers are most likely to be used in cases where parties licensed under other parts of the Act are infringing the terms of the licence, for example if it is found that activities, such as dredging and the disposal of the dredged materials, is carried out in such a way as to harm an adjacent MCZ. For example, if the dredged material was contaminated, the MMO must publish notice of the emergency byelaw and draw it to the attention of those must likely to be affected by it.[181]

The MMO, therefore, has a range of management powers underpinned by some potentially punitive powers, such as fines or criminal prosecution that should enable it to manage MCZs and other MPAs under its jurisdiction. The MMO employs Marine Officers whose role is to ensure that anyone operating in English waters complies with the CFP, MCAA and other marine, environmental and sea fisheries legislation. This includes carrying out inspections, collecting and recording data, and giving advice and guidance including monitoring fish landings and inspecting marine construction sites. The MMO and its Marine Officers have a range of enforcement options available to them to ensure compliance with the provisions of the MCAA and to enforce its byelaws, ranging from oral advice through to the

[179] *Environmental Audit Committee Oral Evidence: Marine Protection Areas Revisisted.* (HC 597 31 January 2017 2017) para 19 second indent.
[180] MCAA 2009 s131 (1) (n 137).
[181] Ibid s131 (4).

imposition of a range of Statutory Notices defined under the MCAA in relation to licensable activities.[182]

There are a number of other enforcement powers available to the MMO in connection with illegal fishing activities anywhere in English waters, not just within MCZs.

To assist in making its contribution to the management of MCZs the MMO produces a summary MPA Strategic Management Table which summarises information about the sites.[183] The table covers MCZs, SPAs, SACs and cSACs. The table is not an exhaustive list of all relevant management activities being undertaken by all public authorities, but is a summary of the MMO's current priorities and gives a summary of the designated features, and relevant statutory nature conservation advice for each site.[184] To find the complete list of organisations with a lead role in the management of an individual MCZ it is necessary to refer to the appropriate MCZ factsheet.

4.3 INSHORE FISHERIES AND CONSERVATION AUTHORITIES

4.3.1.1 INTRODUCTION

[182] Marine Management Organisation Compliance and Enforcement Strategy (Undated) available on the MMO website https://www.gov.uk/government/publications/compliance-and-enforcement-strategy.
[183] Marine Management Organisation, 'Marine protected areas (MPAs): MMO strategic management table: March 2016.' (2016) <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/543755/MMO_Strategic_Man_table_March_2016.pdf> .
[184] 'Marine Management Organisation Website.' Guidance page https://www.gov.uk/government/collections/conservation-advice-packages-for-marine-protected-areas.

The coming into force of the MCAA dissolved the previous local regulatory bodies, the Sea Fisheries Committees, and in their place established IFCAs which have additional powers not previously available to their predecessors.[185] It is clear that the focus of the earlier legislation was on protecting marine living resources from over exploitation rather than preservation and conservation of the marine environment in its entirety. It is therefore a welcome development that, as successors to the old Sea Fisheries Committees, the IFCAs have been given additional powers including responsibility for conservation within their authority areas. The extended powers not only include ensuring sustainable inshore fisheries, but also to help achieve conservation objectives.[186]

4.3.2 LICENCING AND REGULATION OF INSHORE FISHERIES

Depending on the type of gear used, commercial fishing can have a significant impact on the conservation of protected features or species in the marine environment. For example demersal trawling can harm protected features of the seabed, whereas pelagic trawling may result in by catches, including some species of cetaceans. IFCAs are responsible for the regulation of inshore fisheries within their districts which includes such part of the English inshore region lying 6 nm from baselines. EU law recognises the UK's exclusive right to fish within 6nm of baselines. Foreign vessels fishing within the 6 nautical mile limit would be contravening EC legislation.[187] This delimiting of the UK's control is problematic for

[185] MCAA 2009 Part 6 Chapter 1 s149 (n 137).
[186] 'Association of Inshore Fisheries and Conservation Authorities Website' (2017) <http://www.association-ifca.org.uk/about-us/ifca-history> accessed 12 June 2017 IFCA history page.
[187] *IFCA Byelaw Guidance. Guidance on the byelaw making powers and general offence under Part 6, Chapter 1, Sections 155 to 164 of the Marine and Coastal Access Act March 2011* (Department for Environment, Food and Rural Affairs, London 2010, 2011), para 1.9.

MCZs extending beyond, or completely outside, the 6nm limit for two reasons. First, the UK will not be able to ensure the conservation objectives for the site beyond the six-mile limit are fulfilled, because it has no control of boats of other EU Member States beyond that limit. Second, without intensive surveillance fishermen may pursue their target species into the six-mile limit and, in addition to illegally harvesting fish, they may damage sites within the limit. In its area an IFCA must manage the exploitation of sea fisheries resources in that district in a sustainable way and to balance the social and economic benefits of exploiting the sea fisheries resources of the district with the need to protect the marine environment.[188]

Each IFCA is responsible for producing byelaws in respect of methods of fishing, or to prevent harm to protected features such as reefs within their own districts. [189] The MMO acts as a policy and legal adviser in the making of making IFCA byelaws. The IFCA will consult the MMO at various stages of the byelaw making process and the MMO will undertake quality assurance of byelaws and supporting evidence, before referring them to Defra for sign off by the Secretary of State.

Additionally, the MMO and the Environment Agency can also make fisheries byelaws in England within the 6 nm limit to protect MCZs from fishing activities or to protect migratory fish during important stage of their life cycle such as transitioning from salt water to fresh water and *vice versa*. IFCAs also enforce MMO nature conservation byelaws within the 6 nm limit. NE has byelaw making powers in

[188]MCAA 2009, s153 (n 137).
[189] Ibid s155.

intertidal SSSI and National Nature Reserves where they overlap with IFCAs, but guidance about their functions is not covered in the Defra document.[190]

In general, the scope of byelaws is different, but complementary, to those held by the MMO. In addition to the byelaws being implemented in conjunction with the MMO, IFCAs have put in place 27 new byelaws and 13 voluntary measures. They cover the following:

> The prohibition or restriction of the exploitation of sea fisheries resources in specified areas or periods or limiting the amount of resources that may be exploited or the amount of time a person or vessel may spend exploiting fisheries resources in a specified period;
>
> The prohibition or restriction of the exploitation of sea fisheries resources in an IFC district without a permit. IFCAs will be able to recover the costs of administering and enforcing a permit scheme, attach conditions to permits and limit the number of permits they issue under a particular scheme;
>
> The prohibition or restriction of the use of vessels of specified descriptions and any method of exploiting sea fisheries resources. The possession, use and transportation of specified items or types of items used in the exploitation of sea fisheries resources may also be prohibited or restricted. This would enable an IFCA to require the use of a particular method of sea

[190] *IFCA Byelaw Guidance. Guidance on the byelaw making powers and general offence under Part 6, Chapter 1, Sections 155 to 164 of the Marine and Coastal Access Act March 2011* para 1.7.

fishing or an item used in sea fishing (for example to reduce by-catch) by means of a prohibition on the use of other methods and items;

The protection and regulation of shellfisheries including, but not limited to, requirements for shellfish to be re-deposited in specified places and for the protection of shellfish laid down for breeding purposes and culch, which is the substrate/material on which the spat or young of shellfish may attach and grow;

To establish a district of oyster cultivation, allowing an IFCA to prohibit the sale of oysters between certain dates, and allows IFCA authorities to disapply the defence concerning the taking and sale of certain crabs and lobsters as set out in section 17(2) of the Sea Fisheries (Shellfish) Act 1967;

To make provision for monitoring the exploitation of sea fisheries resources. This includes requirements as to the fitting of particular equipment, the carriage of on-board observers and the marking or tagging of items used in the exploitation of sea fisheries resources;

To require people involved in the exploitation of sea fisheries resources in their district to provide them with specified information so that it is an offence if certain information is not provided.[191]

[191] Ibid para 6.4.

It should be noted that IFCAs also regulate activities such as recreational sea angling, bait digging and seaweed gathering which were previously not regulated by SFCs.[192] These powers attracted some controversy in the UK press when it was thought recreational angling from the beach would be caught under the CFP quota system.[193]

In circumstances where it considers there is an urgent need for a byelaw and that the need to make the byelaw could not have reasonably been foreseen, IFCAs can make an emergency byelaw.[194] An emergency byelaw comes into force on the date specified in the byelaw, and remains in force (unless revoked or extended) for such period, not exceeding 12 months, as specified in the byelaw.[195] An IFCA must notify the Secretary of State within 24 hours of making an emergency byelaw and the Secretary of State has the power to revoke the emergency byelaw. Emergency byelaw can only be extended once, and by no more than 6 months. [196] Extensions may only be approved by the Secretary of State if during the period the emergency byelaw has been in force, the IFCA has used its best endeavours to make a byelaw that will make the emergency byelaw unnecessary, and that there would be a significant and adverse effect on the marine environment if the approval was not given.[197]

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[192] Ibid para 3.2.
[193] The Independent 1 November 2014 available at https://www.independent.co.uk/environment/anger-over-eu-plans-to-limit-anglers-to-catching-one-sea-bass-a-day-to-combat-worrying-decline-9832949.html accessed 9 July 2019.
[194] MCAA 2009 s157 (n 137).
[195] Ibid s157 (3). Any such byelaw remains in place for a period not exceeding twelve months unless extended by the Secretary of State.
[196] Ibid s157 (5).
[197] Ibid, s 157 (6).

Whilst designating MPAs is important, their benefits will only be realised if these areas are also effectively managed. Since 2013, the IFCAs and the MMO have been working to implement over 30 existing bye-laws that apply between 0 and 12 nm. The IFCAs have also put in place 27 new by-laws and 13 voluntary measures.

4.3.3 IFCAs AND THE CONSERVATION OF MCZ DESIGNATED FEATURES

An IFCA must seek to ensure that the conservation objectives of any MCZ in the district are furthered and may make byelaws to that end.[198] This duty is in addition to their responsibility for managing inshore fisheries. The byelaws are specific to the circumstances of each IFCA. For example the Cornwall IFCA has passed byelaws forbidding the use of bottom towed gear in The Manacles MCZ.[199] It has a similar byelaw prohibiting bottom towed gear in European Marine sites in its district.[200] These byelaws may be considered as traditional management measures for the conservation of designated features. For the purpose of enforcing such byelaws, an IFCA may appoint persons to be inshore fisheries and conservation officers (IFCA Officers).[201] IFCA Officers have powers to enforce byelaws and to pursue vehicles or vessels if necessary. Contravention of byelaws is punishable by a fine on conviction by a court.

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[198] Ibid s154.

[199] 'Cornwall Inshore Fisheries and Conservation Authority Website' (2017) <http://www.cornwall-ifca.gov.uk/> accessed 12 June 2017 The Manacles Marine Conservation Zone (Fishing Restrictions) Byelaw 2017 accessed 10 September 2017.

[200] Cornwall Inshore Fisheries And Conservation Authority website Closed Areas (European Marine Sites) No 2 Byelaw https://secure.toolkitfiles.co.uk/clients/17099/sitedata/Byelaws%20and%20orders/Cornwall_SFC/Closed-Areas-EMS-byelaw-No-2.pdf accessed 8 July 2019.

[201] MCAA 2009 s165 (n 137).

Currently, of the ten IFCAs in English waters only four, Cornwall, Eastern, North Western, Northumberland and Sussex have published byelaws relating to MPAs in their areas. All have prohibitions on the use of bottom towed gear in protected areas while Sussex also has prohibitions covering angling and digging for bait within four MCZs in its area. It is disappointing to note that byelaws have not been introduced to prevent *inter alia* activities such as anchoring in seagrass beds.

There is a potential threat to MCZs and protected species from boats operating under the CFP regime for MCZs that extend beyond the 6nm limit or which are wholly outside that limit. This will be examined in chapter five by reference to an attempt by the UK to regulate pair trawlers to protect cetaceans in the South West of England.

Of course, there may be a difference in a public authority having a duty to exercise their powers correctly and what actually happens in practice. This will now be addressed by reviewing the conservation objectives for each site and the bodies with management responsibilities for each of the sites. This will be followed by an analysis of the powers available to those bodies to regulate activities that may affect the conservation objectives set for an MCZ.

5. EXAMPLES OF MCZ MANAGEMENT

To illustrate how the management of MCZs is actually effected three case studies follow. The MCZs selected for the case studies are Whitsand and Looe Bay, The Manacles and Chesil beach and Stennis Ledges.

5.1 WHITSAND AND LOOE BAY MCZ

The conservation objective for the Whitsand and Looe Bay MCZ is that the protected features, 'so far as already in favourable condition, remain in such condition and, if not already in favourable condition, be brought into such condition and to remain in such condition'.[202] Favourable condition with respect to a broadscale marine habitat or marine habitat within the MCZ means that its extent is 'stable or increasing'.[203] In addition, its structures and functions, its quality, and the composition of its characteristic biological communities should be such as to ensure that it remains in a condition which is healthy and not deteriorating. This means that the 'quality and quantity of its habitat and the composition of its population in terms of number, age and sex ratio are such as to ensure that the population is maintained in numbers which enable it to thrive'.[204] There is a degree of leeway in the Order in that it states that any temporary deterioration in condition is to be disregarded if the habitat is sufficiently healthy and resilient to enable its recovery.[205]

The management objective is to maintain all the broadscale habitats and two of the species of fauna, the Stalked Jellyfish and the Ocean quahog in favourable condition. The other two marine fauna species Pink sea-fan (*Eunicella verrucosa*) and the Sea-fan anemone (*Amphianthus dohrnii*) are to be managed to aid recovery to favourable condition.[206]

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[202] The Whitsand and Looe Bay MCZ Designation Order.
[203] Ibid s5 (2) (a) (1).
[204] Ibid s 5 (2) (b).
[205] Ibid s5 (2) (b).
[206] *Whitsand and Looe Bay MCZ Factsheet (MCZ048)*

There are seven lead organisations listed as responsible for the activities that may affect the MCZ. These include the MMO; Cornwall IFCA; the Environment Agency; the Department for Energy and Climate Change; Local Harbour authorities; the DfT; and NE. The details of this fragmented approach to governance can be seen in their individual responsibilities in respect of this MCZ which are set out in the in the MCZ Factsheet.[207] For example both the Cornwall IFCA and the MMO have responsibility for the regulation and management of fisheries within the 6 nm limit, while the Environment Agency has responsibility for migratory and freshwater fish. Similarly, both DfT and the Harbour Authorities have responsibilities in respect of harbours.

5.2 THE MANACLES MCZ

The Order designating the Manacles MCZ sets out exactly the same conservation objectives for the site as those described above for the Whitsand and Looe Bay site.[208]

The MMO's Strategic Management table outlines current management actions for the site which consists of assessing the risk of fishing gears on site interest features. It also notes that NE and the MMO are continuing to monitor risks posed by recreational activities.[209]

[207] Ibid Annex.
[208] The Manacles Marine Conservation Zone Designation Order 2013 SI 2013/13 s5.
[209] 'Marine Management Organisation Website' https://www.gov.uk/government/organisations/marine-management-organisation accesed 1 July 2015.

Once again there are seven lead organisations listed as responsible for the activities that may affect the MCZ. These include the MMO; Cornwall IFCA; the Environment Agency; the Department for Energy and Climate Change (DECC); Local Harbour authorities; the DfT; and NE. The details of this fragmented approach to governance can be seen in their individual responsibilities in respect of this MCZ which are set out in the in the MCZ Factsheet. For example three bodies, the MMO, the IFCA and the Environment Agency all have responsibility for fisheries management albeit in different zones. Similarly, the MMO, the Harbours authorities and local authorities have management responsibilities for the port and coastal waters within their jurisdiction. Local authorities have a role to manage, regulate and facilitate activities at the coast. These include management of coastal recreation, tourism, economic regeneration, flood protection, spatial planning and coastal zone and estuary management and the consequences of this sharing of responsibility can create some difficulties in dealing with threats to the MCZ.

The Cornwall IFCA issued a fishing restriction byelaw prohibiting the use of bottom towed gear following concerns about abrasion and other damage to parts of the protected reefs.[210]

5.3 CHESIL BEACH AND STENNIS LEDGES MCZ

The MCZ runs along the length of' Chesil Beach from Abbotsbury, to Weston on the Isle of Portland in the south-east. The site covers an area of approximately 37 km^2 and extends seawards to include the reefs of the Stennis Ledges, an area of rocky

[210] The Manacles Marine Conservation Zone (Fishing Restrictions) Byelaw 2017. Cornwall IFCA website https://www.cornwall-ifca.gov.uk/Byelaws_Regulations.

ridges and rugged seabed.'[211] Governance of the bay is fragmented with seven lead organisations each of which has responsibility for different aspects of governance of activities within the MCZ.

The protected features are described as high energy intertidal rock and intertidal coarse sediment both of which are broad scale marine habitat.[212] In addition, the MCZ is intended to protect two species of marine fauna native oyster (*Ostrea edulis*) and the pink sea-fan (*Eunicella verrucosa*). The sea-fan is extremely slow-growing and very sensitive to damage. This is because it attaches itself to 'rocky seabed habitats and never moves during its adult life'. It is, therefore, at extreme risk if exposed to certain types of mobile trawls such as scallop dredges.

The rocky habitats within the MCZ are rich in plants and animals such as sponges and sea mosses, and also provide a suitable habitat for inshore commercial fisheries species, such as common lobster and crab. Native oysters are also found on the rocky habitats within the site. They are under pressure from invasive species such as the slipper limpet and the American oyster drill snail. Sediments such as gravels, pebbles and coarse sands are also found within the intertidal area of the site. This habitat supports species such as tiny shrimp-like creatures that can live amongst the sediment, and provides an important feeding area for wading birds.[213]

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[211] 'Chesil Beach and Stennis Ledges Marine Conservation Zone Fact Sheet' (*DEFRA*, 2016) <http://publications.naturalengland.org.uk/publication/5501887130370048?category=1721481> accessed 14 November 2016

[212] *Chesil Beach and Stennis Ledges Marine Conservation Zone Factsheet* (Department for Environment Food and Rural Affairs 2013).

[213] Ibid.

The MCZ Factsheet lists the individual responsibilities of the same seven bodies responsible for management of activities in the MCZ, which are identical to the above examples.

6. PROBLEMS IDENTIFIED WITH THE CURRENT APPROACH TO REGULATION

This fragmentation of regulatory responsibility may allow each of the nominated regulators to interpret the law differently, or even lead to regulatory capture. As was seen in chapter one the International Law Commission describes the interpretation of law as 'an art, not an exact science'. In cases where there are multiple regulators each may have a different understanding of the 'ordinary meaning of words' particularly when some, such as ecosystem or ecological coherence are derived from the biological sciences. This lack of an integrated approach to regulation is a serious flaw when operating in an area such as the marine environment where knowledge is known to be incomplete. Holder, albeit in slightly different circumstances, alludes to this problem in respect of environmental matters when saying there is 'a fundamental flaw in the process of environmental integration and post assessment monitoring'.[214] Substituting the word 'management' for 'monitoring' illustrates the problem with current MPA management in UK waters.

The act of designating an area as an MCZ is not therefore, of itself, sufficient to protect the fabric of the marine environment or its protected species. They will only fulfil their purpose if they are effectively managed and the importance of highly

[214] Holder J and Lee M, *Environmental protection, law and policy : text and materials* (2nd edn, Cambridge University Press 2007), 464.

protected 'reference areas' is recognised as an essential component of any ecologically coherent and well-managed network of MPAs. At its second inquiry into MPAs, the EAC concluded that the Government should 'commit to the designation of such reference areas within MPAs in each biogeographic region, using best available evidence assessed against the Ecological Network Guidance criteria'.[215] The committee also believed that reference areas would provide the Government with a means to assess how well the MPA network is performing and to understand the potential for recovery in the absence of human activities. This information would help the development of management targets for other sites.[216] They considered that rather than 'reference areas,' the sites should be referred to as 'recovery areas' to more accurately reflect the conservation objectives of such sites.

The requirement for the regulating organisations to obtain advice from the JNCC, or its constituent national bodies where appropriate, does, at least, provide some scope for the adoption of a co-ordinated approach to their management. However, this does require a number of bodies, with sometimes conflicting objectives, to follow the advice given. Locating the power to both licence potentially harmful marine actives and to participate in management of MPAs within the MMO, or its equivalent in the devolved administrations, is unsatisfactory. The reality is that the receipt of revenue from licencing activities, such as dredging, could leave the MMO, or its equivalents conflicted, because their management of the natural environment does not provide any sort of revenue. It is difficult, therefore, to see what incentive there is for the MMO or its equivalents to expend too much time on scrutinising documents supplied by licence applicants or to refuse applications for marine

[215] Marine Protected Areas Revisited, para 36 (n 228).
[216] Ibid para 37.

licences. This must be addressed by assigning statutory powers for MPA conservation in a single body, which is not conflicted by the loss of revenues from rejecting licence applications of potentially harmful activities in them.

As noted, the MCAA places a general duty on public authorities to exercise their functions in ways which will not affect the conservation objectives for the site. To be able to do this the public authority needs, at an early stage, to identify any activities with the potential to harm the site and its protected species. The next section addresses the main activities that might damage MCZs, as identified by Natural England, and looks at the theory of how these activities should be regulated. The reality of what actually happens will be the subject of chapter five.

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7. MANAGEMENT OF UK MPAs DESIGNATED UNDER OTHER INSTRUMENTS

As was discussed in chapter two, MCZs are not the only type of MPA designated in UK waters. Sites designated under Ramsar, ASCOBANS and as EMS must be managed if they are to contribute to the health of the marine environment. The designation process for each of these types will now be reviewed.

7.1 MANAGEMENT OF MARINE SSSIs and ASSIs

Most SSSI and ASSI are privately owned and are managed under the guidance of the appropriate SNCB. The SSSIs/ASSI designation may extend into intertidal areas out to the jurisdictional limit of local authorities, generally Mean Low Water in

England.[217] However, prior to the passing of the MCAA in England and Wales there was specific provision for marine SSSIs/ASSIs beyond low water mark. Under the MCAA there is now provision to de-designate an area of a SSSI in England or Wales if it is below the low water mark if it would be more appropriately managed as an MCZ.

7.2 RAMSAR

Contracting Parties are expected to manage their Ramsar Sites so as to maintain their ecological character and retain their essential functions and values for the future. Management of UK Ramsar sites is the responsibility of the relevant national SNCB overseen by the National Ramsar Committee who act as an adviser to the Government on the implementation of the Convention. Many of the UK's Ramsar sites are also listed as marine SPAs and as such they are also subject to the obligations arising from that designation.

Information sheets for each of the UK's Ramsar sites are contained on the JNCC website.[218] The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant SNCB. Each site information sheet contains the name and address of the management authority, which is normally also the relevant national SNCB. The information sheets set out the conservation measures that have been taken and those outstanding which provide a clear picture of how the site is being managed. Individual sites have different patterns of land tenure or ownership and

[217] MCAA 2009 Schedule 13 (n 137).
[218] 'Joint Nature Conservation Committee (JNCC) Website' Designated and Proposed Ramsar sites in the UK and Overseas Territories & Crown Dependencies page http://jncc.defra.gov.uk/page-1389.

this can impact on approaches to management where part or all of the site may be in private ownership. This approach of co-operative management could be developed to ensure that people, such as commercial fishermen, who consider they have 'property rights' in other types of protected areas of the marine environment, such as MCZs, could continue to an have those rights respected.

Projects which have the potential to significantly affect the environment of a UK Ramsar site must apply for a marine licence to carry out that activity. The MMO can only issue a licence if an appropriate assessment is made of the likely impact of the project on the site.

7.3 OSPAR

An analysis of the UK's nominations shows that all sites are also designated as SPA's or SAC's under EU law. The area of individual MPAs varies from 1.2km^2 (e.g. Killough Bay in 2011) to 12, 3 km^2 (Dogger Bank).[219] The network consisted almost entirely of SACs and SPAs designated under the EU Habitats and Birds directives and their future status post-Brexit will need to be resolved. As such, the MPAs were subject to the management requirements of the two EU directives. The one exception is Ramsey Marine Nature Reserve (MNR) adjacent to the Isle of Man (IoM). The IoM is not part of the EU. Therefore the MPA was developed in a partnership between the Department of Environment, Food and Agriculture (DEFA)

[219] UK MPA Datasheets available at http://mpa.ospar.org/home_ospar/mpa_datasheets?recherche=2

and the Manx Fish Producers' Organisation (MFPO) with input from other users of the area and the wider community.[220]

A database of all OSPAR designated MPAs is searchable by a number of criteria including by country although users are cautioned, *'Warning: all data are not included in the database yet, more data will be forthcoming'.*[221] Certainly, of the 245 MPAs listed for the UK only Dogger Bank, Pen Llyn A`R Sarnau / Lleyn Peninsula and the Sarnau, and Stanton Banks have any real detail, including an absence of management plans as required under the Convention. A similar situation exists for many of the other Parties to the Convention. It is not clear whether or not the OSPAR Commission have the data, but has not yet published it, or if the UK and other countries have not submitted the required information as required under the Convention. The lack of information prevents an independent assessment being made of the UK's compliance with its obligations under OSPAR. Instead, it is necessary to rely upon the Commission's own assessments in the Parties collectively meeting their obligations.

At the time of writing the OSPAR website does not show any management plans for the UK sites listed under that designation.

7.4 MANAGEMENT OF EUROPEAN MARINE SITES

[220] 'Ramsey Marine Nature Reserve Zones' (*gov.im*, 2016) <https://www.gov.im/categories/the-environment-and-greener-living/protected-sites/marine-nature-reserves/ramsey-marine-nature-reserve/ramsey-marine-nature-reserve-zones/> accessed 21 October 2016 .

[221] 'OSPAR Commission MPA datasheets.' (*OSPAR Commission*, 2016) <http://mpa.ospar.org/home_ospar/mpa_datasheets?recherche=2> accessed 10 August 2016 .

The Habitats and the Birds Directives set out broad objectives for site management rather than providing a prescriptive set of rules for site management. This is unsurprising in the sense that Member States are entitled to transpose Directives into their national law in a manner appropriate for their own circumstances. In the Natura 2000 network, Member States are required to encourage the management of features of the landscape which are of major importance for wild fauna and flora.[222] How this is achieved is up to the individual Member States.

EMS in the territorial sea adjacent to England and Wales are subject to management measures under the provisions of the Habitats and Species Regulations.[223] Scotland has separate arrangements. EMS situated between 12 and 200 nm from the UK baseline are managed under the provisions of the Offshore Habitats Regulations.[224] The wording of both sets of Regulations is consistent with the provisions of the Habitats Directive in that the Regulations state that the relevant authorities, or any of them, ***may*** establish for an EMS site a management scheme [emphasis added]. The obligation on Member States under the Habitats Directive is to '*establish the necessary conservation measures involving,* ***if need be****, appropriate management plans specifically designed for the sites*'.[225] The net effect of this is that there is no statutory requirement for the implementation of management schemes for EMS under the Habitats Directive. However, under the Habitats Regulations the appropriate authority may, after consultation with the statutory nature conservation body restrict an activity in certain circumstances or in a particular manner, if it would be likely to destroy or damage the flora, fauna, or

[222] Directive 2009/147/EEC Art 10 (n 196).
[223] Conservation of Habitats and Species Regulations 2010 Regulation 36.
[224] The Offshore Marine Conservation (Natural Habitats &c) (Amendment Regulations 2010 SI 2010/491, Regulations 19 to 21.
[225] Directive 2009/147/EEEC Art 6.1 (n 196).

geological or physiographical features by reason of which the land is a European site.[226] This can be achieved through the issue of a stop notice if considered appropriate.[227] It is, of course, permissible under EU law to introduce higher non-discriminatory standards than those set out in the original Directive and this should be considered.

JNCC notes that this means that establishing management schemes is optional for relevant and competent authorities under the Habitats Regulations and Offshore Habitats Regulations. The Regulations place a general duty on all statutory authorities exercising legislative powers to perform these in accordance with the Habitats Directive, although, of course, management plans are not mandatory.[228] JNCC suggest that management schemes can be best achieved by providing a framework for management and promoting cooperative working with other relevant/competent authorities, especially on large or complex sites.[229] There are, however, five organisations that have responsibilities for management of EMS in the English inshore area and for managing UK offshore sites. Each has its own set of responsibilities, which suggests that a clear statement on the management of the sites is vital to their success. As part of the requirement for a site to be included in the Natura 2000 network, Member States must complete a Standard Data Form for each site showing the protected features and the management approach for the site for submission to the EU Commission. Sampling of the forms for EMS located in

[226] Conservation of Habitats and Species Regulations 2010 Regulation 25.
[227] Ibid Regulation 26.
[228] Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 SI 2007/1842, Regulation 19
[229] 'Management of the UK's European Marine Sites (EMS)' (*Joint Nature Conservation Committee (JNCC), Monkstone House, City Road, Peterborough, PE1 1JY*, 2016) <http://jncc.defra.gov.uk/page-4215> accessed 1 November 2016.

UK waters show that none of them have the section on management schemes completed.

The closure of the Darwin Mounds area, referred to in chapter three, was accomplished through the mechanism of the CFP Regulation and, as such, it was immediately binding on Member States. Since the closure, the area has been designated as an SAC under the Habitats Directive. The conservation objective for the SAC is to protect a deep cold water coral reef from damage by bottom-trawling. It has been noted that there is an inherent tension between the legal approaches to nature conservation and fisheries management in Europe, which is of particular importance when seeking to conserve habitats or species that are at risk from fishing activities.[230] Unfortunately, in common with others sampled the Natura 2000 Standard Data Form records that no management plan had been prepared at the time it was last updated, although, as stated above it is a discretionary requirement.[231]

In practice the management approach adopted is less strategic and focusses on the licencing of certain activities that may harm or hinder the conservation objectives for the site. This is handled mainly by the MMO who have the power under s129 of the MCAA to make byelaws for the protection of an EMS in English inshore waters. The Scottish and Welsh devolved administrations have similar powers. Defra, rather than the MMO, is responsible for all offshore sites in UK waters. Where a project may have a significant effect on a European site the applicant must obtain a licence

[230] Elizabeth M. De Santo, 'The Darwin Mounds special area of conservation: Implications for offshore marine governance' 41 Marine Policy 25.
[231] 'Joint Nature Conservation Committee (JNCC) Website' http://jncc.defra.gov.uk/protectedsites/sacselection/n2kforms/UK0030317.pdf

from the MMO or the equivalent body in the devolved administration. The MMO, or its devolved equivalent, must make an assessment of the implications for that site in achieving the conservation objectives. The information required includes,

> the location of the project in relation to any European site
> the interest features and conservation objectives of the European site
> an indication of the means by which the plan or project could impact upon the conservation objectives and designated features of the site and a description of any such effects
> the potential for impact in combination effects with other plans or projects
> proposed mitigation measures

The MMO, or its devolved equivalents, can only grant a licence having decided that it will not adversely affect the integrity of the site, unless there are imperative reasons of overriding public interest.

The management of EMS does not take account of any existing or potential socio-economic uses of an area.[232] This difference in the approach to the management of EMS compared to that of MCZs is that if a proposed plan action is likely to have negative implications for an EMS, and there are no alternative solutions, then the plan or project can only be carried out if there are imperative reasons of overriding public interest. This can include those of a social or economic nature but the Member State must take all compensatory measures necessary to ensure that the

[232] *Marine Protected Areas Revisited: Government Response to the Committee's Tenth Report of Session 2016–17* Wildlife and Countryside Link published written evidence (MPAOO23).

overall coherence of Natura 2000 site is protected.[233] The fact that no management measures appear to have been entered onto the Natura 2000 data forms for EMS is highly unsatisfactory, but not unlawful. The Directive merely requires Member States to establish site specific management plans ***if need be*** to further the conservation objectives of the site [emphasis added]. This equivocation effectively means that the management of EMS could be ignored until damage occurs, which may be too late. The requirement to develop management plans for EMS should be placed on a statutory footing.

There is, however, an exception to the freedom to take compensatory measures. This is that where a site hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are:

- those relating to human health or public safety,
- to beneficial consequences of primary importance for the environment or,
- If the Commission has expressed an opinion that there is some other imperative reasons of overriding public interest.[234]

This exception provides a much stronger degree of protection than the provisions governing the management of MCZs.

The Government has confirmed that UK MPAs designated under EU law i.e. SACs and SPAs, of which over 200 have been designated under the Birds and Habitats Directives, will be transferred into English law via the European Union Withdrawal

[233] Directive 2009/147/EEC Art 6 (4 (n 196).
[234] Ibid Art 16 (1) ©.

Act when it is passed. If the much stricter management restrictions applying to priority natural habitat types and/or a priority species under the Habitats Directive are not replicated in UK law then there will be a serious reduction in the protection of some MPAs. The Government informed the EAC that it did not intend to remove any "designations or any protections", but regrettably the Minister emphasised to the EAC that no final decisions had been made as to how this process would be carried out.[235] This lack of clarity on future arrangements for UK EMS is unsatisfactory for the future management of the sites.

Under the current EU governance arrangements, successive governments have been able to be held to account for environmental actions. This is because, under EU law, citizens have been able to challenge Government policies in the European Court of Justice (ECJ). For example, as shown in the Darwin Mounds case the fact that when the EU Habitats Directive was originally transposed into UK law, the UK Government argued that it only applied out to 12 nautical miles could be challenged. As was shown earlier, Greenpeace challenged this view and were able to take the UK Government to court and argue that it was applicable out to 200 miles. The case was heard by the ECJ which found against the Government and said that the Directive applied to the UK continental shelf up to a limit of 200 nautical miles.[236] This will not necessarily be possible post Brexit if, as seems likely, oversight by the ECJ is ended. The reporting, monitoring, evaluation and enforcement structures for EMS under EU law need to be preserved through transposition into UK law. Logically this would be achieved by means of amendments to Part 5 of the MCAA

[235] *Marine Protected Areas Revisited: Government Response to the Committee's Tenth Report of Session 2016–17,* para 41.
[236] *Case C-6/04 Commission v United Kingdom [2005] ECR I - 9017.*

and the introduction of a single unified management approach for EMS and other UK MPAs.

8. SUMMARY

The bodies responsible for the regulation and management of UK MPAs may be summarised as follows;

Bodies with powers to manage UK MPAs

Designation type	Country	Inshore/ offshore	Regulator
Ramsar sites with marine components	England	Inshore	The same as the underpinning SAC or SSSI.
	Wales	Inshore	The same as the underpinning SAC or SSSI.
	Scotland	Inshore	The same as the underpinning SAC or SSSI.
	Northern Ireland	Inshore	The same as the underpinning SAC or SSSI.
SSSIs with marine components	England	Inshore	Natural England
	Wales	Inshore	Natural Resource Wales
	Scotland	Inshore	Scottish National Heritage
ASSIs with marine components	Northern Ireland	Inshore	Northern Ireland Environment Agency (NIEA)
Special Areas of Conservation	England	Inshore	Department for Environment, food and rural affairs (Defra), Environment Agency, Department for Business Energy and Industrial Strategy (BEIS), Association of Inshore Fisheries and Conservation Authorities (IFCA), Marine Management Organisation (MMO).
	UK	Offshore	Department for Business Energy and Industrial Strategy (BEIS), Marine Management Organisation (MMO), Department for Environment, food and rural affairs (Defra), Marine Scotland.
	Wales	Inshore	Department for Business Energy and Industrial Strategy (BEIS), Natural Resources Wales, Welsh Government.
	Northern Ireland	Inshore	Department Agriculture Environment and Rural Affairs (DAERA), Northern Ireland Environment Agency (NIEA)
	Scotland	Inshore	Scottish Environmental Protection Agency (SEPA), Marine Scotland.
Special Protected Areas	England	Inshore	Department for Environment, food and rural affairs (Defra), Environment Agency, Department for Business Energy and Industrial Strategy (BEIS), Association of Inshore Fisheries and Conservation Authorities (IFCA), Marine Management Organisation (MMO).
	UK	Offshore	Department for Business Energy and Industrial Strategy (BEIS), Marine Management Organisation (MMO), Department for Environment, food and rural affairs (Defra).
	Wales	Inshore	Department for Business Energy and Industrial Strategy (BEIS), Natural Resources Wales, Welsh Government.
	Northern Ireland	Inshore	Department Agriculture Environment and Rural Affairs (DAERA), Northern Ireland Environment Agency (NIEA)
	Scotland	Inshore	Scottish Environmental Protection Agency (SEPA), Marine Scotland.
Marine Conservation Zones	UK	Offshore	Department for Business Energy and Industrial Strategy (BEIS), Marine Management Organisation (MMO), Department for Environment, food and rural affairs (Defra).
	England	Inshore	Department for Environment, food and rural affairs (Defra), Environment Agency, Department for Business Energy and Industrial Strategy (BEIS), Association of Inshore Fisheries and Conservation Authorities (IFCA), Marine Management Organisation (MMO)
	Wales	Inshore	Department for Business Energy and Industrial Strategy (BEIS), Natural Resources Wales (NRW), Welsh Government.
	Northern Ireland	Inshore	Department Agriculture Environment and Rural Affairs (DAERA)
Nature	Scotland	Offshore	Department for Business Energy and Industrial Strategy (BEIS),

Conservation MPAs			Marine Scotland.
	Scotland	Inshore	Department for Business Energy and Industrial Strategy (BEIS), Scottish Environmental Protection Agency (SEPA), Marine Scotland

Table 2 Developed with the assistance of the JNCC

The EAC bemoaned the absence of a clear lead agency to drive effective co-ordination of protected areas. It suggested that the MMO might be given that role, but if so the Government would need to ensure that the organisation's planning and resources would allow it to discharge that responsibility effectively. On that basis the Committee suggested that the Government should provide its assessment of the budget and resources that the MMO will make available to manage the MCZs, and how any efficiencies will affect the level of MCZ management and enforcement that the organisation will be able to provide.[237]

9. CONCLUDING REMARKS

The management and regulation of MPAs in UK waters is divided among many organisations, each with their own priorities, which can conflict. This potential for conflict is compounded by the much less stringent provisions governing MPA management under the MCAA compared to the Habitats Directive. The MCAA allows the MMO to take into account any economic or social consequences arising from a plan affecting an MCZ. This is a much lower threshold than the one set under the Habitats Directive. In general, plans or projects likely to have a negative effect on EMS can only be carried out for imperative reasons of overriding public interest and compensatory measures can be taken. If sites contain habitats or species of priority interest, then before a plan could proceed it would require an opinion from the Commission. If a single regulator was created to manage all types of UK MPAs then a much more co-ordinated approach could be adopted to the conflicts arising from the tensions between conservation and exploitation of the

[237] *Environmental Audit Committee 'Marine protected areas' (2014-15) HC 221 2014,* Summary page 3.

marine environment by means the adoption of a precautionary approach whereby the effects on the wider ecosystem could be emphasised.

This study found no evidence of management plans for MCZs either at the point of designation or subsequently. The benefits of MPAs will only be realised if these areas are effectively managed. Consequently, the MMO and IFCAs or a new unitary independent regulator should be tasked to make this the primary consideration in management and decision-making.[238] The effect of this is that there is currently 'very little ambition for management of the sites and damaging activities continue in most MCZs'.[239]

The Government's default setting for managing MPAs appears to be to apply a top-down governance model, albeit one based on scientific evidence. However, after the top-down approach adopted in implementing the closure of an area of Lyme Bay, the UK Government made no attempt to resolve the resultant conflict between those reliant on the area for their livelihoods. It took an intervention by the Charity Blue Marine in creating a working group of stakeholders to resolve these serious issues collectively.[240] This suggests that the idea of a bottom-up approach to site governance might produce better results and this should be examined further by the UK Government.

Neither this study, nor the EAC's inquiries, found any evidence that fully realised plans existed for any of the types of MPA found in UK waters despite this being a legal requirement under various instruments. It must be concluded that at present it

[238] Ibid para 22 and conclusion 4.
[239] Ibid para 19.
[240] Blue Marine has now taken this model into other areas around the UK coast.

the UK is highly unlikely to be managing its MPAs fully in accordance with the five obligations it has accepted under international law. This failure is compounded by the fact that there is currently no unified regime for the management of MPAs in UK waters. The responsibility for managing UK MPAs is fragmented with management responsibilities split between a number of different organisations based upon the instrument underlying the designation type and location of the MPA.

In chapter five, the question of how threats to designated sites are managed and whether the top-down approach to managing protected areas is successful of if a better approach can be found through harnessing the contributions that could be made through contributions from what is often termed civil society – a bottom up approach to governance.

CHAPTER FIVE
THREATS TO MPAs

The previous chapters examined the framework of international law concerned with the protection and conservation of the marine environment. This was followed by an analysis of how EU and UK domestic law incorporate the international obligations set out in the selected instruments and how that law facilitated the designation, management and regulation of MPAs in UK waters. UK domestic law requires that authorities manage MCZs to protect their special features and any ecological or geomorphological processes on which the integrity of the site depends.

Regardless of how comprehensive or effective the framework for managing MPAs is, on occasion unforeseen threats can emerge, or the statutory management system can break down. The overall objective of this chapter is, therefore, to consider if the appropriate authorities comply with their international obligations when responding to threats that arise unexpectedly, or which emerge during the carrying out of legally permitted activities. How a state responds to such events can indicate how closely it is complying with its international obligations. These threats can be divided into, at least, three broad categories, each of which requires a different response. This chapter, therefore, has three core parts. The first part of the chapter looks at three examples of threats which are global in nature and therefore appear to be beyond the capability of individual states to resolve. The difficulty in resolving them often stems from the fact that, for example, a pollutant may be produced by one state, but its effects may cross jurisdictional lines, due to currents or wind effects, and impact on other parties. The first two, climate change and ocean plastic pollution are currently being tackled at the international level, but it

may take some time before a comprehensive plan is adopted at international level. In the meantime the UK has introduced domestic measures to reduce its own contribution to those global threats and these will be analysed. The third example deals with an incident of marine oil pollution. As was demonstrated in chapter two, marine oil pollution has been addressed through an increasingly comprehensive framework of laws. Therefore exploring the response to a recent example of oil pollution illustrates how the law can be used to resolve threats to the marine environment. This is because when an incident occurs, national authorities should be able to respond by implementing contingency plans already in place. Contingency planning and response is different in nature to the day to day management of MPAs because of the imperative to take rapid action. The second part of the chapter considers cases where, despite the statutory licencing system, threats arise to MPAs, or priority species, in the normal day to day management of a site due to inadequate management control of activities. These include activities such as commercial fishing, dredging or coastal development. In theory, these examples should be amenable to correct management, but, on these occasions, the law underpinning the management process was inadequate and this resulted in threats to both MPAs and their conservation objectives. The third part of the chapter illustrates how state action to prevent harm can be limited due to a conflict of laws.

Before proceeding it is worth briefly restating the legal duties placed on the appropriate authorities in terms of managing threats to MPAs. First, the MCAA requires any ‘public authority exercising a function that may impact on an MCZ to act in a way that best furthers the conservation objectives stated for the MCZ, or least hinders the achievement of those objectives’. As was seen in chapter four, the

Birds and Habitats Directives do not place a statutory duty on Member States to establish management plans for European Marine Sites (EMS) in their waters. However, as seen above, the Habitats Regulations, which transposed the Directives into UK law, does provide statutory powers to restrict or stop activities that might harm a site.[1] Similar duties are placed on the UK authorities to manage threats to other types of MPA if they are to fulfil some of their obligations under EU and international law.[2]

1. GLOBAL THREATS

Global threats are those that may be produced elsewhere but are not necessarily amenable to resolution based on the actions of an individual state where they may make their impact.

1.1 CLIMATE CHANGE

The UN has stated that climate change is a global challenge that does not respect national borders.[3] Between 1880 and 2012, average global temperature increased by 0.85°C.[4] To date, as a result of climate change, the oceans have warmed and sea level has risen. From 1901 to 2010, the global average sea level rose by 19 cm as oceans expanded due to warming and ice melted.[5] The oceans will continue to warm and the ice melt will continue leading to a prediction that a further average sea level rise is predicted as 24 – 30cm by 2065 and 40 - 63cm by 2100. The Arctic's

[1] Conservation of Habitats and Species Regulations 2010, Regulation 26.
[2] Marine and Coastal Access Act 2009 (MCAA 2009)s125 (5).
[3] 'United Nations Framework Convention on Climate Change' (*United Nations, New York*, 2017) <http://www.un.org/sustainabledevelopment/> accessed 5 June 2017 fourth para of text.
[4] Ibid Goal 13 Facts and figures page, first indent.
[5] Ibid, Sustainable Goals 13 Facts and figures page, second indent.

sea ice extent has shrunk in every successive decade since 1979, with 1.07 million km² of ice loss every decade.[6]

In the case of the UK, average sea surface temperatures around the coastline increased by 0.7°C over the past three decades. Surface waters to the north and west of the UK have become relatively more saline since the 1970s.[7] It has been noted that ecosystems can be affected by both natural and anthropogenic climate variations but, 'partly due to the lack of baseline monitoring data', it can be difficult to separate out the effects of these two influences.[8]

There is already evidence of an increased abundance of warm-water species, such as tuna, stingrays, and triggerfish in the waters of southern Britain. There is also evidence of a decrease in abundance in some cold-water species, such as the acorn barnacle, and some zooplankton species.[9] Climate change may also be exacerbating the spread of some invasive non-native species, such as Chinese mitten crabs and japweed, in UK waters.[10] However, sedentary species such as coral are likely to suffer severe harm. This suggests that, despite the fact that the UK has designated some MCZs specifically to protect species, such as the cold water coral *lophelia pertusa,* it may prove impossible to meet some of the conservation objectives of many UK MPAs if global warming proceeds unchecked.

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[6] Ibid, Sustainable Goals 13 Facts and figures page, second indent.
[7] *Biodiversity and Climate Change - a summary of impacts in the UK* (Inter-Agency Climate Change Forum (IACCF) 2010) 10.
[8] *Charting Progress. An integrated assessment of the state of UK seas* (Defra Publications, PB9911 London SW1A 2XX, 2005). 115.
[9] *Biodiversity and Climate Change - a summary of impacts in the UK*, 11.
[10] Ibid 12.

Climate change is an issue that requires solutions co-ordinated at the international level and help for developing countries to move toward a low-carbon economy. This is being addressed in the United Nations Framework Convention on Climate Change under the auspices of states who adopted the Paris Agreement on 12 December 2015 at the twenty-first session of the COP. The UK ratified the agreement on 28 November 2016 and it entered into force for the UK on 18 December 2016.[11] The text of the agreement notes the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity when taking action to address climate change.[12]

The UK had in fact already implemented domestic measures to mitigate climate change when it enacted primary legislation in 2008 with the aim of reducing targeted carbon emissions and to provide for a system of carbon budgeting.[13] The Act sets an ambitious target of reducing UK carbon emissions by 2050 that are at least 80% lower than the 1990 baseline.[14] The final report for the first carbon budget period 2008 – 2012 reported that the UK's emissions were 23.6% below the 1990 base year emissions.[15] In addition, as required by the 2008 Act, the UK Government established a National adaptation programme to improve the country's resilience to the effects of climate change.[16] The first five-year programme ran from 2013 to 2018 and set out measures covering the built environment, infrastructure, communities, agriculture and forestry, the natural environment and business and

[11] 'United Nations Framework Convention on Climate Change,' Status of Ratification' page, accessed 5 June 2017.
[12] Ibid thirteenth recital.
[13] Climate Change Act 2008.
[14] Ibid s1 (1) the 1990 baseline" means the aggregate amount of net UK emissions of carbon dioxide for that year, and by 2050.
[15] Final Statement for the First Carbon Budget Period department of Energy and Climate Change, London, May 2014, Executive Summary, 6.
[16] Climate Change Act s58 (n 13)

local government.[17] The second five year plan was issued in July 2018 and covers the period up until 2023.[18] The series of programmes suggest that the UK's actions will reduce the effects which may cause harm elsewhere. This provides the UK with a strong moral position when arguing for other countries to take action within their own territories.

1.2 OCEAN PLASTIC POLLUTION

During the course of this study, the problem of plastic pollution in the marine environment was brought to the attention of the general public. Campaigns such as Sky Ocean Rescue, which investigated the problem, were featured on news bulletins.[19] Similarly, the BBC investigated the phenomenon of the presence of plastic nurdles on the beaches and in the seas around the UK.[20] Nurdles are small pellets used in the production of plastic products.[21] The problems caused include the fact that around 500 marine species are known to be affected by plastic pollution or are suffering from entanglement in and consumption of plastic debris, both of which often prove fatal.[22]

Early steps are being taken by the UK Government to address the problem. For example on 5 October 2015, the UK Government introduced a five pence tax on

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[17] *The National Adaptation Programme Making the country resilient to a changing climate*. London. Defra publication PB 13942, 2013.
[18] *The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting Making the country resilient to a changing climate* Defra, London, 2018.
[19] Skyoceanrescue.com, website, accessed 10 April 2018.
[20] Sky news http://www.bbc.co.uk/news/uk-39001011, accessed 10 April 2018.
[21] Oxford Dictionary online https://en.oxforddictionaries.com/definition/nurdle, accessed 10 April 2018
[22] 'Flora and Fauna website, Ocean plasic pollution page' (2018) <https://www.fauna-flora.org/>, accessed 12 January 2018.

single use plastic bags previously provided free from large retailers in England.[23] CEFAS, who sample the content of trawls, has noted a 30 per cent drop in the number of bags picked up by trawlers between 2010 and 2017.[24] It seems likely that some of the decline is likely to have been the result of the negative incentive provided by the tax on the plastic bags.[25] In 2017 the UK Government, using powers under the 1990 Environmental Protection Act, outlawed the use of microbeads as an ingredient in the manufacture of rinse-off personal care products and the sale of any such products containing microbeads.[26] Microbeads are defined as 'any water-insoluble solid plastic particle of less than or equal to 5mm in any dimension'.[27] Studies had shown that micro-plastics consumed by marine organisms caused harm 'directly or by causing contaminants into their systems'.[28] On introducing these measures the UK was obliged to notify the EU, under the Technical Standards Directive,[29] as well as the World Trade Organisation under the Technical Barriers to Trade Agreement,[30] because such measures may constitute non-tariff barriers to trade. This suggests that there may be indirect limits imposed on a state's ability to take unilateral action to reduce global non-amenable environmental harms. Unfortunately, space does not permit a detailed analysis of the limits none-tariff barriers to trade may place on domestic measures to protect the environment.

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[23] The Single Use Carrier Bags Charges (England Order 2015, SI 2015/76.

[24] BBC websitehttp://www.bbc.co.uk/news/science-environment-43658739, Plastic bag litter falls in UK seas page, accessed 10 April 2018.

[25] It is indicative of the UK's strategic approach to mitigating environmental harm that the powers for the charges are set out paragraph 28 of schedule 6 of the 2008 Climate Change Act.

[26] The Environmental Protection (Microbeads) (England) Regulations SI 2017/1312.

[27] Ibid reg 2.

[28] The Environmental Protection (Microbeads) (England) Regulations 2017 Explanatory Memorandum.

[29] European Parliament and Council Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations [1998] OJ L 204/37.

[30] https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htmExplanatory Memorandum To The Environmental Protection (Microbeads) (England) Regulations available at https://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm.

Once in the marine environment the plastic pollutions are carried by currents and the wind into the High Seas or into the coastal waters of other jurisdictions and, for this reason, their control and reduction will require a co-ordinated international response similar to the manner in which marine oil pollution was dealt with by MARPOL. An example of the problem may be seen in the fact that a Coca Cola can produced for the 1988 Seoul Olympics washed up on a Scottish beach in 2019.[31] Once waste, plastic or otherwise, enters the ocean it can be carried on ocean currents and gyres across the planet. A Marine Conservation Society spokeswoman said about the can, 'This really unusual find shows that when it comes to litter there is no 'away' and we need to ensure that anything we are using today is not being picked up by volunteers in 30 or more years' time.'[32]

Although climate change and ocean plastic pollution will ultimately require co-ordinated global action the UK is commendably already taking steps to adapt.

1.3 MARINE OIL POLLUTION

The threat of pollution of the marine environment resulting from marine casualties was raised in section 2.0 of chapter two with a review of the sinking of the Torrey Canyon in 1967. As a result of work done by the IMO under the auspices of MARPOL, the design and operation of bulk oil tankers has greatly improved and statistical evidence suggests that major spills of oil and chemicals into the marine

[31] https://www.bbc.co.uk/news/uk-scotland-edinburgh-east-fife-47906228 first paragraph.
[32] Ibid eighth (penultimate) paragraph.

environment are now at historically low levels.[33] However, it remains inevitable that major marine spills will occur due to casualties among all types of seagoing vessels. The environmental impacts of even modest spills can have major environmental consequences if the affected environment is particularly sensitive.[34] In addition to accidental spills there is evidence of illegal discharges of oil from ships. However while this still occurs in some areas of UK waters it was found that the practice causes little lasting damage to marine life and beaches.[35] Marine oil pollution is still significant despite an overall decrease in accident oil spills in European waters.[36] The number of accidental spills of above 7 tonnes per spill had decreased from 19 to 4 in the 17 years prior to the report's publication.[37] The decrease still meant that over 100 tons of oil was released into the marine environment worldwide in 2005.[38]

Oil spills in marine areas could have a significant impact on the environmental quality of all aspects of marine ecosystems. The type of oil can cause surface contamination and smothering of marine biota, also its chemical components can cause acute toxic effects and long-term accumulative impacts.[39] Even the clean-up operations, can either directly or indirectly cause physical damage to marine and coastal habitats. The quantity of oil spilt is, however, not the only factor determining the extent of environmental damage that is caused by the oil. It might be thought

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[33] European Environment Agency, EN15 'Accidental oil spills from marine shipping.'
[34] Mark F. Kirby, Rosalinda Gioia and Robin J. Law, 'The principles of effective post-spill environmental monitoring in marine environments and their application to preparedness assessment' 82 Mar Pollut Bull 11.
[35] *Charting Progress. An integrated assessment of the state of UK seas*, 89 (n 8).
[36] ' EN15 Accidental oil spills from marine shipping (*European Environment Agency*, 2017) <https://www.eea.europa.eu/data-and-maps/indicators/en15-accidental-oil-spills-from/en15-accidental-oil-spills-from> accessed 1 September 2017, Key message: first page. Report archived in 2015 but still available on the internet.
[37] Ibid fig. 1.
[38] Ibid Section 1 Indicator Assessment. First para.
[39] Indicator Fact Sheet (WHS11) Accidental oil spills from marine shipping European Environmental Agency 2004. Archived but available at http://www.vliz.be/docs/Zeecijfers/WHS11_OilSpillsAccidental_250504.pdf accessed 24 February 2018.

that a larger spill would generally cause a greater inherent risk of environmental damage, a smaller spill occurring at the wrong time or in a sensitive environment might prove much more environmentally harmful than a larger spill at a different time of year in the same environment. [40] The EU has introduced a range of legislative measures designed to supplement or enhance the international legislation referred to in section 2.0 of chapter two.

It is expected that major accidents will still occur at irregular intervals. Nonetheless the average number of accidental oil spills above 7 tonnes in European waters has decreased significantly with only four accidents resulting in oil spills occurring in European waters in 2005.[41] The evidence shows that the grounding of vessels is by far the most important factor for oil spilt into the sea accounting for 44 % of the total.[42]

Despite the reduction in the number of accidents, each occurrence puts the marine environment in jeopardy and how the authorities respond will affect the outcome. An example of the way to respond can be seen in the breaking up of a cargo ship in the channel in 2007. The incident happened at a time when Lyme Bay off the coast of Dorset and Devon in the South West of England was not subject to any overall protection other than its coastline being designated as a World Heritage site. During the morning of 18 January 2007, while on passage in the English Channel the container ship MSC Napoli encountered heavy seas causing the ship to pitch heavily. The vessel suffered a catastrophic failure of her hull in her engine room. The ship was subsequently taken under tow towards Portland, UK but as the

[40] Ibid Section 2.1 Environmental context.
[41] EN15 Accidental oil spills from marine shipping, Fig 1, n 24.
[42] Ibid Section 1 Indicator Assessment second para.

disabled vessel approached the English coast, it became evident there was a severe risk she might break up or sink and she was intentionally beached in Branscombe Bay part of Lyme Bay on 20 January 2007.[43]

MSC Napoli was carrying chemicals classified by the IMO as dangerous goods, as well as her own fuel oil. Whilst there was an immediate leakage of oil into the sea during the five months following the accident most of her fuel oil and any remaining containers were successfully removed.

In the aftermath of the disaster a programme of environmental monitoring focussing on hydrocarbon elements regarded as highly carcinogenic was implented. The monitoring and sampling took place in the immediate aftermath of the incident.[44] The monitoring focussed on shellfish as these are less mobile than finfish which will move quickly to avoid the pollution. Fortunately the contamination resulting from the oil spillage was less than had been feared. This was thought to be primarily because of the successful removal of most of the oil from the vessel before it spilled into the sea.[45]

The reference to this incident is made not to criticise the authorities but to illustrate how the marine environment of the bay could have been put at serious risk if they had not had in place contingency plans which meant that they responded quickly to establish an environmental group to provide the salvage team with prompt expert

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[43] *Report on the investigation of the structural failure of MSC Napoli English Channel on 18 January 2007* (Marine Accident Investigation Branch Carlton House Carlton Place Southampton United Kingdom SO15 2DZ Report No 9/2008 April 2008, 2008) 1.

[44] M. F. Kirby and others, 'The use of a bioassay based approach to the hazard/risk assessment of cargo derived toxicity during shipping accidents: A case study – The MSC Napoli' 56 Mar Pollut Bull 781.

[45] Carole Kelly and others, 'PAH in commercial shellfish following the grounding of the MSC Napoli in Lyme Bay, UK, in 2007' 56 Mar Pollut Bull 1218.

environmental advice.[46] The authorities can be said to have quickly adopted a precautionary approach by alerting the public to the possibility of contamination and then monitoring the area to establish the scientific evidence that might have led to a ban on exploitation of the marine living resources. Subsequent research has indicated that the level of preparedness for a similar disaster to that of the Napoli is much improved.[47]

The speed of response to the disaster plus the strengthening of the law in relation to water quality in coastal areas, particularly due to the WFD, suggest that despite the inevitability of future marine casualties the effects of such disasters has greatly been reduced. In risk management terms such events can be considered low probability but high risk. Perhaps the key lesson from the Napoli is that threats to the marine environment from maritime pollution can be reduced by prompt action on the part of the authorities combined with environmental monitoring. Ensuring organisations have contingency plans in place for such events should therefore be a legal requirement on the part of the MMO.

Neither climate change nor marine plastic pollution can easily be remedied through day to day management practices by the UK at present. However, the legal framework surrounding marine oil pollution from casualties such as the Napoli incident does provide some evidence that concerted international efforts to agree a legal framework for dealing with ocean plastic pollution would be achievable.

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[46] M. F. Kirby and others, 'The use of a bioassay based approach to the hazard/risk assessment of cargo derived toxicity during shipping accidents: A case study – The MSC Napoli' 56 Mar Pollut Bull 781.
[47] Frances J. Peckett, Gillian A. Glegg and Lynda D. Rodwell, 'Assessing the quality of data required to identify effective marine protected areas' 45 Marine Policy 333 .

The next part of this study will consider three activities with the potential to harm MPAs, but which are amenable to management by UK authorities through the marine licencing process and will analyse whether those powers are being correctly applied. The activities are, i) dredging, ii) coastal and port infrastructure development, and iii) commercial fishing. For each of these a case study will be used to answer two questions:

> Is the legal framework governing the activity sufficient to ensure that authorities exercise their functions in a way that best furthers the conservation objectives stated for the MCZ/MPA or at minimum does it ensure that they exercise them in a way that least hinders the achievement of those objectives.[48]
>
> Is the licencing regime being operated by the authorities in such a way as to meet the responsibilities set out in law?

2. THREATS TO MPAs AMENABLE TO LOCAL SOLUTION

In many cases threats to MPAs arise which are entirely within the competence of the UK Government to address. This is because the relevant site is located within waters under its jurisdiction and it has the power to enforce any relevant laws or to implement new laws or regulations to respond to new or emerging threats. This section will now consider how the UK has responded to such threats in recent years.

2.1 MAINTENANCE DREDGING AND DISPOSAL

2.1.1 INTRODUCTION

[48] MCAA 2009s125 (n 2).

Defra noted that dredging was one of the activities that can have a major impact on the marine environment, particularly if it results in the adding of materials to the seabed from dredging activities.[49] Research projects have shown that samples of sediment and animals collected from areas of low dredging intensity were indistinguishable from undredged surrounding areas after 6–7 years, but in areas where dredging intensity was high, effects can be seen on the sea floor more than ten years after the dredging has stopped.[50] Defra noted that between 25 and 40 million wet tonnes of material are dredged and deposited at about 150 licensed disposal sites annually.[51] Dredged material can contain harmful contaminants such as Ttributyltin, Polychlorinated biphenyls and metals and there is potential for contaminant redistribution and release from the sediment to the water column where it is more available for uptake by living organisms and for this reason licences should only be granted for dredging when a suitable disposal method and a site is available.[52] Licencing had traditionally been managed by local authorities but this was transferred to the MMO when the MCAA came into force.

The MCAA requires the licencing of any form of dredging within the UK marine licensing area including using any device to move any material from one part of the sea or seabed to another part.[53] Dredging involves moving sediment around the sea (as opposed to lifting it out of the sea and taking it to a deposition site).[54] It was

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[49] *Charting Progress. An integrated assessment of the state of UK seas*, 25 (n 8).
[50] Ibid 76.
[51] Developing a Biological Framework to assess functional responses at dredged material disposal sites. Cefas and Defra report September 2011, 5.
[52] Ibid 77.
[53] MCAA 2009 Ss 65 (1) (9) and 2 (a) (n 2).
[54] Marine Management Organisation website, Do I need a marine licence? page https://www.gov.uk/guidance/do-i-need-a-marine-licence accessed 20 March 2017naccessed 20 March 2017.

not licensable under earlier legislation. With a small number of exceptions all types of dredging need a marine licence including hydrodynamic and plough dredging which involve the use of water jets or ploughs.[55] These move sediment along the sea bed, while aggregate dredging involves the removal of sediment for use on land. The risk to the marine environment stem from the damage to the physical environment by the action of the dredge and the disturbance to any associated marine species.

In summary, dredging can be required for the following reasons,

I. Navigation dredging to deepen berths and channels.
II. Aggregate dredging to extract sands and gravels for construction.
III. Clearance dredging to clear outfalls.[56]

There is also a form of dredging carried out to harvest scallops. The vessels engaged in this activity have to be licenced as fishing vessels rather than as dredgers and conform to the Scallop Fishing Order.[57] The provisions of the Order are essentially technical measures regarding fishing methods rather than dredging as commonly understood. This particular activity was fully explored in chapters three and four and will not, therefore, be revisited in this chapter.

As seen in chapter three, any public authority must exercise its functions in connection with dredging in a way that best furthers the conservation objectives, or least hinders, the conservation objectives stated for any MCZ likely to be affected.

[55] Ibid.
[56] Ibid.
[57] The Scallop Fishing (England) Order 2012 SI 2012/2283.

One way in which public authorities seek to fulfil this duty is through the imposition of a regulatory framework. To carry out non-fisheries related dredging, companies need to obtain a marine licence for that activity. In determining an application for a marine licence, the appropriate licensing authority must have regard to the need to protect the environment.[58] The reference to the 'environment' is to be read widely as including the physical, chemical and biological state of the sea, the sea-bed and the sea-shore, and the ecosystems within it, or those that are directly affected by an activity, whether within the marine licensing area or otherwise.[59]

The questions of the adequacy of the legal framework governing the licencing of dredging and the way the authorities apply the law can be assessed reviewing the facts relating to a 2014 case concerning dredging and disposal of dredged materials in an area adjacent to The Whitsand and Looe Bay MCZ.[60]

2.1.2 THE BACKGROUND

On 7 March 2014 the MMO issued a licence allowing a company, the Westminster Dredging Company, to carry out maintenance dredging to maintain the operational and navigation depths in the approaches, berths and basins at HM Naval Base Devonport.[61] Devonport is the largest naval base in Western Europe and home to Britain's amphibious ships, survey vessels and half her frigates, plus the training

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[58] MCAA 2009 s69 (1) and also see, Do I need a marine licence? Page, https://www.gov.uk/guidance/do-i-need-a-marine-licencehttps://www.gov.uk/guidance/do-i-need-a-marine-licence accessed 20 March 2017 accessed 20 March 2017.

[59] MCAA Explanatory Notes, para 240.

[60] *The Queen on The Application of Stop Dumping in Whitsand Bay v Marine Management Organisation* CO/2656/2014.

[61] Marine Management Organisation Licence (licence no. L/2014/00063) available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/597758/Marine_Licence.pdf.

hub of the front-line fleet.[62] As such, it is of international strategic importance and maintaining its navigation channels is vital.

Dredging is now a licenceable activity under the MCAA and is, therefore, a perfectly legal enterprise if authorised and carried out correctly.[63] However, dredging does bring a risk of damage to the physical environment by the action of the dredge and it is likely to disturb any associated marine species. Similarly, the disposal of the dredged materials, such as harbour sediments contaminated by oil or heavy metals, can affect the water quality if it is disposed of in, or near, sensitive areas. This may breach the standards set out in the Water Framework Directive (WFD), by reducing the environmental status of the water column and breach the duty of the regulator in respect of conservation objectives for an MPA.

In this particular instance, the dredging activity would impact upon a number of European Marine Sites (EMS), including Plymouth Sound and Estuaries special area of conservation (SAC) and the nearby Tamar Estuaries SAC. The Tamar estuaries complex is classified as a special protected area under the Birds Directive.[64] It comprises the estuaries of the rivers Tamar, Lynher and Tavy which collectively drain an extensive part of Devon and Cornwall.[65] Its mud-flats contain extensive and varied infaunal[66] communities rich in bivalves and other invertebrates,

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[62] 'Royal Navy website' (*Ministry of Defence*, 2017) <https://www.royalnavy.mod.uk/> accessed 13 September 2017 HMNB Devenport page.
[63] MCAA 2009 s66 (9) (n 2).
[64] 'Tamar Estuaries Complex SPA description information as published 2001.' (*Joint Nature Conservation Committee*, 2015) <http://jncc.defra.gov.uk/default.aspx?page=2033SPA description (information as published 2001)
Tamar Estuaries Complex>, accessed 15 November 2017.
[65] Ibid.
[66] Infaunal marine species are those that burrow into and live in marine sediments. They include species such as clams and some worms.

and feeding grounds for waterbirds in numbers of European importance.[67] The licence granted by the MMO permitted disposal of the materials at a site off 2km West of Rame Head, Devon, alongside a newly designated MCZ.[68] The licence placed no onerous conditions on the licencee other than that they were permitted to deposit the substances or articles in quantities not exceeding the amounts specified in the tables set out in the licence.[69] The conditions of the licence were reasonable, but the selection of the disposal site was less so. The MMO was authorised to revoke or cancel the licence in a number of circumstances, including changes in terms of human health or increased scientific knowledge.[70] There is, therefore, a clear procedure for obtaining a licence and governing how the licence should be operated if the MMO and licencee have fully considered all relevant facts. In addition, by way of context, in this area similar dredging and disposal activities had been carried out in the same areas for more than a century.

However, as stated above, the Whitsand and Looe Bay MCZ was designated as an MCZ in 2013. The landward site boundary follows the coastline along the mean high water mark, from Hore Stone near Talland Bay in the west, to a point between Queener Point and Long Cove on Rame Head in the east and this meant that the disposal site abutted the recently designated MCZ. The MCAA requires that where an activity, such as dredging, is capable of 'affecting the protected features; or any ecological or geomorphological feature of an MCZ then the applicant must satisfy the authority that the activity will not affect the conservation objectives stated for the

[67] 'Joint Nature Conservation Committee (JNCC) Website' Tamar Estuaries Complex SPA description page http://jncc.defra.gov.uk/default.aspx?page=2033.
[68] MMO Licence L/2014/00063, page 7 (n 54).
[69] Marine Management Organisation Licence L/2014/00063/1, page 7.
[70] Ibid, s 1.6 (3) (a) and (b).

MCZ'.[71] There was also a duty to consider the provisions of the Water Environment Regulations under which any public body in exercising their functions must, *inter alia,* carry out an assessment of the impacts of the proposed project in so far as it affects the water quality of a river basin district.[72] The licencing of a dredge and the disposal of dredged materials would, therefore, need to be regulated appropriately. As such a reasonable person would be entitled to expect that the MMO would adopt a precautionary approach to the disposal of the dredged material given the proximity of the newly designated MCZ. Unfortunately it did not appear to do so. It will be recalled from chapter three that a Centre for Environment, Fisheries and Aquaculture Science (CEFAS) survey prior to designation of the MCZ had found little evidence of human activity on the site apart from a number of wrecks and some evidence of marine litter/debris at one point. The dumping of dredged material close to the site might be expected to alter this situation. This led to a group of activists seeking judicial review of the MMO's decision to grant the licence on seven grounds relating to the MMO's failure to comply with the legal requirements prior to issuing the licence.

The case was settled before the court hearing when the MMO agreed to a Consent Order under which it suspended the planned dumping at Rame Head.[73] This was because the defendant accepted that its records '*did not adequately record or explain its decision making.* [74]' On this basis the court declared that '*the decision to grant a licence was therefore unlawful and should be quashed*'.[75]

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[71] MCAA 2009Part 4 s126 (n 2).
[72] Water Environment (Water Framework Directive). (England and Wales) Regulations 2003 SI 2003/3242. Regulation, 17.
[73] *Stop Dumping in Whitsand Bay v Marine Management Organisation Consent Order Re: CO/2656/2014*
[74] Ibid para 3.
[75] Ibid para 3.

Whilst the MMO's capitulation was good news for the claimant, it is to be regretted that the issues were not fully tested before the court. Although the case was to be argued on the specific facts, and it was settled prior to a court hearing, the skeleton arguments prepared by both the claimant and the defendant provide answers to both the adequacy of the legal framework and the way the authorities act within it. There was no material disagreement between the parties about the legal framework governing the activity or its ability to ensure that authorities exercise their functions in a way that best furthers the conservation objectives stated for an MCZ/MPA.[76] The MMO's capitulation when challenged does, however, raise questions about its ability to operate the licencing regime in such a way as to meet its responsibilities in law.

The case is, therefore important, in that it contributes to what is currently a very small body of case law that can be analysed to judge the UK's performance in the protecting the marine environment through the designation of MPAs.

The second inquiry by the Environmental Audit Committee (EAC) of the House of Commons heard evidence referencing the case, which said that the Government's current monitoring and surveillance regime created a 'veneer of marine protection while not actually delivering any.' [77] The facts certainly suggest that this point is correct.

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[76] Unreported skeleton arguments submitted in defence of the MMO (clauses 40 to 51) and in clauses 17 to 31 of the claim by the Queen on behalf of Stop Dumping in Whitsand Bay CO/2656/2014. Kindly supplied to the author by the claimant.

[77] *Environmental Audit Committee, 'Marine Protected Areas Revisited' HC (2016-17) HC597* ,para 20.

It must be regarded as unsatisfactory that private citizens have to undertake the expensive and uncertain process of judicial review on a narrow point of law to get the MMO to properly discharge its duties. It is, however, good that as a last resort such procedures exist.

2.2 COASTAL INFRASTRUCTURE AND DEVELOPMENT

2.2.1 INTRODUCTION

Coastal development has been defined in a number of ways. The Coastal Concordat defines it as individual projects spanning the intertidal area in estuaries and on the coast, and require multiple consents including both a marine licence and a planning permission from the local planning authority.[78] The Marine Life Information Network (MARLIN) uses a wider definition, *'the carrying out of any building, engineering, mining or other operation in, on, over or under land, or the making of any material change in the use of buildings or other land* on the coastline: an area of dynamic transition where land and sea interact and which includes both the landward margin and inshore waters'.[79] It can include among other things infrastructure development such as new ports or harbours, new outfalls, seawalls, leisure developments and power generation facilities. The MMO administers marine environmental licensing and harbours regimes on behalf of the Secretary of State.[80] In this role the MMO of course has a duty to exercise its functions in ways that further the conservation objectives set for MCZs, and not to authorise activities or

[78] 'A Coastal Concordat for England 11 November 2013 ' Defra publication PB 14060. 3.
[79] Evans J, *Marine Life Topic Note: Coastal Development* (The Marine Biological Association of the United Kingdom The Marine Life Information Network (MARLIN) Plymouth: Marine Biological Association of the United Kingdom 2007).
[80] MCAA Explanatory Notes, para 12.

development which carry a significant risk to or hinders the achievement of those conservation objectives.

The UK Planning Act was amended to broaden the number of persons to be consulted during the pre-application procedure for development consent.[81] As a result the MMO must be consulted in any case where the proposed development would affect, or would be likely to affect, waters in or adjacent to England up to the seaward limits of the territorial sea; the EEZ; any Renewable Energy Zone; and any area designated under section 1(7) of the Continental Shelf Act 1964. Arguably, widening the consultation process to include more bodies should lead to better decision making if each consultee fulfils their statutory duty. However, if one body does not fully discharge its responsibilities adequately and instead relies on the other parties to act correctly then the outcome may not be the optimal one as was seen in this case.

The Coastal Concordat is a policy document that sets out guidance identifying common evidence needs across different consenting regimes to enable the parallel tracking of any work required to satisfy evidence requirements where appropriate. This is intended to 'ensure that the information contained within any regulatory assessment is sufficient for both the marine licence and the planning application approvals and may inform other relevant consents, licences and permissions'.[82]

The question now to be addressed is whether or not the UK authorities are scrutinising coastal development applications in a sufficiently rigorous way to fulfil

[81] The Planning Act 2008, s42.
[82] 'A Coastal Concordat for England 11 November 2013, ' s 3.4, n 65.

the obligations under international law and the requirements set out in the MCAA. This will be done by reference to approval of development consents in relation to the Port of Sheerness and The Manacles MCZ recognising the limits of this approach due to the small number of cases to date.

2.2.2 LAPPEL BANK (PORT OF SHEERNESS)

2.2.2.1 INTRODUCTION

As stated in chapter two, the MCAA was intended to be ground breaking legislation capable of protecting the marine habitats and species. Before analysing how the Act is performing it is worth reviewing an example of a coastal development project undertaken prior to the Act coming into force. The relevance of this is that it provides some insights into what may be lost when the UK leaves the jurisdiction of the European Court of Justice (ECJ) following completion of the Brexit process.

The Medway Estuary and Marshes are an area of wetland of international importance listed under the Ramsar Convention on 15 December 1993.[83] The site was also designated as an SPA in 1993, but the Secretary of State decided to exclude an area of 22 hectares of the site known as Lappel Bank to provide room for expansion for a car and cargo park. This was on the grounds that the economic need not to impair the future expansion of the port of Sheerness outweighed the

[83] 'Ramsar Website' Ramsar Sites Information Service accessed 11 April 2016.

site's nature conservation value. This was despite the fact that the site shares several of the important ornithological qualities of the area as a whole.[84]

2.2.2.2 THE ROYAL SOCIETY FOR THE PROTECTION OF BIRDS (RSPB) OBJECTS TO THE DECISION

The RSPB applied to the Divisional Court of the Queen's Bench Division to have the Secretary of State's decision quashed on the ground that he was not entitled, by virtue of the Birds Directive, to have regard to economic considerations, i.e. the proposed expansion of the port, when classifying an SPA. The court found against the RSPB. On appeal by the RSPB, the Court of Appeal upheld the lower court's judgment. Therefore, in 1995 the RSPB appealed to the House of Lords for a preliminary ruling on the interpretation of Articles 2 and 4 of the Birds Directive in the context of the exclusion of Lappel Bank from the SPA.[85] In summary, Article 2 of the Directive requires Member States to take measures to maintain listed species at a level which corresponds in particular to ecological, scientific and cultural requirements to their requirements, while Article 4 requires Member States to ensure the 'preservation, maintenance and re-establishment of biotopes and habitats, including the creation of protected areas and the upkeep and their management in accordance with the ecological needs of habitats inside and outside the protected zones. Uncertain of how to proceed the House of Lords referred the matter to the ECJ for determination.[86]

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[84] 'Joint Nature Conservation Committee (JNCC) Website' Special Protection Areas page.
[85] *Case C-44/95 R v Secretary of State for the Environment, ex parte Royal Society for the Protection of Birds* [1996] ECR 1-3805.
[86] Ibid para 16.

2.2.2.3 THE ECJ MAKES ITS DETERMINATION

The ECJ considered two questions in reaching its ruling. The first question was whether Article 4(1) or (2) of the Birds Directive could be interpreted as meaning that a Member State is authorised to take account of the economic requirements mentioned in Article 2 of the Directive when designating an SPA and defining its boundaries. The ECJ linked the articles to the ninth recital of the Directive, which states that 'the preservation, maintenance or restoration of a sufficient diversity and area of habitats is essential to the conservation of all species of birds [covered by the directive]', that 'certain species of birds should be the subject of special conservation measures concerning their habitats in order to ensure their survival and reproduction in their area of distribution', and, finally, that 'such measures must also take account of migratory species'.[87] This requirement is formally recognised in articles 3 and 4 of the Directive.[88] The court referenced settled case law in finding that article 2 did not provide an automatic derogation from the general system of protection and therefore ecological requirements had to be balanced against economic interests. Similarly 4(1) or (2) of the Birds Directive are to be interpreted as meaning that a Member State may not, when designating an SPA and defining its boundaries, take account of economic requirements as constituting a general interest superior to that represented by the ecological objective of that Directive.[89] The answer to the second part of the second question was, therefore, that Article 4(1) or (2) of the Birds Directive had to be 'interpreted as meaning that a Member State may not, when designating an SPA and defining its boundaries, take account

[87] Ibid para 18.
[88] Ibid para 18.
[89] Ibid para 31.

of economic requirements which may constitute imperative reasons of overriding public interest of the kind referred to in Article 6(4) of the Habitats Directive'.[90]

Unfortunately, the UK had got it wrong in not stopping the development until the ECJ made its determination and planning permission had already been implemented and the site destroyed. The ruling left the UK Government with an obligation to compensate for the habitat loss in order to maintain the coherence of the Natura 2000 network.[91] On this occasion neither the EU's judicial process, nor the UK's provided a remedy within a reasonable time to save the site. The entry into force of the MCAA provides an alternative route and, indeed, it may be the only hope for remedy in such cases after Brexit. To avoid similar circumstances in the future, the MCAA should be amended to allow for stop notices to be issued while any legal action is in progress

2.3 DEVELOPMENT THAT COULD IMPACT THE MANACLES MCZ

2.3.1 BACKGROUND

In December 2009, Cemex UK Materials Limited made an application to Cornwall County Council, which is the relevant planning authority, for the review of the old mineral permissions (ROMP) for the site to make them subject to modern conditions and thereby properly controlled.[92] Dean Quarry covers an area of approximately 44

[90] Ibid para 32.
[91] 'Royal Society for the Protection of Birds website.' (*The Royal Society for the Protection of Birds (RSPB), Sandy, Bedfordshire. Registered charity: England and Wales no. 207076*
2017) <https://ww2.rspb.org.uk/our-work/our-positions-and-casework/our-positions/safeguarding-wildlife-sites/eu-birds-directive/where-the-directive-failed> .
[92] The process is commonly referred to by the acronym ROMP and is derived from the 1995 Environment Act.

hectares on the coast of the Lizard peninsular in Cornwall. For over a century the quarry had been the source of the mineral gabbro, which is an exceedingly hard igneous rock used for a variety of purposes, but the site had been dormant since 2008.[93] Following the planning authority's consideration, ROMP permission was granted by the Council on 13 January 2012, allowing work to begin to prepare the site for operation.[94]

Separately, on 17th July 2014, Tidal Lagoon Swansea Bay PLC applied to the MMO for a screening and scoping opinion in respect of a proposal to construct a loading area and breakwater on the coast adjacent to Dean Quarry. The purpose of this facility was to enable the loading of mineral won from the quarry onto vessels for transport to Swansea Bay in South Wales. The new breakwater would be 535 metres in length in contrast to the existing one which is 30 metres long i.e., seventeen times longer. This fact suggests that the proposed jetty would be caught i.e., by s 125 (1) of the MCAA and that the public authority should exercise its functions in a way that will not significantly affect the MCZ. If it does not, then the byelaw prohibiting the use of bottom towed gear within the MCZ must be regarded as pointless. The proposed development would appear to pass the threshold in terms of a percentage increase in the area of the MCZ at risk of harm or the more relevant fact the potential damage to the high quality reef. A court could determine the question of how much of a designated site must be at risk of harm.

[93] Head of Planning and Enterprise Phil Mason, *West Sub Area Planning Committee Report 7th April 2015. Application Number PA14/12081.* (Cornwall County Council 2015)+Background, para 1.
[94] *R (Silke Roskilly) v Cornwall Council and others.* R (Silke Roskilly) v Cornwall Council and others EWHC 3711 (Admin) [2015], Para 2.

These facts appear to make it a suitable case for the application of the Coastal Concordat, because it has both terrestrial and marine elements, and it was agreed that the MMO would be the lead authority and regulator in respect of this proposed development.[95] Because the quarry development was within an area of outstanding natural beauty (AONB) it was concluded that it was a sensitive area within the meaning of the Town and Country Planning Regulations.[96] The MMO's letter also stated that the development would require a marine licence under the MCAA. This meant that the following parties could be considered 'relevant authorities' who might have an opinion on the terrestrial components of the proposals included the local authority, Natural England (NE) and the Environment Agency. In addition the MMO and local Inshore Fisheries and Conservation Authority (IFCA) were competent to address the impact on the MCZ as it was within 6nm limit set for the exercise of their powers.

Because of the threat to the MCZ and the wider environment an action group of concerned residents was set up to oppose the re-opening of the quarry as a Super Quarry. The volunteers formed a committee to co-ordinate the opposition and became an incorporated body 'Community against Dean Super Quarry (CADS') as a way of having a formal membership and corporate structure to protect the members from personal liabilities.[97] The aims of the action group included

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[95] *Screening and Scoping Opinion - Proposed Loading Area and Breakwater at Dean Quarry.* (Marine Mangement Organisation Letter dated 13 October 2014 Reference MLP/2014/00201 2014).

[96] The Town and Country Planning (Environmental Impact Assessment) Regulations SI 2011 No. 1824, Schedule 2.

[97] Community Against Dean Super Quarry Limited (Reg No 9399178). Limited by guarantee companies are t often formed by non-profit organisations such as sports clubs, workers' co-operatives and membership organisations, whose owners wish to have the benefit of limited financial liability. Such a company is a distinct legal entity from its owners, and is responsible for its own debts up to the amount of the owners' guarantees. This strategy makes good sense for citizen action groups challenging commercial corporate bodies.

protecting both the marine and the terrestrial environment.[98] This can be seen in the objections to the industrialisation of the AONB and the risk of damage to the adjacent SSSI. On 26 March 2015, CADS registered its objections to the planning application with the Planning Authority. The Planning Authority rejected this objection after considering a report from the case Planning Officer.

The CADS group felt that it had become clear that a major development of the site was being planned and that it would have a significant impact on the local terrestrial and marine environments, the local population, and potentially on tourism in the area. What might have been deemed to be an *insignificant risk* or a *minor matter* in terms of s126 of the MCAA to the public authorities was viewed by concerned citizens as a much greater risk to their local environment and in a very different way to that of a public authority.

Shortly after the publication of the officer's report and before the committee met, CADS requested the National Planning Casework Unit to seek a screening direction from the Secretary of State.[99] The Secretary of State has the power to 'call in' a planning application rather than letting a local authority decide. CADS submitted a number of objections to the Unit including a significant number of environmental concerns that would arise from the operation of the quarry if the development proceeded. The claimant argued that the application should be screened for an EIA in accordance with Regulation 3 of the Town and Country Planning (Environmental

[98] Cornwall Against Dean Superquarry., (2015) <http://www.cads2015.com/> accessed 13 November 2015/ Home page.
[99] *R (Silke Roskilly) v Cornwall Council and others,* s11, (n 80).

impact assessment) Regulations.[100] In particular they argued against the 'salami slicing' approach, meaning that the applicant intends to submit future applications individually for a breakwater and new loading bay facilities, to gain access for sufficient stages of the development to be approved, thereby making it difficult to refuse subsequent applications. Therefore the development must be considered holistically.[101] The EIA regulations require that the relevant person, e.g. the planning authority, the Secretary of State, or an inspector, does not grant planning permission or subsequent consent '*unless they have first taken the environmental information into consideration and they shall state in their decision that they have done so*.'[102]

However, when the application was passed to the planning committee on 7th April 2015 it was accompanied by a letter from the Head of Planning and Regeneration at the authority which stated that the proposed development was not an EIA development within the meaning of the EIA Regulations, i.e., he claimed the development did not require an EIA.[103] This was because, despite it being in a sensitive area, it was unlikely to have a significant effect on the environment.[104] This action is suggestive of the authority 'marking its own homework', which is probably the motivation for CADS seeking a direction from the Secretary of State in the first place.

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[100] The Town and Country Planning (Environmental Impact Assessment) Regulations SI 2011 No. 1824. Regulation, 3.
[101] *R (Silke Roskilly) v Cornwall Council and others*, para 13, (n 80).
[102] The Town and Country Planning (Environmental Impact Assessment) Regulations SI 2011 No. 1824, Regulation 3 (4).
[103] Phil Mason Head of Planning and Regeneration, *Letter of 27 March 2015 to Wardell Armstrong International Limited regarding The Town and Country Planning (Environmental Impact Assessment) Regulations 2011, Regulation 7* (Cornwall Council Planning and Regeration Service, 2015)
[104] Department for Communities and Local Government, *Screening Direction for Environmental Imapact Assessment Dean Quarry, St Keverne, Helston, Cornwall.* (9 June 2015, 2015).

Despite the ongoing referral to the Secretary of State, the planning application was approved by the planning committee on 8th April 2015. The planning committee, in effect, disregarded the fact that they had been informed that CADS had made an application to the Secretary of State seeking a screening opinion on the development. On 9th June 2015 the Secretary of State issued his screening direction which was that the proposal was indeed subject to an EIA within the meaning of the 2011 Regulations.[105]

2.3.2 JUDICIAL REVIEW

On 1 July 2015 the action group CADS made an application for judicial review of the April 8 decision by Cornwall County Council to approve the reopening of the quarry. Permission for judicial review was granted by the court on 12 August 2015 and the actual judicial review hearing was held on 13 November 2015. In summary CADS contended that there were two grounds for challenging the decision. First, they argued that the planning permission which had been issued is unlawful as a result of Regulation (4) of the Environmental Impact Assessment Regulations on the basis that the Secretary of State's screening direction was, by virtue of the Regulations, binding and determinative. This meant that the planning permission granted by Cornwall Council for environmental impact development which was not accompanied by environmental information was unlawful. Second, CADS argued that 'by virtue of paragraph 116 of the National Planning Policy Framework the development was proposed was a "major" development in an AONB, it was subject

[105] Ibid.

to a strict policy which required the demonstration of exceptional circumstances' before it could be permitted. The Defendant, it was argued, had simply failed to examine this point and therefore this amounted to a misdirection of the members, a misinterpretation of the policy in the National Planning Policy Framework and thus an error of law.[106]

The case was heard by the High Court on 13h November 2015. The court noted that the facts [were] not subject to legal challenge'.[107] However, the court found that although there was 'a wealth of environmental information about the potential operation of Dean Quarry that did not, nor could it properly be contended that it did, provide an answer to the need to screen the development. That is because, by virtue of the definition of Schedule 2 development which has been set out above, *since the application was within a sensitive area, a screening decision was required by the 2011 Regulations'*. However, although 'the defendant and the interested party were critical of the decision which the Secretary of State made in making the screening direction, neither of them have taken any steps to challenge the lawfulness of that decision'.[108]

In reaching this decision the court noted that the Secretary of State had considered carefully the issues raised, which included 'the potential impact of the proposal on the AONB and the likelihood of impacts on the Coverack to Porthoustock SSSI, the nearby Lizard Special Area of Conservation and the Manacles MCZ.[109] Further, it was noted that the related elements of the overall development, namely the

[106] *R (Silke Roskilly) v Cornwall Council and others,* Ss 19 to 21, (n 80).
[107] Ibid at 35.
[108] Ibid at 36.
[109] Ibid at 17.

breakwater and jetties, had already been deemed by the Secretary of State to require an EIA.

The court found that in circumstances where a planning authority decides screening is not necessary, but the application is the subject of a screening direction by the Secretary of State at a time when planning permission is granted, the planning permission is rendered unlawful by the subsequent issuing of the Secretary of State's positive screening direction.[110] On reading the regulation the court accepted the claimant's contention that the local authority must wait to determine the application until the Secretary of State has concluded his consideration of an application for a screening direction. Otherwise they run the risk that the Secretary of State will subsequently determine in the light of the application for a screening direction before him that the development is an EIA subject development 'thereby imperilling the decision by contamination with illegality'.[111] The basis for this decision was that 'the prohibition contained in Regulation 3(4) is a matter for determination by the court on the basis of the material available at the time when the court comes to consider that question'.[112] As neither the defendant nor the interested party had challenged the decision of the Secretary of State to issue a direction that the development was an environmental impact assessment development the court felt itself unable to consider the merits of that decision. On the basis of the above the court accepted the first ground of claimant's argument and quashed the decision to approve planning permission. As a consequence of this the court did not feel it necessary to consider the second ground.[113]

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[110] Ibid at 37.
[111] *R (Silke Roskilly) v Cornwall Council and others.*, At para 38, (n 80).
[112] Ibid at 36.
[113] Ibid at para 42.

Despite the decision at the initial judicial review the developer continued work within the boundaries of the quarry site. This led CADS to seek a further judicial review. Consequently, on 29th September 2016 CADS issued a claim for a second Judicial Review against Cornwall Council. This was intended to require Cornwall Council to prohibit the actions by Shire Oak Quarries which were likely to have significant effects on the environment.[114] CADS lost its second judicial review case on 20 January because of a last minute retrospective planning application by Shire Oak Quarries on 17 January 2017 for a perimeter fence surrounding Dean Quarry.[115] CADS stated that the tardiness of this application as a 'cynical tactic' in that it addressed elements of Ground One in CADS' legal argument, and thus emasculated the case. The court declared that the submission of the retrospective application for planning permission rendered the claim as no longer substantive. It was now left to the planning authority to consider the merits of the retrospective application for construction of the fence and any formal objections from members of the public through its website.[116] The planning committee approved the application despite having received eighty objections to the development, as it was entitled to do.

2.3.3 SOME KEY FINDINGS FROM THIS CASE

The first finding is that this court case actually turned on aspects of terrestrial planning laws, and effects of the EU's EIA Directive, rather than addressing the

[114] 'Cornwall Against Dean Superquarry Website.' (2015) <http://www.cads2015.com/> Newsletter page, 29 September 2016 newsletter.
[115] Application PA17/00257 Cornwall County Council Online planning register.
[116] 'Cornwall Against Dean Superquarry Website.' Newsletter page, 25 January 2017 (n 105).

potential risks to the conservation objectives for the Manacles MCZ as other parts of the development proceed. The court had to consider the facts before it rather than taking a holistic approach and considering the very real threat of future harm to the MCZ. It is does however provide other lessons for those seeking to protect MPAs in UK waters. First, it is clear that in this case the Coastal Concordat did not provide an adequate process for balancing the need for some development with the concerns for the marine environment that arose in this instance. This is evidenced by the fact that although the MMO, the agreed lead authority for the development, had determined that an EIA and marine licence were required in October 2014, the planning authority decided otherwise when consenting to the development in April 2015. Second, the judicial review process did provide the environmental protection that the interested party was initially seeking.

However, as with the outcome of the Whitsand Bay case it must be regarded as unsatisfactory that private citizens have to undertake the expensive and uncertain process of judicial review to get the MMO to properly discharge its duties.

2.4 COMMERCIAL FISHING

2.4.1 INTRODUCTION

On first consideration commercial fishing might not be considered to be a threat to MPAs because it is a perfectly legitimate activity. However, the practice if unregulated, or incorrectly regulated, can result in harm to the species and features which are intended to be protected by the network of MPAs. We have already seen how one type of fishing method can cause damage to valuable reef habitat and how

the UK responded to that threat. The next part of this thesis will consider how commercial fishing can harm highly protected migratory species if the wrong method of fishing is practiced.

The following sections will unfold as follows, section 5.1., sets out the current legal basis for commercial fishing in EU waters in general, and the UK in particular. Section 5.2 will review the origin of the EU's Common Fisheries Policy (CFP) in the early 1970s. Section 5.3 will provide a brief summary of the operation and development of the CFP before an analysis of how a threat to protected species, dependent upon marine protected areas, was impacted by a particular method of commercial fishing The final section, section 5.4 will analyse the legal approach adopted by the UK in an attempt to mitigate a threat to highly protected species.

2.4.2 CFP - An INTRODUCTION

Fishing vessels registered in the UK must have a licence to fish for sea fish that is to be sold. The purpose of the licensing system is to restrict the size of the UK fleet and control UK fishing opportunities to stay within the quotas under the CFP. There are different types of licence, depending on the length of the vessel, the species fished and the waters the vessel will operate in.[117] The licencing regime was transferred from the Secretary of State to the MMO when the MCAA came into force.[118] The UK authorities, however, only have complete discretion on the management of fisheries within 6nm of the baseline. Beyond 6nm, historical rights of access for some other Member States continue to apply in those areas and

[117] 'Marine Management Organisation Website.' Fishing vessel licence requirements https://www.gov.uk/guidance/understand-your-fishing-vessel-licence accessed 20 August 2016.
[118] MCAA 2009 (n 2).

commercial fishing is managed under the provision of the CFP and this has limited the ability of UK authorities to respond to a number of problems. In addition to its own fisheries laws and the CFP the UK is subject to the rules of the London Fisheries Convention.[119] The London Convention is important in that it reserves exclusive fishing rights for the Contracting Parties between the baseline and 6 nm which accords with the extent of the jurisdiction of the IFCAs.[120]

The CFP is not concerned with MPAs *per se,* but it needs to be considered in this study because it has a significant impact on the UK's marine environment. Its main provisions can be found in a series of Regulations which, as we have seen, are binding in their entirety and directly applicable in all Member States.[121] As such, they do not require transposition into UK law in the same way as Directives and, as a result, if the UK wished to continue to apply them they would need to be transposed into UK law post-Brexit. The Government has announced that the UK will use the opportunity presented by Brexit to bring in a world-class fisheries management system, based on the principle of maximum sustainable yield (MSY), and which will help 'to restore and protect the marine ecosystem'.[122] This will include ensuring plans are science-based so that fisheries are managed to allow them to recover to sustainable levels in the shortest time feasible. The UK Government has committed to manage fisheries using an ecosystem approach to fisheries management to minimise, impacts on non-commercial species and the

[119] Fisheries Covention, London. 9 March/lO April 1964 Cmnd 3011.
[120] Ibid Art 2.
[121] P. P. Craig and G. De Burca, *EU law : text, cases, and materials.* (5th edn, Oxford University Press 2008) 278.
[122] *A Green Future: Our 25 Year Plan to Improve the Environment* (Defra, 25 Year Environment Plan, Area 1C, Nobel House, 17 Smith Square, London, SW1P 3JR, 2018, 106.

marine environment generally, including through technical conservation measures.[123]

It is currently estimated that only about 30% of UK fish stocks are now at sustainable levels, for example, and 'since 2010 the proportion of large fish in the North Sea have risen to levels not seen since the 1980s'.[124] It is not clear, nor does the Government enlighten us, on how much of this recovery is due to measures imposed by the EU. However until the UK has formally left the EU, the CFP will remain in effect. It is also likely to be a subject of further discussion during the 'divorce talks'. On that basis it would be remiss if CFP was not considered in this study.

2.4.3 A PROBLEMATIC BEGINNING

At the time of its creation, the legal basis for CFP was said to be Article 38 of the Treaty of Rome (ToR) which governed markets for agricultural products such as 'products of the soil, of stock-farming and of fisheries'.[125] This Article is now Article 3 (d) in the post Lisbon numbering. The placing of fisheries under agricultural provisions of the ToR (Title II) became problematic when the Community subsequently created its environmental provisions under a separate Environmental Title (XX). This created a jurisdictional separation between fisheries management issues, which are overseen by the Directorate General for Maritime Affairs and Fisheries (DG MARE), and nature conservation, which is overseen by the

[123] Ibid 107 section 1.
[124] Ibid 106 second para.
[125] Treaty Establishing the European Economic Community, March 25, 1957, 298 U.N.T.S. 3, 4 Eur. Y.B. 412. Art 38(1).

Directorate-General for the Environment (DG Environment).[126] This bifurcation of policy was not remedied at the time of the adoption of the Lisbon Treaty and this has led to the inability of the Community to resolve the environmental problems caused by CFP. Amongst the problems caused by this division of responsibilities is that it is often difficult to reconcile responsibility for the conservation of habitat areas for marine living resources and the demands of commercial fishing. This hinders the development of law and policy concerned with species conservation and it is for this for that reason that the effects of the CFP on marine living resources must be briefly considered.

The origins of the CFP can be traced back to 1970 when the six founder members agreed to common rules for the co-ordination of fisheries policy.[127] The 1970 Regulation contained a single reference to the idea of conservation. This gave the Council the power to adopt measures where there was risk of over fishing certain stocks.[128] There were no references to current concepts such as the need for sustainable practices, managing the wider marine ecosystem, or the need to reduce by-catches or discards. The 1970 Regulation was a way of establishing rules for the exploitation of what was hurriedly deemed to be a common resource by the Council in the final stage of the negotiations for the accession of four new Member States.[129] The Regulation granted Member States equal access to, and use of, fishing grounds in maritime waters coming under the sovereignty or within the jurisdiction of Member

[126] Elizabeth M. De Santo and Peter J. S. Jones, 'Offshore marine conservation policies in the North East Atlantic: Emerging tensions and opportunities' 31 Marine Policy 336.
[127] Council Regulation EEC No 2141/70/EEC of 20 October 1970 laying down a common structural policy for the fishing industry [1970] OJ L236/1 (Regulation 2141/70/EEC).
[128] Ibid Art 5.
[129] Britain, Ireland, Denmark and Norway.

States.[130] In effect, fisheries in the waters of Member States became a common community resource. The Regulation was a mere fifteen articles long. The sole derogation was regarding access to waters within three nautical miles of the base line of a state for a period not exceeding five years from the coming into force of the Regulation.[131] In essence, the 1970 Regulation rendered the London Convention inoperable by restricting exclusive fishing rights to a mere 3nm.

2.4.4 A BRIEF SUMMARY OF THE OPERATION AND DEVELOPMENT OF THE CFP

From its inception the CFP was widely criticised as a failure in terms of conserving the marine environment and, as a consequence, commentary on it often tends to the polemic rather than analytical.[132]

In 2006 the Commission set out its plans for implementing sustainability in the EU's fisheries through the adoption of an MSY approach.[133] This approach was to be based on the commitment made at the World Summit on Sustainable Development held at Johannesburg in 2002 and which required the maintenance or restoration of fishing stocks at levels consistent with MSY.[134] This approach was to be operated in the context of an ecosystem approach to stock management which would be

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[130] Regulation 2141/70/EEC, seventh recital (n 117).
[131] Ibid Art 4.
[132] Christopher Booker and Richard North, *The castle of lies : why Britain must get out of Europe* (Duckworth 1996) 86.
[133] Commission (EC) Implementing sustainability in EU fisheries through maximum sustainable yield' COM (2006) 360 final, 4 July 2006.
[134] MSY is the maximum yield that may be taken year after year to ensure that the level of fishing mortality results in a stock size that produces the maximum sustainable yield.

gradually implemented.[135] In addition, in response to the UN Resolution on Sustainable Fisheries, the Commission set out its proposals for eliminating destructive fishing activities in the high seas and for protecting vulnerable deep water ecosystems.[136] The International Council for the Exploitation of the Seas (ICES) stated that most deep sea species exploited by the European fisheries industry were outside safe biological limits. The Commission described the destruction of vulnerable marine habitats by human activity as 'one of the 'hidden' environmental catastrophes of our time'.[137] Particular reference was made to scientific evidence that suggested that deep sea biodiversity is concentrated in and around features of the sea bed such as seamounts, coral reefs, and hydrothermal vents. The Commission set out how it intended to comply with the resolution on sustainable fisheries adopted by the UN General Assembly on 8 December 2006. This called for action by states with authority over the deep seas to protect them from damage.[138] The EU committed itself to a number of actions in co-operation with the CBD, Regional Marine Conventions, the FAO and Regional Fisheries Management Organisations. These included the following,

- The submission of a report to the UN Secretary General providing the EU views on progress made in addressing destructive fishing practices and

[135] COM (2006) 360 final s1 para 5 (n 123).
[136] Commission, 'Destructive fishing practices in the high seas and the protection of vulnerable deep sea ecosystems' COM (2007) 604 final, 17 October 2007.
[137] Ibid S 1.1.
[138] UNGA Resolution 61/5 Sustainable fisheries, including through the 1995 Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, and related instruments adopted on 8 December 2006. Clause 83 of which called on RFMOs and States "*to adopt and implement measures, in accordance with the precautionary approach, ecosystem approaches and international law (…) as a matter of priority*", in accordance with a package of key elements that constitute a rigorous management regime for high seas bottom fisheries by 31 December 2008 at the latest (31 December 2007 in the case of interim arrangements).

proposing ways and means to make further progress. Preparations shall include a call for views from stakeholders and civil society.

- Assisting the UN FAO in its efforts to collect and disseminate information on measures taken by States, the establishment of databases on protected areas or closures, and the development of technical guidelines on deep sea fisheries.
- Assisting CBD and Regional Marine Conventions in their efforts to identify ecologically or biologically significant marine habitats in need of protection in open ocean waters and deep sea habitats, and
- Engaging in consultations and demarches with UN counterparts to promote a rigorous review process.[139]

The framework Regulation for CFP was subject to major revisions in 1983;[140] 2002[141]; 2009[142] and 2014.[143] In addition, further Regulations have been introduced periodically as technical measures to improve the operation of the policy. The most significant of these measures include provisions on surveillance of catches, for quotas to be based on scientific information, a requirement for Member States to act in concert to extend their fishing zones to 200 nautical miles,[144] a

[139] Commission COM (2007) 604 final s5.1.
[140] Council Regulation (EEC) 170/83 stablishing a Community system for the conservation and management of fishery resources [1983] OJ L24/1 (Regulation 170/83/EEC).
[141] Council Regulation (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy [2002] OJ L358/59.
[142] Council Regulation (EC) 1224/2009 of 20 November 2009 establishing a Community contol system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006 [2009] OJ L343/1.
[143] Parliament and Council Regulation (EU) No 1380/2013 of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC [2013] OJ L354/22.
[144] Regulation 170/83/EEC) fourth and eleventh recitals (n 130).

regulation establishing a Community system for fisheries and aquaculture,[145] and a regulation on the exploitation of fisheries resources.[146] This latter Regulation mandated that the exploitation of aquatic living resources should be based on the precautionary approach.[147]

Despite the frequent revisions of the CFP framework and the output of technical measures relating to fishing and marine conservation, in late 2007 the EU's Court of Auditors (CoA) issued a special report in which it reported its findings on the operation of the CFP.[148] The audit examined whether the CFP was achieving the objective of sustainable exploitation of living aquatic resources. It would not be an exaggeration to describe the findings as scathing. In summary, the CoA report found the following problems,

- catch data was neither complete nor reliable,
- the inspection system did not provide confidence that infringements are prevented or detected when they occur,
- the procedures for dealing with reported infringements didn't support the Commission's assertion that every infringement was followed up,
- over-capacity in the EU's fishing fleets was damaging industry profitability and incites non-compliance with restrictions. [149]

[145] Council Regulation (EEC) 3760/92 establishing a Community system for fisheries and aquaculture[1992] OJ L389/1.
[146] Council Regulation 2371/02/EC, (n 131).
[147] Ibid recital 3. The recital states that the precautionary approach is based on the same considerations as the precautionary principle found in Article 174 (Art 193 post Lisbon) of the Treaty.
[148] Court of Auditors Special Report No 7/2007 of 28 December 2007 on the control, inspection and sanction systems relating to the rules on conservation of Community fisheries resources together with the Commission's replies [2007] OJ C 317/1.
[149] Ibid Executive summary.

In its response the Commission largely agreed with the CoA's findings and referred to its forthcoming reform of CFP as offering a remedy.[150] Despite the CoA findings and the Commission's general endorsement of the findings the enforcement of fishing regulations has continued to be lax. In particular, there remained a significant gap between the levels of totally allowable catch (TAC) agreed in Council and sustainable catches which suggested the prevailing of short-term interests over long term sustainability.[151]

In 2008 a Regulation designed to strengthen the collection and management of scientific knowledge on fishery stocks and to enforce a move towards an ecosystem approach to fisheries management was introduced.[152] In the same year, the Council implemented a Regulation which did indeed extend the application of the CFP beyond Community waters.[153] The objective of the regulation was to ensure the conservation of marine ecosystems, such as reefs, seamounts, deep water corals, hydrothermal vents and sponge beds. This was done on the grounds that there was abundant scientific information showing that the integrity of these ecosystems is threatened by fishing activities using mobile bottom trawling gears and was in line with earlier Community measures to close areas within Community waters where such ecosystems are found.

[150] Ibid Commission Replies, Clause 121.
[151] José-María Da Rocha, Santiago Cerviño and Sebastian Villasante, 'The Common Fisheries Policy: An enforcement problem' 36 Marine Policy 1309.
[152] Council Regulation (EC) 199/2008 of 25 February 2008 concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy [2008] OJ L60/1.
[153] Council Regulation (EC) 734/2008 of 15 July 2008 on the protection of vunerable marine ecosystems in the high seas from the adverse effects of bottom fishing gears [2008] OJ L201/8.

A 2010 interdisciplinary review of the CFP set out a number of clear reasons for the failure to achieve its own objectives. These included the fact that both a biological and economic perspective quotas were set too high and subsidies from Member States and the EU had resulted in too much fishing effort and which, in turn, had resulted in low stock sizes, low catches, and severely disturbed ecosystems.[154] In addition, there was tension between the legal and political objectives connected to fisheries. Politicians were found to be seeking to maximise the resource allocation to avoid domestic political problems and, it was argued, that potential conflicts of interest required a well-functioning fisheries management regulatory framework subject to the exclusive competency of one regulatory body whereas the then CFP was characterised by a lack of transparency, opaque decision making and a lack of compliance.[155]

In practice the primary reason for the repeated failure of the CFP has been its highly centralised decision-process and a focus on short-term economic and political interests at a political level.

2.4.5 THE THREAT TO UK MPAs AND MARINE CONSERVATION ARISING FROM THE CFP

It can be seen from the foregoing that the CFP has not been a success in terms of conservation of species, even within its own terms. This conflict may have been what prompted Lord Hunt, during a debate on the UK's Marine Bill to say that, 'the common fisheries policy regulates the environmental impacts of fishing as well as

[154] Setareh Khalilian and others, 'Designed for failure: A critique of the Common Fisheries Policy of the European Union' 34 Marine Policy 1178.
[155] Ibid.

the methods and level of catches permitted. Under EU law, it therefore already factors in environmental damage and deems that to be acceptable to the extent that it is a necessary consequence of fishing'.[156] One example of the environmental damage deemed an acceptable consequence of fishing can be seen in the way the recurrent problem of incidental or unintentional bycatch of protected species was handled by the Commission. Regardless of the reasons for such bycatches, they are not conducive to species conservation for a number of species and they need to be minimised.

A further example of harmful bycatches is the capture of cetaceans during certain types of trawling. This is despite the fact that, as seen in chapter two, all species of cetaceans, including harbour porpoise and bottlenose dolphins are strictly protected under the Bern Convention. They are also subject to strict protection under the Habitats Directive.[157] The protection is absolute, and is not restricted to MPAs designated for the protection of cetaceans. However the effectiveness of this high degree of protection when it meets the *realpolitik* of the CFP reveals a lot about the difficulty for the UK in fulfilling its international obligations while subject to the strictures of the CFP.

2.4.5.1 PAIR TRAWLING AND CETACEAN BYCATCHES

As seen in chapter three, there are thirty-six SACs in UK waters designated under ASCOBANS for the protection of two small cetaceans, the harbour porpoise and the common bottlenose dolphin. Both species are categorised as coastal species and

[156] HL Deb vol 708 col 1247.
[157] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora [1992] OJ L206/7 Annex IV (Directive 92/43/ EEC).

do not migrate particularly large distances. However, coastal populations will move around UK coasts, including passing between the designated SACs. This movement may be for such reasons as breeding or in pursuit of food sources as they move around the sea as part of their life cycle. Moving from a designated SAC will put them in harm's way from certain forms of commercial fishing, such as pair-trawling. Pair-trawling involves the use of a pelagic net towed between two vessels and this practice is implicated in the bycatch of these species. Connectivity between sites is therefore essential and best facilitated by means of migration corridors as suggested under CBD and CMS.

In 2000, the Sea Mammals Research Unit (SMRU), under contract to Defra began to carry out surveys to estimate the level of bycatch in UK pelagic fishing (fishing in the open sea as distinguished from demersal and coastal fishing) and to carry out research into mitigation devices. Pelagic pair trawling had been used in the commercial exploitation of sea bass around the UK. The species is present in fisheries in the Central and South North Sea, Irish Sea, English Channel, Bristol Channel, and the Celtic (Irish) sea.[158] The only fishery in which cetacean bycatch was observed was the bass fishery in the Western Channel.[159] The SMRU report showed that the bycatch for cetaceans in the area exceeded the level of 1.7% of the population set by ASCOBANS.[160]

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[158] Elena Ares, *UK and European Sea bass conservation measures.* (UK and European Sea bass conservation measures House of Commons Library Briefing Paper Number 00745 10 January 2016, 2016).

[159] *R v Greenpeace Limited and The Secretary of State CO/865/2005* R (Greenpeace) v Secretary of State for the Environment, Food, and Rural Affairs [2005] EWHC 2144 (Admin) para 13.

[160] ASCOBAN 3rd Session of the Meeting of Parties 26 - 28 July 2001 Resolution No. 3 Incidental Take of Small Cetaceans.

There are two SACs in the Western Channel area that were designated for the protection of cetaceans, the Fal and Helford SAC; and the Plymouth Sound and Estuaries SAC. Both sites have Harbour Porpoise and Common Bottlenose Dolphins present in them. Given this risk to the sustainability of the cetacean population, the UK approached the EU Commission in 2004 requesting emergency action to close the sea bass fishery in the Western Channel under the provisions of the 2002 CFP Regulation.[161] The application was supported by the scientific evidence collected by the SMRU. Similar powers allowing the regulation of commercial fishing had existed under the UK 1967 Sea Fisheries Act.[162] A ban could be permitted in circumstances where there is evidence of a serious threat to the conservation of living aquatic resources, or to the marine eco-system, resulting from fishing activities and which requires immediate action.

In 2004 the UK requested the Commission to use its emergency powers under the 2002 CFP regulation to extend a domestic ban on pair trawling for bass within the 12 nm limit of UK territorial waters off the south-west coast of England to vessels of other Member States having fishing access to this area. The objective behind the ban was to reduce the by-catch of the cetaceans while seeking more effective, coordinated action at Community level is possible. The Commission rejected the UK's request pointing out that the, '*issue of cetacean by-catch in pelagic pair trawling is a complex one and was specifically addressed as part of the comprehensive scientific review and advice given by the International Council for*

[161] Council Regulation (EC) 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy (Council Regulation 2371/02), Art 7.
[162] Sea Fish Act 1967, s5 (a).

the Exploration of the Sea (ICES) on cetacean by-catch in fisheries.' [163] ICES had indicated that fisheries using methods other than pair trawling also catch dolphins so such a ban could be seen as an arbitrary measure and that there would need to be a comprehensive monitoring of the numerous trawl fisheries active in the region before precise mitigation requirements could be implemented. ICES stated that a prohibition on the use of pair trawls to target sea bass in the United Kingdom inshore waters in the Western Channel would be likely to result in a redistribution of fishing effort into adjacent areas, without necessarily reducing the by-catch of common dolphins. The Commission rejected the UK's request for a ban. The Commission pointed out that it was financially supporting scientific studies and research to develop mitigation measures for by-catch of cetaceans in pelagic trawl fisheries or to update the scientific estimates of the abundance of small cetaceans in European Atlantic waters and would make the data publicly available.[164]

The UK approached the Commission again in 2005 and requested an emergency closure under Article 9 of the regulation. This can only be adopted after consultation with the Commission, the Member State and the Regional Advisory Councils. The proposed measures should be accompanied by an explanatory memorandum. This would have closed the UK territorial waters to all pair trawlers including those of other Member States. The Commission once again rejected the application.

The Commission's decisions illustrate two problems that result from the separation of fishing and environmental matters under EU law;

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[163] Commission Decision (EC) 2005/322 on the request presented by the United Kingdom pursuant to Article 9 of Council Regulation (EC) No 2371/2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy [2005]OJ L 104/37, recital 5.
[164] Ibid recital 8.

- First, it has been argued that the decision raises the question of how one Member State's scientific advisory bodies are viewed at the Commission level.[165] In this case, the Commission did not accept the UK's scientific evidence and preferred to await the completion of its own data collection process. The outcome resulted in UK fishermen line-fishing for sea bass in the English Channel having to observe French and Belgian pair trawling for the stock.
- Second, the Commission's decision making in such cases leads to a greater sense of mistrust within the industry and damages any sense of a level playing field.[166]

2.4.5.2 THE UK IMPOSES RESTRICTIONS ON ITS OWN VESSELS

Concerned at the rate of cetacean deaths the UK decided to ban the practice of pair-trawling by its own flagged trawlers. This ban would be likely to provide some relief to the threatened cetaceans as they moved between protected areas as part of their life cycle.

Member States are permitted to take non-discriminatory measures for the conservation and management of the marine ecosystems within the 12 nautical mile zone adjacent to their coastline.[167] On that basis the UK issued an Order prohibiting British vessels from pair trawling within UK territorial waters in an attempt

[165] Elizabeth M. De Santo, ''Whose science?' Precaution and power-play in European marine environmental decision-making' 34 Marine Policy 414.
[166] Ibid 419.
[167] Council Regulation 2371/02, Art 9 (n 152).

to reduce the rate of bycatches.[168] The ban did not apply to vessels from other Member States

2.4.5.3 THE LEGITIMACY OF THE ORDER IS CHALLENGED

The Secretary of State then found his decision challenged by Greenpeace who requested that the Order be quashed on two grounds: irrationality, and a failure to consider a material matter.[169] It is worth noting that the aim of the Order was,

> to reduce the bycatch of common dolphins. Pair trawling of the type prohibited has been identified as a fishery with a high level of bycatch of common dolphins, and research into possible mitigation measures has shown that there is no early technical solution to reducing the bycatch in this fishery through the use of mitigation devices.[170]

The court, quite correctly, rejected the application to quash the Order on the grounds that *'the power to strike down a statutory instrument on the ground that the Minister's decision to make it was perverse is one to be exercised with caution. The primary review of delegated legislation ought to be Parliamentary'*.[171]

2.4.5.4 CONCLUDING REMARKS

[168] The South-west Territorial Waters (Prohibition of Pair Trawling) Order 2004 SI 2004/3397.
[169] *R v Greenpeace Limited and The Secretary of State CO/865/2005*, para 63.
[170] Explanatory Memorandum to the South-West Territorial Waters (Prohibition Of Pair Trawling) Order 2004 3397, s2.1.
[171] *R v Greenpeace Limited and The Secretary of State CO/865/2005*, para 71.

The Commission's stance on this matter was regrettable given the availability of scientific evidence from the SMRU. By 2005 the EU had already adopted the precautionary principle as a general principle of law and it would seem to have been relevant in this case.[172] Further in previous case, albeit one involving human health, the ECJ had found that '*despite the uncertainty about the degree of that risk the Commission was empowered to take protective measures without having to wait until the reality and seriousness of the risk becomes apparent*.[173]

In a similar vein there were a number of other relevant facts that do not seem to have been given any great weight by the Commission in reaching its decision.

- All species of cetaceans are strictly protected under ASCOBANS and Annex IV of the Habitats Directive.
- Whilst the Habitats Directive only forbids the 'deliberate' killing of cetaceans it does require that Member States prohibit the deliberate disturbance of these species, particularly during the period of breeding, rearing, hibernation and migration.[174]
- The existence of the SMRU data means that while the Commission may dispute its significance it cannot deny that the result of pair trawling was likely to disturb the creatures when migrating.

[172] Craig and De Burca, 567 (n 111).
[173] *Case C-180/96 United Kingsom v Commission [1998]* ECR-2265, para 99.
[174] Directive 92/43/EEC, Art 12 1 ©.

- The Commission had itself issued a regulation on the subject in April of the same year. This introduced technical measures aimed at reducing the number of cetaceans caught incidentally in certain fisheries.[175]

It might, therefore, have been thought that the Commission would have welcomed the UK's action but it did not.

Further, the UK had found itself in the odd position of trying to comply with the EU Regulation requiring the reduction of bycatches of cetaceans but falling foul of a Treaty right concerning non-discriminatory measures against nationals of other EU states. This outcome has had the effect of limiting the UK's ability to make progress in ensuring the strict protection to all species of Cetaceans as required by the Bern Convention, ASCOBANS and the Habitats Directive.

A question that did not appear to be considered in the case is the fact that both common porpoises and bottle nose are highly mobile species and could be inadvertently killed when moving between designated SAC sites then the sites will effectively only be enclaves rather than a coherent network.

The UK's 2015 report to ASCOBANS noted that the SMRU's protected species bycatch monitoring programme stated that the principal area of concern remained the cetacean bycatch in South-Western waters of the Western English Channel and Celtic Sea. It estimated that for 2015 bycatch rates were in the region of 1200 to 1500 harbour porpoises and that harbour porpoise bycatch rates may have

[175] Council Regulation (EC) No 812/2004 of 26 April 2004 laying down measures concerning incidental catches of cetaceans in fisheries and amending Regulation (EC) No 88/98 [2004] OJ L 104/37 .

increased slightly in recent years.[176] The report also noted that the sea bass fishery implicated in the bycatch issue was effectively ended in 2014 due to concerns over bass stocks. It suggested that one reason may have been the bass pair trawl fishery in South-West waters which, in the past, had been a source of concern with respect to common dolphin bycatch. It seems that the CFP won the battle to carry on pair trawling despite the risks to cetaceans but lost the overall war because of its focus on economic exploitation of stocks.

3. RESEARCH FINDINGS

The objective of this chapter was to consider how the appropriate authorities respond to threats that arise unexpectedly or which emerge during the carrying out of activities permitted under the relevant legal framework. The selected threats included maintenance dredging and disposal; coastal infrastructure; and the impact of commercial fishing. Each of the threats is subject to regulation and licencing by UK regulatory bodies under national law and there is an additional regulatory structure under EU law. There have been relatively few cases in these areas that have been heard before the courts but, as will be seen, these do provide key insights into the future management of UK MPAs by the authorities.

The Whitsand Bay case illustrates failures on the part of the MMO to follow its own procedures and to enforce the obligations the UK has accepted under international law. The MMO did not discharge its responsibilities in regard to ensuring that the disposal of potentially harmful dredge materials was carried out in a way which *best furthers*, or *least hinders* the protected features and the conservation objectives set

[176] 'Compilation of Annual National Reports to ASCOBANS 2015.' 14, available at http://www.ascobans.org/sites/default/files/document/ASCOBANS_AnnualNationalReports_Compilation_2015.pdf, accessed 12 June 2017.

for the Whitsand and Looe Bay MCZ as required under s125 of the MCAA. If the MMO had adopted a precautionary approach to the disposal of the dredged materials then it would not have risked hindering the conservation objectives set for the MCZ. The basis for this view is that if the MMO had been certain of its position it would no doubt have defended its decision rather than agreeing to the imposition of a Consent Order. Dredging is a vital activity but if the MMO continues to fail in its responsibilities in respect of managing such activity within, or adjacent to MCZs and other protected areas then public sentiment may turn against what is usually a necessary and legal activity. The decision by the MMO to permit the dumping of potentially harmful dredged material close to the site of a newly designated MCZ does not suggest it was applying a precautionary approach. It also suggests that Defra did not consider the best available science in its approach to the management of the MCZ.

In terms of coastal infrastructure development the UK's bid to exclude the area known as Lappel Bank from the Medway Estuary and Marshes Ramsar designation was ill founded. The site met the criteria for Ramsar designation and for designation as an SPA but the Secretary of State excluded it on economic grounds, contrary to the provisions of the Habitats Directive. The ECJ found the exclusion to be unlawful, but unfortunately the UK's error was compounded due to the length of time the legal process can often take and Lappel Bank was destroyed. Knowing the matter was to be considered by the ECJ the UK court should have imposed a stop order on the development while the matter was under determination by the ECJ.

The circumstances and the outcome in the Manacles MCZ case present a confusing picture of the regulation of coastal infrastructure development. It illustrates that concerned citizens can take a very different stance to the public authorities in respect of the tension between economic development and environmental protection. In this case the legal process did not focus on the risk to the MCZ in the first instance but on the associated terrestrial developments. At first this served the action group well and led to the quashing of a planning application for the all-important terrestrial part of the development. However, the court rejected a second application for judicial review of a failure by the planning authority to enforce its own rules relating to the quarry. It must be regarded as unsatisfactory that concerned citizens have to go to the trouble and expense of seeking a remedy in the courts and have to succeed on every occasion. By contrast the developer needs only to succeed once with an action that could cause significant damage to a supposedly protected area of the marine environment. This allows a developer to 'salami slice' development plans in such a way that could make the final marine development irresistible.

In the *Pair Trawling* case the EU Commission prevented the UK from acting to protect cetaceans despite their strict protection under a variety of international and EU legal instruments. This diminishes the point of creating SACs for cetaceans because they are likely to be harmed as they move between protected areas. In the end it did not protect the commercial fishery for sea bass either, and that has now collapsed. In effect, the CFP prevented the UK from fulfilling its obligation under various instruments to ensure the absolute protection of cetaceans.

In summary, on the basis an admittedly small number of cases, the UK has not responded adequately to a number of threats to marine protected areas in its waters. On occasions the appropriate authorities have adopted a supine approach to threats to MPAs and on others the courts have either moved too slowly or have allowed partial developments to proceed that will ultimately threaten an MPA.

CHAPTER SIX
CONCLUSIONS

DESIGNATION, DESIGNATION, EVERYWHERE, BUT NOT MUCH MANAGEMENT

1. INTRODUCTION

The question to be addressed in this research was, *'Is the UK implementing a marine conservation policy that fulfils its obligations under international law with particular reference to marine protected areas (MPA) and the 2009 Marine and Coastal Access Act (MCAA)?'* Answering this question involved analysing the major multi-lateral environmental agreements (MEA) most relevant to the protection of the marine environment and its living resources in order to understand what obligations are placed on states with regard to MPAs. The next step was to review the UK's approach for designating and managing all types of MPA in UK waters following the coming into force of the MCAA to understand if the UK implements the selected international obligations in its policy and practice.

This chapter will present the results of this study in five core parts. The first addresses how aligned the UK's approach to designating MPAs is with international law. The conclusions for this will be drawn from the evidence set out in chapter three. The second part draws conclusions from the evidence relating to the management of all types of MPAs in UK waters in chapter four. The third part consists of a similar exercise completed in respect of the response to threats to UK MPAs drawn from chapter five. The fourth part of the chapter will provide an overall answer to the original research question and suggest ways in which the UK could strengthen both its practice and its legal framework for MPAs. The fifth part will set out some final concluding remarks on the overall topic.

2. MPA DESIGNATION: A UK SUCCESS STORY

The legal regime governing the grounds for designating the different types of MPAs in UK waters is complex. There are seven different types of designation for MPAs in UK waters with many sites listed under more than one designatory type. For example, many Ramsar sites are also listed as Special Protection Areas (SPA) under the EU's Birds Directive. Similarly, many ASCOBANS sites are designated as Special Area of Conservation (SAC) under the provisions of EU law and included in the list of European Marine Sites (EMS) under the EU's Natura 2000 programme. The situation is further complicated by the fact that all types of UK MPA are listed as MPAs under the OSPAR Convention. However, as stated in chapter three 17% of UK waters have been protected under one or more of the type of MPA designation. The figure for English waters is 35%. The UK has therefore exceeded the 10% target set under the Convention on Biological Diversity for protection by for 2020.

As was shown in chapter 3, the grounds for designating MCZs and the other types of MPA are to protect habitats ***and*** species. However, some of the new MCZs were designated listing ***only*** marine habitats as protected features and do not list any species of marine fauna. This is consistent with the provisions of the MCAA governing the protection of geomorphological features. Examples include the Western Channel and Offshore Brighton MCZs; this is much less commonly the case for marine SACs in UK waters. By comparison, sites designated under Ramsar sites and the Birds Directive are selected entirely on the basis of the presence of listed species with site designation dependent upon their presence.

As stated in chapter three the MCAA does not explicitly mention the five obligations above under international law identified in chapter two when designating MCZs. However, it was shown in chapter three that under the Act public authorities must have regard to any obligations under both EU and international law relating to the conservation or improvement of the marine environment when creating a network of marine conservation sites. It is difficult to see how this can be successfully achieved if all individual sites in the network are not also subject to the same provisions, which suggests that the principles should also apply to individual sites as they are designated.

The designation of MCZs and other types of MPAs is, in essence, a precautionary act designed to protect valuable areas of the marine environment. The obligation to adopt a precautionary approach is repeated throughout UK policy documents on the marine environment. Additionally, the Explanatory Notes accompanying the MCAA refer to the concept in reference to the duties of the Inshore Fisheries and Conservation Authorities (IFCA) in managing inshore fisheries. The general acceptance of the precautionary approach in designating MCZs can be seen in the fact that the House of Commons Environmental Audit Committee (EAC) pressed the Government to adopt a precautionary approach to the designation of the third tranche of MCZs due in 2018. As the precautionary principle is a general principle of EU law it currently has direct effect in UK law so the lack of full scientific certainty about a site's features should not be used as a reason for not proceeding with the designation. Unfortunately this cautious approach was not followed after the designation of the first tranche of MCZs, but was purposely set aside.

The question of what constitutes an ecosystem is clearly set out in a number of the MEAs analysed in chapter two. Ramsar summarised it as the *physical, biological or chemical components, such as soil, water, plants, animals and nutrients, and the interactions between them.* That is to say both the biotic and abiotic components that should be present. The ecosystem approach is not included as a provision of the MCAA, but again it is referred to in the Act's Explanatory Notes in reference to the duties of the IFCAs. The ecosystem approach is, however, referenced throughout the UK's marine policy documents, which suggests it is a widely accepted concept. It is in fact a scientific term and, as such, courts would be in a position to judge whether or not the UK is complying with it in its marine conservation practice and regulation. The failure to explicitly incorporate an ecosystems approach into the provisions of the MCAA reduces its likely effectiveness. Kelleher indicated that among the primary reasons for MPAs was a need '*to ensure the sustainable utilization of species and ecosystems'*.[1] The fact that sites can be designated as MCZs only to protect features, rather than species, leaves some, e.g. Brighton Offshore MCZ, at risk of the purpose not being understood by the public or them being regarded as '*paper parks'* when they are in fact designated to represent the range of features present in the UK marine area.[2] The process of designating both Ramsar and EMS sites provides more certainty in the protection of ecosystems because they are both on the basis of scientific grounds only.

It has been seen that the provisions of the MCAA require that the MCZs form a network with other types of MPA to represent '*the features which are protected by*

[1] Kelleher, G. & Kenchington, R. (1992). *Guidelines for Establishing Marine Protected Areas* A Marine Conservation and Development Report. IUCN, Gland, Switzerland. vii+ 79 pp, 13.
[2] Marine and Coastal Access Act 2009 s 123 (b) (MCAA 2009).

the sites comprised in the network represent the range of features present in the UK marine area'. Unfortunately, the MCAA does not repeat the phrase found under OSPAR that the network should be ecologically coherent. There are, however, three references to the concept in the Explanatory Notes, two of which refer to the OSPAR guidance. However, as seen in chapter three, the statutory nature conservation boards (SNCB) defined what this meant in its statutory advice to Defra under the heading of network design principles. The principal failure in respect of the designation of MCZs, either individually or as a coherent network, has been the fact that none have been designated yet for mobile species. If a *network* of MPAs is to be created in such a way as to ensure that it is ecologically coherent, as required under international law, then it would seem essential that the migration routes for marine species, particularly highly mobile ones, are identified and granted some meaningful level of protection from human interference. This did not happen in the Pair Trawling case and is an area that needs to be addressed through improvements in the UK legal framework for the management of the network of MPAs as it is completed. The UK overall has fallen short of its own ambition to designate a coherent network of MCZs as required under the provisions of the MCAA or an ecologically coherent network of all types of MPA. In a few areas such as Lyme Bay it has however made some progress towards developing an ecologically coherent network of MPAs as required under the relevant international law. The development of the network is continuing albeit at a much too slow pace and at present it can only be regarded as a *representative* network of sites.

The grounds for designating an MCZ under the MCAA provide a clear statement that any reference to a thing (to be conserved) includes a reference to enabling or

facilitating its recovery or increase.[3] However, in practice it does not seem to be at the forefront of the way in which the Designation Orders are drafted. As a result, a full assessment of progress towards the recovery of areas of the marine environment will not be possible in areas designated as MPAs unless Defra accedes to the advice of the SNCBs that some reference areas should be designated. These would have to be classified as no-take zones. The obligation to restore degraded areas of the marine environment is not in the main text of the MCAA or the Explanatory Notes. It is, however, repeatedly referenced in UK policy documents on the conservation of the marine environment. It is also a requirement under the Habitats Directive and the MFSD. Both these Directives have been transposed into UK law so the obligation to restore damaged areas is a recognised legal obligation. The position may alter post-Brexit but this cannot yet be determined. UK law should be strengthened by the substitution of restoration with the word recovery and a full definition should be published for use by the authorities responsible for the regulation of marine protected areas.

The balance of evidence indicates that during the designation process for the different types of MPA in the UK marine area the relevant authorities gather and consider the best available scientific evidence in line with the obligation the UK has accepted in international law. However, as was noted by the EAC, there is evidence of tardiness in the designation of MCZs because of a Government search for '*perfect data*' rather than the more precautionary approach of using the '*best available data'*.[4] This was described as the Government shifting the goalposts in

[3] MCAA 2009 s117 (6) (b) (n 2).
[4] *Environmental Audit Committee, 'Marine Protected Areas Revisited' (2016–17) HC 597* (House of Commons HC 597 Published on 25 April 2017), para 10.

relation to the level of scientific evidence required.[5] It also runs counter to the obligation to adopt a precautionary approach. Indeed as was seen in chapter three, the second EAC inquiry the Government should not make perfection the enemy of the good by using a lack of '*perfect data*' as an excuse to delay the designation of sites. The committee felt that, instead, the Government should adopt a precautionary principle approach to Tranche 3 site selection and designations should be made using '*best available'* data and must take note of the '*gap analysis*' provided by the SNCBs to ensure it fills all the gaps identified in the network. Whilst the use of scientific evidence is not referred to in the provisions of the MCAA governing the designation and management of MCZs and other types of MPA it would be an absurdity to argue that it is not, therefore, a legal requirement. In practice, the UK has a strong record in marine sciences and the UK court has shown it willing to use it in the *Pair Trawling* and the *Darwin Mounds* cases, for example, and is, therefore, likely to be meeting its international commitments.

3. MIND THE GAP: LOTS OF REGULATORS, BUT LITTLE SIGN OF MANAGEMENT

The regulation and management of all types of MPA in UK waters is fragmented and a clear lead agency needs to be identified by the Government. The current position whereby multiple agencies have some remit for regulation of certain activities within the protected areas is unsatisfactory. Public authorities are required to have regard to advice or guidance from the statutory nature conservation body when carrying out their duties, but currently it is for the *public authority* to exercise its functions in a manner which it considers best furthers, or least hinders the conservation objectives

[5] *Science and Technology Committee 'Marine science' Ninth Report of Session hc (2012–13).*

stated for the MCZ, not the SNCB. As was seen in chapter four, it is not unusual for an MCZ to have as many as seven separate bodies regulating aspects of an MCZ subject only to the licencing regime of the MMO. With multiple regulators, it is likely that the SNCB will have to deal with imperfect information and each regulator will, therefore, be in the position where it is able to 'mark their own homework'. This risk has been termed 'regulatory capture'.[6] This is clear from the examples of Whitsand and Looe Bay and The Manacles MCZs which both have seven organisations responsible for regulating certain activities within their footprint. An integrated approach to regulation is therefore a prerequisite when operating in an area such as the marine environment where knowledge is acknowledged to be incomplete. The MMO would seem to be the natural choice for the role of a single regulatory authority, but its performance in responding to threats in MCZs, has been poor. This suggests that the creation of a single regulatory body, with enforcement powers, is needed and it should adopt a precautionary approach to all exploitation within UK MPAs. Such a body needs also to have appropriate enforcement powers, as its principal objective marine protection would provide the focus needed to protect valuable areas of the marine environment. The Lyme Bay study strongly suggests that many stakeholders, including civil society bodies such as charities, would be prepared to engage with such a body designated to protect the marine environment, while pursuing their own objectives.

At present, there is little evidence of a systematic approach to the management of UK MPAs and existing management plans do not appear to have been developed for the newly designated MCZs. Such management as there is within the MCZs appears to consist of the thirty byelaws introduced by the MMO and the twenty

[6] Weimar DL and Vining AR, *Policy Analysis,* 5th edn, Longman 2011, 245.

seven introduced by the IFCAs within the 6 nm limit. This is just over one byelaw per MCZ on average. Similarly, the sampling of the Natura 2000 Standard Data Forms for UK EMS showed that no management plans had been entered in the relevant section of the forms. It is perhaps for this reason that the OSPAR website does not show any management plans for any of the UK's MPAs.

Furthermore, it cannot be regarded as satisfactory that following the closure of an area of Lyme Bay to certain fishing techniques that the UK authorities did not impose any further regulation of activities with the potential to cause environmental harm or conflict between different groups. Again, it was left to a concerned group of citizens, led by the charity Blue Marine, to establish a form of bottom-up governance to manage fishing in the closed area. In the absence of such plans it cannot be safely argued that the UK has adopted a precautionary approach to the management of MPAs. In effect the absence of management such plans renders the UK's MPAs as little more than 'paper parks'.

In terms of managing its network of MPAs in such a way as to ensure ecological coherence the UK is failing. The EAC noted this in the evidence put before it at its second enquiry. The definition of ecological coherence set out in chapter three is given as '*the capability of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organisation comparable to that of the natural habitat of the region'*. This has not been achieved by the UK to date partly because of the failure to ensure connectivity between sites by means of migration corridors at certain times in the life cycles of protected species. In many cases the MPAs are relatively isolated from

one another and as a result it would be more correct to describe the current sites as a representative network.

If management plans were developed for each site and reference areas were designated then it would be possible to gather the necessary scientific data to measure whether the MPA sites were recovering or not. The evidence is therefore that the UK is not complying with its international obligations due to its failure to implement management plans in respect of all types of MPA in its waters. The absence of plans for the management and monitoring or research into whether the MPAs are recovering means that the level of legal protection they have is seriously weakened, and they are likely to remain little more than 'paper parks'.

4. GLOBAL OR LOCAL: THREATS TO MPAs IN UK WATERS CAN BE ADDRESSED

As discussed in chapter five, global threats to MPAs, such as climate change or ocean plastic pollution, may appear not to be amenable to resolution at a local level and instead require international co-operation. If so, the UK could have waited for international action to be agreed before taking any action. This might have been to accept a counsel of despair. Instead the UK has implemented legislation to address these issues within its own territory and has thereby set an example for other states to follow.

Prior to the coming into force of the MCAA, the UK's response to locally amenable threats to MPAs was patchy. The *Lappel Bank* case showed that the UK Government of the day valued economic development over the protection of vulnerable species and their habitat, despite its incorporation of the Birds Directive

into UK law under the Wildlife and Countryside Act. When Greenpeace sought the intervention of the European Court of Justice (ECJ) its processes proved to be much too slow and part of the site was lost due to irreparable damage. If the UK Government is serious in its commitment to uphold high environmental standards post-Brexit then the UK courts and regulators will need to be much more robust and timely when intervening to protect threatened habitats and species.

In the *Pair Trawling* case, the UK responded to scientific evidence and attempted to prevent the killing of listed cetaceans during the course of fishing by pair trawlers attempting to catch sea bass. Unfortunately, the EU Commission refused to impose a ban on the practice by EU vessels in the particular fishery, arguing that it needed to collect more evidence of the threat. This was despite the absolute protection afforded to all cetacean species under multiple legal instruments. The UK responded by imposing a ban on its own vessels, while the vessels from other Member States continued using the technology until the fishery collapsed. Brexit should remove any conflict around whose science has the greater weight and allow the UK authorities to act on the scientific evidence from its own statutory advisers and research institutes.

However, a recent House of Commons Briefing Paper has stated that the uncertainties around the Great Repeal Bill mean that it is still unclear to what extent Brexit will affect marine conservation and therefore whether or not there might also be implications for fisheries management.[7]

[7] David Hirst, Brexit: What next for UK fisheries? (House of Commons Briefing Paper Number CBP 7669, 4 July 2017), 23.

Unfortunately since the coming into force of the MCAA there is evidence of failure on the part of the authorities to respond satisfactorily to threats to protected areas. In both the Whitsand and Looe Bay and The Manacles it was left to groups of concerned citizens to intervene to protect the integrity of MCZs. The MMO was involved in the licencing of activities which posed a significant risk to the MCZs despite its duty under the Act to consider any exercise of its duties which might significantly hinder the achievement of the conservation objectives for the sites. It is unsatisfactory that concerned citizens need to seek recourse the uncertain and expensive process of seeking judicial review to get their concerns properly considered.

Again, the UK authorities' response to resolving threats to its MPAs suggests that they exist as 'paper parks' only rather than exemplars of marine conservation practice with powerful legal protection.

5. HOW THE RELEVANT LAW CAN BE IMPROVED

The purpose of this section is to suggest how such obligations can be used in a mutually reinforcing framework to ensure that the UK can improve its approach to marine conservation law, policy and practice. It is not to suggest that other similar obligations can be ignored.

The exploration of a number of MEAs identified a set of five obligations that are frequently repeated across the instruments. These are;

i. the obligation to adopt a precautionary approach;

ii. the requirement for an ecosystem approach;

iii. the obligation to designate an ecologically coherent network of marine protected areas;

iv. a restorative/recovery approach; and

v. the use of robust scientific evidence.

The five objectives were then evaluated and found to meet Jones' requirement that the law relating to MPAs must have clarity and be capable of being consistently interpreted to be effective.[8] Each of the five obligations has a clear meaning, albeit some are technical in nature, rendering them capable of application by the courts.

It was noted that the five obligations have not been explicitly incorporated into the MCAA or other relevant UK law, but they are repeatedly referred to throughout Government policy documents. On this basis they can be used as soft law to guide the decisions and actions of the UK bodies whose task it is to ensure the conservation of the marine environment when designating of all types of MPAs in UK waters. This would accord with the Tribunal's approach in the *Iron Rhine case*. However, despite their acceptance by the Tribunal at international level some authorities might argue that they would not have direct legal effect in the UK unless they were explicitly incorporated into UK law.

[8] Wanfei Qui P J.S Jones, Elizabeth De Santo, *Governing Marine Protected Areas - Getting the Balance Right. Technical Report, United Nations Environment Programme.* (United Nations Environment Programme. 2011), 55.

The five particular obligations were selected because they facilitate a holistic assessment of a state's performance which would not be obtainable by the use of a single dimension.

The interplay and mutually supporting nature of the selected five obligations should be used to provide something akin to the use of the balanced scorecard approach in business organisations. Under the balanced scorecard approach a number of key metrics are identified to ensure that managers take a holistic view of their activities in order to prevent a short-term approach that damages the wider organisation's health. For example, a simple four dimension business scorecard with four key performance indicators measuring cost control, skills enhancement, product quality, and unit output can be represented thus,

Cost control	Skills enhancement/training
Product quality	Unit output

Diagram 6: A simple balanced scorecard

One can quickly understand that reducing costs by cutting expenditure on skills enhancement/training could have a negative impact on product quality. Equally, focussing purely on reducing unit cost could have a deleterious impact on product quality.

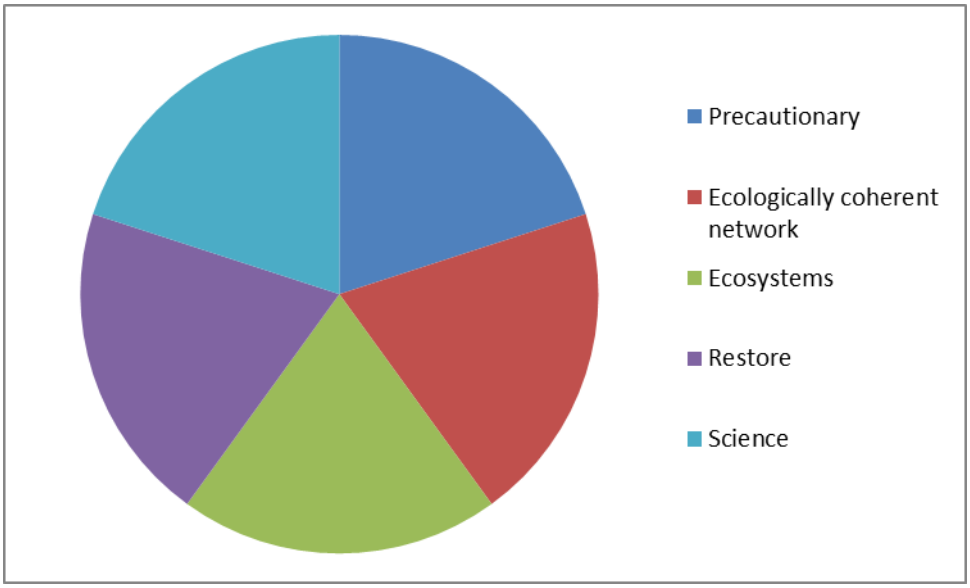

Diagram 7: The five obligations balanced scorecard

Applying this approach to the case of the designation of MCZs under the MCAA, it is clear that the change in the threshold for scientific data after the first tranche was designated has meant that this lessened the precautionary element on which sites had been identified. This 'unbalanced' approach has resulted in significant delay in completing the designation of a coherent network of sites. Viewing the obligations in this way would have made it clear to Defra that its decision to raise the threshold for scientific evidence reduced its compliance with the obligation to adopt a precautionary approach. Another example can be seen in the difference of opinion between the UK and EU over whose science was better in the *Pair Trawling* case. The unbalanced approach prevented the protection of cetaceans and inadvertently led to the collapse of the sea bass fishery in the Western Channel.

Similarly, if the appropriate authorities give an inappropriate degree of weight to the precautionary principle then it is likely that some unintended harm to the human elements of the wider ecosystem e.g. small scale fishing communities will follow. If

the courts and policy makers privilege the human parts of the ecosystem over ecological coherence of the marine environment, when deciding on development proposals, then it is likely to be degraded. For this reason, at this stage of its development, it is proposed that no weighting is assigned to the individual fundamental principles.

There is support for the idea of identifying a set of fundamental principles from a range of MEAs. For example, a similar set of principles was identified by the International Law Association (ILA) in 2002 when it distilled a set of seven principles relating to sustainable development into the New Delhi.[9] It was the proliferation of such MEAs and the inclusion of a number of similar that led the ILA's Committee on Legal Aspects of Sustainable Development to review these emerging principles of international law in the field of sustainable development and to incorporate them in a resolution later passed to the UN Committee on Sustainable Development.[10] These principles are increasingly being reflected in the decisions of international courts and tribunals, suggesting that the courts are beginning to explicitly recognise sustainable development goals and instruments. The ILA list contains the following principles,

- The duty of States to ensure sustainable use of natural resources
- The principle of equity and the eradication of poverty
- The principle of common but differentiated responsibilities
- The principle of the precautionary approach to human health, natural resources and ecosystems

[9] 'Resolution 3/2002 Sustainable Development New Delhi Declaration of Principles of International Law Relating to Sustainable Development.' (*International Law Association*, 2002) <http://www.ila-hq.org/> accessed 31 January 2015
[10] Ibid.

- The principle of public participation and access to information and justice
- The principle of good governance
- The principle of integration and interrelationship, in particular in relation to human rights and social, economic and environmental objectives.

It will be noted that there is a degree of alignment between the components of the proposed framework and the New Delhi principles. However, the use of the New Delhi Principles to assess a state's performance in meeting its obligations for conserving and protecting the marine environment is rejected because, despite the ILA's work, there is, as yet, not universal agreement on the effects or indeed the meaning of some of the principles selected. It is, however, clear that, at minimum, the approach of using a multi-dimensional framework should be regarded as *lege ferenda.*

Despite these shortcomings, the requirement for the recognition of the UK's international obligations when interpreting the UK's domestic law was demonstrated in chapter three when it was noted that the MCAA explicitly states that when creating a network of marine conservation sites the authorities must have regard to the UK's obligations under EU and international law. However, the MCAA's provisions on the designation of MCZs would be greatly strengthened if the requirement to have due regard to relevant obligations under EU and international law was added as a general obligation at the start of Part 5 of the Act. The absence

of this requirement from the MCAAs general provisions runs the risk of reducing the protection available to the new MCZs leaving them as mere 'paper parks'.[11]

6. OVERALL ASSESSMENT OF THE UK's PERFORMANCE

The main research question underlying this study was, 'Is the UK implementing a marine conservation policy that fulfils its obligations under international law with particular reference to marine protected areas and the Marine and Coastal Access Act'? Based on the findings of this study the question must be answered in three parts.

First, the designation of UK sites as MPAs has broadly complied with the international obligations under the selected MEAs. It has exceeded its obligation in international law in terms of the marine area designated in waters under its jurisdiction.

Second, the UK's failure to develop management plans for its MPAs falls far short of meeting it international obligations, such as adopting a precautionary approach or an ecosystem approach. As a consequence, the sites can only be regarded currently as 'paper parks' rather than beacons of conservation excellence with powerful legal protection.

Third, the UK's response to threats to its MPAs cannot be regarded as meeting a number of its obligations. The evidence suggests that this is in part at least due to a

[11] The requirement already applies to the creation of a network of sites so extending the obligation would be rational.

fragmented regulatory framework which lacks a lead regulator acting for the environment. This fragmented regulatory structure diminishes the level of legal protection afforded to the UK's marine protected areas. If a single lead regulator was created the conservation of protected areas and species could be improved by using the balanced scorecard of obligations as a methodology.

7. CONCLUDING REMARKS

The UK has made great strides in developing its law and policy in the field of marine conservation and the MCAA has been a great step forward. Whilst the UK has made great progress in incorporating the obligations identified under the selected MEAs when designating MPAs, the regulation and management is, at the time of writing, unsatisfactory. As a result the UK's marine conservation policy has several weaknesses that need to be remedied particularly in light of the UK's impending departure from the EU. It is therefore a recommendation of this research that a single regulator for MPAs is created with a view to assessing if this remedies the problems identified.

The Brexit process could present the greatest obstacle to the UK's performance in meeting its legal obligations in respect of conserving the marine environment. Of course, much EU law in this area has already been transposed into UK law and any remaining EU legislation will be transposed when the European Union (Withdrawal) Bill is enacted into UK law. However, Ministers are seeking to exercise what have become known as 'Henry VIII' powers which will allow them to amend EU legislation unilaterally without scrutiny by Parliament. If such powers are exercised to alter or remove EU conservation legislation then the UK may lose much of its legal

alignment with the international legal order in this area, even though the UK is also an individual signatory to those international legal instruments. This is because there will be the loss of enforcement by the ECJ, which has been very much an activist in enforcing environmental law across the Member States.
Through the enactment of its Climate Change Act and national legislation designed to reduce ocean plastic pollution the UK has made a start to the protection of the wider marine environment through the tackling these non-amenable threats which may be felt elsewhere. Unfortunately, uncertainty about the ability to act unilaterally in the face of these threats without creating WTO/EU non-trade barriers may be a problem in future.

The UK has a strong legal framework for the designation of MPAs under different legal regimes but the evidence shows that they do not currently have powerful legal protection because the lack of management of the sites threatens their conservation value. They are, in effect, ‘paper’ parks.

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Strong Leadership A Clear Economic Plan A Brighter, More Secure Future

(Promoted by Alan Mabbutt on behalf of the Conservative Party at 4 Mathew Parker Street, London SW1H 9HQ, 2015).