People and the Sea: Building Partnerships to Manage European Marine Sites

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I, Thomas Roberts, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

Partnership approaches to governance between national government agencies, local authorities, local communities and businesses have become the norm across all sectors of government, and nature conservation is no exception. As a result, the development of partnerships is becoming an increasingly common approach to managing common pool resources (CPRs). This thesis examines the state of current approaches to the governance of CPRs and in particular the impacts of the recent emergence of the partnership paradigm on CPR management. The research draws heavily on CPR theory and social capital literature to develop an understanding of the way governance structures and institutional arrangements can influence the development of partnership capacity and consequently improve the management of the protected areas.

The 1994 Habitats Regulations stipulate the creation of partnerships to manage European Marine Sites (EMS), providing a useful framework within which to explore the partnership approach to nature conservation. The research has been conducted through the in-depth analysis of two case studies, The Wash and North Norfolk Coast and North East Kent. The two sites represent very different types of EMSs; this is a reflection of both the nature of the sites and the people who interact with them. Consequently the research has been able to explore a range of challenges relating to the implementation of the partnership approach as well as highlighting a number of examples of good practice. The research has demonstrated that partnerships between the state and the wider stakeholder community can be a useful tool for managing CPRs. However, for them to be successful it is essential that all parties are fully aware of their role and the scope of their influence. The research has also shown that social capital plays a vital role holding partnerships together and can be generated through a shared community interest in environmental management.

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List of Acronyms and Abbreviations

AONB	Area of Outstanding Natural Beauty
BTO	British Trust for Ornithology
CASE	Collaborative Award in Science and Engineering
CBD	Convention on Biological Diversity
CAP	Collective Action Problem
CPR	Common Pool Resource
DEFRA	Department for Environment, Food and Rural Affairs.
DETR	Department of the Environment, Transport and Regions
EC	European Commission
EMP	Estuary Management Plan
EMS	European Marine site
ESFJC	Eastern Sea Fisheries Joint Committee
ESRC	Economic and Social Research Council
EU	European Union
HPMR	Highly Protected Marine Reserves
IROPI	Imperative Reasons of Overriding Public Interest
IUCN	International Union for Conservation of Nature
JNCC	Joint Nature Conservation Committee
LME	Large Marine Ecosystem
MCS	Marine Conservation Society
MOD	Ministry of Defence
MSAC	Marine Special Area of Conservation
MSPA	Marine Special Area of Conservation
NCA	Nature Conservation Agency
NRC	National Research Council
PI	Public Inquiry
RA	Relevant Authority
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAGB	Shellfish Association of Great Britain
SFC	Sea Fisheries Committee
SPA	Special protected Area
TCP	Thanet Coast project
TDC	Thanet District Council
TEC	The Environment Council
UK	United Kingdom
UNCED	United Nations Conference on Environment and Development
WESG	The Wash, Estuary Strategy Group
WWF	World Wildlife Fund

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Introduction

Natural resource management is inherently political, thus conservation is increasingly being seen as about far more than ecology (Dryzek 1997; Bryant 1998; Breachin et al. 2003; Raik et al. 2008). Issues of access, rights control, ownership and use are as important to determining the success of a conservation project as an understanding of the ecology of the areas being conserved. As Harvey (1993:25) observes:

> *'All ecological projects (and arguments) are simultaneously political-economic projects (and arguments) and vice versa. Ecological arguments are never socially neutral any more than socio-political arguments are ecologically neutral. Looking more closely at the way ecology and politics interrelate then becomes imperative if we are to get a better handle on how to approach environmental/ ecological questions.'*

Traditionally the field of natural resource management and conservation has been dominated by a highly technocratic outlook, which is not surprising given the biological and ecological nature of much of the work (Raik et al. 2008). However, it is now being realised that these activities sit within a broader set of practices such as negotiation, discussion, persuasion, communication and decision making which have the power to undermine the core aims of conservation (Brechin et al. 2003; Raik et al. 2008). Furthermore, it is now commonly accepted that decisions about protected area designation require the balance between four key factors to be taken into consideration (Graham et al. 2003:12):

1. Nature conservation
2. Science
3. Visitor opportunities
4. Local and indigenous needs

This has led to an increased interest in the methods used to govern common pool resources (CPRs) and in particular how the social, economic, political and cultural considerations can be incorporated as well as the ecological.

This 'politicalisation' of natural resource management has resulted from changes in the conservation paradigm since the 1970s. Traditionally protected areas have been designated in an almost autocratic elitist style (Western and Wright 1994) which utilised top-down approaches to governance with little regard for the welfare of the local population. Under this model of conservation, known as the 'fences and fines' approach, the focus of protected areas was to exclude people and viewed these areas as separate from the social sphere (Kiss 1990; Barrett and Arcese 1995). Today conservation is seen to be more inclusive with a range of levels of protection attributed to protected areas from strict fully protected 'no take zones' to areas which are carefully managed for sustainable use (Phillips 2002).

Furthermore, since the 1970s conservation has become more participatory, particularly with regard to local communities within and adjacent to protected areas. These changes are a reflection of wider changes within society. Across the globe there has been a general rise in civil society whilst globalisation has led to a more interlinked approach to governance with an increase in individuals and organisations demanding a say on how natural resources are managed (Berkes 2004; 2008). Furthermore, the complex nature of the global environmental crisis has led to the realisation that solutions can only be found by combining a multitude of knowledge, not solely scientific (Western and Wright 1993; Berkes 2004). These developments have led to the rise of the new interdisciplinary scientific approach to nature conservation which is increasingly attempting to incorporate local ecological knowledge.

These changes have led to the decentralisation of natural resource management and conservation which has involved the transferring of responsibilities and authority from

a central body to more decentralised structures (Ribot 2002). The aim has been to achieve an increase in the level of social equity, empowerment, democratisation (Raik 2008) and an increase in the amount of knowledge available for important decisions to be based on. However, despite this emphasis on decentralisation the majority of conservation initiatives still begin as policy interventions dictated by either central governments or international bodies such as the European Union. Local bodies are then obliged to ensure these policies are implemented but bestowed the power to negotiate the details and mechanisms in partnership with other local stakeholders. This presents interesting questions about where the power lies within these statutory partnerships and how best to develop institutional arrangements which can support the complex horizontal and vertical linkages necessary to sustain these complex partnerships. Furthermore, these questions have traditionally been neglected by researchers studying CPRs as they have purposefully elected to represent contexts where the emphasis is on self-governance by self-organised local actors, thus neglecting the role of statutory authorities (Jones 2008).

Nevertheless developments in CPR theory still provide a useful starting point for analysing complex statutory partnerships as they have spearheaded the way for the concepts of inclusion and consultation to be taken seriously within the conservation paradigm. This has marked an important shift in how common pool resource management is perceived; Hardin's (1968) 'Tragedy of the Commons' thesis being replaced by Ostrom's (1990) concept of governing the commons. Many of the principles CPR theorists associate with the successful management of a CPR such as devolution of power, embracing uncertainty and legitimising local knowledge are still relevant when thinking about CPRs operating within a statutory framework. This change in perspective is being recognised (Agrawal 2001; Berkes 2002, 2006; Edwards and Steins 1999; Jones and Burgess 2005; Stern et al. 2002). Furthermore, it is being acknowledged that such research needs to recognise that linkages amongst fragmented institutions in complex governance structures go beyond local civil society (Rydin 2006) in an increasingly multi-level, globalised world (Berkes 2008) and the scale challenges that these linkages present (Cash et al. 2006; Jones 2008).

The majority of conservation initiatives and projects are focused on protecting terrestrial resources, and unsurprisingly this trend has been reflected by research

outputs. However, it is increasingly being realised that the relentless pressure placed upon our oceans is likely to have major implications for the global population, as a result attention is slowly turning to the sea. In the UK (like most other countries) the introduction of legislation for the designation of marine protected areas (MPAs) has been considerably slower than for terrestrial sites. This can primarily be attributed to the cultural differences between people's perceptions of marine and terrestrial environments (see Chapter 3). The National Parks and Access to the Countryside Act of 1949 established in law the basis for the designation of terrestrial protected areas. The primary protection for terrestrial nature reserves in the UK is achieved through the exercise of private property rights. The relevant Nature Conservation Authority (NCA) or a local authority either acquires title to the land or enters into an agreement with the landowner (Gibson, 1988). In contrast, at sea only the soil or the foreshore or the sea bed is capable of ownership, and the water is an unappropriated element subject to the general rights of navigation and fishery by the public (ibid.). As a result, it is not possible to designate MPAs in the same way as terrestrial protected areas.

It is with this backdrop that the current research is set. The EC's Habitats Directive (1992), which was transposed into UK law through the Habitats Regulations (1994), offers a unique opportunity for the protection of the marine environment around the UK and requires the designation of European Marine Sites (EMSs). These are made up of both Marine Special Areas of Conservation (MSACs) for listed marine habitats and species and Marine Special Protected Areas (MSPAs) for the protection of wild birds (see Chapter 3 for full explanation).

Central to the regulations governing EMSs is the principle that they rely heavily on the voluntary cooperation of stakeholders. The national policy guidelines produced by DETR (1998) state that although the maintenance of the favourable conservation status of the EMS features is a statutory duty, enforced by the EC, national governments should only employ statutory enforcement as a last resort. The policy guidance also encourages Relevant Authorities (RAs) to work in partnership to manage EMS and incorporate a significant level of stakeholder consultation. The need for RAs to work in partnership is further enhanced as no one RA has executive powers to direct other RAs, such powers being available only to the Secretary of State on a back-up basis. Essentially the RAs along with the other stakeholders are required to enter in to a

process which Dryzek (1987) terms 'negotiated compliance', whereby central agencies set standards and compliance is negotiated locally on a 'learning by doing' adaptive management basis, with such learning's ideally being transferred through more flexible and ecologically rational hierarchies for application in other contexts (Dryzek 2005; 1987). Consequently, this policy area represents an opportunity to explore the tensions between bottom-up and top-down institutions for environmental governance, and in particular, the feasibility of achieving strategic objectives through co-operation and the development of partnerships.

1.1 Research aims and objectives

This research is supported by an Economic and Social Research Council (ESRC) Collaborative Award in Science and Engineering (CASE) studentship in partnership with Natural England[1]. The purpose of such a studentship is to instruct the development of a research programme that addresses the existing academic context while also responding to the learning needs of the sponsoring organisation. Reflecting Natural England's support for the thesis, the research is centred on understanding the perspectives of actors on partnership approaches to managing MPAs in England and the identification of those factors that determine their effectiveness. Although the CASE award provides the researcher with opportunities and access to resources, the nature of collaborative research also means it has to satisfy two quite separate audiences. For evaluation research this can present particular challenges. An evaluation methodology must be designed so it is able to answer the questions posed by its audience; if there are multiple audiences with contrasting questions, as there are in the case of this thesis, then the evaluation must adopt an innovative methodology that can address both sets of questions. Consequently the research has adopted an evaluative ethnographic approach which enables the development of both an actor centred analysis and the identification of key factors which determine the effectiveness of the legislation[2].

[1] The project was originally developed in partnership with English Nature. However, part way through English Nature was integrated with parts of both the Rural Development Service and the Countryside Agency and from 1 October 2006 formed a new body called Natural England. To avoid confusion in this thesis the term Nature Conservation Agency (NCA) is used to refer to the Government body responsible for nature conservation.

[2] See Chapter 5 for a detailed description of the methodology

The original proposal (APPENDIX 1) was put together by Dr. Peter Jones and Prof. Jacquie Burgess in partnership with Natural England to further develop a line of enquiry they had been researching into the governance of MSACs in the UK (Jones and Burgess 2001; 2005). Their work presents a preliminary analysis of the MSACs partnerships ability to build partnership capacity amongst relevant authorities and resource users to overcome collective action problems (CAPs), through the development of incentive structures and social capital, in order to achieve strategic objectives. This thesis seeks to build upon their work, however, while they presented an overview of 15 MSACs the current research has focused on two EMSs[3] in much greater depth. The idea being to develop a fuller understanding of the relationships between the stakeholders, the problems they have encountered and the processes used to resolve conflicts. In particular attention has been paid to the cultural and political aspects of the partnerships and the impact they have on the functioning of the EMS. More precisely the study aims to address the following questions in the context of inshore marine nature conservation initiatives in England:

Aims

- What are the strengths and weaknesses of different approaches to addressing collective action problems through local partnerships in order to achieve strategic objectives?
- What are the different perspectives on such approaches and problems amongst different actors?

Objectives

- To evaluate the effectiveness of different partnership models amongst relevant actors for the management of EMSs;
- To explore the perspectives of different actors on these different approaches and the related issues in order to assess the key tensions and opportunities.

[3] The original proposal, along with Jones and Burgess's work, focused specifically on the management of the MSAC aspect of the legislation. However, as this project has developed it became clear that both the MSACs and the MSPAs were generally managed jointly through a single management scheme. As a result early on in the project it was decided that the research would focus on the EMS designations as a whole.

Through the literature review, in Chapters 2 and 3, these issues are explored in depth culminating in the development of more specific research questions which are outlined at the end of Chapter 3 , these are then unpacked in relation to the case studies in Chapters 6, 7 and 8.

1.2 Thesis structure

Chapter 2 outlines the theoretical framework on which the thesis is based. It begins by exploring changes in contemporary governance generally and how they have impacted upon the way CPRs are governed. In particular the partnership approach to governance is examined and the ways partnerships have been incorporated in to statutory governance models are set out. Hardin's (1968) tragedy of the commons thesis is introduced which leads on to the contemporary debate about CPR theory and commons governance. Incorporated into this discussion is an analysis of the factors which influence human/environment interactions and how these affect conservation. Finally, Agrawal's (2001) critical enabling conditions for sustainability on the commons are introduced as the basic framework and starting point for the present research.

Chapter 3 takes the basic framework set out in Chapter 2 and applies it first to protected area governance generally and then more specifically to MPA governance. The specific challenges related to marine conservation compared to terrestrial conservation are also considered. In particular the role of science and the impact of scientific uncertainty in the marine environment on the designation of MPAs are reviewed. This leads on to an examination of two concepts, the ecosystem approach and precautionary principle, which have been used in an attempt to overcome the difficulties associated with scientific uncertainty. Attention is then turned to the designation of MPAs within the UK and the legal provisions available are set out. Finally, specific research questions are outlined which are explored through the remainder of the thesis.

Chapter 4 marks a change in focus from the largely theoretical discussions of the previous two chapters to the practicalities of the research in hand. The primary aim of this chapter is to introduce the case studies which are the focus of this thesis and justify

their selection. It begins by setting the current research within the context of a number of previous studies and explains the criteria for case study selection. This is followed by a fuller explanation of the rationale behind the decision to select The Wash and North Norfolk Coast EMS and the NE Kent EMS as the case studies for the research. The two sites are then introduced by looking in depth at the geographic, historical, ecological, social and economic make up of the areas surrounding them and the institutional arrangements in place to facilitate the management of the EMS.

Chapter 5 grounds the empirical work described in this study within the methodological literature. It begins by defending the decision to base the study on just two case studies and introduces the process of evaluative ethnography. Second, the important process of decision making and deciding what to study is explained. Third, the practical details of conducting the research such as gaining access and sampling are outlined. Fourth, the four qualitative methods utilised in the research, analysis of documentary sources, semi-structured interviews, observation and focus groups are introduced. Issues surrounding the positionality of the research, particularly in relation to the support provided by Natural England are also explored. Finally the process of analysing the data collected is outlined.

Chapter 6 is the first of two empirical chapters which presents the data collected from The Wash and North Norfolk Coast EMS case study. The chapter begins by examining the relationship between the stakeholders, the natural environment and the EMS designation. Second, the relationship between the different stakeholder groups is explored and the level of social capital present within and between these groups is assessed. Third, the ability of the partnership to respond to disagreements between members is explored through the case study of a public inquiry (PI) which occurred in 2006. The PI along with a number of other issues is used to probe the potentially conflicting position held by the NCA, which on the one hand plays a facilitating role in the partnership but on the other has to ensure that the strategic nature conservation objectives of the site are met. Fourth, the wider conservation measures in place which overlap with the EMS designation are explored to develop a fuller picture of the combined conservation effort in the area. Finally, the stakeholder's perspective on the future of the area and designation is considered.

Chapter 7, the second empirical chapter, presents the data collected from the North East Kent EMS case study. Similarly to Chapter 6 this chapter begins by exploring the relationship between the stakeholders, the natural environment and the EMS designation. Second, stakeholder perspectives of the historical *'battles'* between conservationists and the local authority are briefly revisited to provide context to the current situation. Third, the recent review of the management scheme is investigated in depth, with particular attention paid to stakeholder perspectives of the stakeholder dialogue process and the decision to adopt the 'ecosystem approach' for the revised management scheme. Fourth, the structure of the EMS management is explored with special attention given to the role and development of the Thanet Coast Project (TCP). Finally, stakeholder's ideas and concerns for the future of the designated area are examined.

Chapter 8 seeks to analyse the data presented in the previous two chapters in accordance with the theoretical framework developed in Chapter 2. This is achieved by revisiting the specific questions outlined at the end of Chapter 3 and addressing them individually.

Chapter 9 is the final concluding chapter and aims to close the loop by summarising findings from the study and presenting closing thoughts on the use of statutory partnerships in the governance of EMS. The chapter begins by looking at the methods the two case studies have used to develop partnership capacity and how this reflects on their success. Second, the focus returns to the concept of negotiated compliance and how Agrawal's (2001) critical enabling conditions need to be adjusted to reflect the additional challenges posed when operating under a statutory framework. Third, the implications and impact of the research are considered. Finally, areas for future research are suggested.

2

Developing Partnerships for Conservation

Introduction

This chapter provides a detailed analysis of contemporary and historical debates which have influenced the relationship between humanity and the environment. The management of natural resources is one of the most critical issues for human survival and well-being. As highlighted by the Millennium Ecosystem Assessment, over 60% of ecosystem services are currently being degraded or used unsustainably (Millennium Ecosystem Assessment 2005). Natural resource management is also a central element of sustainable development, understood to mean development which does not compromise the ability of future generations to meet their needs (Saglie 2006). It is clear that the majority of people would agree with the moral arguments regarding the sustainable use and management of resources. However, setting up workable management practices can be extremely contentious and create numerous challenges which need to be addressed, these are referred to as collective action problems (CAPs). Pennington and Rydin (2000) argue that, '*A CAP arises when the benefits to an individual or group from undertaking actions are less certain and/or less substantial than the cost of taking the actions*'. These hurdles need to be overcome if commitment, cooperation and compliance are to be developed amongst CPR users and regulators, generally described as actors or stakeholders (Jones and Burgess 2005). The principal source of CAPs in natural resource management often results from the bringing together of a wide range of actors whose ideas on 'sustainable' management may vary considerably (ibid.).

This thesis is predominantly concerned with the way in which two communities have interpreted the 1992 Habitats Directive to develop management schemes which provide protection to the surrounding marine environment. More precisely, it is concerned with the processes involved with the establishment and management of networks or partnerships of relevant actors to manage the highly valuable and fragile marine environment. Therefore, to fully understand the wide range of forces at work within these communities it is important that the core issues are framed within the context of human/environmental relations and governance more generally.

The chapter begins by looking at the nature of contemporary governance and in particular the changing role of the state in governing CPRs. These philosophical changes have led to the development of a *'third way'* approach to governance which utilises a range of new governance tools such as partnerships between the state and local communities. Second, the concept of partnership is explored in greater depth within the context of CPR management. Third, the tragedy of the commons thesis first proposed by Garrett Hardin is outlined and the subsequent debates it provoked regarding the management of CPRs are explored. Fourth, the structure/agency debate which explores human motivations and has had considerable influence on conservation discourses is introduced and explained within the context of CPR management. Fifth, the structure/ agency debate is built upon to explore humanity's relationship with the environment and how this has evolved over time. Sixth, these largely philosophical arguments are grounded within CPR theory which forms the basic analytical framework and starting point for the current research. Proponents of this perspective have analysed the usefulness of concepts such as social capital and collaborative management. These concepts are introduced and the debates regarding their impact on CPR governance are summarised. Finally, the chapter outlines the relationship between CPR theory and the proposed research.

2.1 The changing face of governance

In recent years the idea of community participation in the policy-making process has emerged as a major force in political philosophy (Goodwin 1998). This has largely grown out of the increasing concern that government institutions set up in the post- war period to serve the public interest have become overly bureaucratic and unaccountable

to the general public (ibid.). As a result citizens have increasingly questioned the role of the expert in society, weakening individual allegiances to traditional institutions (Habermas 1976; Lyotard 1984; Hetherington 1990; Giddens 1991; Beck 1992). This has led to the development of new and more complex relations between the state and civil society, with businesses, voluntary organizations, local communities, clients and citizens all being seen as needing to play an increasing role in what was previously perceived as *'pure'* public service delivery (Burns et al. 1994). Increasingly criticism of traditional top down command and control approaches to governance has become significantly louder and been followed by calls to give the general public a greater say in the policy-making process. These debates have been played out across all spheres of government but have been particularly prevalent within nature conservation.

2.1.1 Top down management verses bottom up management

Top down approaches to the management of CPRs are highly dependent on rational choice theory and based on formal and predictive models of human behaviour (Scott 2000). This model of governance rejects the notion of collective action and suggests, in the context of CPR management, that unless the state or a private owner dictates the conditions of resource use individuals will exploit resources in an unsustainable manner.

Bottom up approaches advocate taking power away from the state and putting responsibility for the management of resources into the hands of the local community. They strongly reject the rational choice perspective, and argue that the structural ties of communities mean that individuals will work together for the collective good. This approach is seen to be more democratic, as it gives local people a voice and allows them to make decisions about their livelihoods which will both conserve resources and allow them to make a living (Scott 1998; Leach et al. 1999; Kapoor 2001). Furthermore, this approach stresses the supremacy of local knowledge over knowledge gathered by '*outside experts*'. It is argued that decisions made on the basis of local knowledge will be supported by local actors, thus helping in the implementation of sustainable management scenarios.

Followers of bottom up approaches base their ideas on a number of assumptions about communities. They assume that either communities are homogeneous, specially fixed social groups characterised by consensus and solidarity, or that the process of facilitating the distribution and management of resources is a democratic process and free of the exercise of power (Lane and Corbett 2005). However, a myriad of research from a wide variety of social sciences suggests that '*difference*' is a key factor in communities. Therefore, as Lane and Corbett (2005) suggest, if community-based environmental management is to be truly democratic it is important that all the diverse actors in a given community or society are represented in the decision-making and implementation processes. However, there is a substantial amount of evidence which suggests that this is not the case. Sarin (1995); Agrawal and Gibson (1999) and Ribot (1999), all argue that certain social groups are excluded from the decision-making process while the interests of others are favoured. In addition, as Lane and Corbett (2005) point out, in many cases decentralized programmes (bottom up approaches) often funnel resources into the hands of local elites, whilst surreptitiously providing a means of maintaining centralised control.

The top down and bottom up approaches to governance are based on conflicting theories of human action; the top down approach stresses the influence of structure while the bottom up approach stresses the influence of agency. However, this argument is fundamentally floored as human actions do not fit into neat categories. As a result, governance models based on one or other of these conflicting theories of human action are generally ineffective.

There is a growing body of literature that is looking at '*third way*' approaches to environmental management. These new approaches attempt to combine aspects of both the '*top down*' approach and the '*bottom up*' approach, championing collaborative management that encourages the development of social capital and local management, while the state plays the role of facilitator. These approaches have been heavily influenced by communitarian philosophy and '*third way*' ideology, which has become extremely influential in the wider political sphere over the past 20 years.

2.1.2 The Third Way

Over the last two decades there has been a dramatic shift in the way we view global politics. In many western countries the traditional conflict between the left and the right has become obsolete, replaced by a new battle for the '*middle ground*' or '*third way*'. The term '*third way*' is by no means a new concept in politics; it has been used to describe a variety of political approaches over the past century. The Italian fascists first used it in the 1920s to describe their economic policy of corporatism which was seen as an alternative to both socialist attempts to develop a workers' planned economy and to laissez-faire capitalism. The current usage of the term was developed in the late 1980s and early 1990s by centre left politicians in the USA and UK to describe a '*new*' approach to politics, in which Thatcher's and Reagan's projects of economic deregulation, privatisation and globalisation were incorporated into the ideology of the mainstream centre left policy. However, the '*third way*' is more than just a normative proposition about a form of governance; it is also a sociological assumption about a changed world (Leggett 2004).

Since the early 1990's the term has been utilised by many scholars and politicians to describe a number of approaches to governance. There is a general consensus that the '*third way*' approach has been developed as a response to the pressures of a global economy and the dominance of neo-liberalism in the 1980s and early 1990s. In particular, the third way has been associated with Tony Blair's New Labour. In 1999 Blair stated that both the concepts of economic liberalism and Keynesian economic management were redundant in the context of the global economy. He argued that Keynesian economic management is inflexible and incompatible with the pressures of the global economy. He conceded that the economic liberalism of the New Right Thatcher governments had contributed to the modernisation of the state despite its ultimate failure because of a political dogmatism preventing it from dealing with the consequences of globalisation, such as social exclusion (Blair 1999).

Third way ideology attempts to recognise the influence of both structure and agency on the actions of individuals and attempts to create a platform where traditionally conflicting models of governance can be integrated. However, due to the wide range of contexts in which the term has been used, developing a comprehensive definition for it

is problematic. In general terms, the third way has (at least fairly consistently) been associated with a number of core values: interdependence, responsibility, incentives and devolution (Latham 2001). Essentially, the third way philosophy aims to develop strong communities and businesses to assist individuals to tackle the challenges posed by globalisation. Driver and Martell (2000:150) argue that:

> *'Third way thinking supports the view that globalisation brings with it greater risk and insecurity, and that it is the role of policy making not to shield individuals from these but to provide 'social capital' and 'proactive' welfare states which enable them to respond to them and prosper in a global age'.*

The concept of building strong communities capable of managing their own resources and services is central to the ideology. The work of communitarian philosophers such as Amitai Etzioni has played an important role in shaping the third way ideology. He argues that:

> '*Communities often have strong moral voices and hence can help maintain a social order and draw significantly on value commitments … communities also share sets of values and reaffirm them, encourage members to abide by these values and censor the members when they do not' (1997:123)*

Both communitarian philosophy and third way thinking have had a significant influence over contemporary CPR theories. Much of the current thought on the management of CPRs points towards new *'institutional arrangements'*, such as local partnerships between different actors, as effective ways of achieving strategic management objectives for CPRs (Jones and Burgess 2005).

2.1.3 Defining an institution

Before engaging in a lengthy discussion about the nature of these new institutional arrangements it is necessary to first understand what is meant by the term '*institution'*. However, like many concepts related to governance theory it has a number of meanings to different groups of people and academic disciplines (North 1990). For the purpose of

this work the following definition concentrates on pulling together aspects from a range of definitions which are relevant to the development of partnerships for managing MPAs. Institutions need to be seen as both instrumental - have a purpose, and intrinsic, valuable in their own right. Scott (1995) stresses the importance of understanding the intrinsic nature of institutions by emphasising the importance of their social and cultural underpinnings. He argues that *'[I]nstitutions are transported by various carriers – cultures, structures and routines'* (P.33) and concludes that rather than a feature of society they constitute society itself. Therefore institutions designed for governance purposes need to be fully embedded within society. Furthermore, as Scott also notes, institutions work at different levels of society; Jentoft (2004:141) illustrates this by describing them as *'Chinese boxes – institutions existing within institutions'*. Thus, institutions are linked to each other and form networks that are themselves institutions (ibid.). Consequently, they have to be analysed as *'open'* systems, which receive impulses from the outside, i.e. from other institutions, in the form of impacts resources and ideas (Scott 1992). As Novaczek et al. (2001) suggests institutions are never fully controlled because they exist in a cultural, social and institutional vacuum. For example, within the context of an Indonesian fishery *'Sasi, the local institution under which some fishing activities are regulated, is nested in traditional culture, called adapt, which lays down the basic ethics and codes of conduct'* (Novaczek et al. 2001:13).

2.2 Partnership working and collaborative management

The term '*partnership*' and the concept of collaborative management have become the buzzwords of government legislation in the 1990s and 2000s. According to Balloch and Taylor (2001:3) New Labour has *'tied its colours to the partnership mast, in proclaiming its intention to move from a contract culture to a partnership culture'*. Partnerships represent a 'Third Way' which is distinctive from both centralised bureaucratic hierarchies of old Labour and the market of the Conservatives (Powell and Glendinning 2002). New Labour's collaborative discourses extend beyond improving linkages between government departments and statutory services, incorporating government at both local and national levels, the private sector and voluntary sector (Giddens 1998; Powell 1999). In this way partnerships try and address some of the

problems of scale challenges (Cash 2006) and interconnectedness which have emerged from the globalisation phenomenon (Berkes 2008).

Communities are connected to national and global processes more than ever before (Young et al. 2006; Berkes et al. 2006), making them more vulnerable to pressures that originate outside the immediate community and potential partnerships more complex. The way communities respond to these outside pressures can potentially have a huge impact and is increasingly being recognised within policy making circles. These new scale challenges require traditional approaches to community governance to be re-thought, including the management of CPRs. They require policy makers to work on a bigger scale and incorporate a wider network of actors in management schemes, putting additional strain on partnership-working initiatives. Furthermore, as Berkes (2008) notes, a significant proportion of commons research is still focussed primarily on the 'local' and does not deal with issues of scale and other aspects of complexity in a systematic way.

The meaning of the term '*partnership*' is somewhat ambiguous. Powell and Glendinning (2000:2) suggest *'Partnership risks becoming a Humpty Dumpty term (when I call something a partnership, by definition it is one…)'*. The Audit Commission (1998) also claim that partnership is a slippery concept that is difficult to define, and Ling (2000:82) claims that the partnership literature amounts to *'methodological anarchy and definitional chaos'*. Furthermore, Powell and Glendinning (2000:3) argue that *'despite a growing volume of research on partnership…there are no agreed definitions of partnership, nor is there a clear theoretical framework within which to analyse partnerships'*. However, for the purpose of the current research it is necessary to attempt to come up with a working definition.

The legal definition of a partnership, in terms of a profit-making business, highlights that all partners are jointly and severally liable for both the success and failures of the venture. This view is somewhat narrow but offers a useful starting point as it incorporates several important aspects of a partnership. According to this legal definition a partnership only develops when one organisation/individual is unable to achieve a strategic goal on its own. Furthermore, both the risks and the profits from the

venture need to be shared among its partners (Wilson and Charlton 1997). Powell and Glendinning (2000:3) suggest that a minimal definition would require the involvement of at least two agents or agencies, with at least some common interests, and the relationship between them would require an element of trust, equality or reciprocity. They argue that this minimal definition is at the core of the Audit Commission's (1998:8) description of partnership as a joint working arrangement where the partners:

- are otherwise independent bodies;
- agree to co-operate to achieve a common goal;
- create a new organisational structure or process to achieve this goal, separate from their own organisations;
- plan and implement a jointly agreed programme, often with joint staff or resources;
- share relevant information;
- pool risks and rewards.

This definition suggests that a central concept to the idea of a partnership is that it is characterised by a degree of autonomy on the part of relatively equal partners to determine and implement a plan or programme. The ways in which decisions are made by and within partnerships therefore distinguish them from conceptual arrangements which according to the Audit Commission are characterised by mutual compatibility rather than shared objectives.

In terms of partnerships for the purpose of improving governance, the aim is to create an initiative in which partners work together to achieve a commonly agreed set of goals and objectives, and in so doing deliver more than they could do alone (Wilson and Charlton 1997). The partnership approach (or collaborative management approach) has been advocated as a useful tool to address social and economic needs as it offers greater involvement by all sectors of society in the decision-making process, and as a result an inherently more effective way of allocating public funds. The notion of partnership also fits in with the emerging concept of communitarianism and stakeholder society, closely associated with third way philosophy; this essentially refers to the decline in

interest in mainstream politics and the rise in support for local and national single issue campaigns.

The Audit Commission (1998) suggest a number of rationales for partnerships:

- to deliver coordinated services;
- to tackle 'wicked issues' or interconnected problems;
- to reduce the impact of organisational fragmentation and minimise the impact of any perverse incentives that result from it;
- to bid for, or gain access to, new resources, and;
- to meet statutory requirements.

As Powell and Glendinning (2000) point out, this makes an important distinction between 'internal' and external rationales. The first four reasons above constitute mainly internal reasons to act in partnership. The various organisations realise that they are better off working together and believe it will yield positive results. However, the fifth reason is clearly an 'external' rationale: agencies form partnerships not because they can necessarily see the benefits but because they are forced, encouraged or incentivised to do so, normally by central government. These 'forced' or statutory partnerships can in many ways be seen as contradictory as they go against the whole notion of partnership, which is implicitly associated with some degree of choice and autonomous action (ibid.).

Nevertheless, this type of partnership is particularly attractive for environmental management as it provides the scope to involve local people and interest groups in the management of environmental resources, but allows the state or other governing body to facilitate the process and set biodiversity targets. Essentially this refers to what Saglie (2006) describes as a shift from 'government' to 'governance' where governments are moving away from their traditional role of direct control to one of co-ordinating and creating partnerships to fulfil a common purpose (Montin 2000).

However, partnerships are only beneficial if they have the full support of the local communities. If partnerships are imposed on communities to achieve strategic policy

objectives this key principle is lost and there is a real danger of undermining local governance institutions (Jones and Burgess 2005). In this context Berkes (2002) discusses the importance of vertical linkages, whereby there are couplings or interactions between different levels of the governance structure. Such vertical linkages are important as they ensure that stakeholders are involved at all levels of the process. However, when partnerships incorporate a large number of people who only have a limited consultative role rather than being actively empowered in the formation and implementation of policy, it is challenging to gauge the level of support amongst different sectors of the community. As a result natural resource management is increasingly occurring within a progressively more fragmented institutional setting (Saglie 2006).

Cooke and Kothari (2001) argue that such participation may be 'the new tyranny', imposing goals and institutions on local people, overriding existing legitimate decision-making processes, reinforcing the interests of the already powerful and displacing other potentially beneficial approaches. If a partnership is imposed on local communities of stakeholders, it is reasonable that they may regard the initiative as an authoritarian 'top down' institution which they are unwilling to engage with, rather than a true 'partnership'.

Statutory partnerships are a product of third way philosophy and an attempt to address public distrust in the government decision-making processes. However, governments are unwilling to devolve all power to local decision-making authorities and generally feel the need to retain the power to set the agenda and targets for partnerships to achieve. As a result, to avoid partnerships becoming 'the new tyranny' it is essential that they operate under carefully thought out institutional arrangements which have been developed with the full consent of local people. Furthermore, in an increasingly multi-level, globalised world (Berkes 2008) these partnerships need to be able to forge linkages amongst fragmented institutions in complex governance (Rydin 2006; Jones 2008). If this model of governance is to work a full understanding of the communities involved and the development of a strong network of actors who are prepared to work together to attain shared goals is required. CPR theory offers a useful starting point for this process as it helps develop an understanding of the issues which need to be addressed for the successful management of CPRs.

2.3 The tragedy of the commons

Garrett Hardin's article, The Tragedy of the Commons (1968), has stimulated a plethora of research on the sustainability of CPRs. Although today few agree with his thesis, the article remains tremendously influential and is used as a starting point by many researchers working in the field of CPR management. Furthermore, the 'tragedy of the commons' notion is still regularly used in contemporary CPR analysis to describe the situation that is ultimately trying to be avoided.

Hardin defined a CPR as a resource that is '*freely*' accessible to anyone who wants to use it. This might be common grazing land used by a number of local farmers, the sea from which we extract food and minerals and use for transport, or the atmosphere from which we all breathe. His thesis suggests that as the population grows it puts more pressure on resources, undermining their sustainability and creating the '*population problem*.' This is a '*no technical solution problem*', a problem for which the human race cannot invent a solution. Hardin propounded that in the past the population of both '*man and beast'* was self-regulating. Tribal war, poaching and disease, meant that the population was kept well below the capacity of the land. However, social stability has allowed the population to grow which in turn has augmented the pressure on the commons, resulting in the resources being exploited in an unsustainable manner. He argued that individuals are faced with a dilemma. If they limit their use of resources and others do not, then the resource will collapse regardless and they will have lost the short-term benefits of exploiting the resource. This is known as *'the tragedy of the commons'* (Hardin 1968). Hardin uses the metaphor of the prisoner's dilemma to explain this phenomenon. If the police capture two conspirators and neither informs on the other, both will receive light sentences; if they both inform on each other, they will both receive harsh sentences. However, if one informs and the other does not, the informer will receive a light sentence or be set free while the non-informer receives a heavy sentence. Similarly, in relation to CPR management, if a resource user decides to try and conserve a resource but other users do not, the former is disadvantaged despite his own conscientiousness as the resource is still over-exploited. The metaphor of the prisoner's dilemma has become an important concept in CPR analysis.

Hardin concluded that the only way to avoid '*the tragedy of the commons*' is to privatise all common pool resources, allowing them to be governed by the free-market. He argued that '*the commons*' will only be protected if an individual (or group of individuals) has a vested interest in maintaining their sustainability.

Hardin's work draws heavily on rational choice theory, which assumes that people are motivated by financial gain and the potential to make a profit (Scott 2000). He was heavily influenced by the work of Adam Smith who stated that '*we are not ready to suspect any person of being defective in selfishness*' (Smith 1977 [1804]: 446) and Lloyd (1977 [1833]) who argued that CPRs will be over used because the short term interests of users outweigh the potential cost of maintaining the resource for future users. The origins of this approach to commenting on the sustainability of CPRs can be traced back even further. A number of early influential philosophers and social scientists have referred to the commons in their work. For example, Aristotle noted that, '*What is common to the greatest number has the least care bestowed upon it, everyone thinks chiefly of his own, hardly at all of the common interest*' (Politics, Book ii Ch 3).

2.3.1 Criticisms of Hardin's thesis

In many respects it is difficult to argue with the logic behind Hardin's assessment of the problems surrounding the commons. Criticism has centred on the argument that he under-estimates the complexities of human nature and the rules surrounding the governance of the commons. Hardin assumed that all commons are accessible to the whole population. He failed to properly distinguish a CPR '*in which a number of owners are co-equal in their rights to use the resource*' (Ciriacy-Wantrup and Bishop 1975:714), from an open access system, in which there are no features of exclusion (Goodwin and Shepard 1979). In a CPR the number of people with access to the resource is limited, although the number can still be high. The difference with the open access system is that the actors are clearly identified. Therefore, the potential number of free riders is reduced (Saglie 2006). CPRs are characterised by a set of decision-making arrangements controlling the benefits arising from the CPR (Edwards and Steins 1998). Therefore, the sustainable management of the commons does not simply rely on the actions of individual users, but also on the ability of the users to devise and

implement rights and rules of use that govern access to the resource system (Ostrom 1990, Edwards and Steins 1998). This is further complicated by issues of scale, as the sustainability of the resources may be affected by influences such as climate change or pollution which are outside the resource user's control (Saglie 2006).

Hardin's uses of game theory and reliance on rational choice theory have also come in for substantial criticism. The '*Prisoner's dilemma*' (see above) suggests that if there are two rationally motivated individuals they will act in their own self interest but that their behaviour will ultimately disadvantage them both. However, as Kimber (1981:187) points out '*it represents the perspective of one individual, but nothing can be concluded from it about everyone's choice*'.

Many social scientists recognise that humans act in a rational way. However, it is clear that rational actions are accompanied by other forms of action, for example, emotional or effectual action, and various types of norms and value-orientated action (Etzioni 1988; Elster 1989; Scott 2000). In terms of CPR management, there is significant evidence that suggests that individuals who have more control over their resources develop an emotional attachment to their environment, therefore taking greater care of it. Baland and Platteau (1996) argue that the privatisation of CPRs or requisition by government authorities tends to eliminate the personalized relationships that resource users develop when local communities manage CPRs. Although the majority of early references to commons management support the rational actor perspective (e.g. Smith 1804, and Lloyd 1833), there is also evidence of a more optimistic opinion. Maine (1871) pointed towards the village communities that occur all over the world and successfully manage common land for the grazing of livestock. Furthermore, the phenomenon of collective action in social and ecological affairs is as old as human life itself. For many thousands of years humans have worked together in a collective fashion to hunt, fish, recognise edible and medical plants, overpower wild animals, build shelter etc. (Borrini-Feyerabend, et al. 2004).

Hardin has also attracted substantial criticism for under-estimating the abilities of local communities to find solutions to problems and failing to recognise that systems other than privatisation and state control can sustain the commons (Dietz, et al. 2002 and Dietz, et al. 2003). Hardin failed to take into consideration the importance of '*context*'

and socio-cultural diversity (Edwards and Steins 1998). Furthermore, his reliance on rational choice theory fails to recognise that rational choice is strongly influenced by the situation in which decisions are made (McCay, 2002). McCay emphasises that it is necessary to consider the situation in social, political, cultural and ecological terms as relevant to contexts that are specified historically, geographically, or in other ways (ibid.). Rydin and Pennington (2000) add that Hardin under-estimates the potential of social capital to overcome CAPs and the challenges of free riding. As Saglie (2006) argues, this 'norm-driven' behaviour can clearly lead to cooperation in maintaining natural resources as the actors may see this as appropriate behaviour in certain institutional settings. However, developing institutions which promote this kind of collective action is problematic. As noted above, forced partnerships may well come up against resistance from the communities they have been imposed upon, creating significant CAPs which may be difficult to overcome. This makes the study of institutions which promote such behaviour a crucial area for research and is consequently an important aspect of this thesis.

Hardin's work was carefully embedded within a historical context explaining how the enlightenment and industrialisation had dramatically altered the relationship between humans and their environment. However, other authors have taken a similar approach and come up with very different conclusions. Karl Polanyi (1944) suggested that the demise of the commons had more to do with the changing relationship between resource users and their environment. According to this perspective, the process Hardin advocates for managing the commons (privatisation) has in fact contributed to their destruction. From the early agrarian and industrial revolutions to the contemporary dominance of global agro-industrial-market systems, front line resource users have been forced to reject small-scale subsistence farming and to work for land owners and commercial organisations in the production of cash crops. As early as the 15th Century Lords and nobles were fencing off large areas of 'common' land and claiming exclusive hunting rights. Furthermore, there actions were backed up by legal measures with harsh punishments attached. Possibly the most extreme example was the 1723 Black act which created fifty new capital offences. Any one found with their face 'black' (for disguised or camaflarge), or who might 'appear in any forest, close, park, or in any warren, or high road, heath, common or down, could be charged with a capital offence (Pretty 2002; Thompson 1975).

The agrarian revolution of the late 18th century/early 19th century was huge: half the arable land in England previously held as feudal commons and used by peasants to grow food crops or graze animals was enclosed and reserved for cash orientated production for the benefit of the land owner. This marked a significant change in the relationship between resource users and the environment. Polanyi (1944: 35) argues that during the agrarian revolution:

> *'The lords and nobles were upsetting the social order, breaking down ancient laws and customs, sometimes by means of violence, often by pressure and intimidation. They were literally robbing the poor of their share in the common, tearing down the houses which, by the hitherto unbreakable forces of custom, the poor had long regarded as theirs and their heirs.'*

A similar interpretation of the impact of the agrarian revolution on the commons can be seen in this Anonymous English folk poem related to the 'enclosures' which originated in medieval times and was regularly quoted in the 18th Century:

"The law doth punish man or woman
That steals the goose from the common
But leaves the greater felon loose
That steals the common from the goose"

Resource users were removed from the direct management of their resources, dramatically reducing incentives for local communities to manage their resources in a sustainable manner. In a community reliant on subsistence farming, if they fail to ensure the sustainability of CPR the community will starve. The shift from subsistence farming to commercial farming for cash crops has removed this direct responsibility for the resource from the community and given it to national governments, private individuals and corporations (Borrini-Feyerabend, et al. 2004). New state bureaucracies and economic enterprises, associated with monolithic views of progress and rational order, have expropriated from indigenous and local communities many of the decisions and privileges that used to be their own (Scott 1998). This criticism of Hardin's tragedy of the commons thesis comes from the social ecology perspective

which suggests that market forces are the root of many contemporary environmental problems (Selsky and Creahan 1996).

2.4 Exploring the structure versus agency debate

Central to the debate about the management of CPRs is the question first raised by Thomas Hobbes (1960 [1651]): How do communities of individuals agree on sets of action that counteract individual temptations to select short-term, actions when all individuals would be better off if each party selected actions leading to higher group and individual returns (Ostrom 2002)? Hobbes stresses the dominance of human agency and argues that it is impossible for individuals to escape from what we now call 'social dilemmas' without the aid of a strong external authority (ibid.). This was also the principle adopted by Hardin in the tragedy of the commons thesis and forms the basis of contemporary interpretive social theories.

The structure/agency debate questions this position and asks - are humans primarily influenced by structural factors, that is, social institutions such as religion and the state, or by the actions of individuals? Furthermore, it also asks if humans are motivated purely by self-interest or by concern for others and society as a whole (Stern et al. 1993, Dietz et al. 2003). It is clear that there are no fixed answers to these questions. However, individuals' or organisations' interpretation of this debate will have a fundamental impact on their view on how humans view the natural environment and ultimately on the most appropriate way to conserve it.

2.4.1 Outlining the debate

Social scientists who primarily favour the '*agency*' argument see individual human beings or human beings collectively as the key to the constitution of social life; they argue that social institutions and practices are the result of the actions of individuals. Followers of this approach argue that human action or '*agency*' is the dominant force in shaping social life. They see society as the aggregation of independent individual behaviours, and often assume that these behaviours express the rational pursuit of utility on the part of these individuals. However, others stress the influence of social

'*structures*'. They emphasise the role of supra–individual social forces, that is, social institutions such as the state, the household and organised religion, resisting reduction to individuals and utility functions (McCay 2002).

McCay (2002) recapitulates the structure and agency debate in relation to CPR management. She argues that at the one extreme we have the idea that individuals are '*self-seeking'* and faced with a CPR or public good they can only defect or free ride; this approach is primarily concerned with the '*action*' of individuals (agency). On the other hand, we have the idea of communities being '*romanticised*', embedded with the moral economy of '*the commons*' which belong to and are cared for by everyone, but are besieged by larger forces such as commercialism and capitalism, (structure) (ibid). Essentially, the debate is between those who argue the supremacy of '*macro*' influences (such as institutions, organisations, and culture) and those who stress the '*micro*' influences (day-to-day personal encounters, emotional life and personal experiences).

Like many other theories within the social sciences, not all sociological approaches sit clearly on one side of the divide, but rather take on broad aspects of one approach, and they may also utilise aspects of conflicting theories (Layder 1994). For example, a researcher looking at the collapse of a fishery from a Marxist perspective will consider capitalism (a social structure) as the primary factor in the collapse of the industry. However, such a researcher may concede that the over-fishing by a number of individuals has contributed to the collapse (human action). Even if they conclude that the individuals were forced to over-fish by pressures from the capitalist system, it is not possible to completely reject the influence of human action.

2.4.2 Bringing structure and agency together

Resolving the discrepancies between structure and agency has been a long term challenge facing social scientists. Polanyi (1944) recognised that many social phenomena demonstrate both structure and agency, and in response he coined the term *'embeddedness'* to explain how structure and agency can both be present in determining the shape of a society. Peters (1987:178) explains what Polanyi meant by embeddedness in the context of CPR research:

> *'To avoid these polemic extremes we argue for social embeddedness of a commons. It is an error to suppose that an individual calculus can explain a commons system; rather, one has to understand the socially and politically embedded commons to explain the individual calculus.'*

This idea of embeddedness has been taken up by a number of contemporary sociologists who have further developed the theory. For example, Granovetter (1985) argues that the agency approach neglects the clear impact of socialisation on individual actors, portraying them as '*under-socialised*' and only interested in forwarding their own interest. He is equally critical of the structuralist approach as it depicts individual actors as '*over-socialised*' products of their particular social group (class, gender, religion etc), and under-estimates their ability to accept or reject the norms of the '*society/group*' into which they were born. Anthony Giddens (1984:2) theory of structuration is an attempt to reconcile theoretical dichotomies of social systems such as agency/structure, subjective/objective, and micro/macro perspectives. The approach does not focus on the individual actor or societal totality '*but social practices ordered across space and time'*. Its proponents adopt this balanced position, attempting to treat influences of structure (which inherently includes culture) and agency equally. These interpretations (and others) have all played an important part in moving the structure/agency debate forward to the point where it is no longer appropriate to consider structural or human action influences singly.

2.4.3 Embeddedness and human environment relations

It is clear that this debate provides more than enough material for an entire thesis, and therefore it is necessary to move the discussion forward by focusing on interpretations of *'embeddedness'* which have been developed within the context of human environment relations such as that proposed by Wilson and McCay (1999). They postulate that social structure can be seen as '*patterned interactions*' among actors or social networks; and argue that structure influences individuals in patterned ways, although individuals also have agency and are more than just representatives of social categories.

Peters (1987) and McCay (2002) use the concept of embeddedness to conceptualise CAPs that occur within CPRs and as a result they have come up with a fundamentally different set of causes to those described by Hardin (and many other researchers). They argue that '*CAPs arise not from an absence of social ties between the individual user and others, but from competing rights and claims to legitimate use*' (Peters 1987: 178). By adopting this approach it is possible to study CAPs in terms of '*the dynamic of conflict and competition between different social groups located in history and social systems rather than between the rational economizing individual unspecified and the group also unspecifie*d' (McCay and Acheson 1987).

This approach allows us to see cultural and social phenomenon as sources of institutional creation and change without having to reduce social action to individual choice alone. At the same time, it recognises the agency of the individual embedded within such phenomena, and particularly the agency involved in the social process of interpreting and re-creating the natural and social environments (Helgason and Palsson 1997 and McCay 2002).

These debates about humanity's interaction with the environment represent more than just an interesting philosophical discussion; they form the basis of a theoretical framework to evaluate contemporary environmental management. The development of partnership approaches to environmental management requires a careful evaluation and analysis of the historical relations between a community, the environment and the state. It is necessary to properly understand why individuals and communities interact with the environment in a particular way. An understanding of the social structures and individual actions which form the basis of these relations is vital and can help policy makers respond to concerns raised by stakeholders in an appropriate manner. It is therefore useful to further examine the way in which human/environment relations have evolved to create the current situation.

2.5 The changing nature of human environment relations

The story of humanity's relationship with nature and the environment is deeply incorporated with the history of humanity itself. For many thousands of years humans enjoyed a relatively harmonious relationship with the natural environment, before

industrialisation, rationalisation and population growth led to a fracturing of the relationship (Borrini-Feyerabend et al. 2004) Thomas Malthus (1798, 1891) argued that human population grows geometrically but agricultural production grows arithmetically. As a result, if the population grows beyond the means to sustain it the excess population is eliminated. He described this process as a boom-bust cycle which is written in to the relationship between humans and their natural environment. However, since Malthus was writing the relationship between humans and nature has become much more malleable (Murphy 1994). Today the means of subsistence have grown faster than the population to the extent that most developed countries have a food surplus. The population is limited by birth control to such an extent that without the increase in life expectancy and immigration the populations would actually be falling. Until the onset of the current environmental problems it seemed that both the means of subsistence and the population side of Malthus's dilemma had been refuted (ibid).

2.5.1 Francis Bacon and the scientific revolution

The enlightenment and industrialisation marked a distinct shift in the way humanity viewed its relationship with nature. Prior to the seventeenth century science was viewed with suspicion in Europe. The Old Testament taught that the desire for knowledge was both dangerous and evil. Furthermore, during the Renaissance period admiration for classical writers reinforced the idea that mankind was in decline. There was a marked degree of pessimism about the future of mankind and little confidence in man's ability to manipulate his own future (Haynes 1994). At the beginning of the seventeenth century attitudes began to change. Sir Francis Bacon was determined to put an end to the period of ignorance and instituted a complete reform of learning that he called the *'Great Instauration'*. He wanted to change the unfavourable image of science; he did this through a clever theological ruse, locating the basis of science in God's laws as embodied in nature. Bacon inverted the traditional story of the Fall of Man to suggest the possibility of a glorious restoration '*of man to the sovereignty and power (he shall be able to call the creatures by their true names and again command them) which he had in the first state of creation*' (Montague, 1852:83). Much of Bacon's work is dedicated to promoting the role of the scientist in society; he describes scientists as

philanthropists who have compassion for '*the sorrows of mankind*' and wish to elevate them through the fruits of their learning.

It is clear that Bacon's premise was essentially utilitarian, interpreting human welfare in material terms of comfort and technological competence. With hindsight we can see that this change of attitude was essential to the development of modern science. Many contemporary scholars argue that without Bacon's analysis, scientific development may have been much slower (Haynes 1994). However, Bacon's legacy stretches beyond the development of modern science. Bacon's rallying call *'Knowledge is Power'* fundamentally altered human environment relations. Previously scientists had seen themselves as part of the fallen nature, but Bacon's ideas hinged on the concept of man as set over nature, to dominate and control it. Today many environmentalists and especially eco-feminists, suggest that Bacon contributed to the deep divisions which now exist between science and nature and directly led to the development of the perception that nature is a passive object available for exploitation, manipulation and domination (ibid.).

2.5.2 Humanity's perceived domination over nature

Increasingly scientists and politicians are beginning to take the current environmental crisis seriously, but defining the nature of the problem and its root causes is both problematic and hotly debated. Jules Pretty argues that it is about more than simply the loss of biodiversity and ecosystem function and concerns but a fundamental flaw in our assumptions about our relationship and power over nature. He argues:

> *'The danger comes from assuming that we moderns are history's most successful society, and that we will be able to think and invent our way out of any difficulty, bending the world to our intentionality, thus making problems no more than temporary concerns. Put simply our troubles centre on the myth of progress.'* (Pretty 2007:11).

This perceived domination over nature, conceived by Francis Bacon, has dominated scientific thought for the past 300 years and has characterised our relationship with the environment. Murphy (1994) argues that since the enlightenment humanity has

characterised nature as simply a resource which can be manipulated, like plastic, for our own ends. Until recently we have seen ourselves as completely infallible and disconnected from the natural world. In 1981 when the effects of climate change were becoming increasingly visible James Christian wrote that humans were on the threshold of a grand transition: *'the transition from being a passively productive organism to being the active controller of life and destiny'* (Christian 1981:381-2). Furthermore, many people today still hold the view that we will be able to invent our way out of the current crisis. This idea of man being separated from nature is based on the thesis of the social construction of reality which assumes that the relationship between humans and their natural environment can be characterised by an immense plasticity. Rather than having a '*nature*', construct their own nature (Berger and Luckmann 1967). Proponents of this perspective have dismissed ecological problems as socially constructed *'social scares'* (Fox 1991, Buttle et al. 1990, Buttle and Taylor 1992), rather than a change in the natural environment which could in turn affect social action (Murphy 1994).

In recent years it has become increasingly clear that as well as furthering our ability to manipulate nature, the development of scientific knowledge has led to scientists becoming increasingly aware of the mysterious nature of the natural environment. As a result this notion of a plastic relationship with nature is becoming harder to justify. Numerous disasters and dwindling natural resources over the last few decades have fundamentally undermined the notion of a plastic relationship with nature. Technological manipulation has placed the social fabric at risk (Short 1984) and created the risk society (Beck 1992). Only now are humans slowly beginning to recognise the embeddedness of social action in nature and realise that the relationship between reason and nature is an ongoing dialectical one between two powerful forces. The concept of a social construction of nature, like the presumption that we can invent our way out of environmental problems, is based upon shaky foundations. It focuses on the difference between humans and other animals and neglects the similarities we share with them (Murphy 1994).

Murphy (1994) argues that instead of a plastic relationship between humans and nature, it is more accurate to describe the relationship as elastic. Human capacity has enabled us to *'stretch'* our relationship with the natural world. However, it is important to

remember that, like elastic, this relationship has a '*breaking point*'. Elastic also *'recoils'*; similarly, nature reacts to human projects that try to stretch the relationship between the social and the natural. In summary, attempts by humans to re-shape the relationship have repercussions, often unforeseen.

There is some evidence that industrial societies are moving from a technological to an ecological social paradigm (Olson et al. 1992) better reflecting the true nature of our relationship with the environment. However, modern culture is still very reliant upon the plasticity premise. This relationship constitutes deeply rooted values tied to consumer, employment, power interests and lifestyles, which are difficult to overcome. It was this idea that modern culture and human nature have become so reliant upon the over-exploitation of natural resources that it is impossible to break the cycle without draconian laws which prompted Garret Hardin to come up with his influential 'Tragedy of the Commons' thesis.

In light of the developments in the human/environment relations debate, analysis of CPR management has moved on significantly from the work of Garrett Hardin. However, it is important not to forget the influence of the rational choice perspective. Many of the contemporary theories discussed below look at ways in which institutions and structures can be developed in society to promote collaboration and co-management. Essentially they are trying to mitigate the negative impacts of individuals acting in a rational way. Fundamental to this is an understanding of why they act in such ways to begin with.

2.6 Common Pool Resource theory, an alternative to state control and privatization?

As the current environmental crisis started to come to light in the 1970s and 80s along with the ever-increasing pressure placed upon natural resources the debate on how best to manage CPRs has intensified (Diez et al. 2002). Many key studies have concluded that new institutional arrangements, such as local partnerships between different actors, can be effective in achieving strategic management objectives for CPRs (Ostrom 1990; 1998; 1999). It has become increasingly clear over the last two decades that local people affected by conservation initiatives should be involved in their planning and

management to increase the fairness of decisions and promote local ownership and cooperation (Jones and Burgess 2005). This *'new paradigm'* for protected areas was recognised at the IUCN's 5th World Parks' Congress (Phillips 2003).

However, the management of CPRs invariably requires conflicts between different user groups and interest groups to be addressed. There is no easy means of addressing these CAPs. As Hardin (1968) illustrated with the metaphor of the prisoners' dilemma, some actors will be unwilling to co-operate with others for the long term collective good and instead focus their efforts on exploiting the resource for their immediate personal gain. For many years the response to such *'free riding'* behaviour has essentially been to adopt the approaches postulated by Hardin and focused on the regulation of resources by the state to ensure compliance, as the alternative, i.e. the privatisation of resources to ensure that users have a long term vested interest in maintaining the sustainable uses of resources, is often practically and politically unfeasible.

Over the last two decades there has been a growing recognition of the problems associated with such 'top-down' approaches to the management of CPRs, not least because it is often difficult to enforce strict rules and regulations governing resources that are located in rural areas that are difficult to access. Combined with the wider influence of third way philosophy governments have realised that no single actor, public or private has the capacity to tackle environmental problems on its own (Saglie 2006). This has led to an increase in the adoption of the partnership or co-management approaches described above.

However, as noted above, the creation of partnerships for CPR management is far from a simple process. If this approach is to be developed the key challenge for the management of CPRs is to develop institutions which are capable of bringing together numerous actors who may have conflicting ideas on the nature of sustainability and address the increasingly complex scale challenges. Therefore, developing an understanding of the institutional arrangements which underpin these organisations is a useful starting point for analysing governance of CPRs. However, as Rydin (2006) points out this only gets one so far. It does not reveal how the linkages within and between organisational units are activated. The *'institutionalist'* perspective goes further by looking at the more cultural dimensions of how organisations work (ibid.).

This is essential when looking at partnerships between different organisations. As Rydin (2006:17) argues:

> *'Institutionalisum is particularly useful for studying situations of governance, where policy implementation and formulation involves a wide range of actors. The formal and informal networks between these actors help explain how governance processes work. The cultural dimensions of the links between actors in these networks advance the analysis even further.'*

The informal exchanges which go on between the actors within organisational networks is important as they help to explain how the actors develop appropriate behaviour for their roles within the network. Without this socialisation in which the actors learn the appropriate institutional norms, the organisational arrangements would fail (ibid.).

2.6.1 The role of social capital

It has been argued by many commentators e.g. Ostrom (1990); Ostrom et al. (1993), Rydin and Pennington (2000), Rydin (2006); that the key to developing a successful programme of co-management lies in developing social capital within the community of resource users and interest groups. Furthermore, Pretty (2003) argues that social capital has the potential to lower the cost of production (or conservation) as it builds individuals' confidence in working together to engage in collective action.

Over the last decade many social scientists and policy makers have become excited about the concept of social capital, and in some circles it has been championed as the solution to a wide variety of social and political problems. Print and Coleman (2003:123) argue that social capital '*is the most influential concept in the last decade to emerge from economic sociology, let alone to affect political science and interdisciplinary studies*'. This is hardily surprising as, unusually for a concept, it is attractive to both the political right and left. As Bowles and Giants (2002) suggest, the left finds social capital attractive because it emphasises trust, generosity and collective action, whilst the right finds it appealing as it offers non-government entities (such as neighbourhoods and special interest groups) rather than government intervention as stop gaps to market failure.

The work of James Coleman has been instrumental in developing the concept of social capital. Like those theorists who have developed the idea of embeddedness, Coleman (1988) argues that social capital comprises elements of both structure and agency. Social capital is essentially '*trust*' within a society, community or organisation, and should be looked at as a method of exchange in the same way as human and physical capital, making possible certain ends that in its absence would not be possible. '*For example, a group within which there is extensive trustworthiness and extensive trust is able to accomplish much more than a comparable group without the trustworthiness and trust* (1988:101)'. This idea has been further developed by Fukuyama (1995), who argues that it is possible to explain patterns of regional and economic developments by examining the levels of social capital in a given region.

Pennington and Rydin (2000:234) have conducted a literature review on social capital and developed a working definition. They argue that broadly speaking social capital encompasses the following:

- *Level of trust;*
- *Extent of networks;*
- *Density of relationships within networks; knowledge of relationships;*
- *Obligations and expectations about relationships, leading to reciprocity;*
- *Forms of local knowledge;*
- *Operating norms;*
- *Existence and use of sanctions to punish free riding.*

Looking at social capital in more depth, it is important to distinguish between different kinds of social capital which are active within any social context. These different types are characterised by the ties they encourage within a social network (Sparkes and Dale 2007). Putnam (2000) has made a distinction between 'bridging social capital' in which bonds of connectedness are formed across diverse social groups, and 'bonding social capital' that cements only homogenous groups. A third type identified by Woolcock (2001) described as 'linking social capital' refers to the group's ability to engage with external agencies to influence policy or draw on resources.

Bonding social capital refers to the close relations usually experienced among family members, physically proximate friends, and neighbours (Woolcock, 2001). The networks that are highly personal thus tend to be closed to those people with interests and affiliations in common. These networks are often less diverse and not open to the views of 'others' outside the network. The adhesive within these networks is a sense of deep trust held among the network's members, a trust that is often highly relational, personalized, and thus, has a potential for conflict when either trust or commonalities break down. Once trust is built between individuals, it is possible to engage in less personal exchanges based on reciprocity. This reciprocity creates social obligations (Gambetta, 1988) between individuals and between networks. Trust operates in the same way as the concept of strong and weak ties, in that trust can also be either thick or thin.

Bridging social capital, on the other hand, can be characterized by horizontally linked relationships between networks held together by bonding social capital, and the relationships tend to be more impersonal as the linkages are established for strategic reasons. Bridging social capital is often characterized by weak and opportunistic ties that facilitate access to resources and opportunities that exist in other networks. Here, trust is often more thinly held. Bridging occurs when one member of one network connects with a member of another network (Granovetter, 1973). Often, these bridges link networks within one community to more diverse resources normally unavailable in their community (Woolcock, 2001).

Linking social capital connects community to the political and financial decision-makers. Linking social capital is also characterized by weak and opportunistic ties and is viewed as 'the capacity (for a community) to lever resources, ideas and information from formal institutions beyond the community' (Woolcock, 2001). In terms of natural resource management linking social capital particularly refers to communities ability to utilise the resources which are available by building relations with key individuals and organisations (Hall and Pretty 2008).

Like most models used to describe phenomenaon in the social sciences it is unlikely that the social capital possessed by any one community can be neatly fitted in to a

specific category. However, these definitions provide a useful starting point for analysis of levels of social capital in a given community. Furthermore, to fully understand the impact of social capital in a community it is necessary to understand its nature rather than just whether it is present or not.

Rydin (2006) looks at social capital as a tool for analysing policy. She recognises the distinctions between bonding and bridging social capital; however, she raises concerns regarding the usefulness of the terms for analysis of '*policy situations as they tend to involve both strong links between like actors and weaker links between unlike actors in different organisations*' (2006:24). Although these relationships are partly incorporated in 'linking social capital' this appears to be an over- simplification of the problem. Instead Rydin turns to a fourth 'type' of social capital, '*bracing capital*' (Rydin and Holman 2004):

> '*This recognises that specific policy situations require contacts between a limited set of actors; there has to be an edge to the set of actors involved and ultimately bridging is not helpful. However, within this limited set there is a need for elements of bonding among specific groups of actors, cementing those specific relationships in more depth. The metaphor of 'bracing' is meant to suggest the need for scaffolding to achieve a specific policy task, which has definite outer boundaries and covers a limited amount of policy space, has links across the whole policy space (bridging) but particular points where more intensive links are needed to support the required policy work. This compares with the strong glue of the bonding metaphor and indiscriminate linking of bridging.'* (Rydin 2006:25).

Essentially, bracing social capital is more geared to working within and between institutions which have been tasked with developing partnership capacity (Jones and Burgess 2005) for the management of CPRs or other local resources. These contemporary governance situations require both vertical and horizontal linkages to be established between local, regional and national actors, whereas traditional approaches to social capital primarily focus on horizontal linkages (Pretty and Ward 2001; Rydin 2006).

Furthermore, despite the interest generated by the potential benefits of social capital it is increasingly being realised that there are significant problems associated with bonding and bridging social capital. Before attempting to solve social problems through the development of social capital it is essential to assess the circumstances surrounding the problem and to establish whether the necessary conditions are present from which social capital can be developed. From the institutional rational choice perspective, adopted by Pennington and Rydin (2000), it is clear that the potential of social capital to manage environmental resources is highly dependent on the nature of the resource and the structure of incentives facing actors. The evidence suggests that social capital can be most successful in assisting the management of small-scale projects with limited numbers of users and scope to increase the incentives for actors to conserve resources in a sustainable manner. If the user group is too large and there are few incentives for users to change their ways, the potential for social capital to develop is limited. For example, Pennington and Rydin (2000) argue that social capital will be of little use in trying to curb car emissions in a large city, but may be useful in conserving a local park.

Porter (2006) is critical of the manner in which social capital is hailed as a solution to a wide variety of social problems. She is sceptical of the value of the concept and emphasises the importance of assessing the context of the problem before attempting to solve it through the development of social capital. Furthermore, as Pretty (2003) points out, it is unlikely that the development of social capital will allow a community to manage its resources independently without any long-term assistance from statutory bodies. It is essential that governments do not simply provide incentives for community-led sustainable management. They need to be accompanied by a change in social norms and the enforcement of regulations over an extended period of time, otherwise there is a danger that people will revert to their old ways.

The type of social capital present will also impact upon how useful it is. In fact, as Putnam (2000) argues, bonding social capital can actually have a negative effect on a community as it can restrict its access to outside organisations. In the context of natural resource management this also raises a number of other issues. Commentators such as Baland and Platteau (1996), Pennington and Rydin (2000) and Pretty (2003) argue that if social capital is to be an effective tool there is still a need for the state to facilitate

negotiations between actors and to enforce the agreed rules. Clearly this is going to be problematic within a closed social group or network. Although the idea of bracing social capital does not solve these concerns it does provide an analytical framework which is more appropriate and realistic for the analysis of social capital within contemporary governance institutions such as statutory partnerships.

2.7 The current state of the literature on common pool resource theory

One of the greatest challenges facing those responsible for the management of CPRs is how to balance the interests of a variety of different user groups whilst maintaining the sustainability of the resource. There is a growing body of literature that is attempting to develop CPR theory and use it to inform and analyse efforts to manage CPRs.

Before looking at some early attempts to come up with a theory for CPRs it is worth briefly considering where CPR theory sits in terms of the general concept of social theory. There are essentially two types of social theory: *grand theories* such as Marxism and functionalism which attempt to understand whole societies, and *middle range theories* (Merton 1967) which operate in a limited domain such as environmental management. Grand theories often attempt to come up with large scale generalisations, such as the proposition that capitalism is the root of all poverty. Although these theories offer a researcher a potential starting point or theoretical perspective to work within, they are of little use in attempting to develop a research strategy or guidelines to assist in the resolution of a specific problem. Middle range theories, on the other hand, fall somewhere between grand theories and what is occurring on the ground. They represent attempts to understand and explain a limited aspect of social life and can be of great assistance to researchers and policy makers. CPR theory is a middle range theory which is constantly developing and evolving as more research is conducted. In addition to social theories, social scientists also use a range of *'operational tools'* (Jackson 1993) such as bracing social capital to assist them in analysing social phenomenon.

The first attempt to officially '*theorize*' the analysis of CPRs came in the mid 1980s when a basic analytical framework for CPR management, developed by Ronald Oakerson, was adopted by the panel on Common Property Resource Management at a

meeting of the National Research Council (NRC), to organize the presentation, analysis and comparison of 20 case studies on the management of single use CPRs in different settings (NRC 1986). The framework distinguishes four sets of attributes or variables that can be used to describe a common:

- **The physical attributes** of the specific resource or facility and the technology used to appropriate its yield. This requires analysts to consider three factors. (1) The extent to which extraction by one user impacts on the sustainability of the resource for others; (2) the extent to which access to the resource can be controlled; (3) the extent to which clear boundaries can be defined for management.
- **The decision-making arrangements** (organisational rules) that govern relationships between users, as well as relevant others. This essentially requires the analysts to look at where the power lies and who makes the decisions regarding the use of the CPR.
- **The mutual choice of strategies and consequent patterns of interaction amongst decision makers** once the physical and technological attributes of the resource have been taken into consideration.
- **Outcomes or consequences** of the adopted strategies on resource management on the basis of the criteria set by the researcher, for example economic efficiency, social equity, and ecological sustainability.

(Oakerson 1986, 1992,)

Since publication, the framework has had a huge influence on CPR research and over the years it has been changed and adapted for specific projects. One key change has been the addition of a fifth element, the social characteristics of the user community (Tang, 1992, Freedy 1994, Edwards and Steins 1998). This category allows the researcher to include social and cultural information about the community in the analysis.

This framework was developed for the analysis of simple single use CPRs. However, as Steins and Edwards (1998) point out, due to demographic changes, technological

developments and the integration of the resources in the market, CPRs are increasingly being used by multiple groups, with a variety of interests both extractive and non-extractive. For example, land that was traditionally used by commoners to graze their animals is now being used by an increasing number of recreational users, such as walkers and cyclists. Similarly within the marine environment, fishermen who rely on secluded coves and bays to catch lobsters and crabs now have to compete with recreational anglers and scuba divers. A key feature of CPRs with multiple users is that each user group has its own decision-making arrangements and overall control of the resource is held by an '*umbrella authority*'. It is these umbrella organisations that are increasingly changing from authoritarian organisations, adopting a top-down approach, to partnerships involving representatives from user groups. Furthermore, the institutional arrangements are becoming increasingly complicated, with CPRs ultimately governed by national and even international law. As a result, it is necessary to consider not only relationships between individual users in a specific user group, but also the relationships between the user groups, and the user group's relationship with the umbrella organisation and international bodies. It is of particular importance to consider the evolution of umbrella organisations and the influence of individual user groups on this process, as this offers an insight into the hierarchy of the individual user groups (Steins and Edwards 1998). This is also recognised by Saglie (2006) and Rydin (2006) who stress the importance of studying the cultural aspects of co-management partnerships and in particular the way in which relationships are developed between different actors. Rydin's concept of bracing social capital also provides an important framework for analysis as, like Steins and Edwards 1998, Rydin recognises the importance of both horizontal and vertical linkages between actors.

Steins and Edwards (1998) attempt to adapt the Oakerson framework for use in complex multi-user CPRs and test their theory with a case study of Cowes Harbour in the Isle of White. They made two key changes to the original framework so that it included components to encourage a two-way analysis of resource governance. Provision was made to include both multi-levels of decision-making (vertical analysis) and multiple user groups (horizontal analysis). The framework was also changed to incorporate factors (European, national and local), which influenced the overall governance of Cowes Harbour.

In addition to the Oakerson framework, a number of other scholars have attempted to develop their own criteria for the analysis of CPRs. Much of this work has focused on how best to develop '*institutions*' capable of sustainable management of CPRs. Three key book length texts which have spear-headed this approach are: Robert Wade's *Village Republics: Economic Conditions for Collective Action in South India,* Elinor Ostrom's *Governing the Commons: The evolution of institutions for collective action,* and Jean–Marie Baland and Jean-Philippe Platteau's *Halting degradation of natural resources: Is there a role for local communities?* Like the Oakerson framework (and Steins and Edwards' adapted version), all these texts conclude with a list of conditions that they believe to be necessary for the development of sustainable commons institutions (Agrawal 2001:1651).

It is clear that all three books use very different methods and case studies to produce their lists of conditions necessary for successful management of common pool resources. Wade's (1988) study is based on data he collected from South Indian villages. Ostrom (1990) uses secondary data collected by other researchers and her own set of dependent and independent variables to analyse the data. Baland and Platteau (1996) use economic literature to attempt to bridge the gap between the enormous amount of empirical literature documenting efforts at managing local-level resources and the quickly growing body of theoretical knowledge dealing with natural resource management. Despite these clear differences Agrawal (2001) discovers that there are similarities in their conclusions. He notes, '*They all conclude that members of small local groups can design institutional arrangements to help manage resources sustainably*' (2001:1653). He goes on to identify similarities in the conditions that they deem necessary for successful management of CPRs, arguing that:

> *'The regularities in successful management that they discover pertain one of four sets of variables: (a)characters of resources; (b) nature of groups that depend on resources; (c) particulars of institutional regimes through which resources are managed; and (d) the nature of the relationship between a group, and external forces and authorities such as markets, states and technology'* (Agrawal (2001:1653).

All three books, along with the work of Oakerson and Edwards and Steins, acknowledge the individual nature of commons and emphasise that it is necessary to take into consideration the local contexts in which the common is situated. There are obvious differences between the resources, for example it is much harder to define the boundaries of a marine resource than a piece of common land used for grazing (see Chapter 3). They also recognize the importance of paying careful attention to local cultural and social conditions and are aware of the impact these can have on the successful management of a resource. However, as Agrawal (2001) postulates, social and cultural issues are treated as a side issue rather than an essential aspect of the analysis. Furthermore, although none of the researchers tries to claim that their framework/set of conditions can be applied universally to all CPRs, they clearly intend their frameworks to be used as a '*heuristic tool for thinking through the logic of a situation and considering alternative possibilities'* (Oakerson 1992:43).

Despite the attempts by the designers of these frameworks to reassure the reader that they are not attempting to make generalisations regarding CPRs, there are still a number of difficulties with their approaches. As Agrawal (2001) points out, attempting to produce even the most general framework or set of factors for the analysis of more than one specific CPR is problematic. He argues that the obstacles can be classified into two groups; substantive issues, related to the choice of case studies, and methodological issues. He goes on to suggest that by examining further cases it may, at least in part, be possible to overcome the substantive issues, but unfortunately attempts to overcome the substantive issues exacerbate the problem of methods. As a result, Agrawal (2001:1654) concludes that a modified approach to the development of analytical frameworks may be more appropriate:

> *'Instead of focusing on lists of factors that apply to all commons institutions, it may be more fruitful to focus on configurations of conditions that bear a causal relationship with sustainability. The identification of such configurations also requires sharp analytical insights and such insights can follow both from comparative research that is either based on carefully selected cases, or datasets that can be analysed through statistical techniques. The critical step is the specification of a theoretical argument to motivate the case selection and data collection.'*

Despite the difficulties pointed out, these attempts to produce frameworks for the analysis of CPRs have made considerable steps forward as they recognise that human interaction with CPRs is influenced by both structural factors and human action. They also provide helpful guidelines for future research as they identify a number of factors which a researcher may want to examine. For example, Stern et al (2002) suggest that for successful management it is essential that local authorities are not undermined by national government. This assumption is presented as 'fact'. However, although this may have been the case in the studies looked at by Stern et al they do not present enough evidence to suggest that this is a universal condition for sustainable management. Although the normative nature of this assumption makes it problematic, if interpreted differently by the researcher it could prove useful. Instead of treating this assumption as fact, the researcher could use it (and other assumed conditions) as a guideline for possible areas for study.

2.8 Universal frameworks and the problem of scientific uncertainty

Much of this literature review has focused on the complex nature of human interaction and its impact on environmental management. However, conservation is primarily concerned with preserving the physical environment, and it is therefore essential that we also consider the processes in which scientific knowledge about the environment is gathered. Moreover, the majority of attempts to develop a framework for the analysis of CPRs have identified the nature of the physical environment as a key factor (e.g. Okerson 1986; Steins and Edwards 1998; Pennington and Rydin 2000).

Developments in the physical sciences over the last century have dramatically altered the way we view our environment and allowed us to understand many natural phenomena and processes. However, it appears that the more we understand the more we realise what we do not know. Furthermore, our continued manipulation of our environment is increasingly resulting in more extreme unforeseen consequences and many physical phenomena can be explained by conflicting scientific theories. This has been highlighted by the climate change debate where scientists have produced contradictory evidence regarding the warming of the planet. These concerns are compounded by the fact that 'expert knowledge' often conflicts with knowledge

gathered by local people, which can cause significant tension between the scientific community and local resource users. As a result, scientific uncertainty is a major issue that has to be considered by those tasked with developing strategies for environmental management.

The problem of scientific uncertainty and the implementation of the precautionary principle further complicate the debate regarding the management of CPRs. Decisions made on the basis of the precautionary principle require careful thought, based on as much information as possible. The cumulative impacts of numerous human actions on the ecosystem structure and processes, and the significance of these impacts for the health of the ecosystem, need to be considered. A number of attempts have been made to come up with formulae to minimise the impact of scientific uncertainty through increased debate between international bodies of experts known as epistemic communities. However, scientific uncertainty remains a potential CAP, especially when unproven scientific assumptions conflict with 'local knowledge'.

Furthermore, scientific uncertainty adds additional complications to attempts to develop universal frameworks for the analysis of CPRs. If it is not possible to accurately define a CPR and predict the impact of actions on its future sustainability, the problems are significantly magnified when we attempt to apply uncertain findings from one site to another. However, it also enhances the argument for collaborative management of resources and the use of comparative studies which highlight both similarities and differences between CPRs. As Wilson (2002) suggests, if we are to develop sustainable management systems for CPRs it is essential to base decisions on all the available information (both data gathered by outside experts and local knowledge). This can be achieved by developing a framework for collective learning which provides opportunities to include local knowledge in the decision-making process and to generate social trust between scientists and local users.[1]

[1] See Chapter 3 for more detail on the problem of scientific uncertainty and the potential to overcome it through the use of the precautionary principle.

2.9 Developing an appropriate approach researching Common pool resources

The majority of the previous attempts to research CPRs can be classified in three broad groups, those that attempt:

- To develop universal frameworks for analysis of CPRs;
- To find either local (bottom up) or large scale (top down) solutions to CPR management;
- To focus predominantly on either the physical environmental or social consequences of action/inaction.

Such approaches are problematic and easily criticised as they focus on only one aspect of the CPR problem and fail to recognise that top down and bottom up approaches are in fact mutually exclusive, thus undermining attempts to find solutions to CAPs. Furthermore, they attempt to rationalise unpredictable human and natural processes which vary dramatically from case to case.

Early scholars of CPRs, such as Hardin, predominately focused on the 'bigger picture'. They examined the impact of issues such as changing markets and population growth on CPRs. More recent studies have demonstrated an important ideological shift, instead focussing on the impact of local phenomenon such as potential to develop social capital in a community. As a result, there is a tendency for researchers to ignore how the *'local'* is often created in conjunction with the external and non-local environment. Evidence from the literature strongly suggests that if we are to produce a comprehensive assessment of CPRs and the challenges they face it is essential that we pay close attention to both local impacts and pressures from the wider environment. Furthermore, it is important to move beyond the traditional debates within the social sciences and recognise that social interaction does not necessarily fit into pre-designed categories. Equally, it is important to recognise the need to break down traditional barriers between the study of the environment and the study of human interaction with the environment, in favour of a joined up approach that considers both natural and cultural phenomenon. As McCay (2002:380) argues, if we adopt a post-modern or post-structuralist [Escobar 1996] approach to the study of CPRs it is possible to:

> *'… break down nature/cultural dichotomies, the social construction of both nature and culture, the indeterminacies and contingencies of socionatural systems, and the need for more pragmatic approaches that neither rely on nor reinforce dichotomies between nature and culture.'*

Adopting such an approach allows researchers to rise above many of the normative assumptions of traditional approaches and to build on/combine previous work.

It is increasingly being recognised that if successful and sustainable management of CPRs is to be achieved it is essential that management decisions are based on research which has examined entire ecosystems and considered the natural, social and economic impact of any changes. Researchers and policy makers are taking this advice on board and a growing number are adopting the ecosystem approach[2] which aims to move conservation away from attempting to conserve one particular species or aspect of an ecosystem towards a system of preserving entire ecosystems (both human and natural)[3]. This *'holistic approach'* aims to enable the management of human activities and conflicts in a way that maintains both the health of ecosystems and human well-being, for the benefit of current and future generations (Jones 2006). The ecosystem approach draws heavily on the work of Polanyi (1944) and his concept of *'embeddedness'* (see above), and aims to provide a full understanding of the challenges facing CPRs. However, it goes further than simply incorporating both structural and agency influences over human motivations, and attempts to draw together the social, economic and physical considerations which will be affected by future management decisions.

It is clear that any attempt to make general assumptions about the nature of CPRs on the basis of a collection of case studies is going to be problematic. However, as Agrawal's (2001) work demonstrates, it is possible to produce sets of factors which may be used as a guide to inform future work. In the development of his framework Agrawal has taken on board many of the concerns highlighted by earlier research into CPRs[4]. He recognises the importance of looking at both small scale (local) and large scale (external) influences on CPRs. He understands the importance of examining the

[2] A detailed examination of the ecosystem approach is provided in Chapter 3.
[3] A good example of this is the Marine Bill which is currently out for consultation in the UK..
[4] Agrawal has examined three key studies into CPRs and produced a synthesis of facilitating conditions identified by Wade, Ostrom and Baland and Platteau. (see Table 2.1).

whole picture, and recognises the need to consider social and economic needs alongside environmental concerns. Furthermore, his framework allows the researcher to consider the impact and potential of such phenomena as social capital, whilst not automatically assuming their existence (or non-existence). This framework provides the researcher with a useful guide to assist in the analysis of CPRs.

Table 2.1 Synthesis of facilitating conditions identified by Wade, Ostrom and Baland and Platteau:

1. *Resource system characteristics* i. Small size (RW) ii. Well-defined boundaries (RW, EO)
2. *Group characteristics* i. Small size (RW) ii. Well-defined boundaries (RW, EO) iii. Shared Norms (B&P) iv. Past successful experiences-social capital (RW, B&P) v. Appropriate leadership-young familiar with changing external environments, connected to local traditional elite (B&P) vi. Interdependence among group members (RW), B&P) vii. Heterogeneity of endowments, homogeneity of identities and interests (B&P)
1. and 2. *Relationship between resource system characteristics and group characteristics* i. Overlap between user group residential location and resource location ii. High level of dependence by group members on resource system (RW) iii. Fairness in allocation of benefits from common resources (B&P)
3. *Institutional arrangements* i. Rules are simple and easy to understand (B&P) ii. Locally devised access to management rules (RW, EO, B&P) iii. Ease in enforcement of rules (RW, EO, B&P)
1. and 3. *Relationship between resources system and institutional arrangement* i. Match restrictions on harvests to regeneration of resources (RW, EO)
4. *External environment* i. Technology: Low cost exclusion technology (RW) ii. State: a. Central Government should not undermine local authority (RW, EO) b. Supportive external sanctioning institutions (B&P) c. Appropriate levels of external aid to compensate local users for conservation activities (B&P) d. Nested levels of appropriation, provision, enforcement, governance (EO)

Agrawal's synthesis of facilitating conditions provides a useful starting point and structure for the research in hand. The inclusion of ecological considerations as well as both local and external human factors is in keeping with the ecosystem approach and provides a framework for the analysis of the management of complex ecosystems governed by equally complex multi-level governance structures. However, conducting research to establish whether all the conditions exist in the case studies is far beyond the scope of the current study. Furthermore, such research would in many respects be unhelpful as some of the conditions may not be relevant to the particular case studies (McCay 2002; Stern et al. 2002). As Agrawal (2001) notes, it is important that research into CPRs is designed with the context of the particular CPR in mind. Nevertheless, the facilitating conditions have been organised into four categories: resource system characteristics, group characteristics (i.e. human/community factors), institutional arrangements, and external environment. These categories provide a framework which can be used as a starting point for the present study. By examining the case studies with these categories in mind, it is possible to decide which of Agrawal's facilitating conditions are relevant to the case studies as well as including other site-specific conditions. More importantly, the framework forms a basis for exploring the relationship between the categories. It is the role of the institutional arrangements to pull all these strands together to develop a workable management programme. Essentially this is underpinned by institutional arrangements ability to build up *'partnership capacity'* (Jones and Burgess 2005) through the use of *'bracing social capital'* (Rydin and Holman 2004; Rydin 2006), this requires partnerships to develop both horizontal and vertical linkages with stakeholders, local government, national government and international institutions. The analysis of these relationships is central to this thesis, and it is therefore essential that this multi-dimensional approach to managing CPRs is reflected in the research design.

2.10 Concluding comments

This chapter began by exploring two seemingly contradictory approaches to the management of CPRs, top down and bottom up. However, it concludes by conceding that the majority of contemporary approaches to CPR management incorporate aspects of both approaches, although many CPR analysts fail to recognise this (Jones 2008).

Globalisation has led to the emergence of an interconnected multi-level world which is governed on many levels. This has led to the development of new governance structures which transcend traditional divisions between the political right and left. Furthermore, industrialisation and globalisation have resulted in the drastic alteration of human/environment relations. The industrial revolution marked the beginning of a period of over-exploitation of resources at an unprecedented and ultimately unsustainable level, and this, combined with a belief in the supremacy of humanity over nature, has created the current environmental crisis.

As a result, an integrated approach to natural resource management is required which takes into consideration the new multi-level governance models as well as increasing pressures on natural resources. Essentially, this means that the development of trust (bracing social capital) between partners is vital to the process of establishing partnerships between the various levels of government and local stakeholders. Furthermore, to establish partnerships on this scale requires some form of leadership or facilitation by at least one statutory body.

One of the most important tools for conserving resources is through the introduction of protected areas. By designating a specific space primarily for the conservation of nature it is possible to develop management approaches which ensure biodiversity conservation and sustainable development within specified areas. However, for protected areas to be successful they often need to be designated either on a relatively large scale or as part of a coherent network, often encompassing a number of jurisdictions and thus increasing the need for a joined up approach to their governance. Chapter 3 begins by exploring the concept of protected areas and how they can be used as a tool for natural resource management. CPR theory provides a useful framework from which to start the analysis of these processes. However, much of the work on CPR theory quoted in this chapter (and much of the work on protected area governance more generally) is based on studies primarily concerned with terrestrial environments. Although still relevant to the marine environment, it is also necessary to explore these issues with particular reference to the additional challenges posed by working in the marine environment. Chapter 3 introduces these challenges and considers there implications for the management of MPAs.

3

Developing Protected Areas in the Marine Environment

Introduction

Protecting terrestrial environments against over exploitation has a long history dating back to medieval times. However, as the marine environment has remained out of sight and out of mind until relatively recently, the designations of MPAs have lagged significantly behind that of terrestrial protected areas. Nevertheless, increasingly attention is being turned towards the marine environment. In recent years marine conservation has started to attract the attention of the media and general public. In 2001 the ground-breaking BBC series the Blue Planet demonstrated the extent and the fragility of the biodiversity in the marine environment, and a number of popular books, such as Charles Clover's The End of The Line and Richard Ellis's The Empty Ocean, have also brought facts about the critical state of the world's fish stocks to the attention of the public. Furthermore, it could be argued that the impact of Disney films, such as Finding Nemo, Shark Tale and The Reef, have had a similar impact on perceptions of marine conservation as Bambi had on Terrestrial conservation in the 1980s (Jones 2007).

However, developing strategies for the sustainable management of the marine environment is significantly more complex than for terrestrial environment. Furthermore, due to the high levels of scale and connectivity of marine ecosystems (see below) the need for multi-level partnerships between stakeholders and local, national and international bodies is even more profound.

This chapter begins by briefly examining the history of protected areas generally, and how they are classified, before looking at MPAs in greater depth. Second, the nature of the marine environment is explored in relation to the additional challenges it poses for management, and these are classified in three categories: ecological, management and cultural. Third, the objectives of MPAs are assessed and the differences between terrestrial and marine protected areas are highlighted. Fourth, the role of science in aiding the designation of MPAs is explored; a lack of scientific knowledge about the marine environment has been one of the key barriers to providing greater protection. However, in recent years there have been increasingly loud calls for the precautionary principle to be invoked when a high degree of scientific uncertainty is present. Fifth, the ecosystem approach to MPA management is examined. This method has become an increasingly popular approach to the management of natural resources and is particularly useful within the marine environment due to the presence of a high level of connectivity. Ecosystem management is also directly linked to the implementation of the precautionary principle, as it is unlikely that scientific data will be available to back up all the necessary decisions regarding both the nature of a marine ecosystem and where to place the boundaries. Sixth, the legal provisions available for protecting the marine environment in the UK are explored alongside the processes which are in place for implementing these provisions. The chapter concludes by looking to the future and the possible implication of the proposed Marine Bill in the UK.

3.1 A brief history of protected areas

Protecting natural areas for the common good is a relatively new idea and was uncommon before the beginning of the 20th century; this is can be understood as a direct reflection of man's perceived dominance of nature which developed out of the ideas promoted by philosophers such as Francis Bacon from the 16th century onwards. Previous attempts to protect natural areas had focussed predominantly on establishing areas for the exclusive use of royalty. There is evidence to suggest that reserves for hunting and riding were set aside for Assyrian noblemen as far back as 700 B.C, and open spaces were reserved for the use of the ruling class in ancient Rome and medieval Europe (Runte 1979).

In addition to providing for the recreational needs of the ruling classes there is some evidence of attempts to protect areas to preserve species as early as the 15th century. However, the primary aim of these areas was still to maintain good stocks for hunting (Boardman 1981). The first calls for the protection of forests can be traced back to the 16th and 17th centuries when people began to realise that the harvesting of oak forests in Europe to feed the British shipbuilding industry was having a devastating effect on the forests (Hoskins 1970).

The first natural park devoted solely to protection of scenic beauty and recreation was Yellowstone in the United States, which was designated in 1872. Developments in science and ecology in the first half of the 20th century led in the 1960s to a broader understanding of the need for a systematic approach to resource planning and management. As a result, the protected area started to develop as a tool for preserving entire ecosystems and biological diversity (Dixon and Sherman 1990).

3.2 Classifying protected areas

Over the last two decades there has been a significant growth in the number of protected areas across the globe. At the 7th Conference of the Parties to the Convention on Biological Diversity (2004) it was agreed that 10% of the area of all the world's habitat types should be effectively conserved through protected area designations, given that some terrestrial habitats and most marine habitats are under-represented. Protected areas span an immense variety of ecological habitats and social contexts. They range from some of the least explored areas of the world to densely populated territories that have been dramatically altered by human actions (Borrini-Feyerabend 1999). However, at the same time, protected areas are coming under increasing pressure from global warming, hunting, fishing, changing demographic patterns, and so on. These pressures have prompted an increased interest in the development of sustainable management systems for existing protected areas and calls to speed up the process of designating new ones. Therefore there is an urgent need for up to date data on the state of the world's protected areas. The diverse nature of protected areas has meant that collecting data is problematic. The best estimates come from the World

Commission on Protected Areas (WCPA) which suggests that approximately 11.58% of the world's surface is designated as a protected area[1].

Despite the vast array of environments described as protected areas, and in an attempt to aid the data gathering and monitoring processes, the IUCN - the World Conservation Union - has agreed upon a single definition:

> *'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.'* (IUCN 1994)

It is clear that this definition incorporates many different types of protected areas, which are used for a wide variety of purposes. To give some clarification to the definition and improve understanding, IUCN has developed a six-category system of protected areas identified by their primary management objective (IUCN 1994), as shown in Table 3.1.

Table 3.1 IUCN Management Categories of Protected Areas (IUCN 1994):

Category	**Description**
1	Strict Nature Reserve/ Wilderness Area: protected area managed mainly for science or wilderness protection
1a	Strict Nature Reserve: protected area mainly for science
1b	Wilderness Area: protected area managed mainly for wilderness protection
2	National Park: protected area managed mainly for conservation of specific natural features
3	Natural Monument: protected area managed mainly for conservation of specific natural features
4	Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
5	Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
6	Managed Resource Protected Area: protected area managed mainly for sustainable use of natural ecosystems.

The IUCN protected area management system is based upon the primary objective of management. However, it is clear that all protected areas will have secondary

[1] Data includes MPAs up to 12 nautical miles offshore.

objectives as well. Table 3.2 shows both primary and secondary management objectives which can be used to identify the most appropriate category.

Table 3.2 Matrix of management objectives and IUCN protected area management categories (IUCN 1994):

Management objective	**1a**	**1b**	**2**	**3**	**4**	**5**	**6**
Scientific Research	1	3	2	2	2	2	3
Wilderness Protection	2	1	2	3	3	_	2
Preservation of Species and Genetic Diversity (Biodiversity)	1	2	1	1	1	2	1
Maintenance of Environmental Services	2	1	1	–	1	2	1
Protection of Specific Natural/Cultural Features	–	–	2	1	3	1	3
Tourism and Recreation	_	2	1	1	3	1	3
Education	_		2	2	2	2	3
Sustainable Use of Resources from Natural Ecosystems	–	3	3	–	2	2	1
Maintenance of Cultural/Traditional Attributes	–	–	–	–	–	1	2

Key: 1= Primary objective; 2= Secondary objective; 3=Potentially applicable objective; -= Not applicable

The IUCN has developed this system with the intention of it being used in all countries, to allow for international comparison, and this explains the vague nature of some of the categories. However, the IUCN accepts in the accompanying guidelines that the categories will need to be interpreted with flexibility at regional and national level (IUCN 1994).

The purpose of this two-tier system is to distinguish between management objectives and management processes/effectiveness (how the park is run). For example, a protected area in a given country may be declared in law according to one of the categories listed in Table 3.1, while the categories in Table 3.2 simply provide some guidance on how the area should be managed.

3.3 Marine protected areas

MPAs have been declared under the same principles as terrestrial protected areas. They are essentially designed to protect areas of the marine environment from damaging influences and to preserve biodiversity, natural resource and cultural heritage. The IUCN defines an MPA as:

> *'Any area of littoral or sub-tidal terrain, together with its overflowing water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment'* (Kelleher and Kenchington 1992).

Although, like terrestrial protected areas, there is evidence of humans protecting marine areas in ancient times[2], MPAs are a relatively modern concept. The world's first MPA, which included a substantial sub-tidal area, was established at Glacier Bay in Alaska in 1925, incorporating coastal waters important for whale and seal populations. The first fully primarily sub tidal MPA was established in Fort Jefferson, Florida in 1935, to protect the Dry Torugas network of Coral Reefs. However, it was not until after the invention of SCUBA in the late 1940's that people really started to realise the importance of conserving the marine environment. According to Ray (1999), the first '*self conscious*' MPA was Exuma Cays Land and Sea Park established in 1959 (Jones 2001).

The development of MPAs has been significantly slower than terrestrial protected areas. The first international meeting to discuss MPAs and develop techniques and strategies for selecting such sites was not held until 1976 (IUCN 1976). By 1994 only 1,306 MPAs were recognised by the IUCN (Kelleher et al. 1995) compared to around 37,000 terrestrial protected areas.

Gathering data on the precise number of MPAs is even more problematic than for terrestrial sites, due to the complex nature of the marine environment and difficulties in gaining access. Scientists at the University of British Columbia in Canada are currently

[2] There is evidence of Chinese writing some 3000 years ago describing regulations regarding fishing during the breeding season (Li 1993).

attempting to categorise all such sites across the globe. At present it is estimated that approximately 0.5-1% of marine habitats are protected globally, and the vast majority are located along coastlines. At the fifth World Parks Congress in 2003 it was recommended that a representative global network of MPAs protecting 20-30% of marine habitats be created by 2012. However, marine protection has increased over the last century at a rate of approximately 3-5% per year, and at that rate the goal of 30% by 2012 is unachievable (Wood et al, 2005).

3.4 Features of the marine environment

The designation of protected areas is an approach to conservation that has primarily been developed and applied in the terrestrial environment. This approach is also an important tool for conserving the marine environment. However, it is necessary to recognise that there are a number of specific features associated with the marine environment which have to be taken into consideration, and which without careful planning limit the usefulness of such site-specific approaches (Jones 2002). An awareness of these issues, and their potential to develop into CAPs and hamper attempts to conserve the marine environment, is essential if successful management strategies are to be put in place. These features can be classified in three groups: ecological differences, management differences and cultural differences. Furthermore, by looking at these features with Agrawal's synthesis of facilitating conditions in mind, it is possible to get a better idea of which conditions are not relevant to the marine contexts.

3.4.1 Ecological differences

The marine environment covers over 70% of the world's surface, and ranges from Arctic to tropical waters and from coral reef and surface systems to deep-water ecosystems kilometres beneath the ocean surface. However, unlike terrestrial systems the barriers between different ecosystems are less defined. Instead of being marked by features such as geological change they tend to gradually merge into each other according to changes in sea temperature, salinity or current, tectonic features, and so on. There has been some debate regarding the legitimacy of the emphasis placed on the fluid nature of marine ecosystems. Ray (1996) argues that the complex trophic

patchwork or mosaic structures of marine systems should be recognised. However, although these arguments are valid, as Jones (2001) suggests, it must be recognised that marine environments are generally relatively homogeneous and wide scale, compared to more heterogeneous terrestrial environments. This distinction is important as it has far-reaching implications for the way in which MPAs are designated and managed, especially as marine ecosystems are likely to transcend international borders and jurisdictions.

As well as the issues associated with scale, the extreme connectivity of the marine environment also presents significant challenges to its protection. There is a growing body of evidence that suggests that marine ecosystems, which are spatially separated, are more likely to be functionally connected than terrestrial ecosystems. This can be explained, in part, by the fact that unlike land based systems, which are predominantly rooted to the earth's surface, the sea is quite different, with the bulk of its life moving about in a column to the benthos (Agardy 1997). This is critically important to the design of MPAs and their usefulness in conservation. It is essential that MPAs developed to conserve particular ecosystems and species take into account the migratory patterns of species which visit the site at some point in their life cycles.

Connections between different ecosystems, often thousands of miles apart, are incredibly complex and difficult to predict. Populations may rise and fall in a relatively unpredictable and non-attributed manner due to complex interactions between ecological dynamics of different communities. It is also difficult to predict the impacts of human actions, especially as they may only be felt many thousands of miles away (Kenchington 1990). A good example of this is the impact that over-fishing off the coast of Alaska had on food webs around the Aleutian Islands. Over-fishing reduced the food available to seals and sea lions, resulting in their numbers becoming greatly reduced; killer whales, which once fed on them, expanded their diet to include sea otters. The sea otters fed mainly upon sea urchins, and a reduction in sea otters resulted in a massive increase in the number of sea urchins that in turn decimated the kelp beds around the Aleutian Islands and destroyed an important habitat and source of food, severely disrupting food webs and the local ecosystem (Estes et al, 1998).

In the case of the above example, it is reasonably safe to conclude that the disruption in food webs was caused by human actions. However, this is not always the case. There is currently much concern about crown of thorn starfish devastating coral reefs, especially as the evidence suggest that the frequency of these attacks are increasingly reducing the reefs' ability to recover (Seymour and Bradbury 1999). The extent to which the increase is due to anthropogenic influences is unclear. It could be caused by over-fishing of species which prey on larvae and juveniles (Ormond et al, 1990), or due to population growth caused by increased run-off of nutrients (Birkeland, 1992; Jones 2001).

The complex ecology and connectivity of the marine environment therefore generates a number of problematic questions when some of the resources system characteristics listed by Agrawal (2001) are applied to the marine environment. Although it is clear for the purpose of management that it is necessary to set defined boundaries for MPAs and that the management will be simpler if it is restricted to a small area, it is much harder to make decisions on where the boundaries should be. Furthermore, it is also necessary to consider that there is a much higher likelihood that phenomena outside the boundaries of the protected area influence the condition of the MPA.

3.4.2 Management differences

The primary difference between the management of marine ecosystems and terrestrial systems is that they are generally neutral in management terms, in that they rarely require '*positive*' intervention by humans (Jones 2002). Terrestrial habitats, such as moors, lowland heaths, and meadows, are considered to be semi-natural (at some point in the past they have been altered by human intervention) and therefore to preserve them in their present condition it is necessary to maintain certain human activities (Sutherland and Hill 1995). As a result, it is often harder to persuade local communities of the benefits of MPAs as there is not usually any scope to create employment to replace that lost by restricting extraction activities.

In terms of terrestrial conservation, land ownership is an important element. In the UK (and many other countries) non-governmental organisations (the National Trust, RSPB and other bodies.), the government conservation agencies (Natural England and so on.)

and a number of public bodies (including the Forestry Commission and local councils), use the general powers associated with land ownership as a principal means of protecting areas for conservation purposes. Protected areas which aim to regulate land use, such as National Parks and Sites of Special Scientific Interest, are reliant upon the powers associated with land ownership. However, in contrast, the primary basis of almost all MPAs is regulation (by law or otherwise) rather than ownership since the sea cannot be owned (Cole-King 1995).

The management of MPAs is further hampered by a lack of scientific knowledge regarding their effectiveness (Mascia 2001; Jones 2002; Ludwig et al. 1993). It is clear that our understanding of the marine environment and its ecosystems is poor compared to our knowledge of terrestrial systems. This is primarily due to the fact that the history of marine exploration is considerably shorter than exploration on land, and even today with the benefit of modern technology exploration is heavily restricted by problems associated with cost and gaining access. As a result, the selection design and management of MPAs is held back by factors such as a lack of baseline data for comparison, and difficulties in gaining scientific data to support claims concerning sustainable exploitation levels and cause-effect relationships (Jones 2002).

3.4.3 Cultural differences

As a result of our lack of understanding of the ocean the human race generally looks at the sea with a degree of insignificance. As Agardy (1997:16) notes '*We…harbour a bias towards the oceans, one that may have its genesis in the easily rationalized unease we feel when we as perfectly adapted land creatures venture into what is for us a foreign and dangerous medium.*' The mysteries fuel another misconception: the seas are so vast and their resources so limitless that no matter what we do to them they are likely to recover. It is clear that societies' relationship with the sea is largely defined in terms of the resources it provides, for example fish and waste disposal facilities. In contrast, land is conceived as a tangible entity in itself, the use of which can be specially divided, including the set-aside areas for nature conservation (Cole-King 1995; Jones 2002). Essentially, the shoreline acts as an important boundary in administrative legal and cultural terms. It represents a traditional presumption that our relationships to terrestrial and marine environments are fundamentally different, and

that managing the activities which use them accordingly requires a completely different basis (Cole-King 1995:116).

Again this causes problems for the application of Agrawal's facilitating conditions as he stresses the importance of an overlap between the user groups, residential location and the location of the resource. In the case of the marine environment it is clear that significant damage could be inflicted on the marine environment with only minimal impact on the areas in which the user groups reside.

However, there is some evidence that, at least in western countries, our perception of the sea is changing. In recent years there has been an increased awareness and interest in the marine environment. Many people now highly value the marine biodiversity and there is a growing public fascination with the diversity and complexity of marine communities (Mare 2005). This has at least in part been fuelled by media phenomena such as the Blue Planet. However, the public fascination is primarily focused on the exotic and beautiful images of coral reefs in tropical climates. There is still a strong perception that cold water environments, such as the sea surrounding the UK, are dark, dingy and contain little in the way of marine life.

3.5 Objectives of marine protected areas

As with terrestrial protected areas, it is essential for MPAs to have clearly defined objectives. This is important as it enables policy makers, campaigners, stakeholders, and others to select suitable sites for designation on the basis of scientific evidence and wider conservation objectives (Vanderklift and Ward 2000). Furthermore, clearly defined objectives can help reduce conflict with stakeholders and assist management processes (Jones 1994). Jones (2001) has identified ten general objectives which can be applied to the conservation of inshore MPAs:

- Protect rare and vulnerable habitats and species
- Conserve a representative set of habitat types
- Maintain and restore ecological functions
- Promote research and education

- Harvest refugia
- Control tourism and recreation
- Promote integrated coastal management
- Maintain aesthetic values
- Maintain traditional uses
- Cultural symbolic value of set-aside areas

As stated above, the key difference between terrestrial and marine ecosystems is the level of connectivity between habitats. This has been a source of much debate with some commentators arguing that the high levels of connectivity can fundamentally undermine the ability of MPAs to fulfil their conservation objectives. It is clear that the protection afforded to MPAs is restricted by the geographical extent and distribution of the MPAs. Therefore, to mitigate against the additional challenges posed by connectivity careful thought needs to be given to their location so that protection can be given to species during critical life stages (Jones 2002). However, this level of planning will require a high level of co-ordination between conservation agencies, national governments and international bodies, placing additional importance to the conditions Agrawal (2001) associates with the *'external environment'*, and in particular the role of the state.

3.6 The precautionary principle and the role of science in the development of marine protected areas

The lack of clear scientific data regarding the marine environment has also been highlighted as a major hurdle in developing a comprehensive programme for conserving the seas. However, MPAs provide an important opportunity to, at least in part, rectify the situation by providing benchmark areas that are undisturbed by human activities (ibid.). They can also assist with efforts to educate the public about the marine environment and the importance of its conservation. Nevertheless, the problem of scientific uncertainty remains a major challenge in marine conservation and the designation of MPAs.

The premise which grew out of Frances Bacon's *'Great Instauration'* (see Ch1), that science is ultimately capable of fully revealing and understanding the complexities of nature, poses problems for conservation scientists as increasingly they have to admit that they do not understand certain phenomenon and processes. Science does have limitations, both practical and theoretical; this scientific uncertainty is a significant obstacle to the conservation of all habitats and environments. However, we know considerably less about the marine environment than we do about the terrestrial environment, magnifying the problem for marine scientists and policy makers. As a result, it is vitally important for the development of strong functional partnerships between scientists and local stakeholders to facilitate discussions about these uncertainties. A possible solution is to adopt the precautionary principle. However, the precautionary principle is a complex concept which is open to many different interpretations, potentially undermining its usefulness. Furthermore, if it is to be incorporated in policy it requires a high level of trust and understanding between policy makers, scientist and local stakeholders. O'Riordan (1994:12) described the precautionary principle as a:

> *'…rather shambolic concept, muddled in policy advice and subject to whims of international diplomacy and the unpredictable public mood over the true cost of sustainable living.'*

In more recent publications (for example. O'Riordan et al. 2001) he has, however, recognised that the concept has the potential to influence policy decisions in a positive way. Nevertheless, his 1994 statement remains a useful reminder of the concept's potential for abuse, and, as the examples below suggest, to fully implement the precautionary principle a fundamental change is needed in the way we view science, law and policy.

The precautionary principle first emerged in European environmental policy in the late 1970s (Foster et al. 2000). Essentially, it suggests we should take precautionary steps to ensure that ecosystems are not destroyed or irreversibly damaged before we properly understand them. This may mean restricting activities with uncertain impacts or not allowing developments until we are sure of their impact on the wider environment.

Since the 1970s the precautionary principle has become a buzz word within current environmental policy debates, and has found its way into a number of pieces of legislation[3]. However, deciding what steps should be taken to ensure that the precautionary principle is upheld is still subject to political decision making and ultimately determined by the perceived *"public mood"* and the voices of powerful political lobby groups. As O'Riordan (2001:22) propounds:

> *'For precaution to work properly … there needs to be a change in both science and law beyond what is occurring today. The incorporation of "soft" values relating to being more in tune with nature and more sensitive to legitimate aspirations of all others is a matter that separates interdisciplinary science from multidisciplinary science. The science of including feelings, of introducing trust and of nurturing sensitivity for the interests of others, is not quite born.'*

Scientists and policy makers need to recognise that they need to move beyond simply interpreting the outcome of scientific investigation and to think more widely about the possible long term consequences for society of a variety of different environmental outcomes. Essentially, the precautionary principle is a concept which needs to be grasped by society as a whole, not just the scientific community. It is essential that social relationships and ecosystems are considered together, as the implications of over exploiting natural resources are likely to have a profound impact on human lifestyles (ibid.).

De Santo and Jones (2007) illustrate the changes needed within law and policy highlighted by O'Riordan with an example from the Common Fisheries Policy. The basic regulation suggests that the precautionary approach should be adopted in relation to nature conservation; however, this is contradicted by the fact that a degree of certainty, i.e. that '*evidence of a serious threat*', must already exist. For example, the European Commission rejected the UK's proposal for a closure of an area to sea bass

[3] e.g COUNCIL REGULATION (EC) No 2371/2002 of 20 December 2002 on the conservation and sustainable exploitation of fisheries resources under the Common Fisheries Policy, O.J. L358, 31.12.2002, p.59. The UK government has stated that the precautionary approach will be a central principle behind the Marine Bill.

pair-trawling because of a lack of evidence required under article 7. However, this requirement is arguably not consistent with the precautionary principle.

Environmentalists are calling for the precautionary principle to be applied to marine policy to provide scientists with more time to fully understand the complex nature of marine systems. As Jones (2006) points out, our lack of knowledge about the marine environment means that if marine conservation is to be taken forward the majority of conservation decisions have to be made with a degree of uncertainty, therefore requiring the adoption of the precautionary principle. Lauck et al. (1998) argue that if the precautionary principle is adopted for the management of the marine environment more progress would be made. Instead of concentrating efforts on further understanding complex marine systems, it would be more productive to focus on ways to deal with this irreducible uncertainty, it is this argument which has formed the basis of many calls for no take MPAs. These calls are beginning to be taken seriously and the precautionary principle is increasingly being adopted by managers and policy makers governing our marine resource (e.g. the Marine Bill consultation and Safeguarding our Seas). Nevertheless, as the above example of the Common Fisheries Policy demonstrates, it is important that before policy makers claim that they are adopting a precautionary approach they properly understand the implications of the concept and ensure that legislation is not contradictory.

Furthermore, in the past the precautionary principle has been used as an excuse to do nothing (Roberts 1997). However, there are signs from its use in recent government documents that attempts are being made to combat this notion of inaction. In '*Taking forward the Marine Bill: The Government response to pre-legislative scrutiny and public consultation'* the British Government talk of *'proportionate application of the precautionary principle'* which suggests it will no longer be used as an excuse for inaction. Although clearly a positive step this raises a new question; what is a proportionate application of the precautionary principle?

Ultimately for the precautionary principle to work extensive dialogue between stakeholders and policy makers is required, and therefore additional attention has to be given to the development of the governance approaches surrounding the resources. Many of these issues can be addressed through the 'partnership' approach and the

development of appropriate institutions with high levels of bracing social capital, to facilitate discussions across actors operating at all levels.

Questions surrounding the proportionate application of the precautionary principle and the development of suitable institutions for facilitating these processes form a central element of this thesis and are discussed in depth in Chapters 6, 7 and 8.

3.7 The Ecosystem approach

The concept of ecosystem management is by no means new. Its goal is to maintain an ecosystem in a healthy, productive and resilient condition so that it can provide the services humans want and need in a sustainable manner (McLeod et al. 2005). However, its meaning has shifted significantly in the last 15 years from a purely ecological concept to one which incorporates both ecology and governance and represents an integral part of the CPR theory approach to environmental management. This is highlighted in Agrawal's synthesis of facilitating conditions, in which he points out the importance of recognising the relationship between resource system characteristics and group characteristics. As well as incorporating all aspects of the natural environment it factors in human activities within a given ecosystem. Furthermore, due to our lack of knowledge about ecosystem functions and connectivity, the ecosystem approach recognises that it is necessary to take key decisions based on the precautionary principle.

The ecosystem approach is increasingly being adopted as a model for managing protected areas in both terrestrial and marine environments. However, due to the high level of connectivity in the marine environment the need to adopt a more holistic approach is even more important. Historically, attempts to conserve the marine environment have relied on traditional fisheries management approaches which concentrate on conserving individual species within the ecosystem. Single species fisheries management has been largely driven by the desire to achieve the maximum sustainable yield from a single element of an ecosystem rather than sustaining it for nature conservation purposes (Hirshfield 2005). Such approaches are fundamentally flawed, as they ignore the implications of wider processes on both the ecosystem and stocks of individual species. They often ignore predator-prey interaction, (the

exploiting of forage species undermines the productivity of predators) (Rosenberg 2005). They also fail to take in to consideration the lack of scientific uncertainty which surrounds connections between different species. Furthermore, it is not only fishing which has an impact of fish stocks; other activities such as oil and gas extraction and coastal developments have a massive impact. This is highlighted by the list of MPA objectives (outlined above). They consist of a range of ecological, social and economic objectives which could not be achieved through traditional approaches to conservation. The ecosystem approach potentially offers an alternative, joined-up approach which takes into consideration the wider cumulative impacts and potential impacts on marine ecosystems, as well as the needs of different resource users.

3.7.1 Unpacking the ecosystem approach in terms of marine protected area management

Before embarking on a lengthy analysis of the ecosystem approach it is helpful to have a clear working definition of an ecosystem and an understanding of how marine ecosystem boundaries are defined. A useful definition is included in the Scientific Consensus Statement on Marine Ecosystem-Based Management, prepared by scientists and policy experts to provide information about coasts and oceans to U.S. policy makers. They define an ecosystem as: *'…a dynamic complex of plants, animals, microbes and physical environmental features that interact with one another'*. They go on to stress the importance of including humans as an integral part of ecosystems. A key feature of ecosystems (especially in the marine context) is '*interconnectedness*' within and among ecosystems, provided both by the physical environment and biological interactions.

The scientific consensus statement also gives some clarity to the way an ecosystem is defined:

> *'Ecosystems come in many sizes, often with smaller systems embedded within larger ones. For example, a kelp forest in southern California represents a small habitat ecosystem that is nested within the larger California Current Large Marine Ecosystem. At the largest scale, ecosystems are often categorized as Large Marine Ecosystems (LMEs).'*

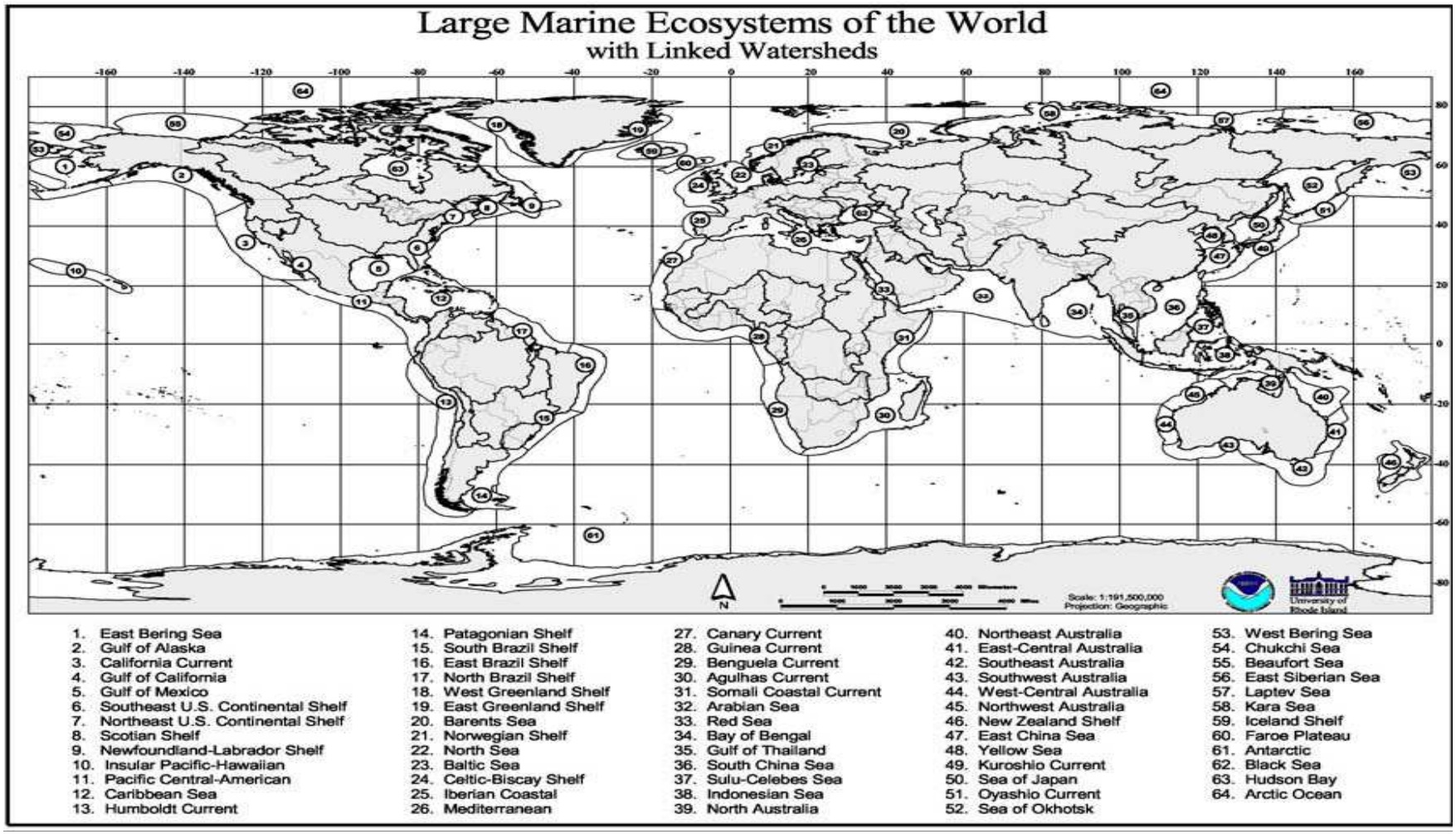
As is highlighted by the above statement, precisely defining ecosystems for the purpose of environmental management can be problematic. Marine ecosystems are defined according to physical features and habitats. However, if an ecosystem is being classified to aid its management (which is normally the case), its boundaries are liable to be manipulated to fit into geopolitical regions to simplify its governance. In many cases this is problematic, especially when the high level of connectivity within the marine environment is taken into consideration. Although this represents a major challenge for marine conservation, it also highlights the importance of considering ecological concerns with the practicalities of governance. As stated above, the high level of connectivity and sheer size of marine ecosystems means that the assumption made by Agrawal (2001) that protected areas need to be of a small size with clearly defined boundaries appears to be at odds with the adoption of the ecosystem approach in the marine environment. However, in practical terms it is necessary to do so and by taking a holistic approach to management it is more likely that solutions will be found that ensure the most vulnerable parts of the ecosystem are protected whilst enabling resource users to continue to operate in a sustainable way.

It is worth noting that much of the confusion regarding the definition of the ecosystem approach is driven from its association with the term holistic. For example, Laffoley, et al. (2004); Agardy, (2005) and Griffis and Kimball (1996) and many other commentators use the term to describe the ecosystem approach, however, it remains unclear what is meant by the term holistic itself. The word holistic is a derivative of the Greek word holism meaning *all*, *entire*, *total*. In the context of environmental management it appears to refer to a joined- up, all- encompassing approach which takes into consideration both the human and ecological needs.

It is clear that for the ecosystem approach to work important management decisions have to be made regarding which areas are protected. Although it is accepted that due to the high levels of scientific uncertainty surrounding the marine environment many decisions will have to incorporate the precautionary principle, developments in mapping marine ecosystems can act as an important guide. The US National Marine Fisheries Service, IUCN, and the Global Environment Facility, in partnership with several United Nations agencies have defined 64 LMEs. LMEs are relatively large

regions of ocean space, on the order of 200,000 km2 or greater, encompassing coastal areas from river basins and estuaries to the seaward boundaries of continental shelves and the outer margins of the major coastal currents (**Map 3.1**) (Sherman, K et al. 2003).

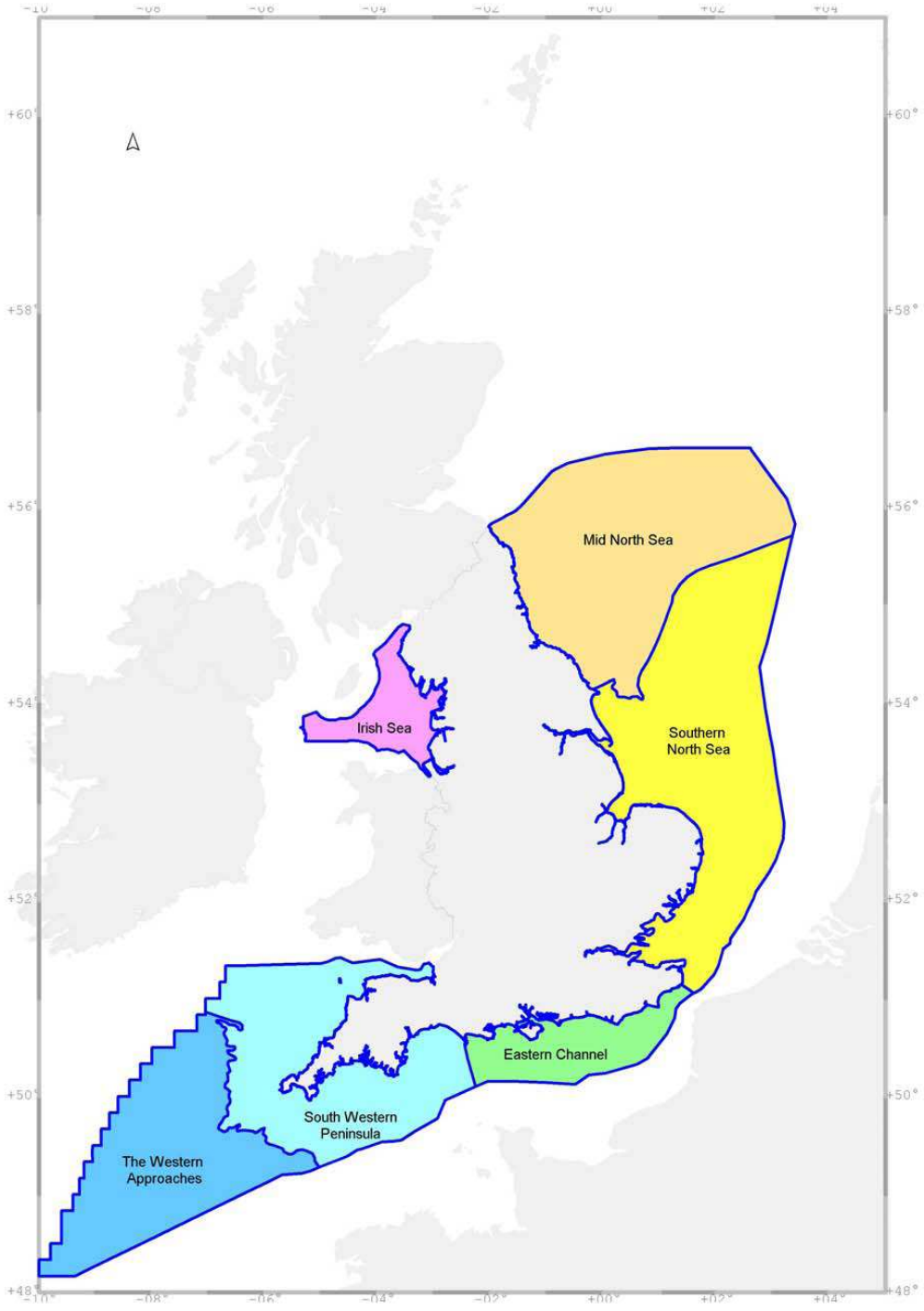
Map 3.1 Large marine ecosystems of the world:



Within the boundaries of the 64 LMEs, 90% of the world's annual yield of marine fisheries is produced (Garibaldi & Limongelli 2003), global levels of primary production are the highest, the degradation of marine habitats is the most severe, and coastal pollution is concentrated and levels of eutrophication are increasing (GESAMP 2001).

The classification of the LMEs has aided the management of marine resources as it allows scientists and policy makers to look at the bigger picture and clearly demonstrates the connectivity between small ecosystems. For example, the waters around the UK have been classified in to two LMEs: the North Sea and the Celtic-Biscay shelf. However, these large scale classifications are not overly helpful in guiding marine conservation policy in the UK as it is not possible to designate entire LMEs as MPAs. At the same time, the knowledge that they exist helps to ensure that a representative sample of each sub-ecosystem is protected. Furthermore, these areas have been broken down into smaller, more manageable sections which can then be used to guide the designation of MPAs. English Nature has identified and described, together with the Joint Nature Conservation Committee (JNCC) and in consultation with other organisations, six Marine Natural Areas and the English coast line which incorporate a number of important natural features:

Map 3.2 Six Marine Natural Areas around England:

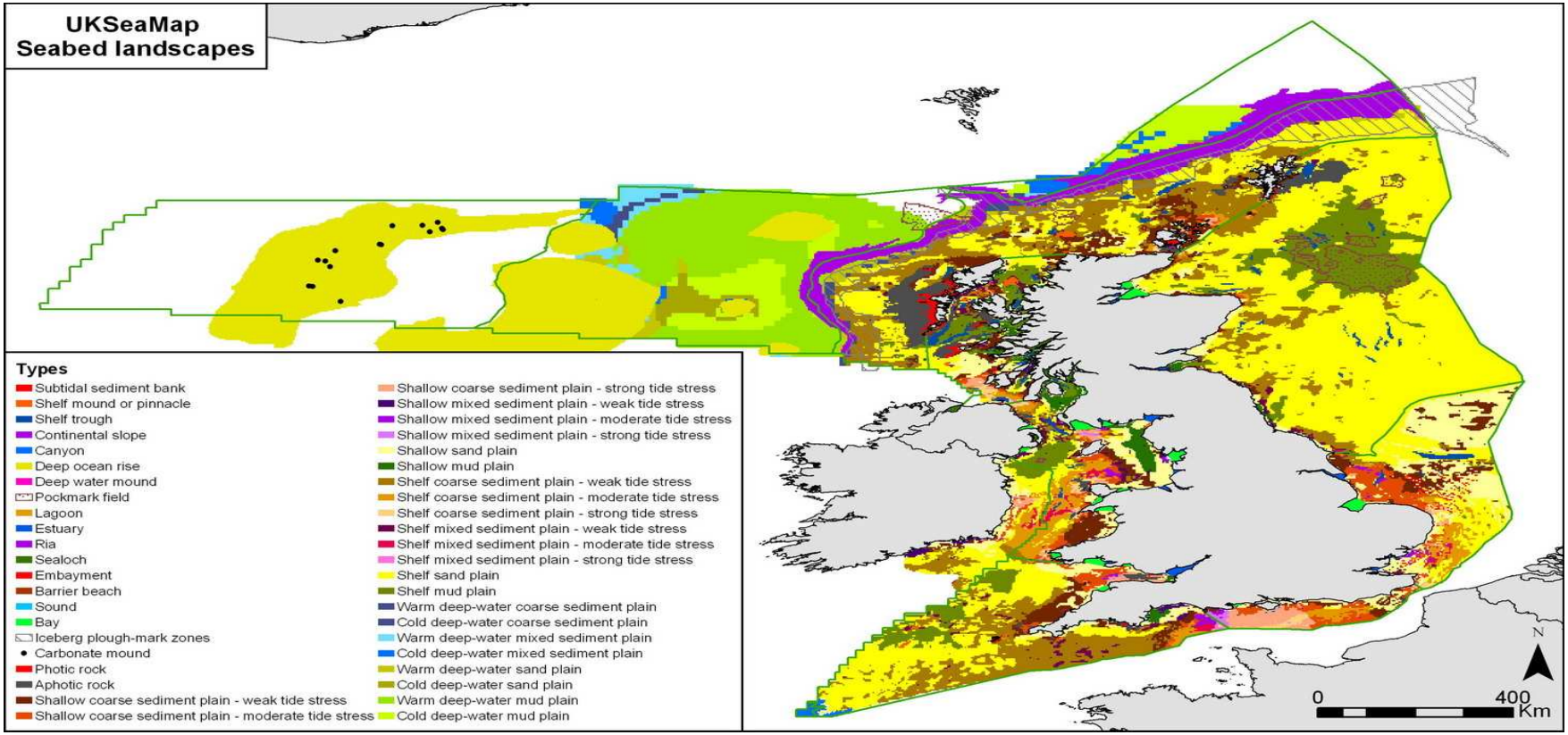


Source: (Jones, L.A 2004)

These Natural Areas have been broken down even further by JNCC to provide a more detailed picture of the different seabed landscapes and water column features of UK seas. This information can then be used as a guide to the development of a representative network of MPAs (see Map 3.3)

However, even with the benefit of detailed maps of marine ecosystems there is still a significant difference between the size of the problems affecting the marine environment and the solutions used to try and combat them. MPAs and fishery reserves are generally too small to address the complex challenges faced by most marine areas. This is intensified when planners and conservation groups ignore the context surrounding the sites (Agardy 2005, Jones 2006, Alison et al. 1998). The NRC argues that despite recent strategic approaches to marine conservation, most interventions still occur in an *ad hoc* and opportunistic manner, as agencies and institutions follow their mandates without really considering how they contribute to the bigger picture beyond their regional, sectoral or agency boundaries (NRC 2001). This highlights a need for more attention to be paid to the governance aspects of the ecosystem approach and the challenges of assessing the significance of calmative impacts.

Map 3.3 Marine seabed landscapes and water column features of UK seas:



Source: JNCC (2004)

3.7.2 Ecosystem management

Although some claim that there is growing confusion regarding precisely what is meant by the ecosystem approach (Mare 2005), there is in fact a growing consensus regarding the meaning of the concept (see below). The actual confusion seems to lie with the implementation of ecosystem management. For example, the Norwegian government is using ecosystem-based fisheries management as a tool to justify culling seals. The '*ecosystem*' aspect of the policy seems to relate to attempts to manipulate ecosystems in their current state in the hope of increasing the yield from the fisheries, rather than protecting the ecosystems themselves (Corkeron 2006).

The idea that ecosystems should form the basis for designating protected areas was first suggested in the 1930s and 1940s. Biologists George Wright and Ben Thompson (1935) observed that parks were not fully functional ecosystems '*by virtue of boundary size and limitations*.' It was not until the 1970s that the concept started to interest policy makers when Lynton Caldwell (1970) suggested that ecosystems should form the basis for public land policy in the US. However, although influential within the scientific community, ecosystem based approaches to the management of natural habitats had little impact on environmental policy until the 1990s. Gurumbine (1994) argues that it was the biologists Frank and John Craighead who initiated the current attention on ecosystem management. Their research into grizzly bears in Yellowstone national park concluded that the bears' needs could not solely be met within the boundaries of the park. This work set a fundamental criterion for defining greater ecosystems: the area must provide the primary habitat necessary to sustain the largest carnivore in the region. This was affirmed by Newmark (1985), who compared the legal and biotic boundaries of various parks and reserves in western North America.

However, as a number of commentators have noted (for example Christie 2004; Agardy 2005), conservation is not about managing ecosystems or other species, but about managing activities undertaken by our own species. The aim is to devise a management plan which allows human activities to continue in a sustainable manner while conserving biodiversity. As a result, it is important to recognise that the ecosystem approach is not always applied to ecosystems defined on the basis of *'sound science'*, but rather a holistic approach to managing a particular area designated for

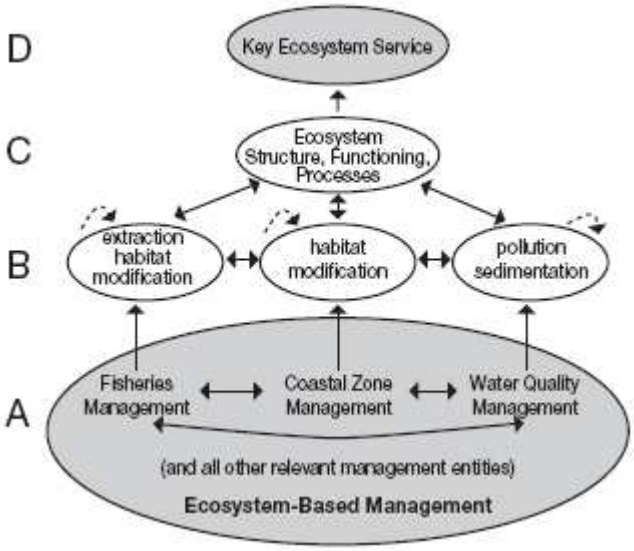
protection. As Rydin (2006) notes, the ambiguity surrounding the concept means it is not very precise and does not provide any detailed guidelines for the management of ecosystems. However, there is widespread agreement that management has to be comprehensive with regard to the relationship between human actions and natural resources, and that relatively large scale approaches need to be applied (ibid.). Increasingly the ecosystem approach is being cited as a fundamental principle of future environmental management. For example, at the World Summit on Sustainable Development held in Johannesburg, South Africa it was agreed that an ecosystem approach to fisheries management should be applied by 2010. Furthermore, the increased attention given to the concept has led to greater clarity over its definition and practical application.

The Convention on Biological Diversity (CBD) adopted the ecosystem approach in 2000 as the fundamental tool for delivery of the Convention's three primary objectives which clearly stress the importance of integrating ecology and governance. The definition of the ecosystem approach adopted by the CBD offers a good starting point for understanding what it entails:

> *'The Ecosystem Approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The application of the Ecosystem Approach will help to reach a balance of the three objectives of the Convention: conservation; sustainable use; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.'*

Many attempts have also been made to develop a framework for the ecosystem approach. One developed by (Rosenberg and Mcleod 2005:271) with the marine environment in mind, is useful for visualising how the ecosystem approach model can work in practice:

Figure 3.1 Key aspects of ecosystem-based management (EAM):



Current management focuses on regulating the impacts of individual sectors on particular ecosystem services, such as the production of food. In contrast, EAM considers the cumulative and interactive impacts of multiple sectors on the stocks and flows of key ecosystem services. Characteristics include: (A) consideration of interactions among policies, without negating the need for individual sector management, (B) examination of interactions among the impacts of individual sectors (arrows between impacts) as well as the cumulative impacts of individual and multiple sectors through time (dotted feedback loops), and (C) monitoring the effects of these cumulative impacts on ecosystem structure, functioning, and key processes, as well as the way in which reciprocal changes to ecosystems modify those impacts. (D) The goal of ecosystem-based management is to maintain the flows of key ecosystem services that result from ecosystem structure, functioning, and processes
Source: Rosenberg and Mcleod (2005:271)

Furthermore, subsequent to the adoption of the approach and development of a definition the CBD has produced useful guidance on the practical implementation of the approach. This consists of twelve principles and five points of operational guidance:

The 12 ecosystem approach principles are:

1. The objectives of management of land, water and living resources are a matter of societal choice.
2. Management should be decentralised to the lowest appropriate level.
3. Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.
4. Need to understand and manage the ecosystem in an economic context.
5. Conservation of ecosystem structure and function to provide ecosystem services should be a priority.
6. Ecosystem must be managed within the limits of their functioning.
7. The approach should be taken at the appropriate spatial and temporal scales.
8. Process and objectives for ecosystem management should be set for the long term.
9. Management must recognise that change is inevitable.
10. Seek the appropriate balance between integration, conservation and use of biodiversity.
11. Decision-making should consider all forms of relevant information (scientific, indigenous and local).
12. Involve all relevant sectors of society and scientific disciplines.

Source: Convention on Biological Diversity:
http://www.cbd.int/programmes/cross-cutting/ecosystem/principles.asp

The 5 points of operational guidance are:

1. Focus on the relationship and processes within the ecosystem.
2. Enhance benefit sharing.
3. Use adaptive management practices.
4. Carry out management actions at the scale appropriate to the issue, with decentralisation to the lowest level appropriate.
5. Ensure intersectoral co-operation

Source: Convention on Biological Diversity:
http://www.cbd.int/ecosystem/operational.shtml

The principles and operational guidance help develop a clearer understanding of how the theoretical concept of the ecosystem approach can be used as a practical model for managing protected areas. However, they should be viewed as a loose guide rather than detailed instructions, as different weights will need to be given to each principle according to the particular circumstances of application (Laffoley et al. 2004). This is demonstrated by '*The Ecosystem Approach: Coherent Actions For Marine and Coastal Environments*' report produced by English Nature which takes these broad ideas and

applies them to the contexts of the coasts and seas around the UK. The report recognises that lack of knowledge and scientific uncertainty is often used as an excuse for delaying implementation of the ecosystem approach within the marine environment; as a result it points to the need for developing adaptive management practices which enable existing data to be used whilst taking account of further information as it becomes available (ibid.). This approach, sometimes described as *'learning while doing'* (Walters 1997), allows initiatives to be managed in a stepwise manner. Management actions are regularly evaluated and adapted accordingly as new information becomes available. Furthermore, the approach is not restricted to the ecological aspects of ecosystem management but it can be equally useful for integrating knowledge across social and economic scales (Walker et al. 2002).

Recent developments in marine conservation policy in the UK have demonstrated that the British Government is beginning to adopt the ecosystem approach to the management of our seas. Their commitment to the approach is outlined in the document Safeguarding Sealife: The Joint UK Response to the Review of Marine Nature Conservation and the draft Marine Bill. While there is still significant debate surrounding the practical implementation of the approach it is clear that future marine conservation policy will have to incorporate both human and ecological needs.

3.7.3 Ecosystem management and the development of partnerships

The ecosystem approach is clearly an important concept in terms of marine conservation policy in the UK. Furthermore, it is easy to see the similarities between the ecosystem approach and the co-management approaches discussed in Chapter 2. Both stress the need for a joined-up, holistic approach to the management of protected areas, in fact in many ways the approaches are mutually exclusive. Without the adoption of co-management processes it is very difficult to see how the ecosystem approach can be implemented. The successful management of resources on the scale of ecosystems poses many *'scale challenges'* and requires numerous organisations and stakeholders to form partnerships. Horizontal linkages have to be developed between communities of stakeholders; the various communities incorporated into the management process need to trust that the others will not over-exploit resources at their expense (bridging social capital). Vertical linkages need to be developed between

stakeholder groups and the various levels of governance, local, national and international (linking social capital). However, ultimately bracing social capital is required to act as a kind of 'social scaffolding' to hold the process together and strengthen links across and between scales and sectors. Consequently the ecosystem approach represents an important mechanism for exploring the effectiveness of marine conservation legislation in England.

3.8 Marine conservation policy in the UK

The wide range of activities which take place within inshore waters is based upon freedom of access to the sea. These activities are governed by their own jurisdiction of a variety of government bodies, which are tasked to control or promote individual uses of the coastal zone. This has made designating MPAs problematic as their purpose is to manage an area of sea itself rather than a particular activity. As a result, they are likely to conflict with these existing rights and powers (Gibson 1988). Therefore, the designation of MPAs was not directly addressed until the 1981 Wildlife and Countryside Act; 32 years after the first terrestrial protected areas were designated. This Act is considered to be the single most important instrument relating to the protection of wildlife in the UK, having created numerous offences relating to the killing and taking of birds, other animals and plants. However, coverage was extremely limited, leading to the establishment of only three statutory Marine Nature Reserves (MNRs) (Jones 1999). The legislation has also been more widely criticised for being too weak (Reid 2002). Furthermore, the Act's system of site identification via Sites of Special Scientific Interest (SSSIs) only applies to the low watermark, below which no property rights or planning provisions exist (Jones1999), and hence enforcement policies necessary for terrestrial conservation cannot be applied.

Until the introduction of the Habitats and Birds Directives in 1992, the vast majority of MPAs in the UK were established on a voluntary basis. These Voluntary Marine Nature Reserves (VMNR) aimed to facilitate cooperation between resource users and conservation measures, and to encourage participatory management. However, they were not backed up with any legal powers. A total of 18 were established on an *ad hoc basis* between 1973 and 1997, a number of which are still in operation today, including Wembury and Looe. The network lacked a systematic approach, and sites were

selected opportunistically with a bias towards rocky reef areas in south-west England (Jones 1999).

3.9 Developing the legislation for the designation of European Marine Sites (EMSs)

Both the EMSs case studies described in this thesis are ultimately governed by the EC Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna 1992 (hereafter the Habitats Directive), which is the first international instrument to address the protection of all habitats, with regard to both geographical location and type (Sands 2003). Therefore, within the context of Agrawal's (2001) synthesis of facilitating conditions the Habitats Directive represents the *'External environment'*, that is, the overarching policy context which provides the conservation biodiversity obligations the sites have to meet. As a result, a thorough understanding of the legislation is vital to the research.

The Habitats Directive can be seen as part of a wider global movement in the early 1990s to strengthen conservation policy. The drafting of the Habitats Directive began several years before the United Nations Conference on Environment and Development (UNCED, Rio de Janeiro 1992). However, it was negotiated in the same time frame as the CBD and can be viewed as a means of implementing the CBD in the EC as well as the Bern Convention[4].

The Habitats Directive signalled a new era in the management of the marine environment in the UK and across Europe. It offered an unparalleled opportunity for the systematic designation of EMSs as part of the Natura 2000 network, and for the first time the British government was required by law to maintain the favourable conservation status of these sites. EMSs consist of a combination of Special Protection Areas (SPAs) which were first introduced under the European Council's Directive on

[4] The Bern Convention is a binding international legal instrument in the field of nature conservation, which covers the whole of the natural heritage of the European continent and extends to some States of Africa. Its aims are to conserve wild flora and fauna and their natural habitats and to promote European co-operation in that field.
(http://www.coe.int/t/e/cultural_cooperation/environment/nature_and_biological_diversity/Nature_protection/)

the Conservation of Wild Birds (1979)[5] and Marine Special Areas of Conservation (MSACs) introduced under the 1992 Habitats Directive. The Habitats Directive is more ambitious in its obligations to conserve Special Areas for Conservation (SACs) and SPAs.

The Directive required that any plans or projects which might have a significant effect on the designated sites should be assessed and these activities should only go ahead '*for imperative reasons of overriding public interest, including those of a social or economic nature'* (Article 6 (4)), subject to appropriate compensatory measures. There is now significant case law within the UK which demonstrates that the Secretary of State is prepared to uphold this legislation even in the face of strong opposition from resource users (see Wash case study below and Roberts and Jones in press).

The Directive became law in the UK in 1994[6] and was amended in 1997 and (in England only) in 2000.[7] The purpose behind the regulations was to implement the aspects of the Habitats and Birds Directive not already included in national legislation. To some extent the regulations can be seen as an attempt to update and improve upon the protection provided by the 1981 Wildlife and Countryside Act. The approach taken to do this is, however, somewhat complicated, as new secondary legislation has been created instead of simply updating the existing legislation. As a result, key laws on species protection are contained in two separate pieces of legislation, one focused at a national level and the other at European level. Although this approach allows for consistency and transparency from the perspective of Brussels, it also provides confusion in that two overlapping sets of rules exist in UK law with regard to species and habitat conservation with similar provisions (Reid, 2002).

[5] However, this Directive was initially weakly worded and poorly enforced.

[6] HMSO (1994) The Conservation (Natural Habitats &c.) Regulations 1994. Statutory Instrument No. 2716. HMSO, London.

[7] Statutory Instrument 1997 No. 3055 and Statutory Instrument 2000 No. 192. The Conservation (Natural Habitat, etc.) Regulations (Northern Ireland) came into force on 13 November 1995 and replicate the provisions in force in the GB Regulations, applying them to the separate legal system existing in Northern Ireland. Directive 92/43/EEC was transposed into the laws of Gibraltar on 25 August 1995 by the Nature Protection Ordinance (Amendment) Regulations 1995 (Defra, September 2001).

There are many difficulties in applying the requirements of the Habitats Directive to the marine environment, both in identifying areas to be protected and determining the means of protection given the influence of external factors, such as land-based pollution, on inshore areas (ibid.). Nevertheless, as a result of the new regulations any authority which has statutory functions that impact on the management of EMS has to exercise these functions in a manner which ensures compliance with the Directive (Regulation 3 (3)). Furthermore, the Department of the Environment, Transport and Regions (DETR) 1998 guidelines make it clear that these powers should be used accordingly, regardless of whether they were originally intended for nature conservation purposes.

The Habitats regulations use the terms relevant authorities (RA) and competent authorities to describe statutory bodies to which the regulations apply (DETR 1998). The distinctions between the two '*types*' of authority are outlined in Regulations 5 and 6[8]. The RAs in relation to EMSs are outlined in Regulation 5:

- Nature Conservation Agencies (NCA)
- Local Authorities
- Environment Agency/ Scottish Environmental Protection Agency
- Sewage, water and drainage undertakers
- Navigation, harbour and lighthouse authorities
- Local Sea Fisheries Committees

Essentially RAs are organisations with powers or functions which could have an impact on the designated features. A central characteristic of EMSs is that no particular authority has responsibility for ensuring compliance with the Directive, relying instead on compliance by the various relevant sectoral authorities with no one authority having a lead role or power over others. This is markedly different to terrestrial SACs where the Secretary of State and the NCA have various cross-sectoral powers to ensure compliance with the Directive. However, the regulations require one or more of the

[8] The term competent authorities includes any statutory body or public office exercising legislative powers – whether on land or sea. The term relevant authorities is intended to identify certain competent authorities with local powers or functions which have, or could have an impact on the marine area within or adjacent to a European marine site. Relevant authorities also have the powers to establish a management scheme for a European marine site. (All relevant authorities are also competent authorities.)

RAs to set up a management scheme for each EMS to ensure compliance with the Directive (Regulation 34 (2)). Despite the differing responsibilities undertaken by NCA in marine and terrestrial SACs in the majority of cases the responsibility for setting up the management scheme will fall to the relevant NCA.

The government also requires that the management scheme process should be overseen by a management group comprised of RAs. It is this group's responsibility to engage with local interest groups, user groups, industry etc.[9] The regulations also state that the Secretary of State can step in and give direction to the RAs as to the management of a EMS which may:-

a) Require specific conservation measures to be included in the scheme;
b) Appoint one of the RAs to coordinate the establishment of the scheme;
c) Set time limits within which steps must be taken;
d) Provide that the approval of the Secretary of State is required for the scheme;
e) Require a relevant authority to supply specific information to the Secretary of State.

It also provides for the Secretary of State to require specific or general amendments to the scheme (Regulation 35). Regulation 36 provides the relevant nature conservation agency[10] with powers to create bylaws to protect EMSs. However, these are restricted to those under Section 37 of the Wildlife and Countryside Act 1981[11].

3.9.1 The role of the nature conservation agency

The role of NCA in the management of EMSs is evidently not as clear cut as it is for terrestrial SACs. However, the regulations (regulation 33 (2)) essentially provide two advisory roles for NCAs but fall short of giving them overall executive control. As

[9] Department of the Environment, Transport and the Regions, European Marine Sites in England and Wales: a Guide to the Conservation (Natural Habitats, etc) Regulations 1994 and the Preparation and Application of Management schemes, DETR Publications Sales Centre, Rotherham, 1998, para. 4.19.
[10] In England the RA is Natural England, in Wales the RA is The Countryside Council for Wales, and in Scotland the RA is Scottish Natural Heritage.
[11] Bylaws created under Section 37 Wildlife and Countryside Act 1981 may not interfere with the functions of the relevant authorities.

Jones and Burgess (2001) state, one of these roles is primarily operational and the other strategic. At an operational level, the NCA has to advise its partner RAs of the conservation objectives of the site and the type of activities which are likely to cause deterioration or disturbance to conservation features. At a strategic level, the NCA has to formally approve the EMS schemes put forward and, if it does not think the scheme will achieve the maintenance of favourable conservation status, it can request that steps are taken to rectify the proposals. Although the NCA does not have any formal powers to enforce changes to the scheme it can advise the Environment Minister to exercise his powers under the 1994 Regulations, forcing the RA to make improvements. If this fails, the European Court of Justice can step in and require the UK government to take action to ensure the maintenance of favourable conservation status of the site. In short, despite the lack of formal powers the NCAs can still take a very top down approach to the management of EMSs.

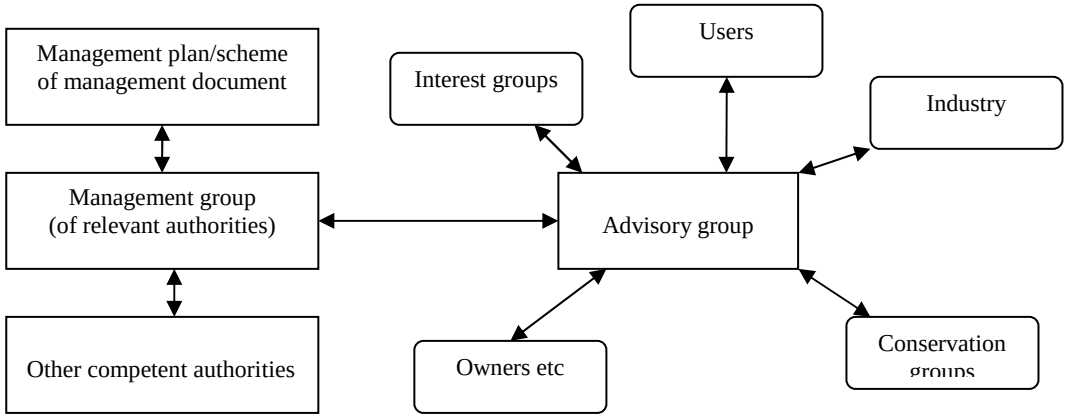
3.9.2 Setting up management schemes and building bracing social capital

The first stage in setting up a EMS management scheme is for the RAs to establish a management group. In many cases there will be existing structure which can be adapted to fulfil this role. For example, The Wash EMS management group evolved out of The Wash forum originally established in 1996. Once the management group has been established its primary role is to co-ordinate the consultation with all the other interested parties. The DETR guidelines specify that '*it is essential that owners and occupiers, right holders, local interests, user groups and conservation groups should be encouraged to participate in the process of developing the scheme at the earliest opportunity*' (DETR 1998:16). Furthermore, full public consultation should be undertaken on any proposals for managing the site and wide publicity should be given at appropriate stages (ibid.). It is stressed in the DETR guidelines that this should be achieved through the development of a partnership approach. Therefore, a central task of the management group can be interpreted to be the development of bracing social capital which is capable of tackling CAPs when they arise. A key challenge in developing bracing social capital is to ensure that the institutional structures employed are balanced, in that they provide for power to be appropriately shared amongst the RAs and stakeholders, and are appropriate for the local contextual factors that

characterise each EMS (Jones and Burgess 2005). Once again, the concept of bracing social capital is useful for understanding this process.

Since the designation of the first EMSs in the UK a number of different management structures and approaches to establishing partnerships have been adopted. The policy guidelines (DETR 1998) recommend that a two-tier management structure is adopted:

Figure 3.2 DETR recommended European Marine Site management structure:



Some of the EMSs have followed these guidelines and adopted such management structures, while others have decided to develop different models, particularly where existing structures were already in place. Jones and Burgess (2005) have conducted preliminary analysis into the types of management structures adopted by EMSs to build partnership capacity/bracing social capital, and the effectiveness of the structures. Their sample consisted of 15 EMSs in England, Wales and Scotland. They discovered that within the sample the management structures could be divided into three categories: t*wo-tier management schemes* (as recommended by the policy guidelines); *federated management structures*- whereby hierarchies of structure were established to cover different territories (these were popular amongst the bigger EMSs covering a large geographical area); and *flat management structures* – whereby the RAs and stakeholders share power in a single-tier group.

3.10 The Marine Bill

It is clear that legislation to protect the marine environment in the UK and Europe has moved on considerably since the introduction of the 1981 Wildlife and Countryside Act. However, the marine environment around the UK remains significantly less well protected than the terrestrial environment. In August 1999 the UK Government and the devolved administrations pledged to accompany the strengthening of protection for terrestrial wildlife sites with an examination of how effectively the system for protecting nature conservation in the marine environment was working (DEFRA 2004). The report contained 16 key recommendations, including that the government should consider the legislation required to underpin the delivery of an effective network of MPAs.

There is currently much speculation and a degree of excitement about the potential content of the Marine Bill. However, there are still many challenges which need to be overcome. The main point of contention regarding nature conservation objectives is in regard to planning legislation. On the one hand, conservationists are calling for stricter marine nature conservation procedures; on the other, developers are calling for more streamlined consent procedures which offer more certainty. However, as Jones (2006) points out, hardly any interest groups favour the retention of the status quo because this benefits neither developers nor conservationists. It is unlikely that the government will be able to reach a consensus on all the issues. At present there is much uncertainty and debate as to whether the compromise will incline towards economic development or marine conservation. Both sides are lobbying hard to influence the Bill (ibid.).

The Marine Bill consultation document (DEFRA 2006) does not specifically mention EMSs, and the general assumption is that they will continue to operate as before. Nevertheless, the Bill should provide a proper framework for the management of EMSs and a more coordinated approach to marine conservation which will be beneficial.

As stated above, marine conservation legislation in the UK is currently focused at a European level, that is through the introduction of Natura 2000 sites. It is unclear from the consultation document whether the proposed network of MPAs is simply going to be incorporated within the current network of European sites or whether a new

nationally complementary network of MPAs is to be developed. A number of conservation groups are currently pressing the government to use the Marine Bill as a catalyst to introduce a network of Highly Protected Marine Reserves (HPMRs), containing No Take Zones (NTZ) and greater protection than the European sites. The World Wildlife Fund (WWF) and The Wildlife and Countryside Link, Born Free and the Marine Conservation Society (MCS) are just some of the organisations that have produced their own versions of the draft Marine Bill calling for such a network to be established. Furthermore, the MCS is currently running a high profile petition calling for HPMRs[12]. Quite how this debate will play out is unclear at present; one possibility is that HPMRs will be incorporated into EMSs. However, such a move would be unpopular with the fishing industry and other extractive industries as under the current system regulated activities are not banned within EMSs.

It is clear that the Marine Bill could potentially mark a dramatic change in the way the marine environment is protected around the UK. However, at present the European Habitats Directive remains the most powerful conservation tool. Although this thesis acknowledges the potential of the Marine Bill, the focus will remain on the way the Habitats Directive is currently being implemented in relation to the marine environment. Nevertheless, the findings of the research may be relevant to the future implementation of the Marine Bill and HPMRs.

3.11 Summary of previous work evaluating European Marine Site management structures

The central aim of the present research is to examine the strengths and weaknesses of different approaches to addressing collective action problems through local partnerships in order to achieve strategic objectives. As discussed above, key to the success of the partnerships is their ability to develop partnership capacity and use bracing social capital to hold the process together. This project will explore these issues by examining two case studies in detail (see below).

[12] http://www.marinereservesnow.org.uk/

Jones and Burgess's (2001; 2005) work acts as an important starting point for the present research and offers an insight into many of the management challenges faced by EMSs. They look at the general principles behind a larger representative sample of EMSs and analyse the different partnership models in terms of their potential ability to overcome CAPs, how they addressed CAPs in their early stages of development, and what future CAPs they are likely to have to address.

One of the key debates which has emerged from the research (and is introduced Ch 1 of this thesis) is whether management structures should be controlled by government (top down) or by local people (bottom up). Jones and Burgess (2005) found support for Ostrom's (1990) argument that a partnership is better equipped to overcome CAPs when the state shifts its role from '*controller*' to '*facilitator*', allowing considerable local autonomy whilst providing a supportive framework. However, as the legislation requires NCA to ensure that specific biodiversity conservation obligations are met by the partnerships they have to retain a hands on approach to the management of the site. Nevertheless, it remains important that stakeholders are intimately involved with the management of the site and consulted on the management scheme. The evidence from Jones and Burgess's research showed that in the four cases where a flat management structure had been adopted these principles seem to have been fulfilled, while in the majority of cases with two-tier structures they had not. However, as this research shows, five years after Jones and Burgess conducted their preliminary analysis of these case studies it appears that two of the sites adopting a two-tier management process have moved on and stakeholders appear happy with the procedures in place for consultation on issues related to the EMSs (see Chs. 5 and 6).

Jones and Burgess also examined Rydin and Pennington's (2000) argument that in cases where CAPs are severe, it is often necessary to adopt a more top down approach. There was evidence of this occurring when two-tier and federated two-tier management structures had been adopted. A particularly bitter conflict arose early on in the life of the Solent/South White EMS partnership which required strong government intervention and caused significant dissatisfaction amongst local stakeholders. However, evidence from the present study demonstrates that providing these conflicts are handled in a sensitive way and bracing social capital has been developed over time,

it is possible for partnerships to recover from these top down interventions and continue to successfully manage the EMSs (see The Wash and North Norfolk Coast Case study, Chapter 6). Jones and Burgess (2005) also demonstrated that in a number of the two-tier management structures, the potential for undermining stakeholder participation was minimised by ensuring that the stakeholder groups were allocated specific, tangible tasks. This was confirmed by the present study and is consistent with Young's (2002) argument that a key to the success of integrating decision making across different institutional levels is *'allocating specific tasks at the appropriate level of social organisation and then taking steps to ensure that cross-scale interactions produce complementary rather than conflicting actions'*.

3.12 Developing specific research questions from the literature review

Through the literature review (Chapters 2 and 3) a number of issues central to the thesis have been introduced and unpacked in relation to the aims and objectives of the study outlined in the introduction. This has led to the development of a more specific list of research questions which will be explored in the following chapters in relation to the specific case studies:

- What is the nature of the relationship between stakeholders and the EMSs and does it affect the management of the site?
- What form should the relationship between the state and local stakeholders take in order to balance provision for stakeholder participation with fulfilment of statutory obligations?
- Is the concept of a statutory partnership a useful tool for the management of MPAs or an unworkable contradiction in terms?
- What are the implications of the ecosystem approach for MPA management?
- Is it possible to define a proportionate application of the precautionary principle or does this only lead to further questions regarding when it should be used?
- What role does social capital play in the development of partnerships for the management of MPAs?

3.13 Concluding comments

This chapter has demonstrated that the protection of marine ecosystems is a long way behind the protection of the terrestrial environment. It is clear the marine environment presents many additional challenges which need to be overcome in the development of a sustainable network of protected areas. The high level of connectivity, scale and our lack of understanding mean that it is essential to take a holistic and precautionary approach to the designation of MPAs. In addition, marine conservation is further hindered by cultural factors associated with the general public's lack of appreciation of the biodiversity present in our seas.

At present the European Habitats Directive represents the most powerful legislation for the protection of the marine environment and provides a framework for its management through partnerships between government, local organisations and stakeholders. Nevertheless, implementing such a management programme requires a high level of commitment from both government and stakeholders and carefully thought out institutional arrangements. The work of Jones and Burgess (2001; 2005) provides an insight into the practical implementation of this legislation in the marine context. However, to fully understand how these complex institutional arrangements work in practice, and equally importantly the stakeholders' perceptions of them, further in-depth case study research is required.

Chapter 4 begins this process by introducing the two case studies which have been selected to further explore the challenges associated with setting up and managing EMSs: The Wash and North Norfolk Coast and North East Kent. Both EMS have had to overcome a number of significant challenges in the implementation and management of the sites. They offer an insight into the challenges and benefits associated with using a partnership approach for managing the marine environment.

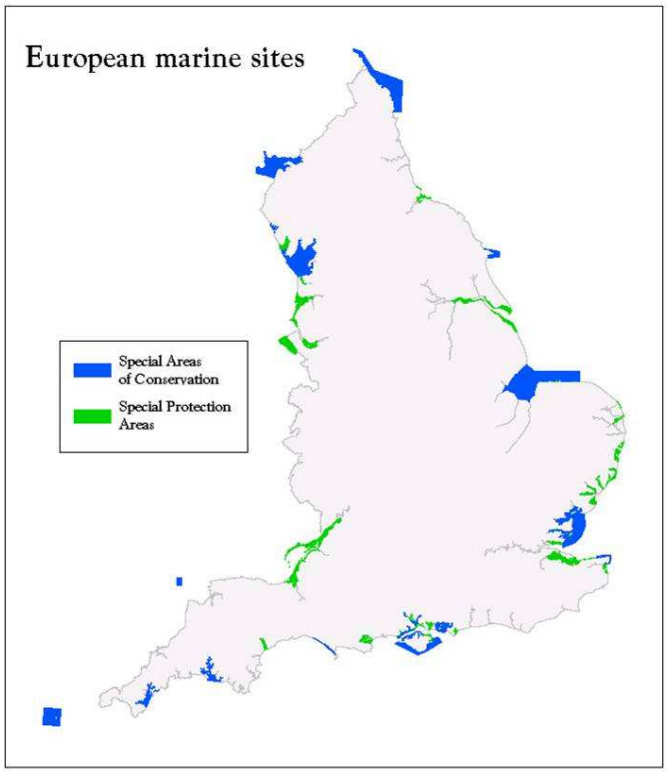
4

Introducing the case Studies

Introduction

The Habitats Directive has led to the designation of an extensive network of EMSs across Europe, and provided significant protection to a range of marine habitats. In England there are currently forty two EMSs made up of a combination of SACs and SPAs:

Map 4.1: Marine Special Areas of Conservation and Special Protected Areas in England which make up the network of European Marine Sites:



Source: JNCC (2004)

The aim of this thesis is to study the institutional arrangements used to develop partnership capacity and manage EMSs and the perspective of the stakeholders on these arrangements. This research has been carried out through the in-depth evaluation of two case studies utilising a range of qualitative methods (see Chapter 5). Early on in the research important decisions had to be made regarding the selection of suitable case studies. From the outset it was agreed that the case studies would be drawn from the 15 sites originally studied by Jones et al. 2001 (Table 4.1), as this would allow for an element of longitudinal analysis. Immediately eight of these sites were discounted as they were, at least in part, situated outside the jurisdiction of Natural England. This leaves a possibility of seven (shaded in grey below in Table 4.1).

The purpose of this chapter is twofold. First, it will explain and justify the selection of the two case studies, The Wash and North Norfolk Coast EMS and The North East Kent EMS. Second, it provides an introduction to the context surrounding the two sites. This information is classified under the headings that Agrawal (2001) used to produce his list of facilitating conditions: Resource system characteristics i.e. geographical and ecological make up of the area; group characteristics i.e. historical, ecological, social and economic contexts and institutional arrangements in place to manage the sites. The forth set of conditions, the external environment, essentially refers to the legal and policy framework within which the EMSs have been designated and this has already been outlined in Chapter 3.

Table 4.1 Attributes of MSAC case studies studied by Jones and Burgess:

Site and NCA	Area (ha) and type	Main economic activity	Previously integrated management initiative	No. RAs	Approx. population around site
Papa Stour (SNH)	2900 island	Tourism, fishing, small-scale agriculture, crafts	None	6	150
Loch Maddy (SNH)	1850 bay	Mariculture, fishing, tourism, small-scale agriculture	None	8	200
Sound of Arisaig (SNH)	5300 coast	Tourism, mariculture, fishing, small-scale agriculture	None	7	1000
Solway Firth (SNH/NE)	12,978 estuary	Industry, agriculture, forestry, ports, tourism, fishing, recreation	Solway Firth Partnership-established 1994	16	100,000
Berwickshire and N Northumberland Coast (SNH/NE)	64780 coast	Fishing, agriculture, tourism, recreation	None	27	35,000
Chesil and Fleet (NE)	694 lagoon	Agriculture, commercial port at its eastern end, tourism, recreation	Fleet Management Group-1990	10	10,000
The Wash and N Norfolk Coast (NE)	41,620 estuary	Tourism, agriculture, ports, fishing, recreation	Wash Estuary Management Group 1994	15	110,000
Thanet Coast (NE)	2269 coast	Port, tourism, fishing, recreation,	None	10	120,000
Morecombe Bay (NE)	17,766 bay	Industry, commercial ports, fishing, agriculture, tourism, recreation	Morecombe Bay Partnership 1992	13	200,000
Plymouth Sound and Estuaries (NE)	3752 estuary	Commercial port, MOD, fishing, recreation, tourism	Tamar Estuaries Consultative Forum and Port of Plymouth Liaison Committee	14	400,000
Essex Estuaries (NE)	26,526 estuaries	Agriculture, tourism, fishing, recreation	Part: Blackwater Estuary Management Partnership-1992	16	500,000
Solent/South Wight Maritime (NE)	22,615 coast	Commercial port, MOD, recreation, tourism,	Solent Forum-1992	40	1,140,000
Cardigan Bay (CCW)	96,871 coast	Tourism, agriculture, fishing	Ceredigion Marine Heritage Coast-1995	9	10,000
Llyn Peninsular and Sarnau (CCW)	96,980 coast	Tourism, agriculture, fishing	None	10	60,000
Strangford Lough (EHS)	15,399 bay	Tourism, recreation, agriculture, fishing	Strangford Lough Management Committee-1992	4	60,000

SNH, Scottish Natural Heritage; NE, Natural England; CCW, Countryside Council for Wales; EHS, Environment and Heritage Service, Dept of the Environment for Northern Ireland

4.1 Criteria for case study selection

Before the process of identifying the case studies could begin it was first necessary to clarify the focus of the study. The central aim of this thesis is to make a significant contribution to the growing body of research on partnership/co-management approaches to managing MPAs and to provide an analysis of both successful initiatives and problems encountered. It is therefore essential that the case studies provided the scope to study these key challenges as well as a variety of techniques for addressing them.

As acknowledged by Jones and Burgess (2005), the vast majority of studies of co-management of protected areas have largely focused on terrestrial environments. Nevertheless, the literature review identifies a number of challenges (CAPs) relating to the setting up and managing MPAs which provided a useful starting point. Ultimately these are largely derived from the unsustainable relationship which humans have developed with the marine environment and the difficulties associated with understanding marine ecosystems (see Chapter 3). The literature review also analyses a variety of possible management approaches to mitigate against the identified CAPs. These can be classified under three headings: top down; bottom up; and co-management. However, the purely top down and bottom up approaches were dismissed as both ineffective and impractical methods of managing MPAs, especially where statutory biodiversity conservation objectives have to be met. Therefore, it is the analysis of co-management approaches which forms the focus of this study.

However, as indicated in the literature review, the process of setting up co-management schemes is far from straightforward, requiring policy makers and practitioners to combine seemingly contradictory ideas, for example, public consultation initiatives and rigorous enforcement of rules. Consequently the co-management approaches to MPA management themselves generate further potential CAPs. In an article based on the research which preceded the present study Jones and Burgess (2005) identify a number of potential CAPs which the EMSs may face in the future (both related to the physical environment and the co-management approach). By arranging these CAPs in accordance with Agrawal's (2001) framework it is possible to understand the relationship between the CAPs posed by the physical environment and those related to

co-management. Furthermore, by classifying the CAPs in this way it is possible to explicitly observe the relationship between Agrawal's framework and the present research:

- Resource system characteristics
    - Ecosystem boundaries
    - High level of connectivity within the marine environment
- Group characteristics (i.e. human/community factors),
    - Social Capital
    - Extent and nature of extraction activities
    - Other non extractive activities, i.e. tourism
- Institutional arrangements
    - Partnerships
    - Building partnership capacity
    - Top down Vs. bottom up management
    - The role of the nature conservation agency/state
    - Ecosystem approach
    - Potential legal interventions
    - Interpretation of scientific data
- External environment
    - Statutory biodiversity obligations
    - Protecting resources from free riding by non local actors

Having identified key characteristics and potential CAPs for study from the literature it was essential to find case studies that incorporated these features. Furthermore, as it is hoped that the findings of this research will provide useful conclusions which can be applied to a range of contexts it was necessary to ensure that the selected case studies contained both a range of difficulties and examples of good practice.

On this basis two case studies have been selected, The Wash and North Norfolk Coast EMS and NE Kent EMS. The following sections provide a detailed justification for the case study selection based on the criteria outlined above.

4.2 Why study The Wash and North Norfolk Coast European Marine Site?

One of the key concerns Jones and Burgess (2005:239) raise regarding the EMS management arrangements is that the NCA may end up in a controlling rather than a facilitating role, as their '*interventions shift from facilitating initial discussions and establishing the conservation objectives to the actual implementation of management programmes to ensure those objectives are actually met'*. They went on to argue that ultimately this could lead to a legal intervention if they fall-back '*on their powers to advise the Secretary of State to utilise the statutory step in powers to require that specific conservation measures be adopted'*(ibid.).

Soon after the beginning of the project, it became clear that such an intervention was likely to take place on The Wash. The previous year a group of mussel farmers had applied to the NCA for permission to scare eider ducks of their lays using sonic bird scaring devices. They argued that eider numbers had increased dramatically since 2003 and were decimating the mussel lays, rendering mussel farming on The Wash unsustainable. However, the NCA refused their request on the grounds that The Wash is an important foraging area for large numbers of birds and the use of bird scarers was likely to disturb them, to the detriment of the ecological integrity of the site and in contravention of the 1992 Habitats Directive. In June 2006 a PI was convened in Boston, Lincolnshire to resolve the disagreement. The PI recommended that all the appeals be dismissed and the judgement was upheld by the Secretary of State.

This provided an unprecedented opportunity to study a legal intervention by the NCA and as it occurred at the beginning of the research it was possible to study the case from the beginning of the PI right through to the impact of the verdict eighteen months later. Furthermore, the PI provided a useful frame through which to study some of the other areas of interest identified in the literature review. For example, the case had a significant impact upon levels of social capital, it was possible to identify different types of social capital at work (i.e. bonded, linking, bridging and bracing) and study the changing relationships between interest groups and individuals.

Aside from the PI, The Wash and North Norfolk coast EMS represents a valid case study for a number of other reasons. Geographically it is the largest EMS in the

country and consists of two distinct areas, The Wash and the North Norfolk Coast. Although both areas are managed as one site they pose different ecological challenges and are inhabited by separate communities who appear to have somewhat conflicting attitudes towards the use and management of the site. Furthermore, the site incorporates six local/borough councils and two county councils, in addition to the EMS partnership parts of the site are also managed by The Wash Estuary Strategy group partnership and the Norfolk Coast Area of Outstanding Natural Beauty partnership. The combination of three partnerships and the large number of local authority interests provides potential for the management of the site to become fragmented. As with the PI the multi-partnership management structure in place on The Wash offers an interesting framework from which to analyse the dynamics between a wide variety of individuals, government organisations, NGOs and resource user groups.

The inception of the EMS management scheme for the site also represented an interesting shift in the institutional arrangements for the management of the area. Between 1996 and 2000 The Wash Forum had successfully co-ordinated the management of the area on a voluntary basis, without statutory objectives or responsibilities. Two key studies, Gardner (2005) and Jones et al. (2001), concluded that although there were a number of strong opinions and conflicts between individual personalities, overall the voluntary forum was effective in delivering a sustainable management scheme on The Wash. In 2000 The Wash Forum was taken over by the EMS management group and formed the basis for the new statutory partnership. This links in to another of the concerns raised by Jones and Burgess (2005), that new forms of co-management of EMSs may be undermined if the state does not recognise or fails to legitimise traditional rules or customs which may have previously assisted the conservation of the site.

It is clear that The Wash and North Norfolk EMS provides an interesting and valid case study to explore the issues raised in the literature review. The site offers an unprecedented opportunity to look at the consequences of a top down intervention in a management scheme which is supposed to be driven by the community and to explore important issues related to CPR governance. Where does the balance lie between ensuring that biodiversity conservation objectives are achieved and involving local people with management? Can co-management approaches to CPR management work

when they are underpinned by the threat of legal intervention? Furthermore, these important issues can also be examined by studying the changes in governance that have occurred from the historical voluntary partnership and the current statutory scheme.

In addition, the complex institutional arrangements and the geographical size of the site allow the research to explore a wide range of relationships between a variety of stakeholders. This highlights the importance of considering both ecological concerns and governance issues simultaneously. On the one hand, managing the area as two separate sites may be more straightforward from a governance perspective; on the other hand, such a move may undermine attempts to manage the wider ecosystem.

4.3 Why study North East Kent European Marine Site?

For the partnership approach to governance to be successful it is essential that adequate partnership capacity and bracing social capital can be developed within the community amongst local stakeholders and RAs. This is particularly important when the NCA role is to facilitate the management process rather than implement it itself. As Jones and Burgess (2005) recognise, building partnership capacity is a key challenge and potential CAP in the development of the EMS management schemes. This is an important issue which has to be dealt with by all EMSs; however, it is of particular concern to sites such as NE Kent where, unlike The Wash and North Norfolk Coast EMS, there were no pre-existing institutions to form the basis of the partnership. Furthermore, the NE Kent EMS employed an innovative method of stakeholder dialogue which has been highlighted as an example of good practice across Europe. The concept of social capital is closely related to the need to build partnership capacity and within the NE Kent EMS the two processes appear to have developed simultaneously. A number of key actors within the EMS commented that the development of a high level of social capital amongst the stakeholders has significantly aided the building of partnership capacity. Therefore the stakeholder dialogue process provided a useful framework within which to study the role of social capital and the process of developing partnership capacity.

The timing of the research also meant that it was possible to see the process in action, as the EMS management group was in the final stages of reviewing the management

scheme. After the *'success'* of the original stakeholder dialogue process they decided to use the same technique for the review. Although the initial stakeholder dialogue events occurred before the inception of the current project, it was possible to evaluate the process by canvassing the opinions of numerous stakeholders involved in the process.

In addition, the management group had decided to adopt the ecosystem approach for the review of the management scheme in an attempt to develop a more holistic approach to the management of the site. The proposal was to try and offer a degree of protection to the wider ecosystem, beyond simply protecting the designated conservation features. Although not a requirement of the Habitats Directive, the literature review revealed that the ecosystem approach to resource management is rapidly becoming the norm. NE Kent EMS was the first EMS in the UK to explicitly adopt this approach. However, due to its increasing popularity, it is likely other EMSs will follow their example. The review process clearly highlighted a number of the issues surrounding the ecosystem approach, not least the confusion surrounding its meaning. Other interesting issues raised in both the literature and played out within the review process included the challenges of setting ecosystem boundaries within the marine environment. As a result NE Kent EMS provides a useful case study to look at the implications of adopting the ecosystem approach to manage MPAs.

The designation of NE Kent as an EMS and the first management scheme resulted in the creation of the Thanet Coast Project. The Project was set up in 2001 as a result of the first stakeholder dialogue process to drive forward the priorities which people had identified.

The project aims to:

- raise awareness of the area's important marine and bird life
- work with people to safeguard coastal wildlife
- be a one-stop shop for coastal information
- promote wildlife events or activities.[1]

[1] http://www.thanetcoast.org.uk/thanet_coast_project.aspx

The project is recognised both nationally and internationally as an example of good practice for raising awareness about the marine environment and developing social capital within the local community. A number of other EMSs within England (including The Wash and North Norfolk Coast) have been looking at the model developed in NE Kent with the intention of trying to develop similar projects in their areas. The Thanet Coast Project is an interesting example of an institution which has been developed from the bottom up to aid the process of partnership capacity building. Furthermore, the reported success of the project is inviting from a research perspective as it is possible to probe both the projects successes and the challenges it has come up against.

The North East Kent European Marine site case study has a great deal to offer from the perspective of CPR research. It presents an exciting opportunity for a thorough assessment of the challenges associated with the development of institutions for co-management and in particular the role played by social capital. In addition, as the first EMS in the country to explicitly adopt the ecosystem approach it enables the research to explore the practicalities of implementing this increasingly popular approach for CPR management within the marine environment under the constrains of specific statutory guidelines.

4.4 Complementing and contrasting case studies

Below, contextual information about the two sites is presented which focuses on the social, economic, geographical, historical and ecological background which led up to the designation of the sites as EMSs. As this demonstrates, although the objectives of the two sites are similar, the management schemes have to deal with very different issues and challenges. Furthermore, the processes employed to develop the management schemes were significantly different. The participatory process that produced the management scheme for The Wash and North Norfolk Coast followed the template suggested by the DETR. Importantly this describes a process without facilitators and based on advisory groups feeding information into a management group of relevant authorities. This is in strict contrast to the stakeholder dialogue approach adopted in NE Kent, which despite its variation in practice, always employs facilitators and strives to establish a flat decision-making structure that allows all stakeholders to

share in deliberations (Gardner 2005). By looking at two contrasting sites it was possible to include a wider range of potential CAPs and other challenges facing EMSs and CPRs more generally.

4.4.1 Previous research and scope for longitudinal analysis

Finally, by focusing on these two sites it was possible to introduce an element of longitudinal analysis to the research and to track the development of the management schemes since they were first launched. This approach offers significant benefits as it allows the researcher to investigate the context and background to the status quo. In addition to the provisional research conducted by Jones and Burgess, a previous PhD student, Sam Gardner, has also conducted research on these two sites. Although the focus of Gardner's work was primarily concerned with the decision-making process known as stakeholder dialogue, his research was conducted through the same case studies and there is a significant overlap between the two projects. Gardner's research was conducted between 2000 and 2004 during the early years of both EMSs. As this thesis will demonstrate, the sites have moved on considerably since those early days. However, an understanding of the historical process which led to the present situation has provided significant contexts to the contemporary analysis. Furthermore, it has allowed me to follow up on a number of early challenges and to look at how they have been subsequently dealt with and resolved.

4.5 Background to The Wash and North Norfolk Coast European Marine Site

4.5.1 Resource system characteristics - geographical and ecological context

The Wash and North Norfolk EMS covers a vast area of coastline running from Lincolnshire down to Norfolk, a total of over 100 miles and covering an area of 107761 ha. It is possible to identify two distinct regions within this area. Dominating the western range of the site is The Wash; this stretches from Gibraltar Point in Lincolnshire to Heacham in Norfolk. The Wash is the largest marine embayment in Britain, with the second largest expanse of intertidal sediment flats in the country covering 29,770 ha (Mortimer 2002a). Moving East from The Wash the site embodies

the sandy barrier beach system of the north Norfolk coast from Heacham to Weybourne. Both areas of coastline are recognised for their high conservation value, with approximately 80% of the coastline falling under existing conservation designations. The EMS is made up of one SAC and three SPA. However, the site is also covered by a number of other designations, an Area of Outstanding Natural Beauty (AONB), six National Nature Reserves, and a Ramsar site. During the latter half of the 1990s The Wash supported over 300,000 shorebirds, including 11 populations of international importance (Musgrove et al. 2001).

The Wash and North Norfolk Coast SAC has been proposed for the following Annex 1 habitats[2] and Annex II species as listed in the EU Habitats Directive (Mortimer 2002b):

1. The large shallow inlet and bay defined by The Wash
2. Sandbanks which are largely covered by seawater all the time
3. Mudflats and sandflats not covered by seawater at low tide
4. Samphire (*Salicornia* spp.) communities
5. Atlantic saltmeadows
6. Mediterranean and thermo-Atlantic halophilous scrubs
7. Biogenic reefs
8. Lagoons
9. Seals
10. Otters

The North Norfolk Coast Special Protection Area has been classified under the EU Birds Directive for the following interests:

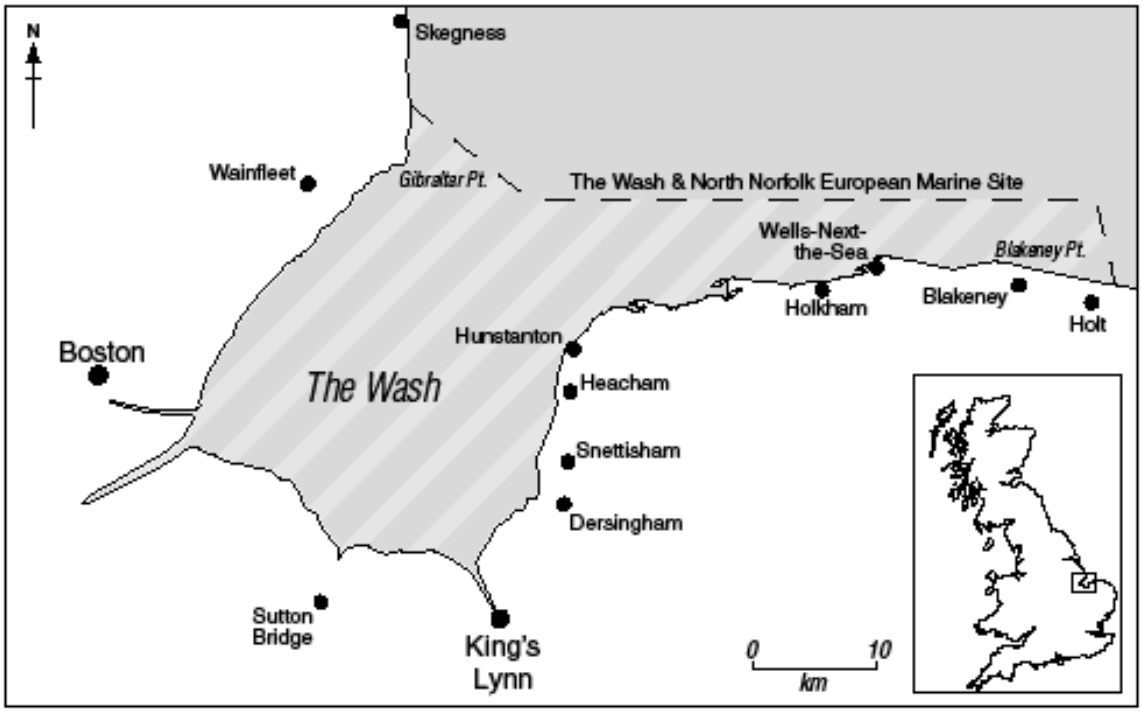
1. Internationally important populations of marsh harrier Circus aeruginosus, Montagu's harrier C.pygargus, avocet Recurvirostra avosetta, sandwich tern Sterna sandvicensis common tern S.hirundo, and little tern S.albifrons;
2. Internationally important assemblages of non-breeding waterfowl including migratory species.

[2] Annex 1 habitats are listed in the Habitats Directive and are natural habitats of community interest. Article 1 of the Directive defines the criteria used to select these habitat types.

The Gibraltar Point Special Protection Area has been classified under the EU Birds Directive for the following interests:

1. Internationally important populations of little tern S.albifrons;
2. Internationally important assemblages of regularly occurring migratory species.

Map 4.2 The Wash & North Norfolk European Marine Site situated on the East Coast of England:



4.5.2 Group characteristics - social and economic contexts

The geographical divide between The Wash and the North Norfolk coast is reflected in terms of socio-economic features. As Map 4.2 shows, the North Norfolk coast is characterised by many small coastal towns and villages. Their immediacy to the coast plays an important role in defining their character and economy. There is a very strong tourist industry with large numbers of summer visitors and bird watchers in the winter. The Wash area does not have the same tourist appeal (Skegness is an exception) and its economy is defined by agriculture, the ports of Boston, Fosdyke, Sutton Bridge, Wisbeach and King's Lynn, and fishing. Historically, few settlements have been

developed close to the seashore, largely because of the significant areas of land claimed from the sea (Mortimer 2002b).

Traditional activities, including those based on common rights, such as samphire gathering, bait digging, wildfowling and shellfish farming/gathering, are widely recognised by the NCA and the other RAs as a particularly important aspect of the local culture and economy in The Wash (ibid.). Following the Commons Registration Act in 1965, some 200 villagers were given Rights of Common for an area of over 6000 acres along the North Norfolk coast. This entitled them to graze cattle, sheep, horses and geese and to gather flora and fauna from the extensive salt marshes. In 1984 the Scolt Head and District Common Rights Holders' Association was established in response to growing tourism and what they referred to as the '*burgeoning interest of institutional authority*' (www.northcoastal.freeserve.co.uk). Since its formation, the Association has actively campaigned and defended the activities of common rights holders and in doing so has become an established and respected authority. However, recently these traditional activities have been declining and although the increase in tourism has helped soften the impact of the changes the majority of jobs in the tourism sector are low paid and low status. Furthermore, data from the Learning and Skills Council suggests that there is generally a relatively low and narrow skills base amongst the potential working population in the area, which restricts opportunities for new economic activities and employment (Norfolk Coast Partnership 2004).

The Wash (and to a lesser extent the North Norfolk Coast) has supported important shellfisheries for cockles and mussels for hundreds of years. Two types of mussel fishery are supported: the harvesting of mussels from wild beds and the cultivation of mussels through transplanting stocks onto 'lays' on the lower shore. The cultivation of mussels in this way has been carried out since the early 1900s (Dare et al. 2004). Since the late 1980s, fisheries for cockles and mussels on The Wash have declined sharply. These fisheries have always been subject to large and unpredictable natural fluctuations, but since the mid-1980s mussel spatfall on to inter-tidal beds has been negligible (Dare et al. 2004). It is only recently that the natural mussel beds have started to show signs of recovery.

There have also been significant changes in the methods used to exploit the shellfisheries. Prior to 1970 the fishery mainly relied on traditional methods, with much collection being carried out by hand. However, since the 1970s new equipment has been introduced, along with other mechanised and highly efficient fishing practices. Over the same period, there were also significant changes in the nature of mussel cultivation. According to English Nature's 'statement of case' at a recent Public Inquiry, following the collapse of the natural fishery in the mid 1990s, the number of lays and their stocking rates increased markedly from 1997 onwards in response to the lack of mussels on the natural lays. Since 1999 'seed' mussel has been gathered from outside The Wash and re-laid for cultivation. There has also been a considerable increase in landings from the lays, the first sale value of which has been between £0.2 and £1.6 million per year since 2001 (Dare et al. 2004).

The social make up of the area as a whole, and the North Norfolk coast in particular, has changed as a consequence of the increase in second home ownership. This has led to a dramatic increase in the cost of housing and resulted in local people employed in traditional industries struggling to find affordable accommodation. The problem has been further compounded by the sale of council houses under the Right to Buy scheme. Furthermore, the delicate nature of the area and the numerous nature conservation designations means the building of substantial new housing stock is not possible as it would have a significant impact on the character of the site (Norfolk Coast Partnership 2004).

Traditionally, there has been a strong local involvement with the coastline, which has helped to create a high sense of ownership regarding its management among the local communities. This is to be found most strongly among the older, often retired, generation, as increasingly the dual pressures of higher house prices and poor employment opportunities mean the younger generation are moving away. This high sense of ownership has resulted in strong opinions regarding the management of the area. As a result, in the past there has been some resistance towards national and international policies, such as the Habitats Directive and the Regulations that implement them, designed to modify activities of local users (Gardner 2005).

4.5.2.1 History of collaborative management on The Wash and North Norfolk Coast

Nature conservation has been a controversial issue in the area for a long time. The first official intervention by conservationists occurred in 1912, when the National Trust set up a field centre on Blakeney Point. Many local fishers were outraged and felt the field centre threatened their livelihoods, consequently it was promptly burned down. Since then the relationship between conservation organisations and local stakeholders has been fraught. However, over the last twenty years efforts have been made to improve the relationship by increasing the involvement of stakeholders in the management of the site. Although in some circles conservationists are still viewed with suspicion on the whole, the local communities have embraced these opportunities with enthusiasm and commitment.

The Estuary Management Plan (EMP)[3], part of the national estuaries strategy, first introduced in 1996 and revised in 2004, was an early example of official collaboration between conservationists and local stakeholders in policy development. The plan was the result of the setting up of The Wash Estuary Strategy group and pre-dates the EMSs designation. However, stakeholder involvement was limited to consulting on drafts of the document. The main challenge to the EMP came from wildfowling groups who argued against the need for wildfowl refuges within the estuary. They challenged the evidence that refuges were required to sustain population numbers and strongly resented both the threat to their activity and the absence of any real opportunity to contribute their extensive understanding of the subject (Gardner 2005).

Around the same time as the EMP was being developed a crisis was unfolding in the shellfisheries of The Wash. The poor state of the mussel and cockle stocks caused concern for a wide variety of Wash stakeholders, including mussel layers/harvesters, scientists, managers and wildlife conservation organisations. As a result, in 1996 The Wash Forum was formed to give all interested parties the opportunity to assess the situation, exchange information, and attempt to find a solution. This was part of a national initiative to promote the integrated management of estuaries. The forum was

[3] This is a non-statutory document aimed at securing the sustainable management of the area.

chaired by a representative of the regional Sea Fisheries Committee (SFC). The first meeting in December 1996 was attended by representatives of the SFC, government research agencies, the Environment Agency, the Shellfish Association of Great Britain (SAGB), the British Trust for Ornithology (BTO) and the Royal Society for the Protection of Birds (RSPB), as well as representatives of local users of The Wash.

The Wash Forum represented the beginning of the official co-management of The Wash and its resources, although there was significant informal dialogue between the stakeholders pre-1996.

Along the North Norfolk coast there has been a similar history of debate between local user groups and national conservation interests. In particular, the Common Rights Holders have been vociferous in defending their right to continue their activities whenever they perceive them to be threatened by changes to coastal management. Proactive coastal realignment as a method of flood defence is an example of a longstanding issue between Common Rights Holders and national agencies such as the Environment Agency (see for example O'Riordan and Ward 1997, O'Riordan 2002).

In the past, a number of researchers have looked at the collaborative management programme on The Wash and North Norfolk Coast and assessed the effectiveness of the partnerships. Two key studies, Gardner (2005) and Jones et al (2001) conclude that although there were a number of strong opinions and conflicts between individual personalities, overall these early voluntary partnerships were effective in delivering sustainable management across the site. Gardner also concludes that on a small scale the various user groups can be seen to show high levels of trust, interconnectedness or networks of communication (bonding and bracing social capital), while at the same time exhibiting poor levels of trust and communication with national agencies (linking and bracing social capital).

In 1996 the combined area of The Wash and North Norfolk Coast was designated as an EMS, marking the beginning of a new approach to the management of the site. The Wash Forum became the basis for discussion regarding the management scheme and eventually transformed from a voluntary partnership primarily concerned with the management of The Wash fisheries to a statutory partnership responsible for the wider

conservation of The Wash and North Norfolk Coast EMS. These changes significantly altered the relationship between the local stakeholders and the RAs with mixed results, eventually leading to the complete break down of communication between the NCA and a group of Wash mussel farmers resulting in a PI. This change in relationships and the PI itself is discussed at length in Chapter 6.

4.5.3 Institutional arrangements - The Wash and North Norfolk Coast European Marine Site management structure

The process of consulting all the relevant stakeholders and developing the management scheme was a lengthy process. From the site first being designated to the implementation of the management scheme took over five years. This is a reflexion of the complexity of the area and the many different stakeholders that have an interest in the site. The large geographical area made the consultation process particularly difficult. As a result the site was divided into three areas, each with its own advisory committee, tasked with feeding back the concerns of local stakeholders to the main management group.

The advisory groups were originally set up to allow stakeholders, interested individuals and other groups to freely participate in the development of the management scheme. Today they have a multitude of functions, including providing a forum through which local people can give their perspective on the site and debate issues as they arise. Each advisory group has a chair who attends the full management group meetings enabling two-way communication between the advisory groups and the full management group. The advisory groups represent the primary method of stakeholder participation within the management scheme and are central to ensuring the continuation of a participatory approach the management of the site. Stakeholder perspectives of this approach to consultation are discussed at length in Chapter 6.

Figure 4.1 demonstrates how the advisory groups relate to the other parts of the management structure, and also shows how the responsibilities for managing the site are distributed amongst different people/organisations. Importantly it distinguishes between the RAs (core management group) who have a legal responsibility to ensure that biodiversity conservation objectives are reached and the other stakeholders

involved with the partnership (other members of the full management group). The management group is also supported by a scientific advisory group which provides advice on scientific matters related to the designated features and it is the EMS project officer's job to co-ordinate the whole process. The core management group is made up of the following RAs:

- Natural England (Norfolk Team)
- Environment Agency (Anglian Region)
- Lincolnshire County Council
- Boston Borough Council
- Norfolk County Council
- North Norfolk District Council
- Internal Drainage Boards
- King's Lynn Conservancy Board
- Ministry of Defence
- Natural England (East Midlands Team)
- Fenland District Council
- East Lindsey District Council
- South Holland District Council
- Kings Lynn and West Norfolk Borough Council
- Eastern Sea Fisheries Joint Committee
- Wells Harbour Commissioners
- Port of Boston
- North Norfolk Common Right Holders

Although this thesis primarily focuses on the processes put in place to manage the EMS, it is important to note that it is not the only 'partnership' concerned with the management of the area. The North Norfolk Coast Partnership, which manages the North Norfolk Coast Area of Outstanding Natural Beauty (AONB), and The Wash, Estuary Strategy Group (WESG), which promotes sustainable use of The Wash all have an interest in the area. There is a considerable overlap in terms of geographical jurisdiction of these three partnerships. In 2007 a number of partners represented on more than one of the partnerships raised concerns about the level of overlap in the work

done by the three organisations and in particular whether it was cost effective to fund three partnerships. As result a review was commissioned to evaluate the work of the three partnerships. Table 4.2 taken from the review outlines the responsibilities of the three organisations:

Figure 4.1 The Wash and North Norfolk Coast European Marine Site management structure.

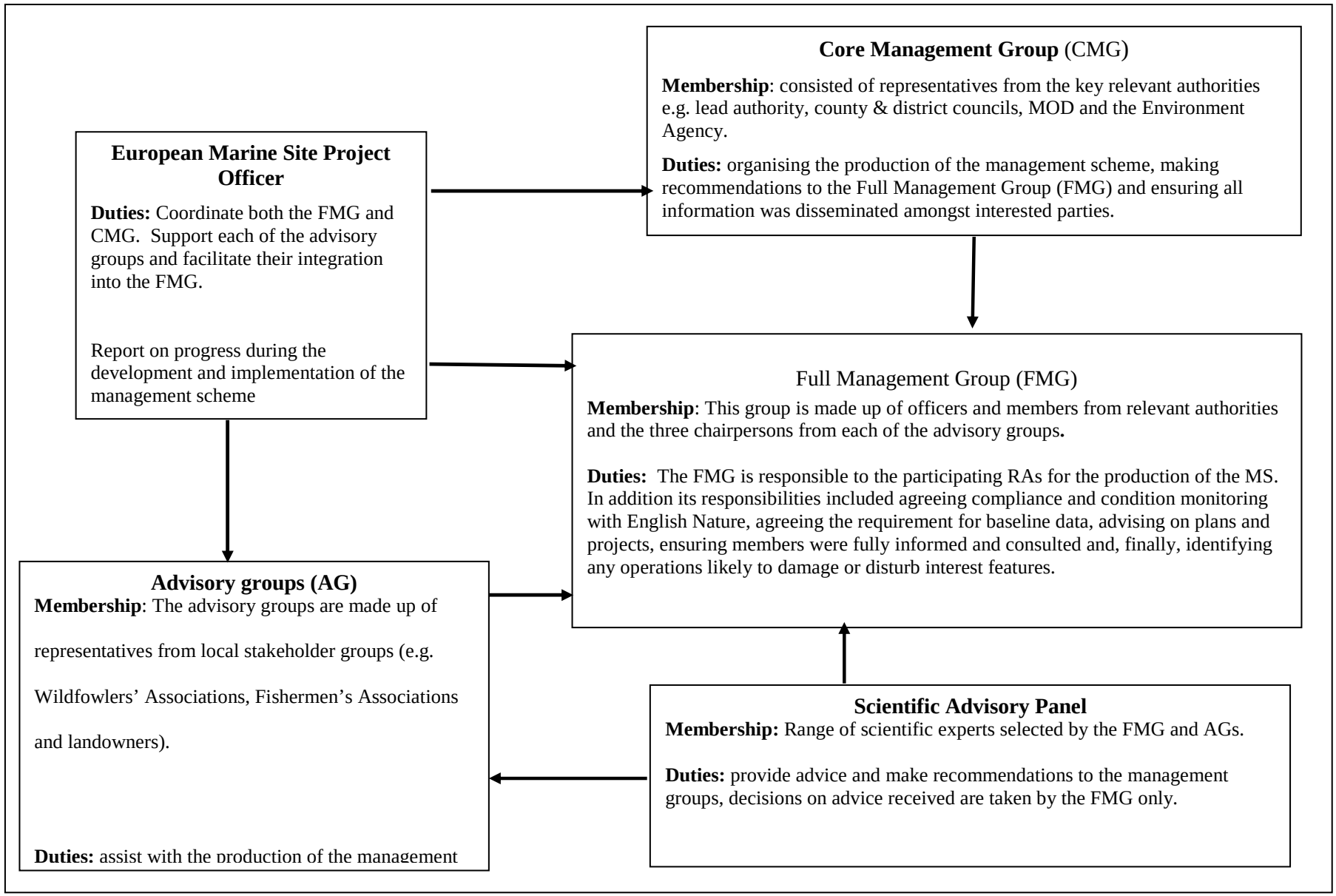


Table 4.2 Summary of partnerships remit and structure:

Name	The Wash and North Norfolk Coast European Marine Site (EMS)	Norfolk Coast Area of Outstanding Natural Beauty (AONB)	Wash Estuary Strategy Group (WESG)
Status	Statutory, supported by European and UK legislation	Statutory, supported by UK legislation	Non-statutory, but supported by national planning policy
Overall objective	The maintenance, or restoration at a favourable conservation status, of the marine habitats and species for which the site is designated	To conserve and enhance the essential character of the natural beauty (landscape, wildlife, and built and cultural heritage)	The sustainable use of The Wash and its hinterlands, which recognises the relationship between land and sea, and overcomes various administrative boundaries
Guiding legislation / policy	Conservation of Wild Birds Directive (79/409/EEC) Habitats Directive (92/43/EEC) Habitats Regulations 1994	National Parks and Access to the Countryside Act, 1949 Countryside and Rights of Way Act 2000	Planning Policy Guidance Note 20 – Coastal Planning 1992
Guided by	Wash and North Norfolk Coast European Marine Site Relevant Authorities' Group	The Norfolk Coast Partnership	The Wash Estuary Strategy Group
Key document	The Wash and North Norfolk Coast European Marine Site Management Scheme (2002)	Norfolk Coast AONB Management Plan 2004 –2009	The Wash Estuary Management Plan, 2nd edition (2004)
Location/ Contact / website	King's Lynn Tel. 01553 772020 www.esfjc.co.uk/ems.htm	Fakenham Tel. 01328 850530 www.norfolkcoastaonb.org.uk	Holbeach Tel. 01406 425518 www.washestuary.org.uk

Source: Norfolk Coast Partnership et al. (2008:3)

The report stresses the complementary roles of the three partnerships but also recognises that there is an element of overlap in their work and a significant number of people sit on more than one of the partnerships. The review fell short of recommending the amalgamation of the partnerships, on the grounds that the remit of a single organisation would be too large and difficult to manage. Nevertheless, it made a number of short, medium and long term recommendations on how to provide a more holistic management of the area; these are explored in depth in Chapter 6.

4.6 Background to the North East Kent European Marine Site

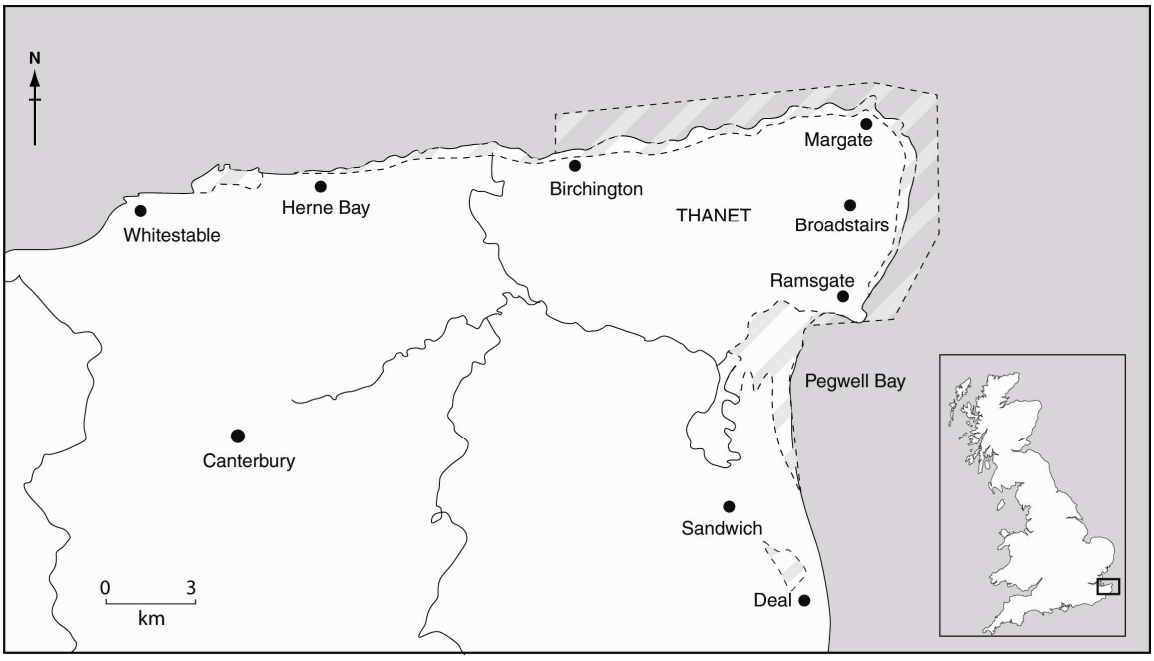
4.6.1 Resource system characteristics - geographical contexts

The North East Kent European marine site covers the shore from Herne Bay to Deal with a small separate area at Swalecliff. It also extends out to sea for up to 2km around Thanet and includes several overlapping designations:

- Thanet Coast SAC
- Thanet Coast and Sandwich Bay SPA
- Sandwich Bay SAC

As Map 4.3 shows, the majority of the EMS is situated around the coast of the Isle of Thanet. The region is bordered along two sides by the English Channel and on a third by the River Wantsum. This river began silting up in 1499; prior to this it had been known as the Wantsum Channel and had effectively separated Thanet from the rest of Kent. The coastline forms a peninsula stretching from Herne Bay in the North round to Sandwich Bay in the south. Consisting of soft chalk cliffs and sheltered bays, the Thanet coast has provided safe points of harbour for hundreds of years. St. Augustus landed at Pegwell Bay in 596 AD, whilst Ernest Shackleton set sail on Endeavour from Margate. The coastline of Thanet is dominated by 23km of continuous chalk cliff, representing 20% of the coastal chalk in Britain (NEKEMS Management scheme 2001). Equally distinctive, although not so obvious, are over 250 hectares of chalk reef, some of which is exposed only during spring tides (Gardner 2005).

Map 4.3 North-East Kent European Marine Site situated on the South-East Coast of England:



The Thanet Coast SAC qualifies for the following Annex I habitats as listed in the Habitats Directive:

- Reefs
- Submerged or partially submerged sea caves.

The Sandwich Bay SAC qualifies for the various dune habitats that run along the back of the bay, whilst the Thanet Coast and Sandwich Bay Special Protection Area is designated for three bird species (English Nature 2000):

- Breeding little tern (*Sterna albifrons*)
- Wintering golden plover (*Pluvialis apricaria*)
- Wintering turnstone (*Arenaria interpris*)

4.6.2 Group characteristics - social and economic contexts

Thanet is widely recognised as being the most economically deprived area within the county of Kent[4]. In an attempt to reverse this situation Thanet District Council has long pursued an agenda based around economic regeneration and development. The island geography of Thanet has given the people of Thanet a strong sense of local identity. The area is still known as the Isle of Thanet, a title reinforced by the local newspaper, the Isle of Thanet Gazette. There remains a sense in which Thanet is seen as being removed from the rest of Kent; amongst the older generation there are those that can remember having to show their identity card when crossing the Wantsum Channel during the Second World War. The sense of detachment and identity associated with an island community has been reinforced by the isolation of Thanet's economic decline amongst the relative prosperity of surrounding Kent. Together, the relative isolation

[4] Thanet is Kent's most deprived district and ranks 60th in a list of England's most deprived local authority districts. This description is explained by the fact that Thanet scores in the 25% most deprived districts in all six deprivation categories (employment, education skill, training, geographical access to services and income and health deprivation and disability) (TDC 2004). Incidence of violent crime in Thanet in the period 2000/01 was 14.1 per 1000 population. This is 47% above the county average and 24% above the national average (Thanet Community Safety Partnership 2002). A study by Beatty and Fothergill (2003:57) of the economies of seaside town describe Thanet as having a real unemployment figure of 5.4% (and a real figure of 11.7%). This compares to a figure for Kent of 1.9%. The dominant theme to emerge from amongst these and additional statistics is that Thanet stands out as being particularly deprived within the county of Kent.

and economic standing of the area has led to a defensive local community that might regard 'outside' input as unhelpful and ignorant of Thanet's needs and history (Gardner 2005).

Although the Isle of Thanet is largely an area of arable farming, the coastline is dominated by an urban fringe that runs almost unbroken around the eastern point. The three towns of Margate, Broadstairs and Ramsgate make up the bulk of Thanet's population of 126, 702 (TDC 2004) with a population density of 12.36 persons per hectare (compared to the Kent average of 3.54 persons per hectare) (TDC 2004). This population is seen to rise dramatically over the summer months as over 1.7 million day visitors come to the region.

Historically Thanet's economy has been based on the tourist income associated with the traditional English seaside resorts of Ramsgate, Margate and Broadstairs. Over the years this has been supported by Ramsgate Harbour, which at one time handled both passengers and freight, and by a medium-sized fishing fleet of approximately forty boats. However, in recent years the number of visitors coming to Thanet has steadily declined and of those that do choose to visit, few stay overnight. The decline of the tourist industry and the absence of any significant alternative economy have left Thanet as one of the two poorest areas in South East England, a position borne out by its receipt of European Objective 2 funding.

4.6.2.1 History of collaborative management on the NE Kent coast

During the late 1990s successive planning proposals by TDC resulted in two long running public debates between the local authority and the then NCA (Jones et al. 2001). The first of these related to a proposed sea wall across one of the last remaining stretches of chalk cliff, while the second concerned the building of an approach road to Ramsgate that would destroy cliffs and caves. It quickly became clear to campaign groups, such as the Pegwell and District Association, that the proposed 18 metre wide sea wall was simply another way of TDC ensuring the approach road was built (Gardner 2005). This proposal eventually collapsed without getting to the Public Inquiry stage. Instead it simply eroded already poor levels of trust between local campaign groups and the members of TDC. Both disputes provoked widespread public

interest with headlines such as *Green Slime Versus Jobs* appearing in the local paper (Jones 1999b).[5] The decline in relations between the NCA and the local authority as a result of these protracted debates is widely acknowledged on both sides. Furthermore, these public disputes had a major impact on how the main actors were perceived. The economic agenda ensures there are competing views between those members of the local community who wish to see regeneration and those who regard damage to the coastline as an irreparable scar on Thanet.

The designation of the EMS in the mid 1990s initially exacerbated the difficult relationship between TDC and the NCA. The high level of tension which had developed between TDC and NCA as a result of the past planning disputes meant that the first priority was to encourage the RAs to communicate with each other. Furthermore, there was also significant disagreement amongst local stakeholders and therefore it was necessary to engage them in discussions regarding the implications and scope of the designation.

Two relevant authorities reacted to the designation by lodging objections with the Secretary of State for the Environment. Both TDC and the Thanet District Council Harbour Authority opposed the designation of the Thanet Coast EMS. The port authorities were concerned about how their current and future activities might be impinged on by the surrounding conservation designation. TDC had specific concerns regarding any future development of Ramsgate Harbour and more widely with regard to the implications for the economic regeneration of the area. In addition to their concerns regarding the potential for future development, TDC were reluctant to divert any of their limited resources towards the designation. After lengthy discussions between the council and the NCA it was eventually agreed that the only way forward would be to integrate the development of the management scheme with the application for objective 2 funding to boost economic development in the area (Gardner 2005). As a result consultants were hired to develop and run a stakeholder dialogue process to facilitate discussion and come up with a workable management scheme.

[5] This referred to a specialist species of the *Chrysophycease* algae protected by SSSI status (SSSI Notification 1990).

In addition, tensions had developed between the local NCA project officer, who had been working hard to find a way to take the process forward, and the NCAs national maritime team in Peterborough. The national office was concerned that the management scheme resulting from the stakeholder dialogue process might be compromised if the dialogue about its content started before the Regulation 33 package had been issued. Three weeks prior to the first workshop the NCA maritime team announced the timeline for delivering the conservation objectives (Regulation 33 Advice) for each marine SAC. It was expected that this statement of ecological goals would be delivered in 2000 and that it should be used to inform the development of any management scheme. Effectively the maritime team instructed the NCA Project Officer to postpone the Stakeholder dialogue process for up to 2 years. The stakeholder dialogue process was only allowed to continue after The Environment Council (TEC)[6] met with the NCAs staff and assured them that the process would not undermine the NCAs statutory responsibility to produce the Regulation 33 package and that the Management scheme would be consistent with aims of the designation (Gardner 2005).

4.6.2.2 What does a stakeholder dialogue process entail?

Stakeholder dialogue is a particular participatory decision making process developed by TEC, a charity, in response to the environmental debates of the 1980's. Stakeholder Dialogue is described as a *'designed and facilitated process involving stakeholders'* (Acland 2000). Although this definition does little to separate Stakeholder Dialogue from many other participatory processes it is possible to draw out some distinguishing features from TEC literature. Principal among these is the emphasis given to the notions of stakeholder inclusion and deliberation. The process seeks to establish a shared agreement across the broadest range of relevant interests via a process of facilitated two-way communication (Acland et al. 1999, Acland 2000). This approach is built on a principle of equality amongst participants that is in turn operationalised by adopting a flat decision-making structure intended to offer all individuals an equal opportunity to shape the products.

[6] The consultants tasked with developing the stakeholder dialogue process

During the first process the primary concern was to use the development of the management scheme to improve relations (or bracing social capital) between the two key organisations TDC and the NCA. Furthermore, in light of the bad press previous conservation initiatives had received in the area, there was a desperate need to engage local stakeholders with the process and educate them about the wider benefits of conserving the area. It was clear that due to the pre-existing tensions between the NCA and TDC it would have been impossible for the consultation process to be organised and facilitated by one of the interested parties; consequently the contract was put out to tender and won by TEC.

The Stakeholder Dialogue process centred around four day long workshops where all the stakeholders were invited along to a day of facilitated sessions in which they were encouraged to develop an understanding of each others perspectives on the designation of the site, establish what activities were undertaken, where they were located, the impact of the activities on the environment and the economy etc. The workshops also provided an opportunity for the stakeholders to learn more about the legislative process and the implications for the site. Prior to the workshops a number of meetings were organised by TEC between the RAs to decide on the objectives for the scheme. After lengthy discussions it was agreed that the objectives of the management scheme should be:

- To assist the participants in generating mutually acceptable solutions to tackle the issues identified.
- To provide the forum for creative thinking to generate ideas for new sustainable coastal tourism and recreation initiatives which can be taken forward and lead to new jobs.
- To facilitate the generation of mutually acceptable wording for the main management scheme [for the designated areas of coastline] and the coastal action plan [to address the integrated coastal management objective].
- To facilitate the generation of mutual understanding between different users and thereby maximise the support for and implementation of the agreed actions.
- To facilitate the best possible resolution of conflicts between different users of the site.

In addition to confirming the objectives and outcomes the meeting set out the criteria for selecting stakeholders. These criteria described a clear intention to balance the representation of Objective 2 interests and conservation interests. Eventually 126 stakeholders were selected and invited to attend the workshops, 40% of whom attended at least one workshop. Overall the process was successful and relations were improved between the NCA, TDC and the wider group of stakeholders (Gardner 2005; Jones 2001). The workshops provided an opportunity for local people to interject there knowledge and experience of working in and around the site in to the management scheme. Furthermore, the ultimate goal was achieved in 2000 when the management scheme based on the data collected from the workshops was launched.

Reviewing the Management Scheme – The Second Stakeholder Dialogue Process

The first Management Scheme expired in April 2006 as a result a review of the management scheme was required in order to develop a replacement. Initial discussions between the management group and scientific advisory group revealed a central criticism of the first management scheme was that by focusing on protecting the designated features the scope for protecting the wider environment was seriously restricted.[7] In April 2005 the stakeholders were asked to advise on how the review should be carried out. It was clear from this consultation that the stakeholders concurred with the ideas suggested by the management group in wanting a more holistic approach to management and for the stakeholder dialogue process to be repeated (Pound 2006). Consequently it was decided to adopt the ecosystem approach in the review of the management scheme. Stakeholder perspectives on the Stakeholder Dialogue approach to consultation and the decision to use the ecosystem approach as the basis for the review are discussed in depth in Chapter 7.

4.6.3 Institutional arrangements - The North East Kent European Marine Site management structure

As with The Wash and North Norfolk EMS the process of putting together the original management scheme was a lengthy one. The site was first designated in 1995 and the

[7] These issues were first discussed at the Second North East Kent Coastal conference in 2004

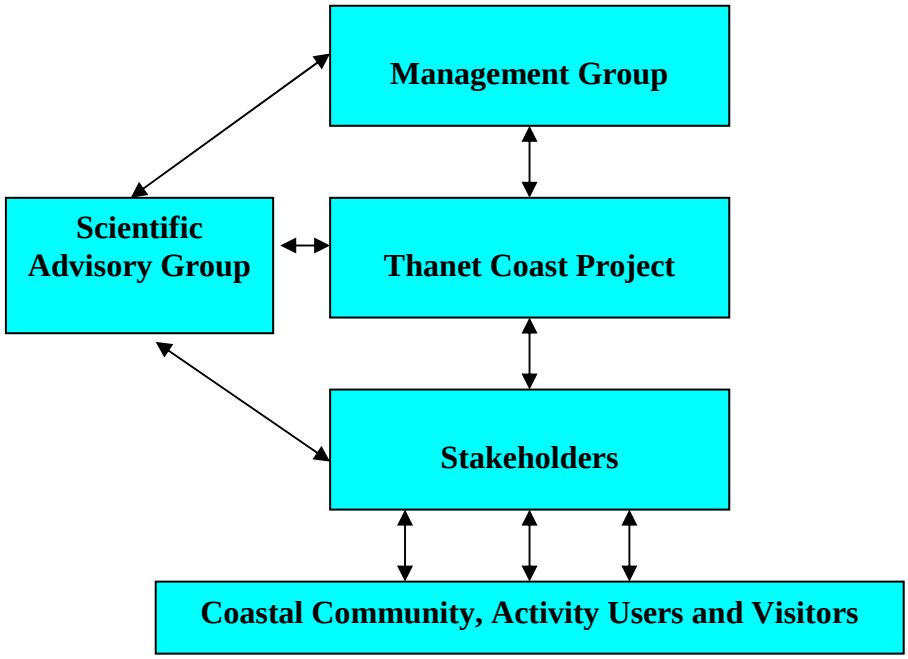
management scheme was eventually launched in 2000. This was largely due to the number of assessments which had to be completed and the challenges related to building partnership capacity and overcoming the conflicts between stakeholders.

The management group is comprised of 'relevant authorities':

- Natural England
- Kent County Council
- Thanet District Council
- Dover District Council
- Canterbury City Council
- Environment Agency
- Southern Water Services
- Thanet District Council Harbour Authority
- Sandwich Port and Haven Commission
- Kent and Essex Sea Fisheries Committee

The small geographical area of the site meant that unlike The Wash and North Norfolk Coast there was no need to split the area up into regional groups for the consultation process. Although the consultation on the original management scheme (and the second management scheme, see below) was conducted through one off events, bi-annual meetings are held to provide stakeholders with regular opportunities to feed their thoughts and concerns in to the management process. As Figure 4.2 demonstrates, the TCP acts as a go-between between stakeholders and the management group. The management group is also supported by a scientific advisory group which consists of local scientists with an interest in the site. Stakeholders with specific knowledge of aspects of the site are also able to present their ideas and concerns about the site to the management group through the scientific advisory group.

Figure 4.2 NE Kent European Marine Site management structure:



4.6.3.1 Thanet Coast Project

One of the outcomes of the workshops was the proposal to set up a community based project to take forward many of the wildlife related actions in the management scheme that were not being dealt with by other organisations. As a result in July 2001 the TCP was established. The project's remit is to (TCP 2005):

- Make people more aware of the importance of the bird and marine life and how to avoid damaging it.
- Implement Management Scheme action e.g. help local users produce, follow and monitor codes of conduct
- Encourage and run wildlife related events and make links with wildlife and green tourism and the arts
- Be a focal point for enquiries and gather information on coastal wildlife
- Keep people informed e.g. newsletters, articles and stakeholder meetings to keep everyone up to date with progress.

The project has grown considerably over the past 7 years and now employs two full time members of staff, a project manager and an education officer. The project has:

- Dramatically raising the profile of coastal nature conservation in North East Kent, worked closely with stakeholders to over-come conflicts of interests and produced a list of voluntary codes for coastal users,
- Developed a regular programme of stakeholder meetings giving local people a regular opportunity to feed their thoughts and knowledge in to the management of the area,
- Developed a highly successful coast warden's scheme which has trained over 100 people to get involved in informing the public about the coast and monitoring the state of the site
- Put on numerous events and activities to encourage people to get more involved with managing the site.

However, despite their reported success until last year they did not have guaranteed funding and spent a considerable amount of time applying for money from a range of sources including TDC, Natural England, and the National Lottery. Last year TDC finally acknowledged the success of the project and agreed to permanently fund the salaries of the two members of staff, securing the future of the project. This was undoubtedly helped by the high profile nomination of the education officer for council worker of the year in the national competition.

4.7 Concluding comments

This chapter has sought to justify the choice of case studies and provide a comprehensive introduction to the two sites. The emphasis has been on describing the events and circumstances which have led up to the current situation. In particular, it has focussed on key events which have shaped the nature of the institutional arrangements in place to manage the EMS. It is clear that the development of social capital between stakeholder groups and organisations has been particularly challenging across both sites and this will form the basis for much of the analysis in the subsequent chapters. From this point on the focus of the thesis moves on to analysing these

processes and in particular the perspective of stakeholders on the way the various challenges have been managed. Chapter 5 outlines in detail the methodology used to conduct the research and clarifies the decision to conduct an in- depth analysis of two case studies rather than a broad survey of a large number of EMS.

5

Methodology

Introduction

As outlined in the introductory chapter, the purpose of the research is to present an actor-centred analysis of partnership approaches to achieve strategic marine conservation objectives, and the identification of those factors that determine the effectiveness of the partnerships. Both the focus on understanding the nature of the partnerships and the perceptions of different actors present some interesting methodological questions which have implications for the choice of research strategy adopted. In terms of methodology it is also important to keep in mind the policy context which has led to the formation of these partnerships (see Chapter 4). Therefore a secondary aim of the research was to evaluate the effectiveness of the legislation which requires additional methodological considerations to be taken into account.

The literature on CPR theory gives very little explicit guidance on methodology. However, a trawl through the literature reveals that the vast majority of studies into CPRs in recent times have been conducted through the analysis of case studies, for example Wade, (1988) Ostrom (1990) and Baland and Platteau (1996). Early scholars of CPRs, such as Hardin, predominantly focused on the 'bigger picture' in examining issues such as the impact of changing markets and population growth. However, more recent studies have demonstrated an important ideological shift, instead focussing on the impact of local phenomena such as potential to develop social capital in a community, subjects which are best studied through a case study approach.

As Skate (1994) suggests, case study *'is not a methodological choice'*: case studies can be studied using a wide variety of methods, they involve the choice of an object to study. However, if research is to be conducted through case studies an important

epistemological question needs to be addressed; '*what specifically can be learnt from the single case*' (ibid.)? From the outset it is necessary to be clear that case study research will not produce a large data set which can be used to make generalisations about the population at large or even other cases. However, it does generate an intensive examination of a single case, in relation to which it is possible to engage in a theoretical analysis which may have relevance to other cases **(**Bryman 2001).

To effectively analyse the partnership approaches which have been employed in the two case studies (see Chapter 4) the research needed to both identify the various voices and groups that exist within the communities and develop a deeper understanding of the culture within and between these groups. These requirements along with the aspiration to produce an actor-centred approach directly led to the decision to conduct the research through case studies and to employ qualitative research methods.

Although the methods employed in this study may not strictly adhere to the principles of traditional ethnographic study, they include many of the approaches developed by ethnographers as outlined by Atkinson and Hammersley (1998: 110-111):

- A strong emphasis on exploring the nature of a particular social phenomenon, rather than setting out to test hypotheses about them.
- A tendency to work primarily with unstructured data, that is, data that have not been coded at the point of data collection in terms of a closed set of analytical categories.
- Investigation of a small number of cases
- Analysis of data that involves explicit interpretations of the meanings and functions of human actions.

Furthermore, the scope and uses of ethnographic research are changing and new definitions recognise its usefulness for policy evaluation (Maggin 2007; Bryman 2001). A number of different terms have been used to describe this approach to ethnographic research such as *'post-modern ethnography'* (Maggin 2007; Denzin and Lincoln 1994), *'qualitative evaluation'*, (Shaw 1999) *'critical ethnography'* (Hammersley, 1992) or *'applied ethnography'* (Chambers, 2000; Fetterman 1989; Loyon, 1997). These new

approaches to ethnography retain the core elements of traditional ethnography – description, interpretation and theorization. They differ in that they tend to be focussed on policy evaluation (Maginn 2007). For the purpose of the current research the term *'applied ethnography'* will be used. This approach has provided the necessary tools to build up a detailed picture of the meaning and significance attached to participation and the impacts of participatory policies on the local communities (ibid.).

By adopting a number of qualitative methods a particular ontological assumption is being made about the world insofar as it does not appear to be the same to everyone, but rather it constitutes *'an assemblage of competing social constructions, representations and performances'* (Smith 2001:25). This is important not only from a methodological perspective but also constitutes an important element of the research itself. One of the purposes of the research is to establish the 'perceptions' of the different actors as it is recognised that these perceptions will have an impact on the way they behave even if they are in contrast with the intended 'reality' of the legislation.

More specifically, four complementary research methods have been used which together provide an insight into the effectiveness of the partnership approaches and the perspective of the different actors. Documentary analysis has provided a significant amount of background information and historical context in which the rest of the research has been framed. Further, it enables the identification of *'public-face'* government statements that contain important details about the intended impact of the legislation. Semi-structured interviews have been used to 'get behind' such presentations by offering the interpretations individual stakeholders develop of the partnership approaches. Participant observation has added a deeper insight into the relationships between the different stakeholders and a fuller understanding of the process and procedures operating in the case studies. Finally, focus groups have been used to discuss the data gathered through the other methods with officials tasked with implementing the legislation, to gauge their understanding of stakeholders' perceptions. The complementary use of these four research methods represents a strategy of *'methodological triangulation'* that offers several lines of *'sight'* into the research problem (Flick, 2002; Berg, 2004).

This chapter will begin by exploring and contextualising the decisions which have contributed to the setting of the agenda for the research. Second, it will describe the sampling process and how access to the participants was achieved. Third, it will look in turn at the four methods used and finally provide details of the processes adopted for the analysis of the data.

5.1 Setting an agenda for the research and developing a strategy

As a consequence of this thesis being based on an ESRC CASE studentship[1] in partnership with Natural England it was important from the outset that the research produced useful and policy relevant conclusions. Although the proposal (see Appendix 1) provided clear aims and objectives for the research and some thoughts on methodology a vital first step was to further develop the proposal and make key decisions on which case studies should provide the focus for the study, what questions should be asked, and the methodologies which should be used. The process of identifying suitable case studies is examined elsewhere in the thesis (see Chapter 4) and significant time is given to the methodological approaches used later in this chapter. It is, however, necessary at this point to briefly explain how the agenda for the research was set.

Although the research has been conducted in accordance with the basic principles of Grounded Theory, the data collection and analysis have proceeded in tandem, repeatedly referring back to each other, it was still necessary to make a number of initial decisions about the direction of the research. The PhD proposal was based on the findings from an initial study of 15 EMSs conducted by Dr. Peter Jones and Prof. Jacquie Burgess in 1999: '*An evaluation of approaches for promoting relevant authority and stakeholder participation in European Marine Sites in the UK*' and a subsequent paper published in the Journal of Environmental Management '*Building partnership capacity for the collaborative management of marine protected areas in the UK: a preliminary analysis'*. Therefore the first step was to re-visit this work and establish a starting point for the present research. Another study which was helpful in the initial planning stages was a PhD written by Dr. Sam Gardner in 2003 '*An*

[1]The nature of an ESRC CASE Studentship is explained in Chapter 1

Evaluation of the Effectiveness of Stakeholder Dialogue in Environmental Decision-making.' Although the focus of this study was different there was a significant overlap in some of the issues which were examined, such as why stakeholders chose to participate in the management process. Furthermore, it was based on the same case studies as the present study and provides a considerable amount of historical context to the sites.

The second stage in the agenda setting process was to conduct a series of informal interviews with key members of the Natural England Maritime team to establish their thoughts on the proposed research and the issues they thought it should investigate.

5.2 Sampling and gaining access

5.2.1 Defining the population

To achieve the aims and objectives of the research it was necessary to engage with a wide range of people and organisations involved with the management of the EMSs as well as the wider community. As Dowler (2001:158) argues '*when working with a community, it is important to obtain a range of backgrounds in the selection of respondents'*. Initially, the intention was to draw the sample from a wide population of everyone who interacts with the EMSs. However, after initial discussions with key individuals involved with the sites it became clear that the wider population was not necessarily aware of the details of the EMS designations and therefore would be unable to discuss their perspectives on the way the sites were managed. Therefore it was agreed that the sample would be drawn from people who interacted with the site and had at least some knowledge of the designations. Nevertheless, from the outset it was clear that the sample should not only include those people who were actively engaged with the management of the sites.

5.2.2 Gaining access

As the research was being conducted in partnership with Natural England, gaining access to the sites was made considerably easier than it may otherwise have been. My Natural England supervisor was able to introduce me to both the conservation officers

and project officers in both case studies. I was then able to use these contacts as *'gate keepers'* to facilitate meetings with other key individuals and organisations. Furthermore, in the early stages of the research they allowed me to observe a number of routine meetings and provided me with a chance to explain my research to the management groups. In addition, they kept me informed of meetings and events related to the EMSs which provided considerable opportunities to conduct participant observation. I also prepared a briefing sheet explaining the research which I handed out to potential participants at meetings (see Appendix 2)

5.2.3 Sampling

Through the gate keepers I was able to obtain lists of key stakeholders engaged with the management process. However, although an incredibly valuable resource, they did not constitute a comprehensive sampling frame as a key aim of the study was to engage with those who had decided not to engage with the management of the sites. As a result it was decided to adopt a snowball approach to sampling.

From the lists provided by the gate keepers I was able to make initial contact with a small group of key individuals and then used them to establish contact with others. The final question I asked in every interview was '*Do you know anyone else I should talk to about these issues?'* This approach was particularly effective in engaging with the fishing community who were not always on the official lists of stakeholders. Furthermore, it also gave me an insight into stakeholders' perceptions of who they thought were the '*key players*' in the management of the site.

A similar approach was also taken to identifying events for observation. As I became better known within the communities, and more people were made aware of what I was doing, they would contact me about events and meetings which they thought might be of interest. My contacts within Natural England were also useful and kept me up to date with processes such as The Wash PI.

5.3 The analysis of documentary sources

The first research method used in this thesis is the analysis of documents. These include official government publications, such as the management schemes produced by both the EMS case studies, publications from other organisations with an interest in the sites, the proceedings of a number of meetings, including a public inquiry and a number of unofficial documents produced by the EMS partnerships and related organisations. The analysis of documentary sources was an importance element of the research, especially in the early stages. As Duke (2002) argues, documentary records and publications have a great significance within the policy arena and many of the key actors in a particular policy field are involved in their production and consumption. Documents constitute a particular reading of an event and at the time of their creation influence the direction of policy; they are 'active' and not just passive objects. Documents need to be located within their wider social and political context which inform what people decide to record; it is important to examine the process of a document's production as what is left out may be as interesting as what they contain (May 2001). This thesis has used documents in three ways: first, to help set the agenda for the research; second, to provide context and texture; and third to help understand the decision-making process within the partnerships.

The research began with a thorough examination of the original guidelines for setting up EMSs produced by the Department of Environment Transport and Regions in 1998 and the management schemes produced by the two case study sites. The purpose of the guidelines was to:

> *'…give advice to relevant authorities, competent authorities, owners and occupiers, right holders, users and other interested bodies about the provisions of the Habitats Regulations and application of management schemes for marine SACs and SPAs'*
>
> *(DETR 1998:1)*

While the management schemes act as a framework for the management of the sites, and to ensure that the conservation goals are met, these documents mark the starting point of the research and present the official picture of what should be happening on the

ground. They also allowed some appreciation of the details and complexity of the policy-making process. This analysis was central to the setting of the agenda for the rest of the research. Many of the questions asked during the interview process were aimed at understanding the stakeholders' perspective on various aspects of DETR guidelines and the management scheme. Importantly, it also permitted comparisons to be made between the actors' interpretations of what was happening on the ground and those recorded in documents (May 2001). However, the main analytical purpose of this part of the research was to understand and analyse the way in which government approached, understood, represented and ultimately constructed ideas about what EMSs should be.

The second channel of documentary analysis came about as a result of The Wash PI into eider predation of cultivated mussels. Although I attended the whole PI as a non-participant observer the main purpose of the observation was to gain an insight into the relationships between the different actors (see below), rather than an attempt to understand the detail of the legislation being debated. This was left to a thorough analysis of the documents presented at the PI and the report produced by the inspector. Through this analysis it was possible to develop an understanding of the conflicting interpretations of the legislation by different interest groups. Furthermore, this analysis formed the basis for the interviews conducted with all the participants a year after the PI.

During the course of the research I was handed numerous documents by many of the interviewees. These documents could be classified in three categories: leaflets produced for the general public such as guidelines for dog walkers or boat owners; official documents such as annual reports and management plans; and unofficial documents such as internal memos and minutes from meetings. The leaflets produced for the general public demonstrated how the partnerships were presenting the implications of the EMS to the general public and attempting to implement aspects of the legislation. They were also the primary source of information about the EMS for many of the interviewees and therefore helped me construct questions at an appropriate level.

The official management schemes produced by the sites only have to be reviewed every seven years, and as a result other official documents produced by the partnerships, along with internal memos and minutes from meetings, provided a valuable insight into the progress of the EMS partnerships. The internal memos and minutes from meetings also offered an insight into the decision-making process within the partnerships and were useful for identifying the key players.

The Wash and North Norfolk Coast EMS partnership works closely with two other partnerships, The Wash Estuary Strategy Group and the Norfolk Coast Area of Outstanding Natural Beauty Partnership. These organisations have produced their own management plans which provided additional contextual material. Furthermore, by looking at all three management schemes together it was possible to develop a fuller understanding of the overall strategic direction of conservation across the site and the relationship between the three partnerships.

A central focus of the North East Kent case study was the analysis of the recent process used to review the management scheme. Unfortunately, the process occurred before I started my research and I was unable to attend. As a result much of the research was based on the observation of a similar process and interviews with participants (see below). However, The Thanet Coast Project, Natural England and the consultants employed to facilitate the process produced an internal report documenting the process which provided a valuable starting point in to this line of enquiry.

5.4 Semi-structured interviews

The primary research method used was a programme of semi-structured interviews. Interviewing is a useful method when the research seeks to unravel complex relationships and processes which have evolved over time (Hoggart et al. 2002). Interviews can take a number of forms, but for the present research semi-structured interviews have been deemed the most appropriate. They impose a degree of predetermined order and structure to ensure the research questions can be addressed, whilst at the same time allowing for flexibility in the way the interviewees describe their perceptions of the given situation. A further advantage of this approach is that it complies with the ‘actor-centred’ philosophy of the research, giving the interviewee the

opportunity to raise issues which they considered important but the interviewer may not have anticipated (Bennet 2001; Hoggart et al. 2002).

The interviews in this research were primarily intended to explore the experiences, motivations, beliefs and attitudes of the individuals being interviewed. However, they were also very useful, in some cases, for obtaining more 'factual' information and for explanations of complex issues, for example the technicalities of mussel cultivation. The interview experience is best conceptualised as a two-way process of interaction between the interviewer and the interviewed. Hoggart *et al.* (2002: 210) see interviewing not as a method of obtaining direct access to another's experience, as there is always a gap between lived experience and communication, but as a process through which interviewer and informant jointly create knowledge *'…through the interaction of linguistic expressions (forming, asking and answering questions), through understanding or misunderstanding and by way of societal positioning'*. The interview experience should be seen as an occasion for the interviewee to reflect on what they know, their positions on various issues, their relations with others and their judgements on what or who were influential in the development of storylines. Furthermore, interviewing can be a reflexive process for the interviewee. For example, in a number of the interviews I asked the respondents to think about how things have changed over the years. This is illustrated by a comment made by a longshoreman in response to a question about his perspective on The Wash and North Norfolk EMS designation: *'I used to be interested when I was younger, all keen and interested in these groups, but as I got older I really don't see the point. He might be the same when he gets older.'* (Interview with longshoreman)

5.4.1 Positionality

Issues surrounding positionality are of the utmost concern to the qualitative researcher (Valentine, 1997). It is necessary to be aware of and consider issues of power and status in the process of interviewing. It is clear that our gender, class, race, nationality, politics, history and experience all affect the way we experience the world and how others view us. It is not possible to do away with these things but it is necessary for the researcher to reflect upon them within the context of the research. I was particularly concerned about the potential impact that my close working relationship with Natural

England would have on the way I was perceived by stakeholders. A number of the interviewees had either been involved with conflicts with Natural England or worked for organisations which were funded by them. I was keen to reassure them that I was not going to report the content of each interview directly back to Natural England and that my research was not an evaluation of their project which would have an impact upon future funding. At the beginning of each interview I introduced myself as an independent PhD student making it clear that although I was part funded by Natural England they were not setting the agenda for the research and that all interview transcripts would be treated in confidence. Another issue which emerged during the research was my status as a PhD student. In a number of the early interviews I got the impression that my research was not being taken seriously by the respondents.

As a reasonably experienced researcher who has worked on a number of previous projects this was initially quite disconcerting. One respondent on hearing I was a PhD student commented; *'…we had a PhD student here a couple of years ago, didn't really know what she was talking about... never finished the project either'* (Interview with Norfolk fisher). I was conscious of the need to prove myself as an interviewer, and as an academic researcher, through demonstrating a knowledge of the topic and through questioning and responding to comments made by the interviewee. I also found that by introducing myself as a PhD researcher working at UCL on a government funded project was in some circumstances a more appropriate way to introduce myself than as a PhD student. Furthermore, over time my confidence as an interviewer grew. As I became more acquainted with the case studies I was better equipped to respond to questions asked by the respondents and to steer the direction of the interview back to the interviewees' opinions and brush off their attempts to ascertain mine.

The power relations and the formality of the interview also shifted depending on the location of the interview. I left the decisions over the location of the interview to the convenience of the interviewee. The vast majority of interviews took place either at the interviewees' place of work or home. Others took place in public places, such as bars and restaurants or out in the field. In general, discussion seemed to occur more freely in public places than in official offices where the interviewees were on 'home ground' and subject to the distractions of the telephone or interruptions from colleagues. Furthermore, those interviews conducted in the 'field' were particularly valuable as the

respondents were able to use the environment as a visual reference to illustrate their points. As Anderson (2004:260) suggests, talking while walking facilitates deeper understanding of *'atmospheres, emotions, reflections and beliefs…as well as intellects rationales and ideologies'*. These interviews did pose a number of logistical problems such as recording and making notes but these were greatly outweighed by the added richness of the material collected.

5.4.2 The interview process

In total I conducted 50 semi-structured interviews with a wide range of stakeholders across both sites. All the interviews were conducted between March 2007 and January 2008. Both sites were studied simultaneously, which allowed me to monitor developments as they unfolded over this eleven month period. Furthermore, this approach simplified the logistics, allowing me to conduct interviews in one site while planning and setting up interviews in the other.

In all cases, a request for interview was initially made by e-mail or letter and where necessary followed up by a phone call. The initial letter/e-mail fully explained the nature and purpose of the research and was based on an information sheet produced to inform potential participants about the research (see Appendix 2). It also asked for approximately one hour of the respondent's time, although in practice the interviews lasted between 30 minutes and 2 hours. A request to record the interview was made at the beginning of each interview, and this request was only refused in two cases. In those interviews notes were taken and written up immediately afterwards. Even when a recording had been made, following the interview observations and details from the interview experience were written up in the research diary. All the interviews were transcribed verbatim as quickly as possible after the interview took place.

In advance of all the interviews an interview guide was drawn up. Initially two templates were developed, one for each site (see Appendix 3), and then tailored for the individuals involved. This ensured that all the central topics were covered but allowed for the questions to be framed in an appropriate manner. Furthermore, as the research was broadly adhering to the principles of grounded theory, analysis was an ongoing process and the interview guides evolved with the research. However, in all cases the

interviews always began with more structured, 'easier' questions, that involved asking the respondent about the organisation they worked for, their position or role in the organisation and their specific responsibilities. This not only provided important contextual information but was aimed at putting the interviewee at ease at the start. At the end of the interview, respondents were always asked who else they thought I should interview. This was intended not only to facilitate the 'snow-balling' process (see above) and establish the nature of the policy network, but also to position individuals in the policy network and to understand their alignment with others.

5.5 Observation

The third research method used was observation. Besides the competencies of speaking and listening which are used in interviews, observing is another everyday skill which is methodologically systematized and applied in qualitative research (Flick 2002). Observation is an essential element in all ethnographic studies and one of the principal tools used by researchers engaged in applied ethnography. It has been used by the present research in a number of ways. All the observations were overt, with all participants fully aware of what I was doing. However, my level of participation in the activities of the groups varied, from being a passive observer of a public inquiry open to the general public to being actively involved with a stakeholder dialogue event as a facilitator of a number of small group discussions.

The use of observational methods added considerable depth of understanding to the research. By studying behaviour in its natural setting it was possible to create an environment in which the respondents felt at ease and were willing to speak freely Western (1992). Furthermore, some of the meetings I observed were attended by more than 100 people, far more than it was possible to interview. However, the observation of these meetings allowed me to gauge the 'general feeling' of a number of interest groups on policies related to the EMSs.

Throughout the research period I kept a detailed log of all my research activities and noted down in detail all my observations. When it was practical, such as in meetings, I made notes while I was making my observations and when it was not possible, such as on a coast walk, I wrote up the experience immediately afterwards.

5.5.1 The Wash Public Inquiry

The Wash PI was the first piece of observational research and also the first piece of primary research that I conducted. The PI was held in June 2006 in a chamber at the council offices in Boston Lincolnshire and lasted five days. As the PI was open to the public observation was easy. I simply sat at the back and made notes on the proceedings. However, I did inform the inspector of my objectives for being there and introduced myself to all the parties giving evidence. Initially I tried to make detailed notes on all the evidence being presented. However, by the end of the first day I had spoken to all the participants and it was clear that they were happy to give me copies of their statements. As a result I focused my note taking on the cross examination and interactions between the parties. Although much of my analysis of the PI resulted from a detailed examination of the documents presented after the enquiry (see above), observing the proceedings added context to the documentary analysis. Furthermore, the body language of the various actors and the way they interacted with each other between the proceedings demonstrated the tension present between the two sides. A secondary outcome of observing all the proceedings was that during the week I got to know the key players who proved to be invaluable contacts later on in the research process.

5.5.2 Stakeholder dialogue process

A central element of the research into the NE Kent EMS case study was the analysis of the stakeholder dialogue process which was used to review the management scheme. However, the process occurred during the first half of 2006, just after I had begun my PhD and before I had selected my case studies. Initially this was a problem as I was unsure how to analyse a process which I had not witnessed. However, with hindsight, missing the process turned out to be an advantage as I was able to question those who had taken part about their perceptions of the process without my own perceptions of the events influencing the questions I asked. Nevertheless, I still wanted to develop a better understanding of the way the process had worked. Through the contacts I had built up at Natural England I arranged to attend an event in the South West for the Finding

Sanctuary[2] project which had been organised by the same consultants as the NE Kent process. Furthermore, I undertook the consultancy's basic facilitation training and facilitated a number of small groups at the event. The experience of undertaking the training and facilitating at such an event allowed me to develop an in-depth understanding of how the process worked and what the organisers hoped to achieve. It allowed me to contextualise the interview data I had gathered on participants' perceptions of the NE Kent process and compare their perceptions with the organisers' intentions for the process.

5.5.3 Meetings

Throughout the research period I attended a number of meetings with my gate keepers in both case studies. These ranged from meetings of the full management group to small community meetings between local stakeholders. At the beginning of the meetings I was often asked by the chair to introduce myself and explain my presence. This was also a good way of making large groups of people aware of my research and resulted in a number of people asking if they could take part. The meetings themselves provided excellent opportunities to observer the dynamics between different stakeholders and which issues were of greatest concern to the different interest groups represented. Having witnessed these interactions between the various stakeholders it was possible to follow these up in the interviews and develop an in-depth understanding of the relationships between the different actors within the partnerships.

5.5.4 Public events

A central aim of both EMS partnerships, but NE Kent in particular, was to raise awareness amongst the general public about the EMSs and encourage them to get involved with the management of the site. To do this, along with their various partners, the partnerships put on a number of public events throughout the year. I attended a number of these events to find out what kind of activities were on offer and to gauge the public's reaction to them. The Thanet coast project has been working particularly hard in this area and puts on considerably more events than The Wash and North

[2] For more information on Finding Sanctuary see http://www.finding-sanctuary.org/

Norfolk Coast Partnership. As a result, the majority of events I attended were in Thanet. I attended the following events: an open day organised by the RAF; a training day for prospective coastal wardens; a coastal walk organised by a local geologist; and training to become a Sea Search[3] diver. These events gave me an interesting insight into the public face of the EMS partnerships and gave me the opportunity to talk to members of the public about their perceptions of EMSs and management of the coast line.

5.6 Focus groups

The final research method used was focus groups. The purpose of these was to get feed-back on the preliminary research findings from key individuals involved with managing the EMSs at both local and national level. The idea behind these focus groups was to stimulate debate about the research and to gauge the reactions of those responsible for implementing the legislation. As Bryman (2001:338) argues, focus groups allow the researcher to develop an understanding of why people feel the way they do. It is possible to allow *"… people to probe each other's reasons for holding a certain view"* and as the debate moves on participants may end up discussing issues which would not have come up in an individual interview. Therefore focus groups are helpful in elicitation of a wide variety of different views in relation to a particular issue (ibid.). Another benefit with focus groups is that the participants, as well as the researcher, can learn through the experience (Bedford and Burgess 2001). This was particularly important as I was keen to make the respondents aware of the findings of the research and get them thinking about the implications for the future management of the marine environment in the UK.

I conducted three focus groups, one with representatives from Natural England's national MPA group and one with officials from each of the case study sites. I had previously met all the participants and had interviewed a number of them. Furthermore, all the participants knew each other and seemed comfortable expressing their views in front of the other participants.

[3] For more information about Sea Search see http://www.seasearch.org.uk/

The focus groups were individually designed to be relevant for the participants attending but followed the same format. Each focus group began with a short introduction to the research and the methods I had used. This was followed by an 'ice breaker' where I showed the participants a photo of a fishers van and asked them to comment on why they may have written this message on the side:

This exercises in itself generated some interesting and relevant discussion on the relationship between the fishing industry and government organisations.

The remainder of the focus group was broken into three sections: Designation, management and governance of the EMS; engaging stakeholders; local knowledge and social capital. Each section started with a short presentation followed by a discussion around key questions I put up on the screen.[4]

The focus groups proved useful on a number of levels. First, it was interesting to discover which issues brought up by stakeholders in the interviews the officials were aware of and which had not been brought to their attention. Second, on a number of occasions when discussing some of the negative perspectives brought up during the interviews, the group would try and rationalise these thoughts and come up with an explanation. These explanations often focused on the reasons why stakeholders may have misinterpreted a policy or intervention rather than the possibility that the policy might be flawed. Finally, the focus groups provided an opportunity to clarify technical points and triangulate the data collected so far. All the participants were experts in the

[4] A copy of the presentations and discussion questions can be found in Appendix 4.

field so when they all agreed on a particular interpretation of a policy or a technical matter I could be fairly sure it was accurate.

All the focus groups were recorded. However, unlike the interviews they were not transcribed in verbatim. Instead the tapes were careful listened to and full reports of each focus group were made.

5.7 Analysis

Analysis of qualitative data can be problematic and is a far cry from the structured processes used by quantitative researchers. Miles (1979) describes qualitative data as an *'attractive nuisance'*, because of the attractiveness of its richness but the difficulty of finding analytical paths through it. However, a variety of theories and principles have been developed to aid the process, the most prominent of which is known as Grounded Theory. As stated earlier in this chapter, the key principle of grounded theory is that the analysis and research should occur simultaneously. This is done through the coding of the data as they emerge. In order to facilitate this process I used the computer software package *AtlasTI* to analyse each of the transcripts from the 50 interviews, observation sessions, and focus groups. *AtlasTI.* provides a systematic tool that allows the researcher to assign codes to segments of text; these codes can then be grouped, annotated and linked together to develop lines of argument. In total the research produced a significant amount of data that spanned more than 600 pages of text. *AtlasTI.* provided an effective means of sorting and retrieving quotations from this data set. However, when using a computer package to analyse qualitative data it is important to remember that it does not do it for you but simply acts as an aid (Lewis and Silver 2007).

One of the key elements in qualitative data analysis is the systematic coding of text (Strauss and Corbin 1990; Miles and Huberman 1994). A number of different approaches to generating these codes do exist, but this thesis uses the principles of 'emic' and 'etic' coding (Silverman, 2001). This approach was used to provide an analytical balance between those *a priori* codes derived from the research questions of the thesis and that are carried to interview by the researcher and addressed through the interview schedule ('etic'), with those that emerge from the interviewee ('emic'). These

emergent codes are derived from the conceptual framework of those being studied and make use of the words or phrases of the respondent. The initial phrase of coding, which occurred while the research was still going on, produced over 100 codes. This set of codes was explored and reduced to the set described in the code table provided in Appendix 5. These codes were then used in the final analysis of the data.

5.8 Concluding comments

This chapter has presented a detailed analysis and explanation of the research process and justifies the decisions to use specific research methods. It has also sought to illustrate a number of limitations which may have affected the research, such as missing the stakeholder dialogue process in NE Kent and explain how they have been dealt with. Finally it outlines the processes employed to analyse the data.

The empirical findings of this programme of research are reported in the following chapters. The perspectives of the stakeholders on the partnership approach to managing the EMSs are described alongside the official government account of how the process should work. Together, they constitute an analysis of what is happening on the ground, what is working well and where problems have emerged.

6

The Wash and North Norfolk Coast European Marine Site

Introduction

This chapter marks a change in focus, from the largely theoretical discussions on the management of CPRs and the descriptions of the case studies, to an analysis of the perspectives of stakeholders who are directly affected by the management processes in place on the ground. So far this thesis has considered a number of questions about the institutional arrangements put in place to manage EMSs and factors which may influence the perspective of stakeholders on these arrangements. It has also looked at various tools for developing partnership capacity and engaging with stakeholders. The work draws heavily on CPR theory but also tries to move beyond the idea that CPRs can be best managed by groups of self-organised local actors without the interference of the state. Instead the focus is on finding ways that the state, or in the case of the EMSs, the NCA, can work in partnership with the communities to facilitate and monitor the process to ensure the externally derived biodiversity obligations can be met.

However, lists of CPR defining principles such as Agrawal's (2001) critical enabling conditions for sustainability of the commons, provide a useful framework, based on generic knowledge, from which practitioners can build knowledge of the specific site conditions by using an ethnographic approach (McCay 2002). The task is then as McCay and Jentof (1998:24) sum up:

'… to determine, for any given case of apparent abuse of common resources, where the failures lie and what can be done about them. To do this requires exploring how property rights are understood by various parties and how those meanings are translated into behaviour, customs and law. It requires understanding the nature of conflicts over rights and responsibilities, the role of science and other forms of expertises and of larger global processes affecting land and natural resource management throughout the world. It also requires understanding, respecting, and building upon the social and political capabilities of local communities, but also of the dis-embedding forces of modern society'.

These challenges laid down by McCay are addressed through the research questions outlined in Chapter 3. The purpose of this chapter and the next is to address the research questions in the context of the two case studies:

- What is the nature of the relationship between stakeholders and the EMSs and does it affect the management of the site?
- What form should the relationship between the state and local stakeholders take in order to balance provision for stakeholder participation with fulfilment of statutory obligations?
- Is the concept of a statutory partnership a useful tool for the management of MPAs or an unworkable contradiction in terms?
- What are the implications of the ecosystem approach for MPA management?
- Is it possible to define a proportionate application of the precautionary principle or does this only lead to further questions regarding when it should be used?
- What role does social capital play in the development of partnerships for the management of MPAs?

As previously outlined in Chapter 4, the context surrounding the two sites and the approaches to management are very different. While this adds considerable depth to the study it also means that the degree to which the research questions are addressed in each case study will differ. In both case studies the core questions regarding the nature of the institutional arrangements in place for managing the sites are discussed in depth

as well as those concerning the relationship between statutory and non-statutory stakeholders. The focus of this chapter is The Wash and North Norfolk Coast EMS, where as a result of a recent Public Inquiry (PI) particular attention is given to questions regarding NCA/government's ability to act as a facilitator of the management process rather than a controller. While the NE Kent EMS case study focuses on the decision to adopt the ecosystem approach as a basis for the management scheme and whether the EMS designation can be used as a focus for the development of social capital.

The chapter begins by examining the relationship between the stakeholders and the natural environment. This is followed by a general overview of the perceptions of the stakeholders on the EMS designation and the approaches adopted to build partnership capacity and manage the site. Third, the relationship between the different stakeholder groups is explored through an analysis of the mechanisms in place to incorporate stakeholder's ideas and perspectives into the management of the site. Fourth, the impact of the legislation on the designated area is analysed; the focus of this section is the analysis of the implications of The Wash PI. Through this analysis other key issues are also explored such as the implications of the terms 'the precautionary principle' and ecosystem approach as well as the role social capital played in rebuilding the partnership after the PI. Fifth, the wider governance of conservation in the surrounding area is analysed and in particular the way a number of overlapping designations and management schemes co-ordinate conservation efforts in the area are considered. Finally, stakeholder's ideas and concerns for the future of the designated area are explored.

6.1 People and the European Marine Site

As Agrawal (2001) notes, an in depth understanding of the relationship between the stakeholders and the resource system constitutes an essential element of the analysis of a CPR. In both the case studies presented here this relationship has undergone significant changes in recent years which have had an impact on the management of the sites. Traditionally the primary use of the sea has been for fisheries and transport, although until recently transport has been seen as relatively low impact. As a result much of the work in the field of marine conservation has focussed on fisheries

management. However, today the marine and coastal areas provide many different functions, both extractive and non-extractive to multiple users (Steins and Edwards 1998; Jones 2002). This change in function of the marine and coastal areas from traditional extractive uses to non-extractive uses such as recreation and tourism has undoubtedly led to traditional users becoming marginalised. Consequently the environment has significantly deteriorated in the pursuit of increased economic development. (Christie et al. 2003 and Garaway and Esteban 2003).

In recent years these new challenges have been recognised and sparked an interest in the management of multiple use MPAs (Berkes 2004; Steins and Edwards 1998; Jones and Burgess 2005; Mascia 2004; Selsky and Crehan, 1996). It is clear from the resource system characteristics of The Wash and North Norfolk Coast EMS, outlined in Chapter 4, that this site is definitely a multi-use MPA. As a result a thorough analysis of the different stakeholders with an interest in the site and an understanding of their relationship with the natural environment is the logical starting point for the analysis.

6.1.1 Historical relationship between conservation and the local community

In Chapter 4 the long history of interaction between communities surrounding The Wash and North Norfolk Coast and the marine environment is described in depth. This has led to many local people developing strong opinions on the management of the site and on occasions disputes have arisen between local people and conservationists.

A local artist, historian and retired fisher told me that *'the first conservation initiative on the North Norfolk Coast occurred in 1912 when the National Trust built a centre on Blakeney Point. They failed to consult local people and it was promptly burnt down by local fishermen'*. He went on to say that since then the relationship between local people and conservationists has been dominated by a '*lack of respect and understanding from both parties'*. It is clear that much of the animosity which has historically occurred between the *'indigenous'* population and environmental policy makers and managers has stemmed from the fact that they are perceived as being out of touch with the needs of the local community. Although the participatory nature of the legislation governing EMS has led to the majority of stakeholders viewing the EMS as a new chapter in the history of relations between local people and conservationists,

problems and disagreements still occur. The lack of social capital represents a potentially serious CAP which could undermine the whole management of the site. Consequently, tackling these issues has been a high priority which is fully recognised within the regulations. A central aim of the legislation is to put in place organisational arrangements to manage these disagreements. However, as identified in Chapter 2 the complex nature of these partnerships incorporating many different levels of government has led to the development of 'scale challenges' (Crush et al. 2006); the challenges associated with the establishment of links between different levels of government. Overcoming these scale challenges represents one of the most significant CAPs facing the EMS partnerships. Therefore, as Rydin (2006) suggests, to fully understand the relationships which exist within the partnership and the cultural aspects of the institutional arrangements it is important to consider the backgrounds of key groups of stakeholders. This is also recognised by Agrawal (2001) who highlights the importance of group characteristics in his synthesis of facilitating conditions.

6.2 Who are the stakeholders?

Essentially, the stakeholders can be broken down into three groups. First, the indigenous population who have lived in the area their whole lives and either rely on the natural resources for their livelihoods themselves, or have strong family ties to traditional industries. Second, the newcomers who have moved to the area in recent years (often in retirement) and developed an interest in the natural environment and local governance. Third, representatives of statutory or non-statutory organisations who have an interest in the site, not all of these people live in the vicinity of the EMS. It is clear that a number of stakeholders fit into more than one category, for example, some of the representatives of the statutory and non- statutory organisations were in fact also part of the 'indigenous' population, therefore caution is required. However, loosely applied, these classifications can be used to help understand the range of opinions present amongst the stakeholders and the interactions between various individuals and interest groups.

6.2.1 The indigenous population

Amongst the 'indigenous' population there is a clear deep seated connection to the area, this came across very quickly in the interviews I conducted with them and also in the comments they made at meetings. Many of the small-scale fishermen and longshoremen who worked on the North Norfolk Coast described how their lives revolved around the weather and the seasons. Even the commercial fishermen on The Wash who are involved in shellfish farming on an industrial scale spoke of '*the love and respect they had of the area'* and the importance of '*working with nature not against it*' (Wash Fisher). They clearly felt that they had a responsibility for looking after the site and that their extensive long term experience meant they had the knowledge to do so. As one local recreational fisher and member of the local advisory group put it: '*I have worked and played in the area for over 30 years…I feel I'm a custodian and have a responsibility to conserve the area for future generations'*.

This belief in the knowledge and experience they had built up over many years represents one of the major CAPs between them and other interest groups (see below), especially when their opinions conflicted with 'scientific knowledge'. However, it appears that attitudes towards conservation amongst the indigenous population may be changing. The research showed that the younger generation had a more sympathetic view of conservation than the older generation and this was acknowledged by the NCA. When talking about one of the local fishers' associations the NCA's local conservation officer commented: '*Recently they elected a new younger chair who's much more willing to work with us, this has resulted in an improvement in our working relationship.*' Furthermore, the local RSPB representative commented:

> '*We saw this with the agriculture industry in the 1980s and the older farmers were very reluctant and against the changes, but their sons saw the way things were going and have embraced the changes. In some ways I see this happening with the fishing industry. If you talk to the younger generation they are willing to listen'*.

Also the new wild fowlers' association representative on one of the local advisory groups said: *'In the past there has been a lot of animosity between our members and the*

EMS management. However, now we work with them very closely and often provide free labour for local conservation projects'. This is a perfect example of bracing social capital which is now common between previously hostile groups of stakeholders and has developed out of partnership working initiatives.

The area surrounding the North Norfolk Coast and The Wash is dominated by a number of small villages and towns, which even today remain fairly isolated. Consequently high levels of bonded social capital have developed within them and there is an element of suspicion between the different communities as well as of external organisations. This is particularly evident between the fishing communities on The Wash and the North Norfolk Coast. In response to questions regarding the PI which involved The Wash fishers, fishers on the North Norfolk Coast were sympathetic to the extent that they thought they were being bullied by the conservationists. However, they argued that at least part of the blame lay with the fishers themselves as they had over-intensified their operations. As one North Norfolk Coast fisher commented:

> *'I think things have to be done in a sustainable fashion. So if you create a very densely populated area of mussel then that's going to encourage the eider. I sympathise with the fishermen up there, they have spent the money and time putting the stock down… but everything has to be done in a sustainable way.'*

In addition The Wash fishers argued that the small scale of the fisheries on the North Norfolk Coast didn't merit an opinion. The divided nature of the fishing industry was also acknowledged by the NCA conservation officer who described the fishers as '*set in various factions'*. Furthermore, representatives of conservation and community groups in both parts of the site argued that too much attention was being paid to the other! The '*fractured*' nature of the indigenous population has largely developed from the presence of a high level of bonded social capital within the small isolated communities surrounding much of the EMS. This poses significant challenges for collaborative management; if stakeholders from the same interest group can't agree policies amongst themselves, it is extremely difficult to reach a consensus across the whole partnership.

6.2.2 The newcomers

Amongst the 'new comers' to the area it was generally accepted that they would never be considered locals. One of the local advisory group secretaries commented: *'I've lived here for nearly 15 years and been coming up here for more than 30 years, but I'm still considered an outsider!'* However, the general attitude of those who were involved with the EMS was that by getting involved with community organisations and groups it was possible to at least become integrated into the communities. Interestingly, a number observed that they had built up personal friendships with both people from the 'indigenous' population and those who were involved with managing the EMS. As a result they often ended up as mediators when disputes arose.

6.2.3 Statutory and non statutory organisations

The three project officers who lead the work of the three conservation partnerships which operate in the area (AONB, WESG, EMS) have all lived and worked in the area for many years, although only one of them described themselves as a '*born and bred local*'. Their roles involve coordinating the partnerships and working closely with a wide range of stakeholders. On the whole they appear to be respected and well liked by the vast majority of stakeholders. They all denied that their 'local credentials' assisted them in their role communicating with stakeholders, although one commented that they thought their age (mid to late 40s) and general life experience made gaining the respect of the stakeholders easier than for a younger person. However, a number of the local stakeholders cited the fact that the project officers were 'local' and often seen around the site as an important factor in their ability to do their jobs well. Their local connections allow them to bridge the gap between the local population and the RAs providing a vital channel for communication on the day to day management of the site. However, when the relationships within the partnership become strained (for example during the eider PI) their credibility with the local population is even more important for maintaining social capital between the different factions.

The relationship between the local community and the NCA conservation officer appears to be more complex and has to be viewed in terms of both the communities relationship with the NCA as well as the particular individual. Historically the NCA

had been seen as very draconian, imposing its will on local people without consultation. Today, despite the participatory nature of the EMS partnership they still felt the NCA wielded too much power. This feeling was summed up by a Wash fisher who commented *'although they listen to us when it suits them, if our suggestions don't fit in with their current agenda they walk right over us'*.

Furthermore, the conservation officer's remit goes beyond The Wash and North Norfolk Coast EMS and is based outside the area. As a result he is not regularly seen around the site; this led to a number of criticisms of rash decisions being based on only one or two site visits. In addition a number of stakeholders commented that his age and perceived lack of *'on the ground experience'* affected his ability to gain the respect of the stakeholders. To some extent these negative perceptions undermined the NCA's ability to deliver strong leadership to the partnership as required by the Habitats Regulations and may have contributed to the break down in communication which led to the PI.

However, ultimately this, at times problematic relationship is at least in part a reflection of the complex role played by the NCA as described in Chapter 3. Although their primary role is to facilitate the management programme, ultimately they still have a responsibility to ensure the conservation obligations are met. This dual role puts them under considerable pressure and often requires them to *'step back from the local pressures and take an 'independent' view'* (NCA Conservation Officer).

It is essential to stress the importance of personality in the relationship between local stakeholders and officials from both statutory and non statutory organisations. In many of the conversations I had with stakeholders they talked about their relationship with particular individuals rather than the organisations. Furthermore, it was clear that the nature of the relationship with individual representatives has a considerable impact on the perceptions stakeholders have of the whole organisation.

The SFC also plays an important role within the EMS partnership; they are the lead authority and have a role in the day to day organisation of the EMS, providing office facilities for the EMS project manager. The Clark and other senior fisheries officers were respected by the majority of local fishers and regarded as having developed

extensive knowledge of the fisheries over many years. Overall they appear to have a good relationship with the local stakeholders and disagreements regarding quotas and the enforcement of rules are normally resolved quickly. In fact the main criticism of ESFJC from local stakeholders was that they covered too big an area and are under resourced making it too easy for fishers to break the rules. Consequently they have an important role to play in ensuring they are being seen to police the fisheries in a rigorous and unbiased fashion to reduce the claims of 'free riding' from rival factions of fishers.

ESFJCs position within the partnership is complex and highlights that developing bracing social capital between statutory organisations is as important as relationships between statutory organisations and local stakeholders. On the one hand they represent their interest as fisheries managers and on the other they appear to unofficially act as representatives of the fishing industry which has led to conflicts with other partners. However, this is a perception ESFJC strongly rejected:

> *'As an organisation many outside bodies see us as an industry lobby group, were not. We are a parliamentary created body and we're here to manage the fishery'*. (Fisheries Officer).

Nevertheless, it is clear that ESFJC often acts as a mediator between the interests of the fishermen and conservationists. This perceived dual role was evident at the PI where they gave evidence in support of the fishers' case. This was illustrated by a comment made by ESFJC Clark in response to the RSPB's reaction to the PI verdict:

> *'The RSPB described the PI as a great victory to stop this highly mechanised industry. Now this paints a picture of the big sand eel condike vessel, you know, these things just remove everything they can, that's not what's happening here. I know we are talking about the removal of tons of mussels, but it's well thought out and there are thousands of tons in The Wash, we think this is a sustainable fishery…. It is a shame this eider issue came along because beforehand everyone was at least reasonably supportive as the artificial beds took the pressure off the natural stocks'*.

This has led to the relationship between the NCA and ESFJC becoming strained at times. Both the ESFJC Clerk and the NCA conservation officer described their relationship as '*fairly good*'. It was clear from interviews with both parties that there were a number of differences of opinion on some high profile issues surrounding the management of '*sustainable*' fisheries. For example ESFJC is concerned that the NCA won't acknowledge the *'conservation'* value of the artificial mussel lays. However, ultimately the Habitats Regulations require all the RAs including the Sea Fisheries Committee and NCA to work together and both parties agreed that it was much better for them to work together rather than against each other.

All the local councils which have a jurisdiction that covers part of the EMS are represented on the EMS management group by a combination of elected councillors and council officers. Other RA include the Ministry of defence (MOD) and the Environment Agency (see p. for full list of RAs). These organisations have remits which go way beyond the EMS designation and their membership of the EMS management group is only a small part of their role. However, these organisations play an important part in ensuring as wide a perspective as possible is included in the decision making process. Furthermore, a high number of the representatives from these organisations are 'local people' which goes some way to increase the perceived legitimacy of the management group.

6.3 Impact of a changing stakeholder population on the management of the site

The changing profile of the stakeholder has undoubtedly had an impact on both the designation of the EMS and their perception of it. The changes in the demography of coastal areas have also contributed to the shifting relationship between stakeholders and the environment. The loss of many traditional industries has forced people to move away or seek to low skilled and low paid work in the new service industries. On the North Norfolk Coast villages and hamlets traditionally populated by an indigenous population with a deep connection to the natural environment have been taken over by second homeowners who are only occasionally in residence and have little connection to the area. These changes have led to a considerable loss of knowledge amongst local people who traditionally relied upon natural resources for their livelihoods and had a vested interest in ensuring the area was managed in a sustainable way.

Furthermore, these changes have occurred simultaneously with an altering in ideas about the relationship between humanity and the environment. Increasingly it is being realised that the perceived *'plastic'* relationship (Murphy 1994) humanity presumed it had with nature since the enlightenment has led to decades of manipulation of the marine environment for economic development. Consequently, the onset of the recent environmental crisis and the realisation that it is more than just a social construction has led to the development of the *'risk society'* (Beck 1992). Ultimately it could be argued that the combination of the loss of local knowledge and rising concerns about environmental destruction has led to the increase in the designation of protected areas. In contrast to traditional approaches to environmental management the designation of protected areas usually requires 'experts' to be brought in from outside to aid the management. However, their ideas often differ from traditional management techniques, providing another source of potential conflict.

6.4 Stakeholder perceptions of the European Marine Site designation and management scheme

The way stakeholders respond to legislation determines how effective it is in achieving its intended goal. The difficulties associated with policing the marine environment mean that without the support of the majority of stakeholders, implementing the legislation is virtually impossible. Furthermore, much of the literature associated with CPR theory (e.g Borrini-Feyerabend, et al. 2004 and Baland and Platteau 1996) stresses that stakeholders take better care of CPRs if they have a sense of ownership and control over the resources.

Overall it was clear that the vast majority of stakeholders interviewed were positive about the designation of the site as an EMSs and thought it was necessary to ensure it's long term sustainability. As one local farmer and chair of a local advisory group put it:

> *'If everyone was sensible we wouldn't need the designation but unfortunately that's not the case, people tend to only look in tunnel vision at their own concerns. So its good that it has been designated and protected.'*

It was this concern to protect against short-termism which motivated the majority of stakeholders and representatives from RAs to work together to protect the area, even if on occasions their views differed on the correct methods.

Furthermore, although a few stakeholders demonstrated an element of anti-Europeanism, '*European legislation goes against the idea of local democracy… everything we do is overruled by Brussels'* (Wash Fisher), the vast majority of people supported the European designation and recognised that intervention from outside the area was necessary to ensure the future protection of the site. Many people argued that *'a European designation gives us more credibility'* (Local Advisory Group Chair). Also, a number of stakeholders commented that *'national conservation policy had been a disaster for so long that the European input was necessary to the change in direction'* (ibid.).

In particular it was the adoption of the *'partnership approach'* and the opportunity for public consultation that the stakeholders especially liked. A number of stakeholders stated that, as a result of this clause in the legislation and the development of institutional arrangements which allowed for stakeholder participation, it marked real change from the old *'command and control'* attitude which had previously dominated conservation policy: '*The EMS legislation has panned out differently, because it has that paragraph written into it which says that people who live, work and play in the site have to be represented and have a legitimate voice'* (Local Advisory Group Chair). The main criticism of previous legislation and conservation initiatives was that the decision making power was in the hand of the wrong people and local concerns were not taken into consideration. In addition previous legislation was also criticised for having little impact as many stakeholders were unaware of it. However, by *'involving local people in the process it is much easier to make them aware of what they need to do/change'* (AONB Project Officer).

The management scheme itself has been received by stakeholders with a mixed reaction. Although the majority agreed with the perspective of the NCA conservation officer that *'due to the size of the site it would be impossible to manage without a written management scheme… the document makes everybody's responsibilities clear'*, some stakeholders remained concerned that it was overly complex and bureaucratic.

As a result this has led to a number of local people becoming disinterested and regarding the whole process as *'another bureaucratic exercise'* (Local Advisory Group Chair). As one of the ex advisory group chairs noted: *'it's very bureaucratic and as a consequence some of the locals have not grasped the influence they have had, that influence is buried in the bureaucracy and they can't find it'*. However, although it was recognised that the document was not meant to be a manual for the day to day management of activities, a common complaint was that *'less time should be spent worrying about the overly complex management scheme and more effort put in to taking action on the ground'* (Local Councillor).

There was also some concern from a number of stakeholders (predominately elected councillors and council officials) about the amount of bureaucracy and meetings associated with the partnership generally. As one local councillor put it:

> *'How frequently they have meetings etc is probably overkill for what they have to do. Because, as with anything else, once it's up and running nothing is going to radically change that often and I would say you only need to meet when something is going to change… …they* [the meetings] *can get quite political with members arguing about issues which are outside of the EMS's remit.'*

This perceived lack of *'frontline action'* was a constant source of annoyance to many stakeholders. Although generally they supported the EMS and welcomed the opportunity to contribute to it, the main complaint was that nothing practical ever happens. These comments from a longshoreman were typical:

> *'…*[it] *does not do anything at all. The EMS is just another quango like Natural England. I agree there is a need for reserves and protecting things and Natural England are quite happy to talk about it but nothing is ever done. Did you see that person who just walked over there with a dog not on a lead, and it's in the middle of the nesting season. If you say anything to Natural England or the EMS people they will say, "oh, we'll look in to it," but nothing is ever done'*.

However, the 'front line' actions which are in place such as the system for reporting low flying aircraft over areas important for nesting birds were unanimously supported.

The perceived lack of 'policing' appeared to be a major source of contention amongst stakeholders, during the interviews they often stressed that they always stuck to the rules but they didn't trust others to do so; many of them argued that it *'puts those of us that stick to the rules at a major disadvantage'*. This demonstrated a clear lack of bridging social capital between some groups, and demonstrated that the level of trust amongst stakeholders was not higher enough for the EMS to be completely self regulating. Although it was very clear the stakeholders wanted to be actively involved with the management of the EMS they felt it was necessary for an outside body to enforce the rules and regulations which the stakeholders had developed. The issue of enforcement is likely to get worse before it gets better as the recent rise in fuel prices has led to ESFJC reducing the number of patrols it carries out. In addition it also highlights the importance of authorities being seen to engage in even-handed enforcement to avoid the temptations of free riding by either local or incoming opportunists (Jones and Burgess 2005). Furthermore, for the stakeholders to accept that enforcement is occurring even-handedly it is essential that a high level of social capital is developed between both the individuals tasked with policing the site and stakeholders. It was stressed during the focus groups that this can only be achieved if the individuals involved possessed strong local credentials and were seen to have developed extensive knowledge of the site through experience rather than formal education.

An additional problem associated with the perceived complicity surrounding the management scheme was the apparent confusion amongst some stakeholders (and even some members of the management group) over the remit of the EMS. This has led to many meetings becoming dominated by discussions about 'plans and projects', such as wind farms, which are outside the remit of the management group. Although it is recognised by NCA and the EMS project manager that the group provides a useful forum for the discussion of controversial issues, some members appear to have become frustrated at the groups inability to directly influence these issues. In some cases this appears to have led to a sense of disillusionment developing about the EMS as a whole.

These concerns regarding the overly bureaucratic nature of the management scheme and the processes involved with both its development and implementation raise some important questions regarding the institutional arrangements. It is clear that if the

arrangements aim to facilitate stakeholder discussions they need to be accessible to people who may not be used to engaging in policy development circles. Furthermore, it is important that their is a clearly visible link between there inputs and the management of the site, otherwise apathy is likely to develop affecting the recruitment of stakeholders and ultimately undermining the legitimacy of the partnership.

6.5 Stakeholder engagement

For partnership and co-management approaches to natural resource management to be successful it is essential that stakeholders take an interest and play an active role in the management of the sites. The Habitats Regulations stipulates that certain statutory organisations (the RAs) have to play an active role in the management of the site; however for the partnerships to be a success it is essential that other organisations and individuals get involved. Therefore it is essential that opportunities for stakeholder engagement form a central part of the institutional arrangements.

6.5.1 Advisory groups

Following the DETER (1998) recommended management structure (See Chapter 3), the primary tool for stakeholder participation is through the three local advisory groups. It was clear that the local stakeholders felt the advisory groups gave them a *'voice which is listened too'* and provided them with the opportunity to question and have an input in the decisions which are made by the management group. As one of the advisory group chairs put it:

> *'I think the advisory group is very good and an important tool and forum for all bodies concerned with the management of the coastline…If Natural England have a wizard idea about something they want to do at least everyone can be informed and knows what is going on at an early stage. If it does impact on fishermen, people sitting in an office in Peterborough may be completely oblivious on that form of impact, they can be made aware of it before the ball rolls too far in the wrong direction'.*

The advisory groups were also seen as an important forum for different stakeholders to meet each other and develop a better understanding of the activities other people are engaged in. This was illustrated through the example of jet skiers who had been regarded with contempt by other users of the site for many years. Their inclusion in the advisory group has meant that other users have been able to explain their concerns and codes of conduct have been developed. Furthermore, responsible users and members of recognised organisations have taken it upon themselves to try and educate jet skiers acting irresponsibly in an attempt to improve the image of their sport.

It is clear from the research conducted by Gardener (2004) and Jones and Burgess (2005) that when the site was first designated many stakeholders were concerned about the impact of the legislation on their livelihoods and were keen to get their point of view across, consequently attendance at the advisory groups was high. All three advisory group chairs commented that when the groups were first introduced they regularly got 30-35 people attending the meetings. However, 6 years on despite continuing support for the advisory groups they are increasingly suffering from poor attendance, *'initially people were very concerned about what impact the EMS would have on their livelihoods and wanted to have a say…now we are lucky if we get 10 or 12'* (Advisory Group Member). It seems that now the majority of the stakeholders are aware of their obligations and are satisfied that providing they keep to a few basic rules the designations are unlikely to cause them problems, they are less concerned about the designation. As a result persuading stakeholders to engage in consultation exercises is becoming a significant challenge for the NCA and management group.
However, as one of the advisory group chairs pointed out: *'…the irony is whenever there is a bit of controversy we are packed out.'* This was confirmed by another of the chairs who pointed out, *'during the run up to the eider inquiry on The Wash attendance at meetings shot up.'*

Evidence from the research suggests there are a number of factors which have impacted on the level of involvement with the advisory group. First, it appears that overall the majority of people are at least reasonably happy with the way the site is being managed and therefore don't feel the need to voice their opinion. Second, some stakeholders appear to have become disillusioned with the EMS, *'nothing ever gets done'*, and therefore don't see the point in turning up. Third, there are a small number of

individuals who have been actively involved with advisory groups for many years, the majority of other stakeholders feel that they are doing *'a good job'* of representing them and don't feel the need to take part. However, this final point could also be interpreted as a sign that a kind of *'clique'* has developed amongst the core members (bonded social capital) and others don't feel welcome. These challenges associated with maintaining the momentum of the partnership are potentially quite serious as they threaten to undermine its legitimacy. Stakeholders clearly value the advisory groups when issues affecting them arise, but, it appears there is a need to find ways to encourage people to engage with the management process on a more regular basis.

Overall the reaction to the advisory groups was positive from both local stakeholders and RAs. It was clear that they provided local people with the opportunity to feed their knowledge and opinions into the system. Furthermore, the NCA other relevant authorities found the information provided by local stakeholders useful. However, problems still arise when 'local' knowledge contradicts 'scientific' or 'expert' knowledge (see below).

6.5.2 Engaging with the fishing industry

The research clearly shows that those stakeholders who have chosen to engage with the EMS process and input their views are generally supportive of the system. However, it is clear that many others have chosen not to get involved. This raises the question; are the right people involved? In particular it appears that the fishing industry is severely underrepresented and as Lauber et al. (2008) point out the absence of just a few specific stakeholders can undermine the partnership's ability to gain the approval of the wider community. Trying to establish the reasons behind this has been problematic as making contact with fishers who were not engaged with the process was difficult and persuading them to be interviewed was even harder. However, two agreed and other stakeholders voiced an opinion on why fishers were often unwilling to engage in the management process. Significant support was found for the arguments presented by Acheson (1981) and May (2008) that the nature of the fishing industry means fishers are often not available to partake in consultation exercises, the research also revealed a high level of disillusionment amongst fishers. One fisher who used to attend the advisory groups but has become disillusioned in recent years commented:

'The trouble with a lot of fishermen is they do this job because they are loners and to stand up and be counted, they don't like it. When I used to go home and complain, my missus used to scream and make a fuss, but it even wore her down in the end.'

The sense of disillusionment felt my many fishers was related to the perception that the EMS was largely a '*bureaucratic paper pushing exercise and didn't produce practical improvements*' (North Norfolk Coast fisher).

This perception of the EMS as an overly bureaucratic exercise appeared to be a central barrier to stakeholder engagement both within the fishing industry and wider community and represents a potentially serious conflict which could undermine the legitimacy of the partnership; this is closely related to the challenges of maintaining the momentum of the partnership highlighted by Jones and Burgess (2005). Consequently trying to make the day to day management of the EMS more relevant for local stakeholders represents a key future challenge for the partnership.

6.5.3 Other forms of engagement and outreach work

As well as the formal consultation and public engagement that takes place through the advisory groups, all three of the project managers stated that engaging with the wider population and informing people about the EMS was an important part of their roles. However, the EMS project manager in particular complained that he doesn't have the time to '*get out into the community*' as much as he would like. On a number of occasions he expressed a desire to try and re-focus his role to involve more outreach work. In particular he is keen to establish a coastal warden's scheme similar to the one developed in NE Kent (see Chapter 7). Furthermore, several members of the management groups stated that increasing the amount of outreach work conducted by the EMS partnership was a high priority to combat the issues raised above regarding apathy and disillusionment. At the moment outreach work appears to be focused on informing the public of the codes of conduct in place for coastal users such as dog walkers. These awareness raising campaigns are predominately conducted through the distribution of leaflets around the coastline.

Currently the majority of outreach work is organised by the WESG in collaboration with the EMS partnership, they regularly give presentations to schools and community groups and generally promote sustainable industry operating in the area. They also organise an Annual '*Wash Week'* in which a range of activities and presentations are organised to encourage people to learn more about the environment and the industries operating in the area.

These issues are explored further below where stakeholder perceptions of the impact of the legislation are discussed and in Chapter 8 where the different models of stakeholder engagement used across the two case studies are compared.

6.6 Impact of legislation

Like most other government legislation and initiatives EMS partnerships are dominated by a culture of evaluation. Every year they are required to produce annual reports which document the activities they have been involved with over the previous twelve months and the progress they have made towards fulfilling their action plans. Furthermore, the NCA has developed a 'score card' which allows partnerships to self-evaluate their progress.

However, although these formal evaluations provide an indication of the partnerships' success they tell us little about stakeholder opinion and the wider impact of the legislation. This information is critical because, as the research has demonstrated, unless stakeholders can see *'practical benefits'* resulting from the legislation they are unlikely to engage with the process in the future, which is essential for the partnership to succeed.

Furthermore, the target driven character of the legislation itself may have had an impact on the nature of the management scheme. Last year a series of advisory group meetings were convened to discuss the ongoing review of the management scheme. Part of the process involved making decisions on appropriate management targets for the new scheme. It was clear that the emphasis was on setting targets which 'could' be reached rather than ones which 'should' be reached. This raises some interesting

questions regarding the role stakeholders should play within the management scheme. Although it was clear that the targets have to be approved by the NCA there seems to be a real danger that un-facilitated stakeholder participation could lead to the watering down of conservation methods.

Although there remains significant debate between the stakeholders regarding the rights and wrongs of some of the implications of the legislation, it is generally agreed that it has had an impact. This was highlighted in January 2008 when, as a result of recovering cockle stocks, the NCA was able to re classify 15,000 hectares of intertidal mud and sandflats within the EMS from Unfavourable Declining to Unfavourable Recovering condition. This represents 25 per cent of the total improvement in condition the NCA was required to make in 07/08 across England (See Appendix 6 for full press release).

A number of stakeholders commented that the key factor in both the improvements in the natural environment and relations between conservationists and local stakeholders has been the requirement for stakeholders to be consulted and the setting up of the advisory groups. It has been widely acknowledged that this marked a significant turning point in the relationship between the NCA and local people. Furthermore, it appears that the benefits of this improved relationship have gone beyond the remit of the EMS and encouraged dialogue on other issues. This has primarily been achieved through the EMS funding the advisory groups.

However, despite these improvements in the natural environment and relations between stakeholders and conservationists it is the impact of the designation on activities which from the outset has caused the most concern. For example, the common rights holders described their *'battle'* with the NCA to be recognised as an important interest group:

> *'We have had a hard fight with regard to commoners over the last five or six years, we had a management plan for the site and it has been difficult to establish common rights within this agreement. They tried not to recognise us as common rights holders but occupiers'* (Common Rights Holder).

Most stakeholders now recognise that, providing their activities are carried out in a sustainable way, they are free to continue as before. Furthermore, the common rights holders and those reliant upon the long shore economy in particular, felt that the legislation protected them from threats from large scale commercial operators.

There is also evidence to suggest that the designation has provided support for various traditional activities which have been welcomed by the local community. For example, a local farmer described a scheme which allowed them to continue grazing on the marshes: '*We don't make much money from it but the money we get from the EMS means we break even, without it wouldn't be possible and the marsh would quickly deteriorate.* This represents an interesting and rare example of a positive intervention which encourages activities; such interventions are rare within marine/coastal conservation which normally requires activities to be restricted. Such initiatives represent a valuable public relations tool for the EMS, although, very few stakeholders were aware that the designation provides support to local farmers in this way.

The legislation has probably had the most significant impact on the fisheries and in particular the artificial mussel lays. The PI (see below for full analysis), regardless of the debate surrounding the result, was a clear example of the legislation having an impact. This was pointed out by the NCA conservation officer who said: *'It gives out a good message that the NCA are prepared to use the legislation to protect the site'*.

6.7 The Wash public inquiry

6.7.1 Scientific knowledge verses local knowledge

The issue of 'scientific' knowledge verses 'local' knowledge is probably the most contentious issue surrounding the management of the site and has been the root cause of many disagreements between the NCA and the indigenous population. In particular this was demonstrated by the PI, where the dispute between scientific knowledge and local knowledge was one of the areas on which the two sides could not agree. Although both sides accepted that the number of eiders feeding on The Wash had increased over recent years they disagreed on the degree and causes of the increase. The mussel cultivators didn't point to a specific reason for the increase, while the NCA

claimed it was due to the recent intensification of the mussel fishery, which attracted a greater number of birds.

A further complication was that both sides conceded that the wailers were ineffective in scaring eiders off the mussel lays. Therefore, without the success of both the application to use wailers and the separate application to shoot eider, the mussel cultivators maintained that they would have to abandon their lays. As a result, the inquiry was essentially investigating whether or not the mussel cultivators should be allowed to use wailers which they deemed ineffective, and the NCA also considered ineffective, but which still constituted a significant risk to the favourable condition of the site.

This poses a number of important questions regarding the incorporation of local knowledge into the management process and the 'value' which should be attributed to it. The Habitats Regulations clearly state that local knowledge should be incorporated into the management of the site, however, they also require the NCA to provide regular evaluation of the condition of the site based on scientific assessments. When a contradiction exists between the two approaches, problems are bound to arise. The research demonstrated that the vast majority of the local stakeholders working out on the site on a daily basis had developed their knowledge from years of experience and watching the actions of others, while the majority of officials responsible for the management of the site had developed their knowledge through formal education. As a result the two opposing groups become suspicious of the 'knowledge' posed by the other. This point is clearly illustrated by comparing the comments made by a fisher who had worked in the area for over 40 years and those made by a representative of the RSPB:

> *'I'm 67 years old, when you get to my age and you get some guy who is 22-23 years old telling me what goes on and what should happen in The Wash it's a complete insult…these people base their decisions on a couple of site visits, they have no idea what's really going on'* (Wash Fisher).

> *'…it is very easy for people who live and work in an environment to have their own pet theories about why something is happening…*[however] *when you have*

fishermen who feel they have to stand up for their industry you are going to have to question their independence and how scientifically rigorous their views are.' (RSPB Representative).

Furthermore, it appears that local stakeholders regularly become frustrated when 'scientific' data is presented to them as 'facts' which are not subject to debate and scrutiny by the EMS management group and advisory boards. For example during the PI there was significant debate between the fishers and conservationists regarding the methods used to count the number of eiders on the lays.

These differences of opinion on the value of 'local' knowledge and 'scientific' knowledge are further extenuated by conflicting perspectives on the use of natural resources. For example while all the parties represented at the PI agreed that eiders should be allowed to take a percentage of the mussels laid on the artificial lays, there was a clear conflict regarding how the balance should be reached. Combined with the disagreement about the behaviour of mussel spat in The Wash this became an explosive issue.

The fishers argued that if the mussel spat was *'left where it fell'* in The Wash only a small percentage of it would end up developing into mussel, furthermore much of it would settle in areas which were too deep for the eiders to reach. By collecting mussel spat from deeper areas within The Wash and re-laying it on the artificial lays as well as making a living they were '*providing a service for the birds*'. However, representatives from the RSPB and NCA argued that a higher percentage of the mussel spat was accessible to birds if it remained in situ than claimed by the fishers. They were also concerned that by 'feeding the birds' from the lays there was a danger that they may become overly reliant upon an artificial source of food that could be removed at anytime. Furthermore, the RSPB representative remarked that this presented an *'intellectual'* issue regarding the ownership of the mussel spat.

At the PI both sides conceded that the reliability and validity of a significant proportion of the scientific information presented was questionable. However, they interpreted the data very differently and called for the precautionary principle to be invoked for conflicting reasons. The mussel cultivators argued that the wider ecological impact of

abandoning the mussel lays was unclear as they had been in position for over 100 years and had become an essential feature of the ecosystem. Therefore, the scaring of the eiders, which they claimed would not significantly affect the integrity of the ecosystem of The Wash, was necessary to ensure the continuation of mussel farming, as an activity which had become integral to The Wash's ecosystem. The NCA claimed that there was little evidence to support the argument that the artificial lays had an important ecological function and that not enough was known about the wider ecological impacts of the wailers. Consequently, the NCA argued that the wailers should not be permitted, as they claimed that they would have significant impacts not only on the eider population, but also on other bird species and seals that are important components of The Wash's ecosystem, as well as being legally recognised features of the EMS.

This raises an interesting issue with regards to differing interpretations of the ecosystem approach. It is accepted that this concept can, like the related concept of sustainable development, be interpreted by different stakeholders in different ways (Mare 2005), often in a way that justifies the imperative of their vested interests in a given ecosystem (Corkeron 2006). In this case both the mussel cultivators and the NCA supported their case with differing interpretations of the role of mussel farming in The Wash ecosystem, the former arguing that mussel lays had become an essential element of The Wash's ecosystem, the latter arguing that the introduction of measures to reduce eider predation on mussel lays represented a threat to the integrity of The Wash's ecosystem. This also raises an important question regarding the interpretation and implementation of the precautionary principle, which argues that preventative measures should be taken when there is a suspicion that activities may cause major and irreversible damage to the environment, even if there is no conclusive evidence that such damage will occur (Mirovitskaya and Ascher 2001). However, it does not help when it is unclear which of a number of activities may or may not cause damage to ecosystems, especially given the challenges of establishing cause-effect relationships in marine ecosystems (Jones 2001). Scientific uncertainty can become a major source of CAPs within partnerships working towards the sustainable management of CPRs, as it is a basis for challenging the case for use restrictions where cause-effect links are highly debatable. This is particularly the case for marine ecosystems, as they are complex and our scientific understanding of them is relatively poor (Jones 2001), and is clearly the case with both

the claimed impacts of wailers on bird and seal populations and, to a lesser degree, the claimed role of mussel lays in the estuary ecosystem.

Furthermore, the problem is significantly magnified when there is a conflict between unproven scientific evidence and local knowledge developed over many years. This conflict was exacerbated in The Wash case by the RSPB, who were giving evidence in support of the NCA's case. They claimed that in cases such as this, local knowledge was irrelevant and the decision should be based purely on objective information presented by 'experts'. However, where scientific evidence and local knowledge are at odds, the final decision is often left to civil servants and politicians who are unlikely to have any significant scientific training or local knowledge. These difficult questions surrounding the use of the precautionary principle have resulted in the principle being criticised as an excuse for inaction (Roberts 1997). Consequently, it is clear that in some circumstances, where a decision has to be made, that it is not possible to use the precautionary principle. Therefore, it is necessary to make difficult value judgements on the proportionate application of the precautionary principle which in itself is likely to lead to further debate and possible disagreement.

6.7.2 Imperative Reasons of Overriding Public Interest (IROPI).

Related to the debate on the legitimacy of scientific knowledge V. local knowledge, is a possibly even more contentious debate regarding Imperative Reasons of Overriding Public Interest (IROPI). This refers to a clause in the legislation which may allow for projects to go ahead despite having a potentially negative impact on the site if there is an IROPI. This was highlighted in the PI but also touches on a wider debate which has affected relations between stakeholders.

At the PI the mussel cultivators made it clear that they thought their case strong enough without having to revert to the legislation regarding IROPI, but included it to add further weight to their case. They argued that the continuation of the cultivation of mussels on The Wash is in the public interest not only for ecological reasons, as discussed above, but also for socio-economic reasons, given its economic and traditional importance. The mussel cultivators also argued that The Wash is a unique environment for the farming of mussels which cannot be recreated elsewhere in the

UK. They considered that, although mussels are farmed in small quantities in other locations around the UK, The Wash is seen as the principal site for such mussel cultivation. Furthermore, they argued that failure to protect the mussel lays would severely disrupt both the EU and the UK government's policy to develop molluscan aquaculture. In particular, the mussel cultivators noted that, in terms of employment, the continuation of the mussel lays represents an IROPI as they claim that over 100 jobs would be lost if the lays were abandoned.

All these points were flatly rejected by the NCA, who again referred back to the lack of scientific evidence to support the mussel cultivators' claims that the abandonment of the lays would have a negative impact on The Wash's ecosystem. Furthermore, they argued that there is a strong possibility that if the present mussel cultivators abandoned the lays they would be taken over by others prepared to continue cultivating mussels in a less intensive fashion. The NCA disregarded the mussel cultivators' claims that failure to maintain the mussel lays would contradict UK and EU policy on molluscan aquaculture as irrelevant and minimal. They argued that there was no clear policy on molluscan aquaculture and that the policies referred to by the mussel cultivators were very general. Furthermore, they argued that when there is a conflict between law and policy, *'law trumps policy'*!

In conclusion, the NCA referred back to a Department of Environment, Food and Rural Affairs, Government Circular (2005) which states that, '*there will be few cases where it can be judged that IROPI will allow a development to proceed which may have a potentially negative effect on the integrity of a European site.'* Accordingly, they urged the Inquiry to address issues of IROPI with caution. The subsequent decision of the Government to reject the mussel cultivators appeal demonstrates that the NCA arguments were upheld, much to the frustration of the mussel cultivators.

6.8 Consequences of the public inquiry one year on

Inevitably the PI has had an impact on relationships within the partnership and its ability to manage the site. During the PI the previous trust and respect between the NCA and the mussel cultivators had been eroded. The mussel cultivators were angry at the lack of credibility attributed to their local knowledge and experience by the NCA,

accusing them of making rash judgments based on only a few site visits and making up the data regarding the number of eider on The Wash. On its side, the NCA felt let down by the mussel cultivators' failure to follow voluntary agreements on the testing of the wailers. The relationships between individuals had also broken down on a personal level, and during the inquiry representatives from the NCA did not feel comfortable going into local public houses owned by fishing families. Furthermore, it was clear from press releases by groups representing the mussel cultivators that the failure of the appeal had created considerable animosity between the two sides. The case also provokes some important and interesting questions regarding the credibility NCAs attribute to local knowledge and as Jones and Burgess (2005) speculated the ability of the state to move from a controlling to a facilitating role (see below).

However, surprisingly not all the impacts have been negative. Initially after the PI it appeared that the partnership had been fundamentally fractured; but despite the apparent break down of relations, twelve months after the PI the relationship appeared to be on the mend. Although it is clear that some of the fishers still remain angry about the result and in particular feel that the *'balance between nature conservation and 'sustainable' exploitation of the fishery is all wrong'*(Wash Fisher), overall, comments from the parties involved in the original enquiry suggest that relations were actually better than before the eider issues emerged. Both sides agreed that the PI was an opportunity for *'everyone to lay their cards on the table and thrash out the issues, and ultimately it provided clarity on the situation'* (EMS Project Officer). As the ESFJC Clark stated:

> '*We welcomed the decision in some ways as it gave clarity to the situation. What would not have done any good was if it had been left that we should do some more work on the impact…'*

Amongst the parties involved with the PI and the wider '*EMS community'* it was generally acknowledged that it was a shame the disagreement had resulted in a PI. The whole process had '*cost a lot of money and man hours'* (Local Councillor) and generated a great deal of bad press for the EMS. However, it was agreed that *'with issues such as these people become very stuck in their ways and stubborn, some times it is necessary to allow an outsider in to look at the facts from an independent position'*

(WESG Officer). Even members of the management group who were not directly involved with the case acknowledged that they were put in a difficult position; One councillor commented:

> *'We want to be promoting the fishing industry and those fishermen elect us and pay council tax so there is the potential for conflict there… it was clearly better that it was dealt with by a PI rather than beaten out between parties within the EMS because that could have been even more difficult.'*

It was also acknowledged that although the PI had only directly affected a small proportion of those involved with the EMS, it had sparked an important debate within the community more widely about the sustainable management of the area. *'It made people think more about the site and what it is about'*. The local RSPB representative commented:

> *'In some ways it was great that it went to a PI, because that meant that everybody has focussed on it. The whole issue of shellfishing and whether it is appropriate in the designated site was discussed. Furthermore, the PI generated a lot more data which is really useful.'*

It is also important to recognise that in the case of the eider PI that although the NCA took this particular course of action to ensure the obligations imposed on the partnership by the Habitats Directive were met, the interviews with the wider EMS community after the PI revealed that many stakeholders actually agreed with the position taken by the NCA. This challenges some of the concerns that the NCA were not taking local opinion seriously. Although there was clearly some concern that such an intervention may set a precedent and could potentially undermine the legitimacy of the partnership as a whole, many stakeholders felt that the over-intensification of the mussel fisheries had led to the eider problem. Of particular significance were the views of mussel farmers on the North Norfolk Coast who are cultivating mussels in a less intensive manner, as one North Norfolk mussel farmer commented:

> '*So if you create a very very densely populated area of mussels then that's going to encourage the eider. I sympathise with the fishermen up there, they*

have spent the money and time putting the stock down then its not very good. But everything has got to be done in a balanced way.'

Consequently it could be argued that the NCA was in fact playing to its role of facilitator and arbiter as it had listened to both sides of the argument and at the PI was representing the views of the majority of the stakeholders.

6.9 Re-building the partnership

Soon after the PI a meeting was convened between all the interested parties to try and find a way forward. The NCA conservation officer acknowledged that '*they went in to the meeting expecting an ear lashing*'. However, all parties were quite positive. As one fisher commented *'we were like boxers after a fight, prepared to make up'*. Over the following months dialogue between the two sides increased beyond the 'pre-eider' level. These discussions led to the NCA agreeing that due to good spat falls in recent years they were willing to allow some fishing to resume on the Gap, an area which had been closed for a number of years. Furthermore, as part of the survey work undertaken by ESFJC in relation to the proposed wind farm development a large area of mussel spat was discovered just outside The Wash. This meant that the fishermen could gather more spat locally, dramatically reducing their costs. Consequently they were prepared to absorb greater losses if the eiders returned en masse to the lays. The situation was further aided by the fact that during the 2006/2007 winter the eiders didn't return to The Wash in the same numbers as the previous two years and losses were minimised. It was reported in Fishing News that during the 2007/2008 winter the eiders had returned en masse to The Wash and once again were attacking the mussel lays. However, neither, ESFJC or the NCA received any official complaints from the fishers. Both organisations agreed that, although concerned by the number of eiders around the site, the generally improving condition of The Wash shellfisheries meant that the losses sustained by the fishers were manageable.

Currently it appears the fishery is stable, however, finding the balance between nature conservation and the commercial exploitation of the fisheries remains a delicate task. In 2008 it again looked as if the fishery was about to experience another crisis, lay holders

had to apply to ESFJC to renew their licences for the first time since the introduction of the legislation. In the past this has been a relatively straightforward process. However, under the Habitats Regulations ESFJC had to assess whether the lays had an impact on the designated features. This posed a number of problems as the definition of the term '*a significant impact*' was unclear and there was confusion over where the base line for the assessment should be set. ESFJC argued that data regarding the impact of the artificial lays from 1996 should be used as this was when the site had been designated an EMS. However, a number of conservation groups were calling for data from the 1900s to be used as this was when the first artificial lays were introduced. The dispute could have potentially caused a crisis within the fishing industry and severely damaged relations between the industry and conservation groups and also raises some important questions regarding the selection of base line data.

A crisis was eventually avoided when new policies on the shellfisheries were agreed between the NCA, ESFJC and the fishing industry. This was greatly assisted by the results of the NCA site assessment which re-classified 15,000 hectares of intertidal mud and sandflats within the site from Unfavourable Declining to Unfavourable Recovering condition. Following the agreement of the policies a joint statement was released by ESFJC, the NCA and the fishing industry. All three groups stressed the importance of the policies and how they had only come about as a result of 10 years of partnership working (Appendix 6). This clearly represents an improvement in relations between the two sides and demonstrates the existence of a high level of bracing social capital which appears to have survived the PI or at least been rapidly re-built.

Alongside the eider problem, two other issues have dominated discussions within the partnership over the last two years; the proposed offshore wind farm development and low flying aircraft. To a varying degree both have had an impact on the changing relationships between stakeholders in recent years and to some extent helped re-build the relationship between the NCA and fishing industry after the PI.

6.9.1 Impact of the wind farm development

It is clear one of the key factors in the re-building of relations after the eider inquiry was the discovery of the new source of mussel spat as a result of the surveys for the

wind farms, although this is now under threat from the wind farm. If the development goes ahead and the fishers once again have to rely on spat brought in from outside the area, their costs will go up and they will no longer be prepared to absorb heavy losses from eider predation. This could potentially plunge the fishery into a new crisis.

However, the wind farm has in fact played a much wider role in the re-building of relations between mussel farmers and conservationists. Furthermore, it has once again put significant pressure on the EMS partnership and demonstrated the strong feelings felt my many stakeholders about the management of the marine environment. The stakeholders interviewed were almost unanimously opposed to the proposed wind farm development; this included both conservationists and fishers, providing the two groups which were at odds over the eider issues with a new shared cause.

The vast majority of stakeholders recognised that climate change poses a major threat and there is a need to develop alternative sources of energy. Furthermore, many accepted the need for wind generation in The Wash, but were concerned about the nature of the development and the proposed route of the cables. In particular they were frustrated that as the development was outside the remit of the EMS designation they didn't have the opportunity to voice their opinion. There was also a significant amount of annoyance that an alternative shorter route for the cables was theoretically possible, but due to the additional cost of upgrading the substation at Skegness it had been rejected by the power company.

In general the fishers were particularly frustrated by the proposed development; they were fundamentally opposed to both the wind farms themselves, as they further restricted the area available for fishing, and the cables, because digging trenches in the sea bed is likely to stir up huge amounts of sediments having a detrimental impact on shellfish stocks. They were also concerned about the long term impact of the turbines on the sea bed: The views of the fishing industry were summed up by an experienced local fisher:

> *'The wind farm is a concern because they are filling the sea up with wind farms and I think there is going to be an enormous problem in the future. Once you start restricting the fishing and the fisherman has a licence to fish in the north*

sea, suddenly you have huge areas you can't fish. But worse than that, these things have a lifespan of about 25-30 years, when they are no longer needed the sea bed will be littered with rubbish and will be one big mess'.

Underpinning these concerns was a sense of frustration that despite the reassurance from the government that they would be '*consulted and listened to'* (Local Advisory Group Chair) on issues regarding the EMS it appeared that '*the government and big business could still bulldoze through the legislation and local planning processes'* (ibid.) when it suited them. A number of stakeholders clearly felt that they were the '*un-heard victims in the governments' drive to meet renewable energy targets and the government was unwilling to adopt a precautionary approach'* (Longshoreman). Furthermore, a number of stakeholders who had worked in the area for many years said they had warned the authorities of a number of practical problems associated with bringing cables ashore in the proposed locations:

' …from my experience of working around The Wash, if you get big machines on the mud flats it tends to get over run by the sea and disappear. Then you come to the grass and you have to cut through various natural creeks and upset the way the water flows in and out.' (Local Farmer).

However, they claimed that the authorities refused to acknowledge their concerns or take their opinion seriously.

6.9.2 Low flying aircraft

Another issue which has helped unite stakeholders from a range of interest groups is low flying aircraft. The skies above the EMS have been used for many years as a military training site; as a result it appears many stakeholders had come to accept the planes. This was demonstrated to me when I was interviewing 'local people' while military aircraft were flying very low above. The vast majority of people simply ignored them or commented '*you just get used to them after a while'*. Nevertheless, a recent increase in the number of civilian aircraft flying above the site, '*often very low over areas where birds are nesting'* has caused considerable concern in recent years. Although the incident reporting scheme (where stakeholders can record the details of the aircraft and then a warning letter is sent to the owner/operator), has been deemed

relatively successful, there is still a concern amongst a number of people that the authorities are not tackling the problem. In addition, stakeholders were frustrated that the military were introducing new types of aircraft to the area without going through the appropriate assessments. There was concern that once again *'the government was ignoring its own legislation'* (Local Councillor).

However, despite the common frustrations felt by fishers and conservationists, the issues surrounding low flying aircraft particularly angered fishers involved with the PI, as they claimed the level of scaring proposed would have had a significantly lower impact in terms of disturbing the wildlife than the constant low level flying operations conducted by the military.

6.10 Perceptions of contradiction and double standards

The issues surrounding wind farms in particular, and to a lesser extent low flying aircraft, combined with the eider issue have led to a dichotomous relationship developing between the NCA and local stakeholders. On the one hand both the fishers and NCA are opposed to the plans for the wind farm and the activities of the military, providing them with a common interest. However, on the other, the perceived lack of action from the NCA to deal with the wind farm and low flying issues has prompted some stakeholders to question the usefulness of the EMS legislation and to conclude that it's nothing more than a bureaucratic exercise. Furthermore, a number of stakeholders stated that they thought it is ridiculous that they won't allow the fishers to scare a few eiders off their lays but '*seem to be doing very little to prevent the power companies digging massive trenches in the sea bed to lay cables in'*. Although the NCA appears willing to explain repeatedly their position and the fact that plans and projects such as the wind farm are outside the remit of the EMS, this seems only to contribute to the frustration felt by stakeholders regarding the lack of action taken on the ground. Consequently some stakeholders have started to question how much power the partnership really has to protect the EMS from outside influences which are seen to be in the wider public interest. It could be argued that a more joined up *'ecosystem approach'* to the management of the wider environment is required. However, as the NE Kent EMS case study (Chapter 7) reveals adopting the ecosystem approach to manage a small MPA is a challenging and complex process.

Furthermore, these issues raise some interesting questions regarding what is in the public interest. The NCA and government clearly believe the potential threat to the site from using wailers to scare eiders outweighs the loss of income experienced by the fishers. However, the government is convinced that the potential damage caused to the sight by digging trenches to lay cables is acceptable as it contributes to meeting the ambitious targets on the generation of renewable energy. Furthermore, the military claim that due to the increased pressure they are under in Iraq and Afghanistan, they have no choice but to increase the number of training flights undertaken within the UK. This has resulted in a number of stakeholders claiming that there are double standards in operation, *'there is one rule for the little guys like the fishermen and another for the big guys like the power companies and government'* (Norfolk Fisher).

Although it appears that the eider issue was the catalyst in causing the initial fracturing of the partnership, it is also important to look at the bigger picture and to try and establish the underlying causes of the problems. There is a strong case to suggest that the governance model in operation has itself contributed to the troubles. The concept of a 'statutory partnership' is in many ways contradictory; on the one hand the local resource users are being encouraged to work together with the relevant authorities to manage resources in a sustainable manner, while on the other hand, the state still retains ultimate control as it must ensure strategic obligations are fulfilled. As Goodwin (1999) argues:

> *'…participatory conservation gives rise to two tendencies which make maintaining a unified conservation vision more problematic for national conservation organisations. First, local participation seems to increase local people's expectations of their right to be 'heard' and responded to. Second, by facilitating the development of local knowledge, local participation generates a local awareness which, with its concentration on personal significance and value, provides a new way of talking about conservation. This may be encouraging diverging ways of perceiving and defining rural space.'*

Put another way, it would be somewhat naive to give resource users the power to manage their own resources and then expect them to always tow the government line.

The internal flaw in this logic is succinctly highlighted by Geisler (2002): *'I expropriate you, then invite you to be my management partner. Precarious power logic; perfidious results.'*

However, it is also clear that the governance model was central in the re-building of the relationship between the two sides after the PI. The EMS management structure had developed over a number of years and evolved from a previous voluntary institution many of the individuals had built up strong professional and personal relationships which enabled them to quickly put their differences regarding the management of eider ducks aide and start moving forward. Furthermore, the highly integrated nature of the governance of the area represents an example of the importance of bracing social capital. As the chief fisheries officer also chaired the EMS management group it was possible to take a more holistic approach to finding a solution which directly led to the re-opening of The Gap to some fishing. Nevertheless, it is important to remember that the process has been greatly aided by natural phenomenon such as the generally improving condition of the shellfish stocks, the discovery of new sources of mussel spat and the reduction in eider numbers; although these conditions have, at least in part, been facilitated by good governance.

6.11 Governing nature conservation on The Wash and North Norfolk Coast

The primary focus of this thesis is the EMS, however, to fully understand the governance of the site it is necessary to consider the wider management of the area and think about the relationship between the three partnerships, (EMS, WESG and ANOB) which govern conservation in the area. Furthermore, the presence of the three partnerships was an issue which repeatedly came up in interviews and was raised at a number of meetings. As Table 4.1 (in Chapter 4) clearly outlines, the three partnerships are governed by different legislation and have a clearly defined remit but their agendas regularly overlap requiring them to work together.

The Norfolk Coast Partnership is defined in part by the need to meet the statutory duties placed upon partners in relation to the designation of an AONB. The first Management Plan covers 2004-09, which is a requirement of the relevant legislation, and identifies policies and

initiatives for conserving and enhancing the essential character of the terrestrial and aesthetic natural beauty of the Norfolk Coast AONB.

The EMS management scheme sets out the conservation objectives and includes an action plan to work towards the safeguarding of the marine and associated area features, as identified within the designations. Again this is set out within legislation. The management scheme was first launched in 2002, and currently a full second edition is pending following the completion of a thorough review.

The Wash Estuary Management Plan was first published in 1996 and a second edition was launched in 2005 after a fully engaging revision and is administered by the WESG. It provides a strategic framework for ensuring and promoting the sustainable use of the area's resources while trying to maintain the balance that allows the local communities to prosper and safeguards the heritage, wildlife, land and seascape features for future generations. The policies relate to economic regeneration, social development and environmental stewardship. However, the WESG's remit is not governed by legislation, therefore it delivers projects and actions within the plans for both the AONB and the EMS.

Despite this relatively clear break down of responsibilities between the partnerships and the acknowledgement of both project officers and stakeholders that the three partnerships work closely together, there remains a significant concern amongst some stakeholders that the cost of three partnerships cannot be justified. In particular concerns were raised by representatives from other RAs which contributed to the funding of the partnerships and attended the management group meetings. The following was a typical response from a local councillor:

> *'I do think they could probably all be rolled into one or two at most. As far as I'm concerned, as an executive member, we have to make decisions about funding of all these bodies, there is only a finite amount of money to fund such things. The more partnerships there are the more money they take from the local pot….They are quite accountable to us, but I think some of them are losing track of that. As an authority we have to enquire what they are doing with the funds we provide them…if you total up all the partnerships I have to fund under the environmental portfolio it comes to over £50,000, that's 1% of council tax. If you said to the electorate we will cut*

council tax by 1% but won't fund these things, I think many of them would be quite happy.'

There was also concern amongst other stakeholders that having three partnerships was very confusing and made the governance of the area appear overly bureaucratic. *'… it is very difficult for people to see where the line is drawn between the three partnerships, if they have a problem or issue they don't know where to turn'* (Local Resident).

These concerns led to the commissioning of a review of the interactions between the three partnerships active in the area and an investigation into options for improving efficiencies. The report discusses a wide range of options from the complete amalgamation of the three partnerships to the continuation of the status quo. In conclusion it recommends that the three partnerships should continue to operate independently for the time being however, recognises the need to:

- Improve communication and information flow vertically and horizontally throughout and between the partnerships to reduce perception of duplication.
- Raise understanding of how the partnerships interact and how this could be improved.
- Propose efficiencies that save time and financial impacts without reducing initial resource contribution – both for partners attending meetings and for partnership staff/work so resources go further e.g. achieve a greater impact with time and resource provided.

The report also provides a detailed explanation on how these recommendations will be achieved and outlines a timeframe indicating short, medium and long term goals. Finally, it is stated that all options including future amalgamation remain open and subject to regular review.

The timing of the research meant that it was not possible to re-interview the stakeholders who had originally raised concerns regarding the justification for three partnerships in light of this report. However, it seemed clear from the reactions of members of the management group at a recent meeting that they were happy with the report's conclusions but stressed the importance of keeping the issues under review. Nevertheless, it remains to be seen whether these

recommendations will be enough to counter the concerns of stakeholders in the wider community regarding the overly bureaucratic nature of conservation governance within the area.

6.12 The future: Taking the partnership forward

The vast majority of stakeholders interviewed were positive about the future of the natural environment within the EMS. Furthermore, they thought the partnership was working well and in a good position to deal with the future management of the site. However, a number of potential environmental and managerial challenges were raised which will need to be dealt with in the future. These potential challenges can be separated in to two groups. Macro challenges such as climate change which are beyond the control of the EMS partnership and micro challenges such as increased pressure from tourism.

6.12.1 Macro issues

6.12.1.1 Climate change

Many stakeholders sited climate change as the biggest challenge facing the site, on numerous occasions it was described as *'the big unknown'*. In particular stakeholders were concerned about the potential impact of rising sea levels. As much of the site is very low lying and already subject to coastal erosion it is clear that in the future difficult decisions will have to be made regarding managed realignment. Rising sea levels could also have a devastating impact on the shellfishing industry.

Furthermore, the problems associated with the proposed wind farm developments were also attributed to climate change. A number of stakeholders, although extremely concerned by the local impact of laying cables across The Wash, recognised the need to find alternative sources of energy. In many cases the benefits of low carbon energy production will have to be weighed up against the impact on local ecosystems. Local people clearly felt that they had a right to voice their opinion on these issues and agreed that the partnership was a useful tool for developing a collective response to national policy interventions.

6.12.1.2 Water quality

Closely associated with the climate change issue was concern regarding the altering of the balance between salt and fresh water in The Wash and the impact this was having on biodiversity. Recent developments in farming methods and a number of dry summers have resulted in a reduction in the amount of fresh water draining in to The Wash. Describing changes which had occurred during his life time, one local fisher said:

> *'When I was a boy if you walked down into this creek you couldn't see over the mud banks, they were 6 or 7 feet high. Now there's very little left, I reckon more than two thirds of the water is pumped out for farming'.*

The fishers reported that these changes were already having an impact on the productivity of the shellfish beds and may have had an impact on the stock crash in the mid 1990s. Conservationists conceded that although their priority was to maintain a high level of biodiversity within the EMS they accepted that as the pressures from climate change increased *'the type of biodiversity may be subject to change'.*

In addition to the challenges posed by decreasing water levels there was concern about the quality of the remaining water. A number of fishers reported that despite assurances that the agriculture industry had 'cleaned up its act' they were still concerned that chemicals were being deposited of in local rivers. There was also concern regarding the potential pollution from a paper mill proposed on the bank of the river Ouse.

Offshore dredging was also raised as a factor contributing to the declining levels of water quality in the harbours along the coast line. In particular it was blamed for the silting up of the harbours which the long shore economy relies on. A number of fishers were concerned that by removing the hard sand all that was left was soft sand which blows around and smothers the cockles and lugworms living in the harbours.

6.12.2 Micro issues

6.12.2.1 Fisheries

Significant attention has already been given to the challenges posed by fisheries within the EMS. However, although currently stable, a number of stakeholders argued that fisheries management still posed a significant challenge for the future. It was accepted that due to the pressures from climate change and pollution as well as the importance of maintaining biodiversity, sustaining an economically viable fishery in the area was becoming increasingly challenging. Both representatives from the fishing industry and conservation organisations realised that they would have to work more closely together in the future and at times this relationship is likely to become strained. Overall it was agreed that the EMS provided a useful platform for facilitating this partnership working, however, some fishers still remain concerned that their industry will be squeezed out by increasing pressure for wind farm developments and conservation.

6.12.2.2 Tourism

Tourism is seen as an issue predominately affecting the North Norfolk Coast. The Wash remains relatively unaffected by mass tourism, at least in part because of difficulties accessing the area. On the North Norfolk coast tourism is perceived as a mixed blessing. On the one hand it has helped boost the local economy at a time when many traditional industries have been declining. However, on the other, tourism is putting considerable pressure on the natural environment. Of particular concern is the number of people walking dogs in important nesting sites during the nesting season. A number of local people also raised concerns about the amount of litter left behind by tourists *'who seem to have very little respect for the environment and local people'* (Longshoreman). It was also suggested that more wardens were desperately required to '*police*' the activities of tourists. Although there was some support for the notices and leaflets distributed by the partnership, informing people about acceptable codes of conduct, many local people felt they were generally ignored by the majority of visitors. However, the EMS project manager made it very clear that he was looking at ways to try and implement a volunteer warden's scheme.

Closely associated with tourism is second home ownership and the number of properties being turned into Bed and Breakfast accommodation. This has led to a dramatic rise in the cost of property and many young people who have grown up in the area are being forced out of the area due to rising housing costs. Many local people were concerned this was having a dramatic impact on local communities and contributing to the decline in local industries. The example which was repeatedly given was the decline in the number of reed cutters who were vital for the sustainable management of the reed beds, an important habitat for many birds and animals.

Furthermore, there was concern that these *'newcomers'* didn't have the same connection to the natural environment and as a result the environment is declining. This is a perspective which is shared by indigenous groups across the world and supported by a number of academic studies (Kelly and Hoskins (2008). As Moore and Graefe (1994) propound; '*a strong connection to the area has been linked with positive behaviours such as environmental conservation'*.

It was unclear how the EMS could directly aide local communities concerned by raising house prices. However, it was clear that the partnership provides a platform for discussing these issues. Furthermore, many organisations represented on the partnership such as local authorities, have responsibilities for providing social housing.

6.12.2.3 Over-management

Finally there was concern in some quarters that the EMS designation, combined with the SSSI designation had led to the over management of the site. As one local fisher commented:

> *'…the site has been here for thousands of years and local people have been living off its resources for generations. The 'management' of the site has only been an issue for the last 50 years or so, I think the site is quite capable of looking after itself.'*

This was closely linked with the concerns raised above about the designation primarily being a target-driven bureaucratic exercise. A number of local people felt that too much

effort was going into managing the site and setting biodiversity targets etc. A longshoreman who had lived and worked in the area all his life suggested that:

> *'…of course the area is changing, for hundreds of years the environment had been sustainably managed by local people who relied upon the site for their livelihoods. If they didn't look after it they starved'.*

He went on to suggest that if the conservationists were really serious about preserving the site they would spend less time setting targets and more time supporting local industries. *'If the longshore economy was revitalised the balance between humans and nature would settle down again'*. Once again it appears that the main issue goes back to the debate between local management of the site based on years of tradition and experience and conservation initiatives based on scientific knowledge.

6.13 Concluding comments

Due to the size and diversity of The Wash and North Norfolk Coast EMS, managing the site is always going to be challenging. This chapter has sought to present the stakeholders' perspective of the EMS management scheme and its implementation. It is clear that since its inception the site has had to overcome a number of serious challenges and at times the partnership has become strained. However, the majority of stakeholders clearly believed that the institutional arrangements put in place as a result of the EMS designation have led to an improvement in governance and accountability. Furthermore, the partnership has provided a valuable forum for stakeholders from a wide range of interest groups to come together and develop a better understanding of each other's perspectives. Ultimately this has resulted from the development of partnership capacity and bracing social capital. However, the research has revealed some concerns regarding the suitability of the institutional arrangements for engaging with some sectors of the stakeholder community. In particular key actors from the indigenous population, with many years experience living and working in the area, have become disillusioned with the process and are unable to see direct links between the management process and practical actions on the ground. . Nevertheless,

although the extent to which the opinions of the local stakeholders are acted upon has been the subject of considerable debate, even the most sceptical admit that the EMS management group is accountable to local people.

Chapter 7 aims to further develop the narrative on stakeholder perspectives of the governance of EMS by looking at a contrasting EMS. The aim is not to directly compare the two sites but add to the body of literature on potential challenges and solutions facing EMSs. The NE Kent EMS has faced a very different, but equally challenging task in developing an effective and accountable management scheme; as a result it complements The Wash and North Norfolk EMS case study.

7

North East Kent European Marine Site

Introduction

The NE Kent EMS represents a very different type of EMS to that seen on The Wash and North Norfolk Coast; this is a reflection of both the nature of the site and the people who interact with it. However, some similarities can be seen between the challenges facing the two sites, i.e. a traditionally sceptical attitude towards conservation and problems engaging with hard to reach groups such as the fishing industry. Furthermore, both sites initially faced significant opposition from key players essential to the sustainable management of the area. However, the actors challenging the process were different in the two sites. On The Wash and North Norfolk coast it was the indigenous population involved with the *'traditional industries'* who felt most under threat from the proposed designation, while in NE Kent the main challenge to the designation came from the local authority, Thanet District Council (TDC), responsible for the majority of the site. Consequently, as described in Chapter 4 a different approach to engaging with these sceptical actors was required.

Another important difference between the two sites is that since the implementation of the management schemes NE Kent EMS has not received any significant challenges to its authority; as The Wash and North Norfolk Coast did through the PI in to eider predation of artificial mussel lays. As a result, the resolve of the institutional arrangements in place has not been tested to the same extent, making it difficult to speculate about whether the bracing social capital which has been developed within the partnership is strong enough to withstand a major challenge.

As Gardner (2005) reveals, the first attempt at running a stakeholder dialogue process in NE Kent to develop the original management scheme was a huge success, well

received by the majority of stakeholders and aided the development of social capital. As a result, it was inevitable that a similar approach would be used again when the management scheme came up for review. Furthermore, as outlined in Chapter 4, initial consultation regarding the review revealed concerns amongst stakeholders that the focus on protecting the designated features had led to the wider environment becoming neglected. As a result, it was decided to use the ecosystem approach as a basis for the review, with the intention of developing a more holistic approach to conservation.

Combined, the use of the Stakeholder Dialogue process and the ecosystem approach represents a significantly different model to the management of an EMS from the one used on The Wash and North Norfolk coast, and indeed the majority of other EMS in England. Consequently it allows the research to explore whether this approach offers a viable alternative to the model recommended by the DTER guidelines, and in particular if it offers a more effective way to address the problems associated with scale challenges (Cash et al. 2006) and the development of bracing social capital (Rydin 2006).

The chapter follows a similar format to that of Chapter 6 and seeks to explore the nature of the institutional arrangements which facilitate the relationship between the state and wider stakeholder community. It compares the stakeholder dialogue approach to consultation with the recommended advisory group model used on The Wash and North Norfolk Coast and explores whether the ecosystem approach can offer a more holistic management model. Recognising the different social and economic make-up of the two case studies it analyses the potential of the stakeholder dialogue approach to utilise and develop social capital to aid the management of the EMS.

The chapter begins by identifying the key actors who interact with the EMS and explores the implications of their relationships with the marine environment and each other on the conservation of the site. Second, stakeholder perspectives of the historical *'battles'* between conservationists and the local authority and how they were over-come are briefly revisited to provide context to the current situation. Third, the process of developing the management scheme through the stakeholder dialogue approach is examined in depth, along with an analysis of how the ecosystem approach has been incorporated in the process. Included within this analysis is a discussion about the

power relations which have developed through the process between the NCA and the wider stakeholder community. Fourth, stakeholder perspectives of the management scheme are explored; particular attention is focused on whether stakeholders felt a greater sense of ownership over the scheme compared with those on The Wash and North Norfolk Coast. Fifth, the structure of the EMS management is explored with special attention given to the role and development of the TCP. Finally, stakeholders' ideas and concerns for the future of the designated area are explored.

7.1 People and the European Marine Site

Like The Wash and North Norfolk Coast EMS the NE Kent EMS is a multi-user MPA. However, as the resource system characteristics outlined in Chapter 4 demonstrate, the sites are composed of very distinct environments, which consequently support a different social and economic structure. The most notable difference is that the majority of stakeholders appeared to be less connected to the marine environment than those on The Wash and North Norfolk coast. From the outset this presents an additional challenge for managers because, as previous research has shown, stakeholders who feel a connection and sense of ownership of a resource are more likely to be concerned with its protection (Philips 2003; Jones and Burgess 2005).

7.2 Who are the stakeholders?

It is not possible to describe a large proportion of the population as *'indigenous'* in the same way as on The Wash and North Norfolk Coast. Out of 24 interviews only 3 respondents talked about their families' long-term connection to the area. Nevertheless, there was clearly a small close-knit group of people who had lived and worked around Thanet for many years and still retained the *'island'* mentality which has historically been associated with Thanet. Although this small group hold strong opinions about the area, in many ways similar to those held on The Wash and North Norfolk coast, they appeared less concerned by the EMS designation; this, at least in part, appears to be because much of the fishing fleet based in the area concentrates the majority of its effort outside the EMS designation. As a representative of the Thanet Fisherman's Association commented *'… for us* [the EMS] *is more of a hobby interest, it doesn't affect us much'*. Furthermore, other actors associated with traditional

activities occurring around the site such as bait digging seem similarly relaxed about the designation. There were some initial concerns from bait diggers that their activities would be curtailed by the designation, but these concerns were unfounded and as a result the bait diggers did not feel it was necessary to be represented when the management scheme was reviewed.

7.2.1 Local people

A more powerful group of local stakeholders are the 'recreational' fishermen, a group that not only includes rod and line fishers but also those who set fixed nets and gather shellfish from the foreshore. Many people from this group had been gathering food from the foreshore for many years and were keen for their voices to be heard and listened to when it came to designing the management scheme for the area. Furthermore, these people strongly believed that their methods were sustainable and did not have an impact on the conservation of the area. However, they (along with other stakeholders) were becoming increasingly critical of the large number of *'outsiders… mostly Eastern Europeans and Chinese who are coming down to the coast and clearing the foreshore of shellfish and setting nets in inappropriate places* (Recreational Fisher)'. Their concerns were two-fold, :first, that the 'outsiders' are illegally exploiting the resources of the foreshore in an unsustainable way for commercial gain, despite claiming they are only gathering food for personal consumption. Consequently, a number of the recreational fishers were worried that the activities of these 'outsiders' could lead to the authorities clamping down on their legitimate activities. Second, they were concerned that the *'outsiders'* do not possess the necessary experience or knowledge about the tides to operate safely on the foreshore and were putting themselves in danger. A number of people commented that '*we have another disaster, similar to the Morecombe Bay incident*[1]*, just waiting to happen'* (local resident)[2].

Central to the sites original designation and actively involved with its management and monitoring is a small group of local scientists and amateur naturalists. A number of these actors have been collecting data and monitoring the site for over 30 years and

[1] In 2004 eighteen Chinese cockle pickers were killed when they were trapped by rising tides in Lancashire's Morecambe Bay.
[2] The impact of these groups of 'outsiders' on social capital in the area is discussed below.

were pushing the conservation agenda a long time before it became fashionable. They recognised the importance of the area, the chalk reef in particular, and have been campaigning for the site to be properly protected for many years. Overall, they were delighted that the site had finally been designated as a protected area - *'…Thanet has 20% of the UK Chalk reef and that's 12% of Europe's, we can now promote Thanet on that basis'*(Local Scientist) - although thought further protection was still necessary. They are all actively involved with promoting the site and support the work of the TCP to get more people interested and involved. Through the TCP they regularly organise walking tours along the coast, explaining the importance of the chalk, pointing out rare algae, edible seaweed and interesting geological formations. As one local geologist noted, '*Thanet is a great area for getting people interested in the marine environment and foreshore, it's not as sensitive as some other areas where you may not be able to encourage people to use the beach and its resources'*.

The expertise provided by these local scientists has been officially incorporated in the EMS management structure through the establishment of the scientific advisory group. The group consists of scientists, conservationists and amateur naturalists involved with monitoring the site. They meet every three months and provide scientific support to the management group. The group was instrumental in the decision to adopt the ecosystem approach as the basis of the review of the management scheme (see below). Furthermore, the group also acts as a forum for discussion about changes in the natural environment and issues that may potentially impact upon the site's designated features.

7.2.2 The Thanet Coast Project

The densely populated urban areas surrounding much of the EMS means there are a large number of people living in close proximity to the coast. However, as outlined in Chapter 4, a large proportion of that population has little knowledge or connection to the marine environment. A central aim of the TCP is to act as a bridging organisation, engaging with stakeholders operating at a range of levels to co-ordinate the management of the site. The TCP has successfully engaged with large numbers of people and provided resources to encourage them to take an interest in the coastline. As a result many local people who may not have a professional or historical link to the coast have become involved with the site. The level of involvement varies

considerably from simply attending events and activities organised by the TCP to taking an active role in the management of the area through attending stakeholder meetings and/or training to be a volunteer coastal warden (see below). The TCP has also worked closely with the local authority to instigate a number of high profile regeneration schemes which have helped to rejuvenate the ailing tourist industry while ensuring that the natural environment remains protected.

As well as attempting to improve the quality of the built and natural environment, an enormous amount of effort has been put into developing a strong sense of community and encouraging people to feel proud of the area (social capital). Through the work of the TCP the EMS has become an integral part of the process, educating people about the coast and encouraging them to engage in community-based projects. Furthermore, the TCP is developing a growing network of people who have been involved with their activities. This group appears to be growing in confidence and is increasingly willing to lobby the statutory organisations on issues related to the conservation of the site. As one local resident commented:

> *'Before my friend persuaded me to go on one of their coastal walks I didn't know much about the marine environment around here, and I certainly didn't realise how important it was or about the reasons why we have to fight to ensure it's properly looked after.'*

In many ways these local activists are taking on the role of environmental advocates played by the indigenous population on The Wash and North Norfolk Coast and have started to develop a sense of ownership of the site. However, as they have predominantly gained their knowledge of the marine environment through activities organised by the EMS their views on its management are less likely to contradict those of the NCA than those who are reliant upon resource extraction for their living.

7.2.3 Statutory and non-statutory organisations

Initially TDC was very sceptical about the designation of the site (see Chapter 4). However, as a result of extensive negotiations with the NCA, TDC has become a leading partner within the EMS and has now taken on the role of lead authority. As the

hosts of the TCP they pay the salaries of two members of staff, the project officer and education officer, and the TCP is highly regarded by TDC as a huge asset and success story. This was reinforced in 2007 when the TCP education officer came second in the national council worker of the year competition. Furthermore, relations are now so good between TDC and the NCA that key agreements are in place allowing the council to conduct certain maintenance to coastal defences and facilities without seeking the permission of the NCA, '*we have a site management statement which we set up a few years ago which allows us to do various bits of work without contacting the NCA first'* (Foreshore Manager). The council's coastal defence policy is also much more in line with conservation objectives. Although it still retains the right to uphold existing coastal walls, further expansion of the coastal defences has been ruled out, allowing the cliffs in some areas to erode naturally, reducing the burden on the chalk reef.

For many years there were serious concerns that conservation was a direct threat to the economic development of the area. However, now the coast is seen as 'Thanet's greatest asset' and as the traditional tourist economy continues to decline increasingly the designation is being used to promote the site as an eco-tourism destination.

There is a marked difference in the role played by the Sea Fisheries Committee in the two sites. On The Wash and North Norfolk Coast they have taken on the role of lead authority and are intimately involved with the day-to-day running of the EMS. In NE Kent they take a more back seat role, attending meetings and inputting to the management group when necessary. Essentially, the Sea Fisheries Committee and the local authority play opposite roles to those of the equivalent organisations on The Wash. This role reversal demonstrates that the fishery sector has a much less prominent position than on The Wash and North Norfolk Coast, while a much greater emphasis is placed on the general social and economic development of the area surrounding the EMS. Furthermore, the variety of roles played by organisations in different EMSs highlights the flexibility of the Habitats Directive and the ability for it to be tailored to the needs of individual sites.

In similar fashion to The Wash and North Norfolk Coast EMS, the other RAs (see Chapter 4 for full list) take an active interest in the EMS and get involved with issues that directly affect them. However, their involvement with the EMS is only a very

small part of their wider remit, and as a result their involvement with the-day-to day management of the site is limited. This was summed up by a representative of Kent County Council who pointed out:

> *'In fact the Thanet Coast is one of the areas of the Kent Coast line I am least worried about, as it is managed extremely well by the TCP. Of course we keep an eye on what they're doing but don't feel the need to get involved very often.'*

7.3 Overcoming barriers to conservation – stakeholder perspectives of the European Marine Site designation and management

Chapter 4 presents a detailed description of the troubled history that dominated relations between TDC and the NCA during the 1980s and 1990s, which led to a number of high profile conflicts when the site was originally designated as an EMS. However, as a result of major improvements in communication and dialogue between the two organisations a strong horizontal relationship now exists between organisations such as TDC and the NCA which previously approached marine conservation from different positions, this has led to a dramatic increase in the levels of bracing social capital present within the partnership.

These changes have also reflected broader changes in attitude towards conservation which have occurred over the last two decades, as one local scientist commented:

> *'In the early and mid 1980s there was an attitude amongst fishermen and the councils that nature reserves were fenced off areas, and to be fair until recently many of them were. However, both the nature of conservation areas and people's attitudes are beginning to change'.*

A number of representatives from the council commented that '*the designation is undoubtedly a major asset to the area'* (TDC Coastal Engineer). This positive sentiment is by and large shared by the other stakeholders involved with the management of the site, *'I think it's great that the area has been designated as an EMS, it gives us status and something to be proud of*' (Local Business Owner). It appears that the key to moving forward with the conservation agenda has been the development

of a community- led approach to designing the management scheme and the incorporation of both the conservation and regeneration agendas. The process has also been greatly aided by the fact that so far it has managed to avoid any major conflicts similar to those seen on The Wash and North Norfolk Coast. This was recognised by a local ecologist who noted that:

> *'It was very important that the socio-economic considerations were taken into consideration, as scientists, that's something we often fail to do. We have actively engaged with local businesses and the council to ensure we are all singing from the same hymn sheet, actively seeking out points of potential conflict and acting to ensure they don't turn into major conflicts.'*

A number of stakeholders also commented that since a new younger generation of both elected councillors and officers had taken over the control of TDC relations had improved between the two organisations. This is indicative of the suggestion put forward by stakeholders on The Wash that the younger generation of fishers had a more sympathetic view of conservation than the older generation, and that this had aided the relationship between the fishers and the NCA.

However, as Gardner (2005) suggests (and is backed up by the findings of the present research), much of the credit for improving the relationship between the NCA and TDC has to be attributed to the hard work and determination of the NCA conservation officer in post during the development of the original management scheme. There was some concern that when she left her post in 2004 the good relationship she had been able to build up with TDC may suffer. However, these concerns were unfounded as the social capital she originally developed appears to have transferred to both the conservation officers in post since her departure. As the original conservation officer put it *'the glue has definitely been between organisations not individual personalities'*. Nevertheless, she did point out that her two successors had been excellent at their job, '*there is of course an element of personality involved, if you put someone in post who was stroppy, had poor people skills or had an old fashioned non-compromising attitude to*

conservation things may start going backwards'[3]. Once again, this demonstrates the impact the personality of individual officers can have on wider stakeholders' perspectives of entire organisations. Here the NCA conservation officers have clearly aided the development of improved social capital between the NCA and wider community, while on The Wash and North Norfolk Coast the Conservation Officer has struggled to develop a positive relationship with some sectors of the community, potentially affecting the overall impression stakeholders have of the NCA. This clearly demonstrates that legislation which requires organisations to work together is not, on its own, enough to guarantee effective partnership working. Legislation can represent a useful framework within which partnership working can operate. However, trust, respect and a shared understanding are all required at both an institutional and personal level to act as a *'glue'* to hold the whole process together.

Despite the largely positive perceptions of the EMS held by stakeholders, there were still some criticisms of the bureaucracy surrounding the designation and the European basis of the designation, although significantly less than on The Wash and North Norfolk Coast. Two recreational fishers commented that it was '*yet another bureaucratic exercise which doesn't really have an impact on the environment'*. Another recreational fisher and member of the small indigenous population added, *'Despite the designation I still don't see any proper management of the coast, all they do is talk and print leaflets and this distracts from the real issues'*.

Similarly to The Wash and North Norfolk Coast a few stakeholders were clearly Eurosceptics and were fundamentally opposed to any European legislation. However, the vast majority were supportive of the European basis of the designation. A number of the scientists and representatives from local conservation groups admitted that initially they had been a bit sceptical that it would be possible to tailor the legislation to meet local requirements, but they agreed that these fears had been unfounded. In particular, this was demonstrated by the development of the second management scheme in which it was decided locally to adopt the ecosystem approach. Furthermore, a number of stakeholders commented that the European designation gave the site more credibility than a national designation. In addition, several of the representatives from

[3] The original conservation officer now runs an environmental consultancy, regularly advises the management group and continues to sit on the scientific advisory group

conservation organisations added that the European SAC and SPA designations had proved themselves much more effective than the national SSSI designations had been.

7.4 Stakeholder dialogue and the incorporation of the ecosystem approach

As outlined above and in Chapter 4, central to overcoming the original opposition to the designation was the decision to integrating social and economic considerations in the management scheme. These principles are central to the ecosystem approach and an important part of the CBD definition used as the basis for the review (see Chapter 3). Explicitly adopting the ecosystem approach can in many respects therefore be seen as a natural progression. Furthermore, as the CBD operational guidance suggests, inter-sectoral co-operation is essential for the ecosystem approach which has largely been achieved through the stakeholder dialogue approach. However, as outlined below, adopting the ecosystem approach for the management of a relatively small MPA and incorporating its 'holistic' philosophy is by no means a straightforward process.

Once it was decided by the management group that the ecosystem approach would form the basis for the review, and that it would be conducted through a re-run of the stakeholder dialogue process, the contract was put out to tender. It was eventually won by Dialogue Matters, the consultancy run by the NCA conservation officer in post during the first process. Initially there was some concern that this appointment may lead to a conflict of interests. However, after lengthy discussions the management group concluded that the lead consultant was now far enough away from the day-to-day management of the site for this not to be a problem. The management group also decided that her extensive knowledge of the historic problems facing the EMS and the ecosystem approach[4] would be advantages to the process.

7.4.1 Structuring consultation versus complete freedom of expression

The principle aim of the stakeholder dialogue process was to develop a framework which would allow the stakeholders to gain a deeper understanding of the EMS

[4] In her previous role as the NCA Conservation Officer she had proposed the idea of incorporating the ecosystem approach in the management scheme to the scientific advisory group and subsequently became a leading advocate of this approach to marine conservation.

management scheme and give them the opportunity to express their views within a facilitated environment. One of the key concerns revealed in The Wash and North Norfolk Coast EMS case studies was that the advisory group and management group meetings had become dominated with issues on the periphery of the EMS and not directly relevant to the management scheme. This had led to the development of frustrations amongst some stakeholders that the EMS was powerless to influence these issues leading to the authority of the EMS being undermined. The stakeholder dialogue process aimed to address this problem by setting out very clear guidelines on the areas on which stakeholders would be consulted and incorporate extensive briefings for stakeholders, informing them on the scope of their influence. The facilitation process then ensures that the discussions remain within these clearly defined boundaries. This is where the stakeholder dialogue process differs from the advisory group model used on The Wash and North Norfolk Coast, by restricting the discussions to a clearly pre-defined list of topics.

7.4.2 Incorporating the ecosystem approach

The highly structured stakeholder dialogue approach to consultation is designed to help focus the process and keep the discussions within clearly defined boundaries. However, it does not deal with the concerns raised by stakeholders on The Wash and North Norfolk Coast that factors outside the jurisdiction of the EMS were having a negative impact on the designation. In fact it could potentially reduce the power of the stakeholders to tackle these issues as it deprives them of a discussion forum. It was these concerns that, at least in part, led to the adoption of the ecosystem approach as the basis of the review which allowed for some discussion about wider environmental protection. However, the incorporation of this highly complex approach, which lacks a clear definition (Mare 2005; Rydin 2006) in a structured consultation process has the potential to detract attention from the core task at hand, that of developing a management scheme.

Furthermore, the lack of scientific understanding regarding marine ecosystems means that any attempt to implement the ecosystem approach also requires the precautionary principle to be adopted which, as seen on The Wash and North Norfolk coast is also subject to significant debate. A major challenge for those leading the process was to

find a way to convey the ecosystem approach to a mixed audience, ranging from experienced scientists to members of the public with little formal scientific education, while keeping discussions focused on the development of the management plan.

Primarily this was achieved by focusing on the 12 principles and 5 points of operational guidance developed by the CBD (outlined in Chapter 4), creating a structured definition of the ecosystem approach which could be incorporated in to the stakeholder dialogue approach. By introducing the ecosystem approach a clear statement was being made that the features for which the site was originally designated cannot be fully protected without taking into account the wider ecosystem. However, by adopting such a regimented definition of the ecosystem approach (even when it is only being used as a 'guide), the freedom of stakeholders to express their opinions on the wider management of the area is still curtailed.

7.4.3 Stakeholder perceptions of the ecosystem approach

Despite these concerns regarding the complexities surrounding the ecosystem approach, the vast majority of stakeholders appear to be broadly happy about the decision to adopt it. Through the stakeholder dialogue process stakeholders have been provided with the opportunity to learn more about the extreme connectivity present in the marine environment and the importance of adopting a more holistic approach to management. However, those stakeholders without prior scientific training remained largely unaware of the wider debates surrounding the ecosystem approach, accepting it as a clearly defined concept based on the CBD principles used in the review. This was reflected in the responses to questions asked during the interviews with stakeholders about their understanding of the ecosystem approach. The following quote represents a typical answer to the question 'what is your understanding of the ecosystem approach'?

> '*The ecosystem approach is a holistic way of managing the site which takes social and economic consideration into account as well as environmental ones. It also means we need to take into consideration impact on the EMS from outside the designation'* (Local Resident).

When asked to expand on the implications of the approach for the management of the EMS and how it differed from the previous approach none of the stakeholders without formal scientific training were able to give a definitive answer, only that it raised awareness about the need for wider environmental protection.

A number of stakeholders commented that during the workshops there had been significant debate regarding the boundaries of the EMS and how they did not reflect the boundaries of the ecosystem. Furthermore, they had been made aware that it was unclear where the boundaries of the ecosystem actually were. When questioned about this lay stakeholders generally accepted that it was an issue, but typically dismissed these concerns, arguing that *'all we can do is our best within the boundaries of the EMS'* (ibid.). They accepted that issues concerning the setting of boundaries still exist, but felt that this was in fact a positive development as in the future it may lead to further productive debates about managing the wider environment. *'Marine conservation is very different to terrestrial conservation; you can't intervene in the same way. As a result you have to look at the bigger picture'* (Local Stakeholder).

The stakeholders from the scientific community were also generally supportive of the adoption of the ecosystem approach and echoed commits made by other stakeholders that it encouraged people to think about the need for wider environmental protection. (This was hardly surprising as it was the scientific advisory group which originally suggested using the ecosystem approach.) However, when it came to describing the practical differences it made to the management of the site they were more philosophical. Furthermore, a number raised concerns about the complexity of the concept and difficulties with applying the approach at a local level:

> *'How do you define a marine ecosystem? Where do you stop? I have some concerns about this approach… these issues can make it very difficult from a management perspective….'* (Member of scientific advisory group).

> *'The trouble with marine ecosystems is people tend to talk about them at a global scale…. It is very difficult to apply these ideas at a local level.'* (Member of scientific advisory group).

'…how do you take it apart and make something sensible out of it? It could end up being an incredibly woolly way of dealing with things. It's like biodiversity or sustainable development… What do they really mean in practical management terms?' (Member of scientific advisory group).

There was also concern that by adopting the ecosystem approach there was a danger of detracting from the main issues, protecting the designated features:

'Unfortunately the legislation doesn't allow us to protect everything, the site has been designated for particular features, it is essential we focus on protecting them. Of course there will be other things which impact on these features such as water quality, but there is provision for that anyway' (Member of scientific advisory group).

Another concern was that by using the term *'ecosystem approach'* there was a danger of alienating and confusing lay stakeholders. One scientist argued that:

'I think it can confuse people, I don't really understand it to be honest. I think there are very few people who really understand ecosystems and especially the nature of why that area was picked to be important. When you have a designation and you say right this is important because it is one of the few examples of a chalk reef that is easy to get your head around. When you start saying well there is a bigger picture there are always going to be things on the margins which impact upon it. When you start saying the whole ecosystem, your scale of reference changes from something which is very local to something which is potentially the north side of the Atlantic, your management frame of reference is quite different and it can soon get confused, resulting in a loss of focus.'

This concern was reiterated by another scientist who argued:

I think it's a really difficult concept to pin down and this has caused a lot of confusion…. Even the management group and scientific advisors struggled with it '(Local Scientist).

However, the concerns regarding confusing lay stakeholders appear to be unfounded as none admitted being confused by the concept, although it was clear that they had been influenced by the straightforward way it had been presented to them and were unaware of the complex debates surrounding the term.

Despite the concerns raised above, overall, there was a general consensus amongst stakeholders that by adopting the CBD ecosystem approach for the management of the EMS, it is possible for the EMS to have a greater impact on both the environment and the local community. As one local scientist commented:

> *'In reality it* [the management scheme] *may in fact be slightly different to what was originally intended. However, we have succeeded in developing a wider environmental approach and taken into consideration the social and economic aspects. We have done this by using the 12 principles as the framework. To truly get to grips with the impact of the wider ecosystem is much harder, but the framework remains useful'* (Local Scientist).

Although a number of stakeholders questioned whether it was ever going to be possible to implement the ecosystem approach in full, they agreed that the underpinning message attached to the concept, that management decisions should take into consideration the broader ecological, social and economic contexts, represented a useful and progressive framework within which to take the management scheme forward.

7.4.4 The ecosystem approach and the precautionary principle

The CBD's third ecosystem approach principle, '*Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems'*, suggests the adoption of the precautionary principle. This was particularly welcomed by members of the scientific community as it recognises the problem of scientific uncertainty and promotes the use of adaptive management practices (CBD's third point of operational guidance). As one of the local scientists pointed out: '*there is so much we don't know about the marine environment and with all the uncertainty associated with climate change it appears we now know even less'*. This sentiment was also

shared by the NCA conservation officer and TCP officers who argued that it was essential that the management scheme was flexible enough to deal with the *'ever evolving environment'*.

However, it is widely recognised in the literature that similar to the ecosystem approach the precautionary principle has been subject to significant debate about its true meaning (O'Riordan 1994; Corkeron 2006). Furthermore, The Wash and North Norfolk Coast case study demonstrates how it can be manipulated to justify conflicting actions depending upon the perspectives and motivations of the actors involved. However, within the context of the NE Kent EMS the principle appears to have been accepted to simply stress the importance of thinking about the wider context of any decision. This was summed up by one of the coastal wardens who commented:

> *'If we have a problem with a particular animal, instead of thinking about it in isolation we have to think about it in terms of the wider environment. We have to ask where did it come from? Should it be here? Why is it here? Is it being affected by local changes or global changes? Rather than just jump in and make rash decisions about how to deal with it'* (Coastal Warden).

This fairly relaxed consensus regarding the ecosystem approach and precautionary principle raises an important question. How have these highly controversial and complex concepts been accepted so easily in NE Kent when elsewhere they have been subject to considerable debate and interpretation?

In part this appears to be down to the way they were presented to the stakeholders through the stakeholder dialogue process in a simplified and structured way, avoiding many of the associated controversies. In fact it was acknowledge by both those organising the review and a number of stakeholders taking part that the stakeholder dialogue workshops were vital to inform people about the ecosystem approach. This was stressed by the TCP officer who pointed out: '*I'm not sure if the ecosystem approach would have worked without the Stakeholder Dialogue process, it allowed the stakeholders to be introduced to the approach and discuss its implications for the site'* (TCP Representative). This sentiment was echoed by a local resident who attended the

workshops: '*The workshops were great, the ecosystem approach was explained very clearly'*.

However, it is also important to note that unlike on The Wash and North Norfolk Coast the introduction of these ideas has not undermined the perspective of any major stakeholder group. In fact the ecosystem approach appears to have if anything enhanced the social and economic development interests that were originally opposed to the designation.

7.5 Unpacking stakeholder dialogue

The stakeholder dialogue process followed a similar format to the first process used to develop the original management scheme, although the number of workshops was reduced from four to three. The three day long stakeholder workshops were set within a coherent process with other key actions happening before and after each workshop, such as the gathering of information, the development of draft texts and the following up of questions raised by stakeholders. Pound (2006) summarises the aims and objectives of each of the workshops:

- The first workshop was designed to help stakeholders picture the future, identify what is working well and what needs to change.
- The second workshop aimed to develop more understanding about the site and the ecosystem approach and come up with ideas for action.
- The third workshop was to short-list the best ideas for implementation and indicate the levels of support for the scheme.

More specifically it was hoped that the process would:

- Engage all relevant stakeholders in the most appropriate way, ensuring that their contributions were heard and incorporated.
- Working with these stakeholders to review the existing scheme, identify what has been achieved, what needs to be done, and what new issues and activities need to be included in the revised scheme.

- Clarifying which issues fall into the remit of the Management Scheme and how issues outside this remit will be handled.

It was also hoped that by the end of the process:

- The Management Scheme contents would be well understood and well supported.
- It would take a holistic Ecosystems Approach to management.
- It would continue the effective management of the Special Protection Area (SPA) and Special Area of Conservation (SAC).
- It would lead to increased understanding of different perspectives, issues and concerns amongst stakeholders and relevant authorities.
- It would further enhance trust and goodwill amongst stakeholders.
- Stakeholders would feel heard and listened to.

The extent to which these objectives were achieved is discussed below through an analysis of stakeholder perspectives of the stakeholder dialogue process, but first it is necessary to explore the nature of the workshops, and in particular the way they were facilitated.

7.5.1 The importance of facilitation

Fundamental to this approach to consultation is proper facilitation to ensure everyone had an opportunity to voice their opinion and the discussions remain focused. As the director of dialogue matters stated, *'the key to a successful dialogue process is the presence of a skilled and independent facilitation team.'* During the process the participants are often broken up into small groups of 8-10 to discuss various issues. Each group requires its own independent facilitator; however, with 60 plus stakeholders at some meetings hiring enough professional facilitators would be extremely expensive. As a result, volunteer facilitators are recruited to support the event.

For the NE Kent process the volunteer facilitators were from organisations involved with the event (mostly TDC). These volunteers could not be people who were directly evolved with the EMS or those intending to attend the workshops as participants. The

training in small group facilitation skills was given at no cost to the volunteer in return for hands on practice at the workshop.

The role of the facilitator is crucial to creating a forum which promotes discussion and gives everyone the opportunity to input their ideas. Dialogue Matters teaches that the practice of facilitation is based on particular principles:

Equality	Everyone has something to contribute and deserves a fair opportunity to do so.
Responsibility	Each person is responsible for their own experience, behaviour and participation during the event
Co-operation	The facilitator and participants are working together to achieve collective goals – facilitation is done with a group not to a group
Honesty	The facilitator sets the tone for participants' expectations of honesty
Transparency and accountability	In facilitated meetings or dialogue, people are clear what is happening, who has power to do what, their role in the process and so on.

Source: InterAct Networks (2003:23)

Central to this approach of decision making is the idea that the process incorporates the values which it is trying to promote: for this to be possible an independent facilitator is essential. During the discussions the role of the facilitator is two-fold. First, they must keep an accurate record of the discussion on a large flip chart which can be clearly seen by all participants. Discussions on specialist topics often incorporate a large amount of 'jargon' and acronyms, and it is therefore essential that the facilitator is familiar with the topics. However, if they are unsure of the meaning of a particular term, they must seek clarification from the group. Not only does this ensure that an accurate record is kept, it also confirms that all members of the group understand the terms being used.

By recording the discussions on a flip chart rather than a notepad the transparency of the process is ensured as stakeholders have the opportunity to question the facilitator if they do not think their point has been recorded accurately. The second part of the facilitator's role is to ask probing questions to promote discussion and manage the behaviour of the stakeholders. During the two day training course for volunteer facilitators they are fully briefed on the discussion topics and told about potential points of conflict. They are also taught how to ask different types of questions depending on the situation. For example, open questions starting, What? Where? Which? Why? When? and Who? help people give fuller answers and promote discussion. However, closed questions, such as Do you agree? Shall we move on now? can be used to consolidate understanding. Furthermore, it is essential that the facilitator avoids inductive questions such as: 'Wouldn't you agree that this suggestion is the best we have heard?'

The importance of good training and briefing for facilitators was highlighted at the Finding Sanctuary Stakeholder Dialogue event in SW England[5]. Overall the process succeeded in bringing a large group of people, from a range of interest groups, together to discuss complex and controversial issues. However, a few potential problems were highlighted. At one point there seemed to be confusion about the position of recreational divers. Commercial scallop divers and recreational divers had been assigned to the same category and as a result both groups of divers were classified in the same stakeholder group as commercial fishermen. This highlighted the importance of making sure that facilitators properly understand the nature of all the stakeholder groups involved prior to the event.

7.5.2 The structure of the stakeholder dialogue process

As outlined above, a central aim of the stakeholder dialogue process was to aid stakeholders' understanding of the management of the site and provide them with the opportunity to feed in their ideas. This was achieved by breaking down complex concepts and processes into manageable topics which included key questions to facilitate discussion. This can be illustrated by looking at the way in which the

[5] I attended this event as a volunteer facilitator to further develop my understanding of how the process worked. See Chapter 4 for a detailed explanation.

ecosystem approach was presented at the workshops. The dialogue was based around 'subject assessment tables', one for each of 49 activities categorised under the following headings:

1. Shoreline Management
2. Fishing and Harvesting
3. Shore Based Recreation
4. Water Based Recreation
5. Air Based Activities
6. Ports and Harbours
7. Research, Education and Wildlife Tourism
8. Water Quality
9. Species Management
10. Extraction of Hard Materials

Each of the activities was assessed according to criteria which also demonstrate how a number of the criteria relate to the ecosystem approach:

Table 7.1 Stakeholder dialogue process subject assessment table:

	Assessment table questions	**EA Principle addressed**
1	What is the long-term goal or vision for this activity?	1&8
2	What is the current situation?	
3	What are the current positive and negative effects of this activity on the following:	
	▪ Social, economic and cultural interests	1&4
	▪ Habitats and species of local importance	1
	▪ Protected species and habitats	1
	▪ Ecosystem function	5&6
	▪ Other ecosystems	3
4	What is the current management?	
5	Will it get us where we want to go?	
6	Can the ecosystem support this activity over the long-term? (Will you be able to do this activity at this level in 100 years if not why not?)	8
7	What if anything do we need to do differently?	
8	What is the long-term effect of what we want to do on: ▪ socio-economic and cultural interests ▪ the environment and ecosystem function?	3, 4,5 & 6
9	How will we know if we are going in the right direction?	

To incorporate the designated features within the more holistic ecosystem approach, questions relating to the SAC and SPA features are nested within subject assessment tables and formatted to indicate their different status (Pound 2006). Essentially these tables were used to help people focus their ideas and understand how the ecosystem approach worked.

7.5.3 Building a community through stakeholder dialogue

Overall the feedback from stakeholders on the consultation process was extremely positive. Many stakeholders who had also been involved with the first process felt that it was a lot more relaxed than the first time round. This sentiment was summed up by a local scientist: *'Since the first process it has been proved that the designation can operate successfully in the area without generating major conflicts between interest groups'* (Local Scientist). As stakeholders were less concerned about the potential impact of the designation on the economic development of the area the vast majority came to the second process with a less confrontational attitude. The first process and subsequent collaborative working between key stakeholders had helped generate a high level of social capital between organisations which had previously been at odds with each other. As the TCP officers stated:

> *'Some of the links which were made during the first process are still there and have grown over time. People have become very committed and adopted this as their scheme.'*

Furthermore, as a result of the newly formed partnerships which had been established between organisations, the second process was viewed by many as *'an opportunity to get together with old friends and celebrate our progress so far and work out how we can do better in the future'* (Local Councillor). The close relationship which had developed between many of the individuals and organisations was clearly visible to newcomers to the process. As one new local resident commented, *'I was amazed at how well everyone got on, it didn't seem like a meeting of people from lots of different interest groups'*.

Although there was still some disagreements amongst stakeholders, such as how to deal with large quantities of seaweed washed up on the foreshore and the extent to which existing sea defences should be maintained, an early consensus was reached on the fundamental issues surrounding the conservation of the site. The legislation underpinning the management scheme clearly places some restrictions on the partnership's freedom to manage the site, which can lead to stakeholders becoming

frustrated. This was demonstrated through The Wash and North Norfolk Coast case study where it appeared that stakeholders felt that, on the one hand, they were being asked to feed their knowledge and opinions into the process but that, on the other, their opinion was not being taken seriously. However, the emphasis the stakeholder dialogue process puts on discussion and explaining the nature of the legislation appears to go some way to alleviating these frustrations. As the NCA conservation officer pointed out:

> *'I think there was a consensus reached on a lot of issues, but it would be impossible for everyone to get exactly what they want. I think the fact that you have gone through the process and there have been discussions is the most important factor. As people have had the chance to raise issues and have them discussed, they are more willing to except the end product even if it's not exactly what they wanted'*

Furthermore, a number of stakeholders stated that by the end of the process they realised that they *'had a lot more in common with other stakeholders than they initially believed'*. There was also plenty of support for the way the process had been organised and run by Dialogue Matters a number of stakeholders commented that it was *'a very democratic way of discussing the issues'*, while others praised the facilitators for preventing the 'experts' dominating the discussions.

Similarly to the first process, many stakeholders commented that it was the opportunity to come together and discuss issues affecting the coast with organisations and individuals they would not normally encounter that they particularly valued. They felt that the process provided an opportunity to learn about the key issues from a wide range of perspectives. As one local councillor commented:

> *'In the past many of the conservationists have been very critical of the sailing community, they perceived them as irresponsible people who got too close to bird nesting sites and caused disturbance. However, during the stakeholder dialogue process it was possible for the sailors to explain that they physically couldn't get that close to the birds and the vast majority of the time they didn't have their engines running.'*

It was also clear that the stakeholders valued the opportunity to be able to input their views into the process; this added to the sense of ownership they felt for both the management scheme and the natural environment and ultimately provided a focus for the development of social capital. Once the management scheme had been completed a number of stakeholders said they felt proud of their achievements. This was summed up by a local resident: *'Once we had completed the process I felt the community had pulled together and achieved something important for the people of Thanet and the local community'*.

In addition, a number of the RA representatives and organisers of the stakeholder dialogue process argued that an added advantage of developing the management scheme in close partnership with the local community was that implementing the scheme is much easier and cheaper:

> *'If the scheme had been developed by the NCA officers away from the community, before we could even start thinking about implementing it we would have had to spend loads of time and money informing people about the scheme. However, this way they are already aware of what it entails because they came up with it'* (Environment Agency Representative).

7.5.4 The problem of apathy and stakeholder participation

Despite the positive feedback from stakeholders regarding the consultation process a number of concerns were raised about the level of attendance at the workshops. Predominantly these came from people who had been involved with setting up and organising the process. However, wider concerns about the lack of representation from some interest groups were also raised. Since the first process there have been numerous stakeholder events and workshops which has led to an increase in the number of people interested in the site. As a result, the stakeholder list has grown from 126 to 170. However, despite the increase in numbers the attendance at the second process was in fact lower. Table 7.2 compares the number of stakeholders attending the two processes.

Table 7.2 Summary of participant numbers attending each of the workshops held as part of both the first and second stakeholder dialogue processes:[6]

	First Process					**Second process**			
	Workshop 1	**Workshop 2**	**Workshop 3**	**Workshop 4**	**Total number of different people who attended at least once**	**Workshop 1**	**Workshop 2**	**Workshop 3**	**Total number of different people who attended at least once**
No. invited	126	126	126	110		170	170	170	
No. Attending	40	55	51	65	103	50	37	41	75
% of total invited	31%	44%	40%	59%	82%	29%	21%	24%	44%

[6] The number of workshops was reduced from 4 to 3 for the second process.

It was clear that the organisers of both the stakeholder dialogue process and the review of the management scheme more generally were disappointed with the low levels of attendance. However, the explanation they gave (which was also backed up by a number of other stakeholders) was that the lower attendance was actually a reflection of greater trust in the process. During the development of the first management scheme many stakeholders were concerned that the legislation would have a negative impact on industry and the economic development of the area. Consequently, once they were satisfied that economic development and conservation could work together they felt less threatened and did not feel the need to voice their opinion. This was summed up by one of the local fishers who said: *'The first time round we were really worried about the potential impact the designation would have on our livelihoods, but our fears have been largely unfounded, [and]as a result I didn't feel it would be a good use of my time to attend the meetings'*. There were also some concerns that the timing of the meetings meant that they were inaccessible to people who worked during the day. As one fisher put it, *'people who work for Natural England and TDC get paid to go to these meetings, we get paid to catch fish'*. This message had clearly been taken on board by the organisers who agreed that if the process is run again it will be essential to ensure that there is at least one evening meeting, as the TCP officer stated:

> *'…I'm very aware that the day long meetings were not suitable for everyone, people were ringing in to speak to me but were not able to commit that much time. One of the key affected groups was the fishing industry. I think this is one area we need to adjust so we better fit the needs of local people. The Sea Fisheries Committee worked hard to put across the perspective of the fishermen, but this was not the same as having the fishermen there.'*

Once again this raises important questions regarding the role of the Sea Fisheries Committee. As in The Wash and North Norfolk Coast case they clearly end up representing the fishing industry when they are not able to attend meetings. However, this could arguably lead to a situation in which the fisher's perspective is not properly represented and the fisheries management perspective is undermined. This was acknowledged by a member of the Kent and Essex Sea Fisheries committee: *'We are not fishermen, but we manage the fisheries [and] we have some goals in common with*

the fishermen, but we also have different motivations'. He went on to suggest some reasons why the fishers were generally quite apathetic and uninterested in the process:

> *'…if you look at any trade, there are people who are just interested in making a living. One of the things with fishing is [that] the quotas are decided by bureaucrats and scientists. [The fishermen] they feel they are not really listened to and constantly being pushed around. So when someone comes along with something else, they are not the most responsive, they have a strong leave me alone attitude.'*

The evidence from NE Kent regarding attendance at consultation events is consistent with the message that came out of The Wash case study. If people are satisfied that the legislation is not going to have a dramatic impact on their way of life they are less concerned about getting involved with consultation exercises. This was clearly the view shared by the organisers of the process. The TCP officer argued:

> *'The first management scheme probably raised more questions from a wider variety of interest groups, there was a lot of uncertainty and confusion about the future of the coast. For example, commercial bait diggers thought their activities would be banned and made sure they were represented at all the meetings. But for the review, they have been in touch over the phone but did not feel the need to attend the meetings'*.

The concerns about the levels of attendance also led to a number of stakeholders arguing that there were not enough people from some of the sectors to ensure they were represented in all the small break-out groups. One representative of a conservation group pointed out:

> *'…by making everyone split up into small groups to discuss different issues you may not get to speak on all the issues you feel are important. Also there were not enough people from the different sectors to go round, making some of the groups unrepresentative'*

7.5.5 Other concerns with the stakeholder dialogue process

In addition to the attendance issues a few stakeholders raised some other concerns regarding the process. Two of the local scientists were concerned that the process was over-complicated and that this intimidated some stakeholders *'who didn't appear to get that involved'*, and that some of the issues were too complicated to express on post-it notes and flip charts. It was also clear that a number of participants did not take the process particularly seriously as they associated the flip charts, coloured pens and group activities with *'games better suited to children'*. Similar criticisms were also forthcoming from some stakeholders at the Finding Sanctuary consultation event, who commented that *'it trivialised discussions on very important issues*' (SW Fisheries Representative). The director of Dialogue Matters acknowledged these concerns and argued that the majority of people start out slightly sceptical about the process but once they have seen it in action they realise that it is a good way of *'defining thinking'*. She went on to say: *'I get a bit frustrated when people say oh no, not more post-its, why don't people say oh no, not another round table meeting where three voices dominate and the rest of us just sit there twiddling our thumbs eating biscuits.'*

This sentiment was generally shared by the vast majority of people interviewed. Direct criticism of the process was restricted to three respondents. A number of others admitted that initially they had been very sceptical but by the end of the process they agreed that it was an effective way of consulting people on the management scheme.

7.6 Stakeholder perspectives of the management scheme

Both The Wash and North Norfolk Coast and NE Kent EMSs are governed in accordance to management schemes which were developed using the guidelines outlined in the DETR (1998) guidance notes; consequently the two documents are presented in a similar way. Both documents are long (in excess of 300 pages) and contain a considerable amount of complex technical detail. However, stakeholder perceptions of the document differed significantly between the two sites. As outlined in Chapter 6, many stakeholders on The Wash and North Norfolk Coast were highly critical of the overly bureaucratic nature of the document and there were serious concerns that it alienated many stakeholders. These sentiments were shared by some

NE Kent stakeholders but appeared to be less of an issue. Furthermore, the majority of criticisms appeared to stem from people who were actively involved with writing the document. As one of the consultants hired to assist with the review of the management scheme commented that it is still *'too complicated and not very user-friendly'* (Local Ecologist). In particular, there was concern about the guidelines set out by the NCA nationally regarding the content of the document. These guidelines required the management group to *'include a huge amount of unnecessary context, which ended up making the document very unreadable'* (Consultant). Directly associated to this concern was the amount of time it took to gather together all the necessary material. This was summed up by a representative of a conservation organisation who said *'the production of the management scheme has become a task in its own right; we need to spend less time planning and more time doing.'* However, she did concede that the process had been significantly easier and less time-consuming the second time round, as all the necessary processes were put in place after the development of the first management scheme. These criticisms were also accompanied by a few negative comments from representatives of the fishing industry. For example, one local fisher complained *'that the document is so big it is difficult to work out which bits are relevant to us, we are very busy people and don't have time to wade through reams and reams of paper'*.

Nevertheless, the wider stakeholder community appeared to have a far more positive perspective of the management scheme. They were much more aware of the purpose and content of the document than those on The Wash and North Norfolk Coast. Furthermore, stakeholders seemed less willing to write it off as *'overly bureaucratic* , recognising the importance of the written document in ensuring that the agreed actions are implemented. On the occasions they were critical of the management scheme they were able to point to specific aspects of the document they did not like and to explain their reasons. As one local resident commented, *'well, it's a very big document and there's a lot in it which I don't really understand. However, it also contains an action plan which makes a lot of sense'*. Whereas on The Wash and North Norfolk Coast the target driven nature of the legislation has been heavily criticised by stakeholders, in NE Kent it has been openly embraced and is seen as a sign of transparency and accountability.

It was also clear that the inclusive nature of the process used to generate the management scheme had successfully helped stakeholders develop a sense of ownership over it and feel a sense of pride in their achievements; one of the volunteer coastal wardens stated: *'well, I've had a read of it and it's very useful and informative … I think it has raised awareness amongst stakeholders.'* Another local resident added:

> '*the management scheme has raised awareness amongst local people. Previously a lot of people just viewed the Thanet Coast as a bucket and spade place with lots of slot machines…But it has opened up a lot of people's eyes to the wildlife which is in the area'.*

Overall the management scheme has been welcomed as it provides a clear framework for action. This was summed up by a local scientist:

> *'The management scheme is very beneficial, it addresses the priorities which all the different stakeholders need to think about. Without it the EMS would end up like the SSSI's where you designate a site but don't do anything about it…. By having a management plan it is possible to have very clear objectives for everybody involved, from the day tripper to the scientist…without the management scheme no-one can be sure where they stand.'*

This sentiment, that without the management scheme the designation would in effect be meaningless, was common amongst many of the stakeholders interviewed. The action plan was repeatedly championed as the most important part as it gave people clear targets and allowed for the monitoring of progress. A number of stakeholders were also keen to point out direct links between the management scheme and practical actions which were occurring on the ground. Furthermore, they liked the fact that the management scheme and particularly the action plan makes the management group and individual RAs accountable to the stakeholders and wider population. The NCA conservation officer was keen to explain how the management scheme ensured that the RAs stuck to their responsibilities, *'… this has directly resulted in a decrease in disturbance in important nesting sites and as a result the turnstone population is now rising rather than falling'.*

These disparities between the perspectives of stakeholders in the two case studies raise some interesting questions regarding both the role they play in the development of the management schemes and their more general engagement with the EMS. The stakeholder dialogue process appears to develop a more obvious link between engaging with the EMS, the management scheme and the protection of the coastline than the advisory group model recommended in the DETER guidelines and adopted on The Wash and North Norfolk Coast. This largely appears to be due to the focused nature of the stakeholder dialogue process which also includes the opportunity for stakeholders to learn about the significance of the management scheme. Furthermore, the fact that the majority of criticisms came from the officials involved with writing the management scheme suggests that the stakeholder dialogue process allowed the wider stakeholder community to feed in their ideas at the right level without getting bogged down with the more technical elements of the process.

7.7 Stakeholder perspectives of the Thanet Coast Project

It was clear from the outset of the research that the TCP was central to the success of the NE Kent EMS. Chapter 4 describes the background to the project and outlines the project's remit and achievements to date. However, it is clear that the project has gone far beyond its remit and become the central hub for the management of the coast, developing social capital around the natural environment and educating people about marine conservation. Furthermore, even the most sceptical stakeholders acknowledged that the project is an asset to the local community. One long time Thanet resident who had been extremely critical about other aspects of the management of the site said: *'I have a lot of time for the TCP, it's not perfect but we have gone from nothing to having an organisation which is educating young people about the coast line'.*

Educating young people is an important part of the TCP's remit and the dedicated education officer works closely with local schools and youth organisations. The project also puts on a range of holiday activities, such as rock pooling and sand castle competitions, to encourage young people and their families to use the coastline. These activities are constantly expanding, and in 2008 the TCP launched a new beach play scheme organising holiday activities for children between 5 and 16 years of age.

Furthermore, over 4,500 Thanet primary school children have been involved in a programme run jointly by the TCP, HM Coastguard and Thanet Leisure's lifeguards to teach them about staying safe on the beach and protecting wildlife. These activities have also helped generate a local interest and pride in the environment.

The educational role of the TCP goes far beyond working with young people. As mentioned above, the project organises a range of coastal walks with local scientific experts, which are designed to both get people interested in the area and educate them about the importance of conservation. These walks predominantly attract local people and are in huge demand. One of the organisers commented: *'it's a real shame we can't get more funding to put on extra walks. We always fill up very quickly. In the summer we get some tourists coming along but the majority of people are locals who want to learn more about the area they live in.'* While another local expert, specialising in algae, highlighted the importance of getting people interested in some of the less 'glamorous' wildlife:

> *'Back in the 1990s there was a lot of controversy in the local press about attempts to save rare algae as it was seen to be threatening development opportunities which would create jobs. However, it is surprising how excited and interested people can become once you show it to them and explain that it's the only place in Europe this can be found'*

On the walks themselves it was very clear that the participants were genuinely very surprised at how much wildlife lived along the coast. During one of the walks the guide pointed out numerous edible plants and seaweeds and explained how he gathered a large proportion of his food from the foreshore. Afterwards he told me that after the walks he often met previous participants collecting sea weed to eat.

The TCP uses a wide variety of mediums to educate people about the coastline, and one particularly popular approach was through coastal art. A couple of times a year artists from all around the country come to Thanet to produce works of art using materials gathered on the foreshore and run workshops with local people. These events appeared particularly popular amongst stakeholders. One local resident commented: *'it's*

amazing what people can do with stuff they pick up of the ground. You get all sorts of people coming down here to see the art work, it really brings the community together'.

The TCP also worked very closely with Kent Wildlife Trust, organising awareness raising activities and monitoring the condition of the site. Between the two organisations, numerous local people had been trained as observers and conducted shore search surveys around the coastline. Furthermore, the general information sessions put on for coastal users by the Wildlife Trust has led to many local people becoming much better informed. As a result they often contact the TCP to report strange sightings or damaging behaviour.

In many respects it is the presence of the TCP which represents the major difference between the two case studies. While The Wash and North Norfolk Coast EMS primarily acts as a vehicle for the management of the EMS, through the TCP the NE Kent EMS acts as a much wider hub for promoting wider community engagement in local governance. In particular, it is important to highlight the volunteer coastal wardens' scheme which has been hailed as the TCP's flagship initiative.

7.7.1 Thanet volunteer wardens' scheme

The aim of the project is to train local people to *'act as the eyes and ears of the coast, collecting information to ensure it can be kept in good condition for future generations of wildlife and coastal users'*. http://www.thanetcoast.org.uk/pdf/Wardenleaflet.pdf.

The volunteer wardens are trained to record marine and bird life, visitor and activity numbers, sea mammals and other wildlife sightings and report any local damage or pollution back to the TCP. Their role is to purely observe rather than intervene or confront people engaging in damaging behaviour. This is stressed in the basic training and as one local councillor clarified: *'the wardens are fantastic foot solders for the project but they are not empowered to have any kind of enforcement role. Unfortunately due to the nature of today's society it would not be safe to have them confronting people about badly behaved dogs etc'*. However, an experienced warden said, although he would never confront people about their behaviour, regular beach

users often approached him to ask about wildlife and the different designations. He went on to say

> *'…we don't have a uniform or anything but when people see you walking around the same area, in wellies carrying binoculars, they assume you must know something about the area. If you can educate people about the area, enforcement become less important as people will respect the coast'.*

All wardens receive basic training which includes how to monitor activities and basic shore life identification skills. There are also opportunities to complete further training such as coastal bird identification, organising beach cleans, shore search identification courses, fossil extraction and marine mammal medic. Once trained, each warden is allocated a stretch of coast line which they are responsible for monitoring. The scheme has now been running since 2005, and as a result a number of the wardens have now been involved for over three years and built up a considerable amount of knowledge.

The commitment of the wardens varied considerably, from those who walked around their area every couple of weeks noting changes and developments, to those who were out every day and regularly organised beach cleans and shore search surveys. Furthermore, at least one warden has been conducting a major survey into the impact of shellfish gathering on the foreshore and reporting back to the scientific advisory committee. The chair of the group commented that *'This was a fantastic project. The individual involved is doing all the planning and leg work, but we have been able to provide him with advice and support to ensure the credibility of the survey.*' As well as providing an essential monitoring role the wardens' scheme has provided another opportunity for local people to get more involved with managing the coastline. A number of wardens (and other stakeholders) commented that it provides a practical way for people to help out, even if they do not want to get involved with *'the bureaucracy associated with the management scheme'*. Both the wardens scheme itself, and the work carried out by the wardens, helps local people develop an interest in the environment and provides a focus for developing social capital between local residence and the organisations involved with managing the coast. It has brought a wide range of people into contact with each other and the coast, providing them with a better understanding of the coast, its users and taught them how they can work together to

benefit both the community and the natural environment. The chair of the scientific advisory group described it as: *'… a fantastic way to engage a broad spectrum of people, and they're really useful as well!'*

The scheme has been a huge success with well over 100 wardens now taking part. Furthermore, it is seen as an example of good practice and a number of other EMS (including The Wash and North Norfolk Coast) are attempting to copy the model and set up similar schemes.

The only criticisms directed at the scheme concerned the processing of the data collected by the wardens. *'The main problem with the scheme is that the wardens report really important information; however, there are not enough people in paid positions to act on it all. Enforcement is still a big issue'* (Local Geologist and Councillor). One of the RA representatives on the management group added that: '*we have a huge amount of information coming in from the wardens, shore search surveys and other conservation groups. However, it is processed in a very ad hoc way, [and] we need a better way to collate the data'*. This was also recognised by the NCA Conservation Officer who proclaimed:

> *'…we now need to take it to the next level so we can make better use of the information. At the moment we don't have a GIS system to put it into…We have all sorts of monitoring responsibilities under the Habitats Regulations. At the moment we tender all this work out, but if we were better organised that might not be necessary.'*

7.7.2 The role of the Thanet Coast Project in governing the European Marine Site

The success of the TCP has been championed by the RAs and stakeholders as a huge achievement and clearly performs a vital role in the management of the EMS. However, a number of key stakeholders raised some concerns regarding its role in the governance of the site. As Figure 4.2 (in Chapter 4) demonstrates, the TCP has become the official mediator between stakeholders and the management group. This is in contrast to the more conventional model used on The Wash and North Norfolk Coast (Figure 4.1, Chapter 4) where stakeholders have a more direct link to the management

group via the local advisory groups. This has led to a number of stakeholders questioning who the management group is accountable to, the stakeholders or the TCP? Nevertheless, a recent survey of stakeholders conducted by the TCP found that the vast majority were happy with the current model and thought the TCP was capable of representing their views. This was confirmed by the current research which clearly showed that stakeholders regarded the TCP officers as their first point of call if they had a problem and were happy for them to represent their concerns at the management group meetings.

Possibly of greater concern was the fact that the TCP's jurisdiction is officially limited to the section of the EMS within the boundaries of TDC. As Map 4.3 (in Chapter 4) demonstrates, although the vast majority of the site is located within Thanet the areas around Pegwell Bay and Herne Bay are not. As a result, a number of stakeholders were concerned that these areas were not getting as much attention as the Thanet area and at least theoretically it may be difficult for stakeholders in these areas to be represented at the management group. The research found some evidence to support the argument that these areas were not getting the same level of attention as Thanet. One Herne Bay representative *commented 'I'm always travelling down to Margate to get involved with activities organised by the TCP. It's a shame there's not more going on around here.'* Also one of the consultants, who was hired to organise the review of the management scheme, pointed out that she was *'very aware that the majority of discussions at the workshops focused on things which were happening around the Thanet coast, and it appeared the other areas were being neglected'*.

These sentiments were confirmed by a review of activities organised by the TCP which showed that the vast majority of activities are centred around the Margate, Ramsgate and Broadstairs area. However, it is important to note that these are also the areas with the largest population and the greatest need for education and community engagement. Furthermore, as the TCP officer pointed out ,*'we work in very close partnership with both the Canterbury and Dover councils and they are also represented on the management group and we are also involved with organising events and activities right across the EMS'*. Nevertheless, there still remains at least a theoretical possibility that stakeholders in these areas on the fringe of the site may not be represented to the same extent as those within the TDC area. As one of the consultants involved with the project

noted, *'In the short term a key challenge is to get the message across that the EMS is about more than just the Thanet coast and the TCP.'*

7.7.3 Funding the Thanet Coast Project

Despite the success and support of the TCP from all sectors of the community, until recently (beginning of 2008) it did not have a guaranteed permanent income. Although TDC paid the salaries of the two project officers and provided office space they were not on permanent contracts and were constantly struggling to find funds for their numerous projects:

> *'Our funding ran out last year. The RAs are contributing with TDC and Natural England putting in the lion's share. It looks like we might get more from TDC but it's difficult to tell due to the local elections and change in administration. We put in a lottery bid but that was rejected… we are getting our salaries paid but that's about it, there is so much more we could be doing'* (TCP officer).

At the time the research was conducted there was no guarantee that the project would continue and this was clearly a major concern for many stakeholders:

> *'Currently the main problem is securing the funding for the TCP. As things stand the project officers are spending too much time chasing funding and not enough working with the community. If the project were to fold due to lack of funds it would have a detrimental effect on both the community and the EMS. Who would take over the role of bridging the gap between stakeholders and conservation?'* (Local Scientist).

Similar comments were made by 15 other stakeholders. In particular there was concern that the TCP was spending so much time fundraising that other projects were being neglected. The high priority these concerns were given by the stakeholders confirms the support for the project in the community. At the beginning of 2008 TDC agreed to put the project officers on permanent contracts, effectively guaranteeing the future of the project. However, concerns still remain regarding the funding of projects and the

amount of time spent on writing grant applications. Furthermore, a recent bid for lottery funding had been rejected which had provoked considerable frustration from the TCP staff and a number of stakeholders. Interestingly, many commented that they felt that due to the Olympics it was becoming harder for projects such as the TCP to bid for lottery funding.

7.8 The Future – taking the partnership forward

Overall, the vast majority of stakeholders appear to be content with the management scheme and the management of the site. They felt that the profile of conservation had been raised considerably since the designation of the EMS and both the community and the natural environment were in a better position as a result. Furthermore, they thought the partnership had created the necessary infrastructure to deal with future challenges. It was clear that at the time of the research the biggest concern was that the TCP was under threat due to lack of funding. Although this major concern has been resolved the stakeholders suggested a number of other, less serious problems which they felt would need to be addressed in the future. Similarly to The Wash and North Norfolk Coast EMS these can be broken down into two groups: macro challenges such as climate change which are beyond the control of the EMS partnership and micro challenges such as increased pressure from tourism.

7.8.1 Macro challenges

7.8.1.1 Climate change

The area designated as the NE Kent EMS is one of the most likely areas in the UK to feel the pressures of climate change related issues such as rising sea level. A recent study by the World Development Movement suggests that by 2080 much of the area surrounding the NE Kent EMS will be below sea level. As mentioned above, in the past aggressive measures have been put in place to protect Thanet from coastal erosion. However, the maintenance of these defences is not sustainable in the long term. Furthermore, by increasing the protection to the coast the impact on the chalk reef, one of the designated features of the EMS, is augmented:

'We cannot defend the coastline forever; sustainability is the key. Otherwise we will end up with a situation where the reef has dropped down so much that it is covered in water all the time. This will also have a negative impact on the beaches and the cost will go sky high' (Coastal Engineer).

As a result, difficult decisions will have to be made regarding the managed realignment of the coast. Ultimately human concerns such as the protection of property will have to be weighed up against environmental concerns such as the protection of the chalk reef. This is not the first time human and environmental interests have been at odds in Thanet, and history has shown that these issues have put a great deal of strain on the relationships between those tasked with economic development and conservationists. The partnership has dramatically improved relations between the various interest groups. However, it still remains unclear how well the partnership would stand up to another battle between conservation and human interests.

7.8.1.2 Other external impacts effecting the European Marine Site

As a result of the decision to adopt the ecosystem approach, many of the stakeholders have been thinking more widely about impacts on the site from outside its boundaries. A number of stakeholders commented that they were concerned with the level of pollution from shipping in the English Chanel: *'We get a lot of shipping-related waste washed up on the beaches which is a hazard for sea birds'* (Coastal Warden). *'All it would take is one large oil spill in the Channel and the impact on the site would be catastrophic'* (Local Scientist). These concerns were realised in January 2009 when a huge quantity of timber broke free from a vessel in the Channel and ended up on beaches around Thanet. Furthermore, the stakeholders were concerned that there was little they could do to mitigate against these threats and argued that it was necessary to *'take the ecosystem approach further and develop partnerships with other organisations and groups, both in the UK and Europe'* (Local Resident).

Of particular concern to the scientific advisory group was the increased number of non-native species which are being recorded around the site. It is clear these are having an impact on native species. For example, native oysters are being decimated by the increase in the number of Portuguese oysters. It is clear that this problem is at least in

part related to climate change, but there is also evidence to suggest that many of the non-native species arrive in the area in the ballast tanks of large ships. Although there are a number of initiatives in place to monitor non-native species, there was concern amongst the scientists that they were *'generally ad hoc and not all that rigorous'* (Local Scientist).

7.8.2 Micro challenges

7.8.2.1 Behaviour of Stakeholders

A number of stakeholders reported that despite drastic improvements in the behaviour of many stakeholders, they were concerned that the message was still not getting through to all sectors of the community. In particular issues, such as driving on the peer, the use of mini motos on the beach, irresponsible dog owners, and jet skis were considered to still be creating a significant disturbance which was having a negative impact on wildlife and nesting birds in particular. These issues were recognised by the TCP which plans to extend its education programme to reach out to a wider range of people. It was also hoped that new legislation forthcoming in the proposed Marine Bill would give authorities more power to clamp down on such activities.

Many stakeholders also complained about the rising number of 'immigrant gangs' who come in from outside the area to collect shellfish from the foreshore. This appeared to provoke an angry reaction from many people, although the reasons are less easy to define. While some appeared genuinely concerned that they were damaging the biodiversity of the site and worried about their safety, '*it's a disaster waiting to happen, Do you remember what happened to the cockle pickers at Morecombe Bay? Well I'm worried that the same thing will happen here*.' (Coastal Warden). However, others seemed more concerned by the fact that they were 'immigrants': 'S*ometimes it feels like an invasion. We get hundreds of Chinese and Eastern Europeans down here stripping the foreshore. They have no right to be here. I'm sure most of them are illegals'* (Local Resident). The scientific community was keen to establish some data on the extent of the problem and the impact it was having on the site. Currently there are a number of monitoring programmes in place which are due to report in 2009.

7.8.2.2 Enforcement

These issues related to the behaviour of coastal users also provoked many stakeholders to raise issues about the enforcement of the legislation. A representative from TDC responsible for looking after the foreshore made the following comments in relation to the shell fish gatherers:

> *'We don't have any real power to stop them. I have to work with archaic bye laws. It's something I'm constantly raising with the legal department. I'm still working with bye laws which allow you to drive oxen around the place! The only ones I can really use are ones referring to causing a noise, disturbance or danger to other members of the public. Although the actual acts of removing the shellfish is not posing a danger to the public they are driving down in loads of cars on to the promenade where they are not allowed to go.… The Sea Fisheries Committee needs to be more involved. We need to know what is going on so it can be properly controlled'*

However, a representative from the Sea Fisheries Committee argued:

> *'One of the main things which crops up is people taking things from the foreshore. That is quite a hot topic. We are not really involved with monitoring, it is more down to the Council to make a bye law. We have certain bylaws to do with collection of certain species. It is very hard to police. It is hard enough with fishermen when you have a certain tidal window and can predict when they are coming in. It would cost a lot to police, and even if you caught one group I'm not sure that would stop others as it is completely opportunist. I think the Marine Bill will help as it should clarify these things and outline who is responsible for what.'*

This clearly demonstrates that although the partnership has increased the levels of co-operation between agencies there is still room for improvement and a need to clarify which organisations are responsible for managing activities.

In relation to the problems relating to other forms of unacceptable behaviour, the TCP officer responded by saying that they were working closely with the local police to educate Community Support Officers about coastal issues and they were hoping to set up patrols along the coast.

7.8.2.3 Pressure from development

As outlined in Chapter 4, historically conflicts between economic development and conservation have been the root cause of many problems. The stakeholders clearly recognised that the situation is now far better than it was in the 1980s and 1990s. However, a number still remained concerned that pressure from economic development still represents a major challenge to the site:

> *'TDC is under huge pressure to develop. Thanet is seen as a very run down area. However, the more development you have the bigger the impact on the coast. This is going to need to be monitored very carefully over the next few years'* (Local Scientist).

Once again the TCP was seen as the key to ensuring that any development was sustainable by continuing to raise the profile of the coast and conservation and making sure they were taken into consideration when planning applications were being considered.

7.8.2.4 Maintaining momentum

Finally, the success of the project to date has led some stakeholders to become concerned that it may not be possible to keep the momentum going at the current rate: *'...in recent years things have been much better. I just hope they continue and the TCP keeps afloat and can attract funding to support interesting and innovative projects in the future'* (Local Resident). Others stressed the importance of keeping projects like the coastal wardens scheme going: *'People tend to jump at these initiatives when they first start, but unless they are constantly seeing new opportunities they will get bored and go off and do something else'* (Coastal Warden).

7.9 Concluding comments

The urban nature of much of the area surrounding the NE Kent EMS presents a specific set of challenges to the management of the site. Furthermore, the areas relatively poor socio-economic status has led to substantial pressure for development which has not always taken into consideration the needs of the natural environment. As a result, it has been necessary to develop a set of institutional arrangements to manage the site which recognise these specific challenges. It is clear that integrating the economic development agenda with the EMS management scheme has been central to the successful management of the site. The partnership's ability to develop a high level of social capital within the community, using the coast as a focus, has led to a well informed stakeholder population, who are willing to work together to ensure its future sustainability. Furthermore, the TCP continues to develop an exciting and innovative programme of stakeholder events which have been cited as an example of good practice by many other EMSs. However, it remains important to remember that the EMS is about more than just the TCP.

The stakeholder dialogue process used to develop the management scheme has been well received by stakeholders and represents a successful example of an alternative way to both inform and consult with stakeholders. The approach has demonstrated that it is possible to present complex and technical material in a way which can be understood by all. The decision to adopt the ecosystem approach represents a continuation of the original management scheme which aimed to integrate socio-economic plans with the environmental management of the site. Although it is unclear precisely how it will affect the wider ecosystem, it has enabled stakeholders to think about the designated features in the context of the wider environment. It also seems that concerns that the term 'ecosystem approach' would confuse stakeholders have been largely unfounded. This was clearly at least in part due to the use of the stakeholder dialogue approach which allowed the term to be explained in a simple and clear way.

As a result of a considerable amount of hard work by a number of committed organisations and individuals, significant progress has been made in marine conservation and improving interactions between people and the environment since the site was designated an EMS. However, there are still a number of issues which need to

be addressed, in particular coastal erosion and engaging with hard to reach groups such as the fishing industry. Nevertheless, the evidence suggests that these issues are recognised by the authorities and efforts are being made to address them.

Chapter 8 marks another change in focus from the presentation of primary data to analysis. The evidence presented in the two case study chapters will be summarised and commented upon in light of the theoretical perspective laid out in Chapter 2.

8

Discussion and Analysis

Introduction

This thesis has addressed a number of questions about the governance of MPAs. On a theoretical level it draws on the CPR literature and uses Agrawal's (2001) list of critical enabling conditions to form the basis of the theoretical framework. However, it is clear that the application and validity of these conditions will vary on a case to case basis according to the context; consequently the focus has been on organising the research findings according to the broad categories; resource system characteristics, group characteristics (i.e. human/community factors), institutional arrangements, and external environment used by Agrawal. In particular, it has focused on the interface between stakeholders, the natural environment and the legislative framework in place to protect the designated areas. In line with the interpretivist tradition in political science, it has sought to provide an actor-centred account of the creation and functioning of the partnerships and their impact on environmental protection.

The research has sought to build upon the earlier work of Jones and Burgess (2001; 2005) and Gardner (2005) on the development of statutory partnerships for the management of EMSs, both by updating their empirical narrative to the present day, but also, conceptually, by returning to examine in more depth the impact of the Habitats Directive on the development of relationships between the RAs and the wider stakeholder community. Jones and Burgess (2005) identify a number of CAPs which have the potential to undermine a partnership's ability to implement the Habitats Regulations and provide protection to the designated sites. These have been classified according to the categories identified by Agrawal (2001) and the extent to which they have materialised in the two case studies is explored through Chapters 6 and 7.

This chapter returns to the six specific questions that were set out at the end of Chapter 3 and reiterated in Chapter 6:

- What is the nature of the relationship between stakeholders and the EMSs and does it affect the management of the site?
- What form should the relationship between the state and local stakeholders take in order to balance provision for stakeholder participation with fulfilment of statutory obligations?
- Is the concept of a statutory partnership a useful tool for the management of MPAs or an unworkable contradiction in terms?
- What are the implications of the ecosystem approach for MPA management?
- Is it possible to define a proportionate application of the precautionary principle or does this only lead to further questions regarding when it should be used?
- What role does social capital play in the development of partnerships for the management of MPAs?

This chapter seeks to provide answers for them in turn in the discussion that follows.

8.1 People and the European Marine Site

Although it is now largely accepted that climate change and biodiversity loss are far more than social constructions, this line of argument cannot be totally dismissed. The way in which individuals, organisations and governments conceptualise these issues is reflected in the policies adopted to mitigate their impact (Hajer 1995; Lundqvist 1999). Nature conservation and in particular the designation of protected areas is not an unambiguous notion from which precise environmental implications and prescriptions automatically follow (Goodwin 1998). For example, if an area is designated as a protected area it is unlikely to incorporate an entire ecosystem; as well as considering ecosystem boundaries, social, economic and political considerations all have to be taken in to account. Although nature conservation is an activity that takes place in the physical environment, it is also culturally constructed through language and symbols (Williams 1973; Short 1991; Redclift 1996). These issues are of particular concern in

the marine environment where the high level of connectivity, lack of knowledge on ecosystem boundaries and the increased chances that ecosystems will stretch across national boundaries make it difficult to protect entire ecosystems. As Mascia (2004) points out, MPAs are a human construction, developed to control human behaviour and thus are a social phenomenon. Consequently, for the designation and implementation of MPAs to be successful it is essential that social, economic and political considerations are taken into account along with the ecological, as ultimately the way in which stakeholders respond to the legislation determines how effective it is going to be.

This was demonstrated in both the case studies. Many of the stakeholders who had lived and worked around the EMSs argued that the root cause of the historically poor relationship between conservationists and local stakeholders was that they had not been properly consulted about proposals. There was also an underlying frustration that the balance between conservation and economic development had been wrong, leading to a fracturing of relations between core interest groups. Furthermore, due to the high cost and logistical difficulties associated with policing the marine environment without the stakeholder support, much of the previous legislation had been largely ineffective in protecting the marine environment. This had led to further complaints that it was simply a pointless bureaucratic exercise rather than a serious attempt to provide protection to the marine environment. Therefore, a critical factor in stakeholder support for the legislation was that the designations were seen to have a positive impact on the area and this required them to have significant legal powers to develop an effective management scheme. Consequently, a difficult balance has to be reached in which the partnership is seen to be acting in a visible and decisive way to protect the environment whilst actively listening to and incorporating the views of the stakeholder community.

As the literature suggests, if this balance is to be reached it is essential that stakeholders retain both a sense of ownership over the site (Borrini-Feyerabend, et al. 2004 and Baland and Platteau 1996) and the management scheme (Jones and Burgess 2005; Saglie 2006). Thus, as the Habitats Regulations suggest, the NCA needs to move from a controlling to a facilitating role. However, as Pretty (2003) and Jones (2008) propound, an element of guidance and facilitation from outside is required to ensure that statutory biodiversity conservation obligations are met. Getting this complex

balance right is by far the biggest challenge facing the RAs and as the research has shown it can only be achieved through effective engagement with the wider stakeholder community.

In both the case studies the authorities leading the EMS designation and management process had by and large succeeded in engaging with the stakeholders and encouraging them to have an input into the management schemes. Furthermore, the vast majority of stakeholders who had taken part in the consultation process felt they had been listened to and were proud of their achievements in developing the management schemes. However, the final management schemes were seen to be excessively complex documents and as a result some stakeholders were unable to determine how they had influenced the scheme as it was *'buried within the bureaucracy'* (Ex-advisory group chair, North Norfolk Coast). Nevertheless, even if they were a little unsure of how they had influenced the management scheme documents they felt their comments and suggestions at the regular consultation events influenced the practical day to day management of the sites.

8.2 Stakeholder engagement with the European Marine Site – the problem of apathy

Although those stakeholders who were actively engaged with the EMS management appeared to be generally happy with the way the process was operating, there were still concerns that many stakeholders were not engaging at all. Furthermore, evidence from both case studies seems to suggest the problem is getting worse. This was reflected during the recent review of the management scheme in NE Kent, where despite the increase in the number of known stakeholders since the first process fewer people attended the review workshops. Also the advisory group chairs in The Wash and North Norfolk Coast EMS reported that attendance at meetings had declined. However, they did note that when specific controversial issues are on the agenda, such as the eider predation of mussel lays, the number at meetings dramatically increased.

To some extent this lack of engagement can be interpreted as a sign of success, stakeholders clearly trust those tasked with managing the area and do not necessarily feel the need to engage with the process on a regular basis unless a particular issue

arises which they are concerned about. Furthermore, although the number of people attending official meetings was in decline, evidence from the NE Kent EMS clearly shows more people than ever before were getting involved with conservation activities organised through the TCP, suggesting that they were willing to engage at a level at which they felt comfortable.

However, of particular concern was the lack of engagement from one of the key stakeholder groups, the fishing industry. The research found some support for the arguments presented by Acheson (1981) and May (2008), that the nature of the fishing industry means fishers are often not available to partake in consultation exercises. But it also appears that many fishers had become so bedraggled by quotas and other legislation that they had developed a strong 'leave me alone attitude' and were not interested in engaging with the management schemes unless they felt it was likely to have a direct impact on their businesses.

This lack of engagement from the fishing industry has the potential to undermine the legitimacy of the partnerships in two ways. First, by not fully engaging with the fishing industry there is a danger than important local knowledge about the state of the designated site may remain below the radar of the partnership and not be incorporated in to the management scheme. Second, and potentially more serious, is the missed opportunity to build strong working relationships between fishers and officials, which may be crucial in resolving disputes when they arise.

8.3 The role of the state: Facilitator or controller?

8.3.1 The challenges of scale

Traditionally much of the research into CPR governance issues has focused on community-based case studies characterised by self-organised local actors governing relatively contained natural resources (Agwal 2001; Berks 2002, 2006; Edwards and Steins 1999; Jones and Burgess 2005; Stern et al. 2002; Jones 2008). However, such approaches fail to recognise the important influences of institutions and bodies beyond local civil society (Rydin 2006) in an increasingly globalised world (Berkes 2008), and the scale challenges that these linkages present (Cash et al. 2006). For example,

Agrawal's (2001) work focuses on identifying combinations of enabling conditions that support the evolution of institutions for sustainable natural resource governance amongst local actors but does not include international bodies. This fails to recognise that these local actors are in fact embedded in supra-individual structures that operate at local and wider scales and that the influence of these structures on the evolution of governance institutions needs to be integrated into CPR studies (McCay 2002; Jones 2008). As a result, structure and agency are treated as mutually exclusive rather than interdependent influences which evolve in tandem as described by Giddens's (1984) structuration theory (Jones 2008). This research has attempted to address these issues by focusing on the cultural aspects of the institutions developed to manage the EMSs, through the analysis of the perspectives of stakeholders on their relationships with other partners operating at a variety of levels.

As this research has shown, the analysis of the governance of EMS requires the embedded nature of the structure and agency debate to be taken into consideration. EMS management requires vertical linkages to be developed between local stakeholders and a range of bodies working at different levels from local government to the European Union as well as horizontal linkages between stakeholder groups operating at the same level. Furthermore, these relationships are very much two-way as the legislation requires local users to be fully integrated into the process and consulted on the management schemes, allowing them to influence the structures under which they operate. Nevertheless, it is clear that stakeholders working at deferent levels may have conflicting ideas on the priorities of the EMSs, causing potentially serious CAPs to develop. Local resource users are likely to see sustainable exploitation as the priority while the NCAs, NGOs, central government and international organisations are more likely to prioritise biodiversity conservation (Jones 2008). It is such discrepancies in priorities which can lead to the different interpretations of concepts such as the ecosystem approach and precautionary principle discussed above.

8.3.2 Shifting the role of the state

These potential conflicts of priorities mean that it is difficult for the state to shift from its role as controller to a facilitator, which Ostrom (1990) argues is necessary for successful governance, if it has a duty to ensure that biodiversity conservation

obligations are met. Furthermore, as Jones and Burgess (2005) point out, this also means that Agwal's (2001) enabling conditions of locally devised access and management rules and the notion that central governments should not undermine local authority will be challenging to fulfil, or may even be inappropriate. Ultimately, the extent to which this shift can take place depends upon the definition of the facilitator's role. As Jones (2001) argues, what is needed is a middle ground approach, which balances local and national perspectives. Essentially, the state needs to be able to move between the two roles, facilitating the day to day management of the sites and taking on board the views of the stakeholders but retaining the power to intervene when necessary to ensure that biodiversity conservation obligations are met. This elastic role played by the state is what Kelleher (1999) was referring to when he argued the design and management of MPAs must be both top-down and bottom up.

The 1994 Habitats Regulations clearly state that the NCA should make this difficult shift from controller to facilitator. The evidence from this research suggests that the NCA is willing to listen and act upon advice and suggestions from a wide variety of stakeholders. However, problems still remain when contradictions arise between the perspectives of stakeholders and the statutory biodiversity obligations. For example, in The Wash the three-way communication between the fishers, the Sea Fisheries Committee and the NCA has led to a much more joined-up approach to fisheries management and a significant recovery in shellfish stocks. Nevertheless, when it came to the issue of scaring eiders even if the NCA had wanted to allow the scaring to go ahead they were restricted by the legislation. Furthermore, the incorporation of the economic development agenda within the NE Kent EMS management scheme has led to a dramatic improvement in the working relationship between TDC and the NCA which has ultimately benefited conservation. Nevertheless, if in the future economic development initiatives are put forward which contravene the Habitats Regulations the NCA will be forced to oppose the plans. Consequently, it can be argued that in practice the NCAs have retained a significant influence over the direction of the EMSs. However, the NCA and management groups across both sites constantly stress the importance of stakeholder involvement. This appears to have led to some stakeholders developing an unrealistic idea about the amount of power they hold within the partnership. As a result, when the NCA intervenes stakeholders are surprised by their actions. Therefore, the problem seems to be, at least in part, more to do with the

NCA's communication to stakeholders about their role and the amount of authority they hold rather than the actual power held by the NCA.

Initially this dilemma appears to be a classic example of a potential CAP predicted by Jones and Burgess (2005), that the management structures and processes employed to govern EMSs may not provide a sufficient degree of power sharing for the state's role to shift from 'controller' to 'facilitator' (Ostrom 1990). They go on to predict that there is a risk that the NCA may end up adopting a controller role in order to ensure that the conservation obligations are fulfilled, instead of simply facilitating discussions between the different partners. The Wash case study demonstrates that if there is a fundamental difference of opinion between the NCA and other partners it is difficult for the agency to fulfil its role as facilitator, as its primary concern is to ensure the fulfilment of biodiversity conservation obligations. If a partnership is to be truly democratic, it is necessary that the voice of local people is not only heard but listened to and acted upon (Kapoor 2001; Leach et al. 1999; Scott 1998). However, this is not possible as the conservation agency cannot act completely independently and has to ensure the strategic biodiversity conservation obligations are implemented. This highlights the classic problem with a statutory partnership that its objectives may end up contradicting each other and become fractured (Goodwin 1998).

On the surface this seems to undermine the core principles associated with co-management. However, in reality it is difficult to imagine a situation where the state introduces legislation but does not retain any powers to enforce it. Furthermore, the statutory nature of the partnership, driven by these obligations, makes this inevitable. The externally derived strategic biodiversity conservation obligations imposed on the partnership means that the relevant authorities cannot leave EMS management to self-governance by self-organised local actors (Jones and Burgess 2005). This brings into question whether EMS management regimes really fit into the criteria that Ostrom (1990) laid down for the management of CPRs. As Steins and Edwards (1999) argue, negotiations amongst actors on CPR platforms are obstructed if strategic narratives, such as those aimed at fulfilling conservation obligations, are adopted. However, it is hard to see how a workable management scheme could be implemented for a complex multi-user MPA which did not have some kind of over-riding direction from a statutory organisation. It is clear that such a management model does not necessarily fit into the

conventional model for co-management described by Ostrom (1990), but does this actually matter? What is in fact more important is that strong institutional arrangements are in place which facilitate the development of partnership capacity/ bracing social capital that can withstand disputes between the NCA and specific stakeholder groups and limit the damage to the wider management of the site. Furthermore, it is crucial that after such an intervention the NCA can move back into its role as facilitator and quickly repair the damage done to its relationship with the particular stakeholder group.

In many respects this is what happened after the verdict of the PI had been reached; the NCA played a vital role in the re-building of the fractured partnership by hosting discussions between the affected parties. This process eventually led to the development of a stronger and more effective working relationship than existed prior to the PI.

The NE Kent EMS has also had to deal with scale challenges regarding the development of linkages between stakeholders. It is clear that these difficulties are much less severe than those which threatened to undermine The Wash and North Norfolk Coast EMS. Nevertheless, they do bring into question the amount of power local stakeholders wield within the partnership, and possibly more importantly how their views are represented. Initially the main difficulties lay with developing a working horizontal linkage between the two central RAs, the NCA and TDC. However, these difficulties appear to have been resolved and a successful working relationship between the two organisations has developed. Subsequently, this has led to the implementation of a unique management structure, different from the one recommended in the DETR guidelines and adopted by The Wash and North Norfolk Coast EMS. This management model is represented in Figure 4.2 (in Chapter 4) and shows that the highly successful TCP now acts as a mediator between local stakeholders and the management group. In contrast, the model recommended in the DETR guide lines suggests stakeholders are directly represented on the management group by the elected advisory group chairs (see Figure 4.1 Chapter 4). This has led to a situation where theoretically the management group is accountable to the TCP rather than directly to the stakeholders as suggested in the DETR guidelines.

The evidence from the research clearly shows that the vast majority of stakeholders are happy with this arrangement. However, as Jones and Burgess (2005) argue, the vertical linkages between stakeholders and the management group have to be carefully managed to avoid undermining the legitimacy of local control. By introducing an additional link in the chain, such as the TCP, between the stakeholders and the management group the chances of the stakeholder's views being misinterpreted increase. Furthermore, the management group is potentially missing out on important and highly relevant knowledge possessed by local people. Throughout the research local stakeholders, managers and representatives of the RAs constantly stressed the lengths to which the management group went to ensure the views of local people were incorporated in to the management of the site. This has primarily been achieved through the development of the TCP. Although it is clear that the TCP has been successful in increasing stakeholder engagement, their role as a mediator may have unintentionally led to an increase in the distance between local stakeholders and the important decisions made by the management group. Furthermore, while the TCP aims to operate as an independent organisation the project officers are employees of TDC and rely heavily on the other RAs for funding. While the partnership is running smoothly, this is unlikely to be a major problem; however, if it were to face a crisis similar to the eider issue on The Wash, this theoretical lack of accountability could lead to the credibility of the partnership being undermined.

It is also important to note that in both case studies the project officers tasked with the day to day management of the site have played a vital role in holding the whole process together and mediating between different interest groups. It is clear that the statutory nature of the partnership can to some extent be seen as contradictory and on various occasions in both partnerships this has caused some tensions to develop. However, in the vast majority of occasions (The Wash PI being the exception) the issues have been resolved through negotiation largely facilitators by the project officers. Clearly the ability of the project officers to communicate with a range of stakeholders from various perspectives has been vitally important to the success of the partnerships. Consequently it is necessary to consider the suitability of an individuals personality when recruiting people for such positions.

8.4 Protecting the sea

Chapter 4 outlines a number of features of the marine environment that create additional challenges for its management. Issues related to these attributes have come up regularly in the two empirical chapters and on some occasions have proved to be significant stumbling blocks in the development of the EMSs' management schemes. In this section three areas are examined in detail: public perceptions of the marine environment, property rights, and scientific uncertainty. Incorporated into this analysis is a discussion on whether the principles behind the ecosystem approach and precautionary principle can aid the management of the marine environment. However, regardless of the approach applied, the central message to come out of this line of enquiry is that it is vital that the differences between terrestrial and marine environments are taken into consideration in the development of legislation to protect the marine environment.

8.4.1 Out of sight out of mind – the role of education

Educating stakeholders and the general public about the importance of conservation initiatives is an essential part of any conservation project. However, as outlined in Chapter 3, humanity's perceptions of the marine environment include many misconceptions (Agardy 1997; Cole-King 1995; Jones 2001), making education even more important for marine conservation. Furthermore, as Watling (1998) points out, much of the marine environment remains out of sight and out of mind. Consequently, destructive activities that would never be accepted on land are largely ignored at sea. Developing education programmes in marine conservation is nevertheless a challenging task as the marine environment remains out of reach to the majority of stakeholders. The research has shown that within the context of EMSs education performs two essential functions: first, to increase people's knowledge of the marine environment and why it needs to be protected; and second, to encourage local people to be proud of their coastal environment and see it as an asset which should be looked after.

Many of the stakeholders interviewed across both case studies stated that since they had been involved with the EMS their knowledge of the marine environment had increased and they were much more aware of its fragile nature. Even the representatives of the

RAs stated that it had been necessary for them to further their knowledge about the sites to ensure they were complying with the requirements of the Habitats Regulations. It was clear that the participatory nature of the management process provided significant opportunities for stakeholders to ask questions and learn more about the environment from each other and external experts. In particular, the stakeholder dialogue process used in NE Kent provided huge scope for stakeholders to learn about the designated area; helping to reduce many of the previously held misconceptions about the impact of marine conservation on economic development.

In The Wash and North Norfolk EMS opportunities for stakeholders to learn about the area beyond the official consultation process were restricted to the events organised by the WESG during Wash week and an ad hoc programme of presentations and events organised by the EMS partnership and WESG throughout the year. It was recognised by the project manager and other leading figures within the partnership that the lack of outreach work was having a detrimental impact on levels of stakeholder engagement.

These shortcomings were highlighted further when compared to the programme of events and opportunities put on by the Thanet Coast project. Although they were still struggling to engage with specific groups such as the fishing industry, and fewer people were turning up to the official stakeholder consultation events, levels of engagement within the wider community were high. The project provides opportunities for stakeholders to interact with the EMS at a range of levels, encouraging people from all walks of life to take an interest in the marine environment.

However, across both sites the increased knowledge of the stakeholders has helped them develop a sense of ownership over the site. Furthermore, both the official consultation process and other organised events provided opportunities for stakeholders to get together and develop an understanding of each other's perspective. Over time, this has led to the development of trust between the stakeholders and aided the building of partnership capacity.

8.4.2 The problem of ownership

Although nation states now retain property rights of the sea bed to 200nm offshore the assigning of property rights in the marine environment remains significantly more complex than for terrestrial areas. Ownership is restricted to the seabed while many of the resources are transient in nature and survive in the water column freely moving between state jurisdictions (Naughton –Treves and Sanderson 1995). As Young (2002:271) suggests:

> *'…there is little history of private property rights and only limited experience with public property…when it comes to the human use of marine resources'*

The challenges this poses for conservation were clearly demonstrated in The Wash and North Norfolk Coast case study. If an organisation such as the National Trust or RSPB had owned the EMS in the same way they own many terrestrial nature reserves it would have been relatively simple for them to refuse the mussel fishers permission to scare the eiders. The development of partnerships between conservationists, the state and resource users are therefore even more important for protecting the marine environment than terrestrial environments. As competition for the rights to exploit high value and rapidly depleting marine resources increases, the need to develop such partnerships becomes even more important. However, the lack of property rights and the large number of interested parties involved with the exploitation and management of MPAs makes the process considerably more complicated. Furthermore, in the case of MPA management co-management not only refers to the state and local communities but also to a wide variety of international, national and local bodies. The process of developing this type of partnership is inherently complex, and requires an in-depth understanding of the communities and institutions involved. As Berkes (2003:628) argues: *'To ground conservation effort we need a more nuanced understanding of the nature of people, communities, institutions and their interrelations at various levels'.* Where institutional arrangements and relations are not succeeding in taking the conservation agenda forward it is necessary to explore the possibility of developing new institutions which encourage collaborative working (see below). As well as emphasising the importance of considering the nature of stakeholder communities when developing institutional

arrangements for managing MPAs, the issues surrounding the lack of property rights clearly demonstrates the need for further research into stakeholder perspectives and understanding of marine conservation policy.

8.4.3 Tackling uncertainty

Today scientific thinking has moved on considerably since Frances Bacon's '*Great Instauration'* (see Chapter 2) and it is commonly accepted that there are some natural processes which are, at least for the time being, beyond human understanding. Consequently, scientific uncertainty still remains a major issue for policy makers in areas such as marine conservation and a potentially serious CAP. Endemic uncertainty undermines efforts to conserve marine systems as accessing sound scientific knowledge is both difficult and expensive. This is further exacerbated by the high level of connectivity within the marine environment. Numerous examples of the challenges uncertainty and connectivity present for marine conservation can be found in the literature (see Chapter 3). It was therefore unsurprising that the present research came across a number of examples of uncertainty-related challenges within the two case studies, such as the impact of scaring eider ducks on The Wash and the effect of large scale shellfish harvesting on the foreshore in NE Kent. Furthermore, it was the established approach for tackling uncertainty, adopting the 'precautionary principle', which was at the root of many of the issues. Closely associated with the debates surrounding the precautionary principle are issues linked with the adoption of ecosystem-based management approaches that represent the primary 'practical' tool for implementing the precautionary principle. However, as the setting of ecosystem boundaries is far from an exact science, this can add further confusion and uncertainty, increasing the potential for disagreement.

Implementing a management plan for the protection of a single species with a clearly defined habitat is relatively straightforward as comprehensive data can be gathered and presented to stakeholders and managers to justify particular actions. However, developing a broad management plan for a designated area used by numerous stakeholders, incorporating a wide range of species and habitats presents a much bigger challenge. Many of the justifications for particular actions will not stand up to rigorous

scientific testing and will be based on general concerns and informed hunches and suspicions rather than proven facts.

Furthermore, discourses surrounding the policy making process, across all sections of government are dominated by the need for evidence-based policy (Davies et al. 2000). This has been demonstrated in particular by the delays in putting together the Marine Bill. It is therefore difficult to make decisions when evidence is not available; this is particularly problematic in areas such as marine conservation where scientific uncertainty remains prolific. In recent years there have been attempts to deal with the high level of uncertainty by incorporating the precautionary principle into legislation such as the Habitats Directive and the Common Fisheries Policy. However, such attempts typically still require that a degree of certainty of risk is present (De Santo and Jones 2007).

This is highlighted by O'Riordan (2001) who argues that the present system does not allow for general feeling about the state of a particular environment to be incorporated into policy. Furthermore, the 'woolly' nature of the precautionary principle means that it is open to significant interpretation and can often lead to stakeholders becoming confused. This was a central problem in The Wash PI, where the precautionary principle was used to justify opposing arguments regarding the scaring of eider ducks, revealing two fundamental weaknesses with the principle. First, the principle only works when there is concern that specific activities may cause damage to a particular ecosystem or habitat. In the case of the eider inquiry it was unclear which activities were having an impact and even what features constituted the natural ecosystem. The mussel fishers were arguing that the artificial lays constituted a valuable habitat which was being undermined by the increase in eiders while the NCA denied that the lays were even part of the ecosystem and blamed the cultivation methods for the increase. Second, due to the loose definition attributed to the precautionary principle it is possible to manipulate it to justify almost any argument.

Consequently, it is necessary to take a cautious approach to adopting the precautionary principle. These concerns have clearly been recognised within recent legislation, as outlined in Chapter 3, recent government documents regarding the Marine Bill call for a *'proportionate application of the precautionary principle'*. Although a welcome

development, in many ways it raises as many questions as it answers. Within the context of The Wash PI, it is unlikely whether an acknowledgement that the concept should be used proportionately would have made any difference; but simply generated more arguments about what constitutes a proportionate application of the precautionary principle.

During the review of the management scheme in NE Kent the precautionary principle was used to justify the decision to adopt the ecosystem approach for the review. This was a genuinely legitimate use of the concept in an attempt to mitigate the high level of uncertainty in the marine environment. In an attempt to avoid confusing stakeholders with the lack of clarity behind both the concepts, the organisers used a simple 12 point definition developed by the Convention on Biodiversity and the U.S Commission on Ocean Policy (see Chapter 3) to explain the ecosystem approach. Furthermore, the research suggests that it has been successful in persuading stakeholders to look at the designated features within the context of the wider environment. However, significant concerns were raised by a number of members of the scientific community that there was a danger the focus would be taken off the important features for which the site had been designated. In addition, there was concern that even when using the simple 12 principle definition and operational guidance it is very difficult to put the ecosystem approach into practice, especially when the boundaries of the ecosystem do not match the boundaries of the designation.

Despite these concerns, the principles behind concepts such as the ecosystem approach and the precautionary principle are potentially useful in taking forward marine conservation objectives. Historically, attempts to manage the marine environment using single species fisheries' management approaches have failed to provide adequate protection; consequently, it is clear that a more holistic approach is required. Developing a management approach which takes whole habitats and all activities into consideration, as well as recognising the problems associated with uncertainty, provides a logical way forward. However, as this may not necessarily incorporate entire ecosystems, the term 'ecosystem approach' may in fact be the cause of some of the confusion. If such approaches are to be used, it is essential that the context of the site is taken into consideration, in particular if pre-existing frameworks are used it is important they are treated as guides which need to be adapted to different contexts,

rather than comprehensive instruction manuals (McCay 2002; Porter 2006; Agrawal 2001; Jones and Burgess 2005; Rydin and Pennington 2000). The emphasis needs to be placed on the need to develop joined-up holistic approaches to the management of protected areas rather than necessarily getting bogged down in debate about ecosystem boundaries, which in the case of the marine environment are likely to be surrounded in uncertainty. Furthermore, the inevitable discussions these concepts generate surrounding the nature of ecosystems and the wider impact of various activities have on the environment have encouraged debate amongst stakeholders. As the RSPB representative at The Wash PI commented, the arguments have brought these important issues to the attention of the wider community.

Nevertheless, such approaches will only be successful if they are accompanied by institutional arrangements which encourage the development of strong partnerships between the authorities tasked with implementing conservation legislation and the stakeholder communities. As decisions have to be taken where an element of uncertainty is present a high level of trust between the partners is necessary. It is also important to recognise that the development of such relationships is unlikely to occur quickly or as a result of simple policy changes. As this research has described, many stakeholder communities remain suspicious of conservation agendas and are concerned that they could undermine their livelihoods or restrict economic development. This can only be reversed if policy makers are seen to be willing to listen to local people and take their opinions seriously. The ecosystem approach can aid this process as it requires human activities and interactions with the environment to be incorporated into management.

8.4.4 Incorporating local knowledge

Historically NCAs were seen as expert witnesses *'speaking truth to power'* (Blanikie 1996:81). However, the changing nature of governance and the erosion in trust of experts has led to NCAs coming under increased pressure to consult stakeholders before making decisions (Matless 1989; Dwyer 1991; Hennessey 1992; Veldman 1984). These changes have affected all spheres of government and have evolved with the growing recognition that neither sole top down or bottom up approaches to governance is effective in an increasingly globalised world. This has resulted in the development of third way philosophies that form the basis of the partnership approach

to governance. At the same time NCAs have realised that a reliance on expertise in the past has not enabled them to secure their stated objectives of protecting biodiversity (Dobson 1993; Felton 1993; Adams 1993; 1996). Furthermore, legislation such as the Habitats Directive has made consultation a statutory requirement and the NCAs need to be seen to be acting on stakeholders' perspectives as well as listening.

In addition to being a core principle of bottom-up management approaches, incorporating local knowledge in the management of EMS is both important and attractive on a number of levels. As this research has revealed, many of the stakeholders involved with the EMSs (especially in The Wash and North Norfolk Coast) have lived and worked around the site for many years and have built up a huge knowledge base. The high level of uncertainty and difficulties related to research in the marine environment means that local knowledge could be extremely useful for filling in some of the gaps. Canvassing stakeholders' perspectives also helps legitimise conservation, generating a sense of ownership amongst local people and potentially reducing free-riding and making implementation of policy both easier and cheaper (Saglie 2006).

However, incorporating stakeholder participation into the decision-making process is in fact a highly complex process. Government rhetoric suggests that participation is a 'desirable' process that engenders either the involvement of a willing public or, at the very least public approbation and support for the initiative (Goodwin 1998). As this research has shown, this is not always the case. Stakeholders are clearly keen to participate in processes which they feel could potentially have a negative impact on their livelihoods or quality of life, but they are less interested in being involved with the mundane day to day management of the sites, for example attending regular stakeholder meetings when there are not any controversial issues on the agenda . As a result, the interactions between stakeholders and managers often end up being based on conflict rather than mutual respect. Add to this a lack of scientific facts, and it becomes difficult to distinguish between genuine information and myths or fishermen's tales. When local knowledge contradicts excepted scientific information it can be extremely difficult to resolve disagreements as neither side has hard scientific facts to back up their arguments. In these situations, where scientific evidence and local knowledge are

at odds, the final decision is often left to civil servants and politicians who are unlikely to have either any significant scientific training or any local knowledge.

Public participation in policy making is a complex phenomenon and not simply an inclusive dialogue that incorporates the perspective of ordinary people in collective decision-making (Goodwin 1998). It covers a wide range of approaches to public involvement that are differentiated by the amount of control and influence they offer participants (Arnstein 1971; Hain 1980). In the case of the EMSs the level of power attributed to stakeholders is restricted by the statutory biodiversity obligations outlined in the Habitats Directive, as a result the re-negotiation of power between local stakeholders and outside experts is limited. As White (1996:6) argues, participation is a contested concept which: *' has the potential to challenge patterns of dominance, but may also be the means through which existing power relations are entrenched and reproduced'.*

The impact of participation on the altering of power relations within partnerships is highly dependent on the mechanisms used for consultation. Furthermore, these mechanisms will also determine the type of information gained. The two case studies adopted different approaches, which have clearly impacted upon the perceptions of participation, held by both stakeholders and managers, as well as on the information it has generated. The stakeholder dialogue approach adopted by the NE Kent EMS was highly structured and organised, providing the opportunity for stakeholders to both learn about the management scheme and contribute towards its development. Although the process stresses the importance of stakeholders being involved at all levels of the planning, the agenda was pre-determined and so reduced stakeholders' opportunity to raise concerns which may not be directly relevant to the predetermined agenda. Furthermore, the task of co-ordinating and assessing all the information is left to outside experts who retain a significant amount of power in setting the agenda for the next stage in the process. As Goodwin (1998:487) argues, by conducting consultation through the criteria laid down by 'experts' it is possible to *'safeguard against the fragmentation represented by the subjective world of the lay person'* and ensure the agreed upon actions will lead to the meeting of pre-determined targets. Giddens (1991) refers to this type of process as 'sequestration of experience', in which expertise offers the only institutionally acceptable way of discussing issues of significance.

Sequestration of stakeholders' views allows experts to ostensibly separate out fact from feeling, preventing direct contact with those events and situations that link people's everyday lives to broad issues of morality, value and feeling. This limits the way in which local people can express their objectives and undermines their ability to question the authority of outside experts (Goodwin 1998).

The advisory group approach used in The Wash region is far less organised and structured and provided stakeholders much greater opportunity to freely express their opinion on issues at the fringes of the EMS's remit. However, this often led to meetings becoming saturated by debates about issues such as the proposed offshore wind farm which had caused widespread debate within the partnership, but was located outside the EMS's remit. Furthermore, the more relaxed style of consultation meant there was not such a clear audit trail of who had expressed particular opinions and how that information had been dealt with. As a result, instead of sequestration of information provided by stakeholders it seems some of it was simply rejected. This lack of clarity in the way information is dealt with may explain why in general stakeholders on The Wash and north Norfolk Coast were less aware of how their participation in the advisory groups affected the management scheme than the stakeholders in NE Kent.

8.5 Holding it all together

Throughout this thesis I have constantly referred to the importance of developing strong institutional arrangements to facilitate the management of EMSs. This is essential as the Habitats Regulations and DETR guidance requires numerous organisations and individuals to work together to manage the sites. Without a clear organisational framework the whole process would quickly become fragmented and unmanageable. Furthermore, the evidence from the case studies demonstrates that it is essential to provide a forum for discussion within which actors can develop an understanding of their obligations under the Habitats Regulations. Significant attention has also been given to how the whole process is held together through the development of partnership capacity and social capital. Social capital also provides a useful framework for analysing the critical cultural aspects of the institutional arrangements that, as Rydin (2006) argues, are essential for fully understanding the relationships between key actors.

In this final section of analysis the aim is to build upon the work of Ostrom (1990, 1992, 1999), Rydin and Pennington (2000), and Rydin (2006) who have shown that in certain contexts social capital can be used to aid the management of protected areas. However, the unique nature of the marine environment presents additional challenges that need to be taken into consideration (Jones 2001). As Watling and Norse (1998) demonstrate, developing a sense of local pride and ownership around a resource that is beyond the reach of many stakeholders is much harder than if the resource is an easily accessible picturesque terrestrial protected area.

Social capital operates at a number of different levels, these have been clarified as bonding, bridging, linking and bracing and are outlined in Chapter 2. Evidence of all four types was found in both the case studies. However, for the purpose of this analysis, linking social capital is left out as there is a significant overlap between the definitions of linking and bracing social capital, with bracing offering a fuller and more useful analytical framework. This section begins by exploring horizontal linkages between individual stakeholders operating at the same level and locality and how this can lead to the development of bonding social capital. Second, it moves on to looking at the role of bridging social capital in linking groups of stakeholders together. Finally, it explores how the idea of bracing social capital can be used to understand how both the horizontal and vertical linkages are brought together to connect the local stakeholders with the wider policy context.

8.5.1 Bonding social capital

As Rydin (2006) suggests: *'… Social capital can create links between actors based on sets of moral obligations that alter the balance between the incentives and the disincentives.'* It creates a situation in which the damage done to an individual's reputation by not engaging in collective action is more damaging than the short term gains of free riding. Bonding social capital in particular is useful for bringing a limited group of actors of very similar characteristics together usually within a close geographical area and can aid the management of protected areas in two ways. On the one hand, if high levels of social capital already exist within a community it may be possible to build upon the existing networks and relationships between key stakeholders to facilitate the management of a protected area. Essentially this was what

happened on The Wash and North Norfolk Coast when The Wash forum formed the basis for the EMS management group. Furthermore, the strong sense of community present at an even more local level provided the basis for setting up the local advisory groups. On the other hand, the introduction of a protected area can be used to generate a sense of local pride in the environment and used to facilitate social capital which can aid the management of the site and also provide benefits to the wider community - the Thanet Coast project in NE Kent is an excellent example of this. Prior to the designation of the EMS, the large fragmented urban population had limited interaction with the coastal environment and those trying to protect it were seen as a barrier to economic regeneration.

However, the case studies also revealed examples of the 'dark side' (Beall 1997; Wilson 1997; Woolcock 1998; Gargiulo and Benassi 2000; Rydin 2006) of bonding social capital. As Ostrom suggests, it may be used to promote sustainable natural resource management and support the livelihoods of the local community. But it can also tie communities together for entirely negative reasons and hide unsustainable practices (Rydin 2006). This is further exacerbated by the resistance bonded social capital can generate towards interventions and monitoring from external bodies. Within both case studies the fishing industry, based around small indigenous communities, was still characterised by a strong 'leave us alone' attitude which led to their being resistant to engagement with external agencies, undermining the development of vertical linkages. This can easily develop into a significant conflict when the involvement of outside experts is critical to the meeting of biodiversity conservation obligations. The high level of bonded social capital amongst The Wash fishing communities may have contributed to the breaking down of the relationship between the fishers and the NCA which ultimately led to the PI as they were unwilling to co-operate in the trials of the wailers or to accept the opinions of scientific 'experts'.

High levels of bonded social capital can also impact on the level of participation from the wider community. If a small group of stakeholders becomes a dominant force within the partnership and develops a high sense of ownership over the site others may feel intimidated about getting involved. This was one suggested explanation for the falling numbers of stakeholders attending the local advisory group meetings on The Wash and North Norfolk Coast. Similarly, a number of stakeholders involved with the

activities put on by the Thanet Coast Project were happy to engage with the coastal wardens' scheme and shore search but did not feel that it was their place to contribute to the formal public consultation process. The high sense of ownership over the site felt by a small group of actively involved stakeholders was also clear when they were talking about 'outsiders' coming in and stripping OUR coast line of shellfish. They appeared as indignant about the shellfish gatherers being outsiders as they were by the impact of their activities.

8.5.2 Bridging social capital

The nature of the Habitats Regulations and the DETR guidance notes governing EMS clearly requires a much more comprehensive approach to management than can be offered by bonded social capital, even if the negative aspects can be controlled. It is essential for stakeholders to build relationships with others outside their immediate communities and understand the wider policy framework within which they are operating. Bridging social capital describes the process of developing links and networks between stakeholders. However, the distinction between bridging and bonding social capital is not always clear. The local advisory groups on The Wash and North Norfolk Coast perform both a bonding and bridging role. On the one hand, they can act to strengthen existing ties between stakeholders within a particular locality, while on the other they provide an opportunity for stakeholders from different 'groups' to get to know each other. For example, historically fishers had had a very poor relationship with jet skiers and the advisory group has provided a forum for the two groups to try and understand each other's perspective and to 'bridge the gap between them'. Furthermore, as the chairs of the advisory group sit on the management group this provides a bridge (or a vertical link) between two tiers of management. The role of the TCP in NE Kent could be described more specifically as a 'bridging' organisation as its primary role is as a mediator between stakeholders and the management group. However, through taking part in activities organised by the TCP there is considerable scope for the development of bonded social capital between stakeholders.

The concepts of bridging and bonding social capital are useful for describing relationships which occur on the ground between organisations and individuals involved with natural resource management. However, these difficulties in

distinguishing between the concepts highlight a key criticism as identified by Rydin (2006). They do not allow for distinctions to be made in the value of links between stakeholders. As Rydin (2006) points out, the links could be analysed just in terms of networks, but this would lead to the crucial cultural elements of the institutions being lost. Bonding and bridging social capital play a useful role in understanding relationships between stakeholders and organisations at a micro level; however, they fail to properly explain the more strategic linkages which are needed for successful policy implementation.

8.5.3 Bracing social capital

The statutory nature of the EMS partnerships has led to the state playing an important role in bringing stakeholders together and the generation of social capital. This presents an analytical problem as the vast majority of social capital theory focuses on pre-existing stakeholder communities or as Ostrom described them 'self organised local actors'. Essentially there has been a lack of attention paid to the role of the state in developing and shaping civic action (Rydin2006; Lowndes and Wilson 2001; Maloney et al. 2000). Lownes and Wilson (2001) and Maloney (2000) describe how government policy can aid the development of social capital. The Habitats Directive is a perfect example of this; the state is providing an opportunity for civic action. Nevertheless, even when these considerations are taken into account a clear distinction is still being made between social capital as an attribute of civil society and the state's role as a facilitator of social capital. Although the analysis of bridging social capital takes into consideration the role of the state it fails to recognise the embedded nature of society, making a clear distinction between the role of structure and agency. As Rydin (2006:25-26) notes:

> *'…governance refers to a much closer and more involved interconnection between the state and civil society… Seeing bonding social capital as influenced by decisions and actions of the state is a very partial account of how communities can be involved in governance structures such as partnerships.*
>
> *A broader reinterpretation of the social capital concept to apply to linkages within but also beyond civil society is more appropriate.'*

The two case studies clearly demonstrated that the whole management process is held together by a network of actors connected by both horizontal and vertical linkages. However, the relationships were by no means equal. The relationship between fishers has been built up over many decades, possibly even centuries, and is based upon a high level of trust. The nature of the fishing industry means that the fishers potentially put their lives in each other's hands on a daily basis. This is very different to the relationship that has developed between the Sea fisheries Committee and the NCA, who are required to work closely together by the Habitats Directive to ensure that biodiversity obligations are met. However, both relationships are horizontal in nature and vital to the successful management of the site. In contrast a strategic vertical relationship between the NCA and the fishers is clearly beneficial to the management of the site but not bound by any kind of social or legal framework. Instead the NCA has had to work at finding common ground between the two interest groups and to build upon these areas to develop a sense of mutual respect and trust. This type of relationship is inherently more volatile in nature and subject to becoming fractured if the relationship becomes strained or breaks down.

On The Wash and North Norfolk Coast the long-term sustainability of the shellfishery has provided both the vital common interest necessary to develop a working relationship between the local community and the NCA and a focus for conflict. The crash of the shellfish stocks in the 1990s led to the development of The Wash Forum and marked a new era in collaboration between the fishers and NCA. Nevertheless, the subsequent arguments surrounding eider predation resulting in a PI led to the temporary fracturing of the strategic relationship between fishers and NCA. However, it was the bracing nature of the social capital present between the organisations involved which has allowed them to move on from the PI, to re-assert their common interests and to start to rebuild the relationship.

Similarly in NE Kent the partnership's ability to incorporate economic development into the EMS management scheme has led stakeholders to see the coast as an asset and provided the framework for both horizontal and vertical relationships to develop between stakeholders with very different agendas. It was the identification of common interests and the formation of a framework for a network of actors to come together and

discuss their concerns which eventually led to the breaking of the long standing deadlock between the NCA and TDC. Furthermore, the establishment of a network of actors has led to a dramatic rise in civil action facilitated through a shared interest in conserving and protecting the coast. This is a classic example of how the state can play a vital role in facilitating collective civil action and clearly demonstrates the study of CPRs needs to move beyond its preoccupation with small case studies involving self-organised local actors.

Essentially, a complex network of unequal relationships between numerous stakeholders, which includes both bonding and bridging social capital, holds the whole process together. It is inevitable that from time to time some of the links will become strained or even severed completely. However, the statutory nature of the partnerships means that they have to continue operating to ensure that biodiversity conservation obligations are met. Like a fragile building that is constantly being renovated and held together by bracing scaffolding, the EMS partnerships need to develop bracing social capital to hold them together. This research has shown that despite the breakdown of some important bridges between key stakeholders the two case study partnerships have continued to operate and work towards the goals outlined in their management schemes. Ultimately, in partnership with the other RAs, the NCA has been able to develop strong partnerships that have facilitated bracing social capital and allowed them to survive significant attacks on their authority.

8.6 Concluding comments

The development and maintenance of EMSs is a complex process that requires significant attention to be given to a wide range of concerns beyond the ecology of the sites. Central to the success of the partnerships is their ability to develop strong institutional arrangements that are capable of making difficult decisions while maintaining the respect of stakeholders. The strength of the legislation lies in the power it attributes to stakeholders and the processes in place which allow local people to influence the management schemes. However, the incorporation of local knowledge and the management of stakeholder's expectations present significant challenges. Furthermore, the unique nature of the marine environment requires additional barriers to be overcome. The research has shown that the high level of uncertainty surrounding

marine ecology has led to conflicts arising regarding the most appropriate way to manage the sites; this further enhances the need to build strong partnerships with a wide range of stakeholders. It is the strong bracing social capital that has developed over a number of years, which allows the EMSs to continue operating even when one or more strategic linkage breaks down.

9

Conclusions

Introduction

The main argument to come out of this thesis is that for the designation and implementation of MPAs to be successful it is essential that social, economic and political considerations are taken into account along with the ecological. Furthermore, due to the unique and typically hard to reach nature of the marine environment, these considerations are even more important than for terrestrial sites as without the support of stakeholders such designations will be impossible to implement. Consequently the focus of this thesis has been an investigation of the development of institutional arrangements which can aid this process. The Habitats Directive has put in place a framework which allows local stakeholders to have a significant influence over the nature of EMSs and ensures they are consulted on important decisions, while the state and NCAs retain the authority to intervene to ensure that the biodiversity conservation obligations of the sites are met. This co-management or partnership approach to conservation is a direct response to changes in governance more generally, and marks a shift from the previous command and control approach to conservation.

This thesis has examined in depth two case studies which have interpreted the Habitats Directive in different ways to set up EMS. While both have successfully implemented management plans which have been in place for more than 6 years, the paths they took to reach this stage were quite different and a reflection of the contexts in which they operate. This highlights another key feature in the governance of marine CPRs, and in fact CPRs more generally: it is essential that the context of the particular site is taken into consideration when designing a management plan. For this reason, attempting to

come to some broad conclusions that can be universally applied to EMSs is not possible or even desirable. However, the research has highlighted a number of issues and examples of good practice that have the potential to be adapted for a range of contexts and could be useful for informing future developments in marine conservation policy and the study of CPRs more generally.

9.1 Overcoming challenges

Throughout the results and analysis sections of this thesis a number of policy decisions have been highlighted which have led to improvements in the management of the EMSs. The table below highlights the most significant challenges faced by the EMS management groups and outlines the policy decisions which have enabled them to overcome these challenges. The challenges have been classified according to the categories identified by Agrawal (2001) which have formed the basis for the theoretical framework used throughout this analysis:

Table 9.1: Summary of challenges, policy decisions and outcomes which have contributed to the development of successful management schemes for the NE Kent and The Wash and North Norfolk Coast EMS.

NE Kent EMS		
Challenge	**Policy decision**	**Outcome**
1. Resource System characteristic		
Relatively small designated area situated within a much larger ecosystem.	Explicitly adopted the ecosystem approach for a recent review of the management scheme.	The management group now considers the impact activities outside the EMSs boundaries on the designated features and requires the management group to work with other organisations to minimise the impact.
Much of the site is surrounded by a large urban area in need of economic development and regeneration.	Integrated economic and social development in to the marine conservation agenda.	The development of a management scheme which incorporates proposals for economic development such as eco-tourism and sustainable urban regeneration into the marine conservation strategy.

2. Group Characteristics		
A history of conflict between conservation and economic development.	Create a space for dialogue between stakeholders and integrate stakeholder knowledge in to the management plan. Employ dedicated project officers to manage the relationships between stakeholders and statutory authorities.	Set up an interactive approach to stakeholder dialogue which brings people together from a range of interest groups to discuss the management of the site and develop mutually acceptable/beneficial management actions. Project officers have been very successful in developing relationships between key stakeholder groups.
A lack of interest and knowledge about the marine environment amongst the population.	Set up the TCP, a community based organisation tasked with encouraging local people to engage with the marine environment.	Provides a vehicle through which to communicate the implications of the designation to the general public. It has also created and facilitated the development of a wide range of opportunities for local people to participate with the EMS at what ever level they feel comfortable with.
A fragmented community with little community cohesion and no history of social capital	Through the TCP organise a range of community events and volunteering opportunities which encourage local people to develop a sense of ownership of the environment and facilitate the generation of social capital.	Through the volunteering and engagement activities organised by the TCP the local community has developed a real sense of pride and ownership over the EMS. Essentially the EMS has become a catalyst for the generation of social capital.
3. Institutional Arrangements		
A highly complex regulatory framework which needs to be interpreted for the local context.	Involve the stakeholders with the decision making process and incorporate local knowledge in to the decision making process.	The stakeholder dialogue process and TCP facilitate the communication of the regulatory process to stakeholders and allow them to feed back their thoughts in to the decision making process. As stakeholders are involved

		with developing the management scheme they have a better understanding of how it works and what it is trying to achieve.
Enforcement of regulations.	Educate stakeholders and build partnerships with other organisations tasked with law enforcement.	The TCP has provided information and codes of conduct to stakeholders and visitors which informs them about the designated site and explains how to enjoy the area in a sustainable way. As a result the majority of users now understand the delicate nature of the site and appear to be behaving in a more responsible manner. The TCP is also developing links with the local police and is educating local police community support officers about the designation. The Sea Fisheries Committee is also becoming more involved with the designation and working with the TCP to clarify the rules regarding the harvesting of shellfish from the foreshore.
Involving stakeholders with the decision making process at a level which they were both willing to engage and facilitated their long term interest in the site.	Set up the TCP, a community based organisation tasked with encouraging local people to engage with the marine environment.	The TCP provides opportunities for people to be involved with the EMS at a range of levels from actively taking part in community consultation exercises, volunteering as a coastal warden or simply coming along to awareness raising activities.
4. External Environment		
A historically difficult	Creating a forum for	The relationship between

relationship between the two central statutory bodies.	discussion and integrating economic development in to the conservation agenda.	the two bodies has improved to such an extent that the NCA trusts the local authority to take important management decisions without formally consulting them.
Securing long term financial support for the TCP.	Raise the profile of the TCP in the community and demonstrate the wider benefits of the project, both in terms of conservation and economic development to the local authority.	By demonstrating the value of the organisation, the local authority has agreed to fund a permanent project officer and project assistant.

The Wash and North Norfolk Coast EMS		
Challenge	**Policy decision**	**Outcome**
1. Resource System characteristic		
A large site containing a range of habitats requiring different types of management.	Split the site up in to three regions for management purposes.	The three local advisory groups meet regularly with the project officer and the NCA conservation officer to discuss the management of the site. Allowing decisions to be taken at a local level with the input of local people.
2. Group Characteristics		
The site is surrounded by a powerful indigenous population reliant on the EMS for their livelihood who processes a strong sense of ownership of the site	Set up regional advisory groups to allow local population to feed their ideas and thoughts in to the management process Employ dedicated project officers to manage the relationships between stakeholders and statutory authorities.	The two way communication between the statutory partners and other stakeholders through the local advisory groups provides local people the opportunity to learn about developments within the designation and feed back their thoughts and ideas in to the decision making process. As a consequence of this process local stakeholders have started to accept that the designation can benefit the sustainable management of the area. Project officers have been very successful in

		developing relationships between key stakeholder groups.
Growing pressure from tourism on the North Norfolk Coast.	Set up programmes to encourage sustainable and responsible tourism.	Communication between all the relevant partners facilitated through all three partnerships operating in the area has allowed tourists to be better managed in a sustainable way whilst still making an important contribution to the local economy.
The site is surrounded by numerous small communities with high levels of bonding social capital but few links with other groups and statutory agencies.	Provide opportunities through the regional advisory groups to encourage communication between stakeholder groups and link them into the wider policy making process.	The regional advisory groups provide an opportunity for stakeholders who would not normally associate with each other to come together and discuss the management of the site. They have helped mediate the traditionally difficult relationship between commercial fishermen recreational users and conservationists. Furthermore, as the chair of each group sits on the management group for the whole site and the project officer attends all the advisory group meetings links have been established with the wider regulatory process.
An increasingly changing population dynamic due to an increase in second home owners.	The promotion of sustainable business opportunities which provide jobs for the indigenous population. Communicate the impact of housing problems to the local authority through the management group.	Although the EMS has no jurisdiction over housing policy a number of local councillors sit on the management group and have been able to communicate these concerns back to the local authority.
3. Institutional Arrangements		
A highly complex regulatory framework which need to be	Involve the stakeholders with the decision making process and incorporate	Through the local advisory groups it is possible to communicate the

interpreted for the local context.	local knowledge in to the decision making process.	regulatory process to stakeholders and allows them to feed back their thoughts in to the decision making process. As stakeholders are involved with developing the management scheme they have a better understanding of how it works and what it is trying to achieve.
Enforcement of regulations	Set up facilities to report for stakeholders to report breaches of the regulations	Stakeholders are acting as the eyes and ears of the NCA, reporting breeches of the regulations to the project officer who can then investigate and take action where necessary. The most successful out come has been the incident reporting scheme for plains flying to low over important bird habitats.
A historically difficult relationship between the NCA and the indigenous population	Increase dialogue between the groups via the local advisory groups and encourage stakeholders to engage in the decision making process	Stakeholders now feel they are listened to and taken seriously and the NCA has recognised that local knowledge is essential for successful management.
4. External Environment		
A major challenge to the authority of the partnership by the NCA	Immediately reopen communication between the concerned parties and look for a mutually acceptable solution.	By brining all the partners' together (fisher, fisheries managers and conservationists) communication is now better than before the PI and a mutually agreeable solution to the issues of eider predations and sustainable mussel cultivation has been agreed.
Three separate conservation partnerships with overlapping jurisdictions.	Increase collaborative working and communication to eliminate any overlap.	Formal processes have been set up which enable each of the project officers to monitor what each other is doing, efforts have also been made to combine meetings and reduce the

		administrative burden for member of multiple partnerships.

Table 9.1 demonstrates the scale of the challenges which have had to be overcome to successful implement the management schemes. Both partnerships have had to work hard over several years to develop social capital between stakeholders operating at a variety of levels within the EMSs. Also by looking at the two case studies side by side it is clear that although the precise nature of the challenges faced were different a number of common themes are clearly present, in particular communication and trust.

These themes along with the other issues identified in the table provide a useful list of considerations which should be taken account of when developing statutory partnerships for the governance of marine protected areas.

9.2 Developing a Statutory Partnership

Steins and Edwards (1999) argue that negotiations amongst actors on CPR platforms are obstructed if strategic narratives are adopted. However, as the evidence from this research shows, providing institutional arrangements are in place which allow state and non-state actors to work together in partnership, it is possible to negotiate the conditions for compliance and the strategic narratives are not a barrier to success, but in fact necessary. If properly managed, statutory partnerships allow for the forces associated with both structure and agency to co-evolve in a more cohesive fashion as described by Giddens (1984) structuration theory; avoiding the confrontation that can occur when these forces are pulling in opposite directions, as is often the case when solely top down or bottom up approaches to governance are applied.

It is clear the statutory nature of the EMSs partnerships means that it is difficult to classify them as partnerships in the traditional sense, as they involve a complex dialectical relationship between state and non-state actors. The RAs have a legal responsibility to ensure that their actions comply with the management schemes and that the NCA retains a high level of control over the process while the other stakeholders or partners have the right to be consulted on the management scheme and related decisions but little legal power to challenge the authority of the RAs. Therefore,

ultimately the EMS partnerships are designed to provide a forum for what Dryzek (1987) termed negotiated compliance.

Consequently, if EMSs are to capitalise on the benefits associated with the co-management approach, easier and cheaper implementation, stakeholders developing a sense of ownership and respect for the sites, it is essential the partnerships consist of a wide range of stakeholders and resource users who feel they are valued members of the partnership. Both partnerships studied have succeeded in integrating the views of a wide range of stakeholders into the management scheme and the evidence from the research suggests that the majority of stakeholders are happy with the role they have played. However, as The Wash PI demonstrates, when a group of stakeholders challenges the authority of the NCA over a decision the consequences can potentially undermine the authority of the partnership and leave stakeholders feeling powerless. This legal intervention by the state represents a fulfilment of Jones and Burgess (2005) prediction that the NCA will not be able to move from controller to facilitator leading to the development of potentially serious CAPs. However, as this research demonstrates, partnerships can recover from such interventions providing sufficient effort has previously been dedicated to ensuring that a high level of bracing social capital holds the partnership together.

Both partnerships studied demonstrated significant evidence of bracing social capital. This had been built up over a number of years primarily through the hard work of the RAs and project officers who had worked to build relationships with the stakeholders and consult them on the designation. In particular, it is clear that the nature of the personal relationships which develop between the project officers and other stakeholders can be instrumental in determining the success of the partnership. As identified in Table 9.1, the research suggests there are three key factors which have been vital to the development of partnership capacity: first, a fully engaged and informed stakeholder population; second, a well defined and transparent framework for stakeholders to share their views on the EMS; and third, the partnership's ability to either develop social capital or utilise existing social capital.

It is clear that through the work of the TCP, the NE Kent EMS has succeeded in providing a highly successful programme of events aimed at educating stakeholders

about the site and marine environment more generally. The programme provides stakeholders with the opportunity to engage with the site at whatever level they feel comfortable, be it taking part in a coastal walk or expressing their opinion at an official consultation event. By integrating community activities into the EMS management process the partnership has created a significant informal space for stakeholders to get to know each other and facilitate the development of bonding, bridging and bracing social capital. In addition, the stakeholder dialogue process used for the development of the original management scheme and the review is well suited for informing stakeholders about the site as well as providing a forum for discussion. Although this highly structured process raises some questions about how much freedom the stakeholders have to express their views on issues which they are not directly being consulted on, the structures in place ensure that all stakeholders fully understand the role they play within the partnership. This clearly goes against Ostrom's principles for co-management but within the setting of a statutory partnership bound by externally derived guidelines clear boundaries outlining the roles of the actors involved are essential if the partnership is to function smoothly. Furthermore, the TCPs role as an mediator between stakeholders and the management groups provides stakeholders with a 'one stop shop' where they can discuss their concerns about the management of the site and the TCP officers can either respond directly to their concerns or explain the procedure of taking the process forward to the management group. This reduces the risk of management group meetings becoming bogged down in discussions that are beyond the remit of the EMS.

The governance model used by the North Norfolk Coast EMS provides stakeholders with the opportunity to express their views within a more open forum than the model used in NE Kent. As the advisory group chairs sit on the management group and the EMS project officer also attends the advisory group meetings there is a clear channel for two-way communications between the stakeholders and the management group. The advisory groups act as the primary method for stakeholders to be kept up to date with the latest developments within the EMS with representatives from the NCA and other RAs also regularly attend the meetings. Furthermore, the space created by the advisory groups allows the stakeholders to get to know each other and facilitates the development of social capital. It could be argued that this model is a closer representation to the model of governance that proponents of CPR theory have

traditionally advocated, giving self organised local actors the autonomy to manage their resources.

However, as this research has demonstrated, when conservation is organised within the constraints of a statutory framework, clear guidelines on the areas in which stakeholders can exert their influence is required. Although the scope for stakeholder consultation within the EMS management schemes has been constantly stressed, the requirement to fulfil statutory biodiversity obligations puts some restrictions on the extent of this influence. If the governance model allows stakeholders too much freedom there is a danger that they will attempt to operate beyond the limits of the legislation, increasing the risk of significant CAPs developing when the NCA vetoes a course of action suggested by stakeholders. It could be argued that this was a factor in the disagreement on the response to an increase in eider ducks on The Wash going to PI. Unless clear guidelines are outlined on the areas which the partnership can influence, stakeholders can become frustrated. For example, many of the management group and advisory group meetings became bogged down in discussions about the proposed wind farm which is sited outside the jurisdiction of the EMS. This kind of distraction can result in stakeholders losing faith in the partnership and the management becoming fragmented.

The absence of an organisation such as the TCP to co-ordinate community events based around the marine environment has had an impact on levels of stakeholder engagement on The Wash and North Norfolk Coast. Although both EMS reported a reduction in people attending formal consultation events, in NE Kent the wide range of engagement opportunities means stakeholders were increasingly taking an interest in the management of the coast. Furthermore, in NE Kent events organised by the TCP allowed stakeholders and RAs to get together in less formal settings while on The Wash and North Norfolk coast the majority of networking occurred through formal consultation events. It is clear that this type of informal networking greatly aided the development of community spirit and social capital in NE Kent.

9.3 Developing a space for negotiated compliance

Agrawal's (2001) list of facilitating conditions (Chapter 2) provided a useful framework and starting point for this research. However, the studies from which his conditions were derived (Wade 1988; Ostrom 1998; Baland and Platteau 1996) were based on the presumption adopted by many CPR theorists that CPRs should be managed through groups of self organised local actors. As this research has demonstrated, when conservation is facilitated through policy implementation such as the Habitats Directive this approach is neither possible nor appropriate as a government is unlikely to introduce legislation and then relinquish responsibility for its implementation and enforcement. Nevertheless, Agrawal's categories Resource system characteristics; Group characteristics; Institutional arrangements; External environment remain relevant, although, it is necessary to emphasise the role of the external environment as it is the statutory authorities which ultimately dictate the direction of the policy. Furthermore, some additional adjustments are needed to the facilitating conditions associated with the external environment and institutional arrangements:

External environment:

- The role of international governments and bodies such as the EU and IUCN need to be recognised as they are playing an increasingly important role in CPR governance
- It is unrealistic to expect that central government or NCA will never undermine local authority.

Institutional arrangements

- When CPR governance is statutory in nature and facilitated through national or international legislation it is unlikely that it will be possible for all the rules and structures to be agreed locally. At the very least central government will provide a framework within which the rules can be decided. Instead the local

partnerships need to provide a space for local actors to negotiate how rules will be enforced within the local contexts.

It is the development of this space for negotiated compliance, which has been the focus of this research. The two case studies demonstrated different approaches to the implementation of the Habitats Directive and had clearly given significant thought to finding an approach which reflected the context in which they were operating. However, the approach adopted in NE Kent, in particular, presented some innovative approaches to building partnership capacity and developing a management scheme which offers an alternative approach to the original DETR guidelines. Furthermore, aspects of this approach may be transferable to other contexts and potentially useful when considering future policy developments. The highly structured and organised approach ensures stakeholders are fully aware of their position and role within the management scheme, helping the process to remain focused; this is aided by the intermediary role played by the TCP. Furthermore, by integrating the management scheme with the wider community development agenda it has been possible to generate support from a large proportion of the local population and encourage the development of social capital. This is also reflected in the partnership's efforts to focus the review on developing a more holistic approach to managing the designated features by adopting the ecosystem approach. Despite the huge amount of debate surrounding the definition and purpose of the ecosystem approach the partnership appears to have succeeded in utilising the concept in the most general sense. It has been used to focus attention on the need to develop a more holistic approach to managing the designation and to try and mitigate the huge amount of uncertainty which has traditionally blighted marine conservation efforts.

Ultimately the partnership has succeeded in developing a workable alternative to the management model recommended in the original DETR guidelines. In fact it could be argued that this organised and structured approach to stakeholder consultation is better suited to the requirements of partnership building within a statutory framework than the traditional advisory group model adopted by The Wash and North Norfolk Coast EMS.

Throughout this thesis the importance of considering the context in which a CPR exists and a management model operates has been constantly stressed. It would therefore be

contradictory to suggest that this approach could be used to improve the management of other EMS or even CPRs more generally operating within a statutory framework. Nevertheless, the research has demonstrated that for statutory partnerships to succeed as a management tool for CPRs it is vital that stakeholders expectations are properly managed and clear structures are in place to ensure consultation remains focused. Furthermore, the basic principles of the stakeholder dialogue approach combined with a process which integrates nature conservation within the wider community development agenda represents a useful tool for developing statutory partnerships which could potentially be applied to a range of environmental management contexts.

9. 4 Reflection on the process - impact of research

Every social researcher hopes their work will have a positive impact on the community and/or organisations they have been studying and their presence in the community has not caused the research subjects to act in an unnatural manner. As this research has been conducted in partnership with Natural England, the NCA which has effectively been overseeing the implementation of the Habitats Directive in the two case studies, it has endeavoured to remain applied and relevant to the current and future policy making process. Furthermore, I hope some of the findings will be taken into consideration when future policy decisions are made.

Within the communities the research was conducted I was able to built up a productive working relationship with a wide range of stakeholders. The project officers in both EMS were particularly helpful and openly stated that they welcomed the independent evaluation of their projects. Initially my presence in the communities was viewed with an element of suspicion and my connection with Natural England was clearly of some concern to a number of stakeholders. However, over the 18-month period in which the research was conducted I was able to overcome this initial scepticism and as people got used to my presence they were willing to talk candidly about a range of issues affecting the way they interacted with the environment. In addition, many individual stakeholders commented after interviews that they felt the opportunity to discuss their perspective with an independent researcher had helped them clarify their own thoughts and position on the EMS designation.

The three focus groups held at the end of the research process, provided stakeholders with an opportunity to feed back their opinion on the preliminary findings from the research. As expected there were a few points which they questioned, such as the impact of the PI on the wider management of The Wash and North Norfolk Coast EMS. However, overall they accepted that my assessment was accurate. More interestingly, they embraced a number of points such as the importance of the cultural aspects of the institutional arrangements and the potentially 'dark' side of social capital, as offering a new insight into the management process. Finally, I was particularly pleased by comments made by two of the advisory group chairs at the final focus group held as part of The Wash and North Norfolk Coast EMS management group meeting. They commented that they thought my research represented a useful insight in to the workings of the EMS and hoped it would be acted upon.

9.5 Further research

For many years the study of CPRs has focused on case studies where groups of self-organised local actors have worked together to manage resources. As a result there has been a lack of studies into the impact of external forces such as the state and international institutions on CPR governance. Jones and Burgess (2005) note that a key area for further research is the impact of externally imposed statutory biodiversity obligations on the partnerships' ability to develop partnership capacity and bracing social capital. The present research has demonstrated along with a number of other recent studies such as Rydin et al. (2006), May (2008),and Berkes (2008) that this is possible. However, as the majority of studies into CPR governance are based on a limited number of case studies further work is required to establish firm conclusions. This research has also highlighted the importance of power relations within statutory partnerships and recognises they are influenced by both forces of structure and agency. As Raik et al. (2008) stress, there is an urgent need for further work in this area that takes such a 'realist' perspective on power.

In addition, this research has demonstrated that evaluative ethnography offers a useful method for assessing the effectiveness of institutional arrangements in managing CPRs. There is considerable scope to further develop this methodology by applying it to future case studies.

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ESRC CASE PhD STUDENTSHIP 2005-2008

IN PARTNERSHIP WITH ENGLISH NATURE (MARITIME TEAM)

An analysis of partnership approaches to achieve strategic marine conservation objectives and of the perspectives of different actors on such approaches

PhD student: to be appointed

Supervisors: Dr Peter JS Jones (P.J.Jones@ucl.ac.uk) & Professor Jacquie Burgess
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Aims

The study aims to address the following questions in the context of inshore marine nature conservation initiatives in England:-

- What are the strengths and weaknesses of different approaches to addressing collective action problems through local partnerships in order to achieve strategic objectives?
- What are the different perspectives on such approaches and problems amongst different actors?

Objectives

- To evaluate the effectiveness of different partnership models amongst relevant actors for the management of marine special areas of conservation (MSACs);
- To explore the perspectives of different actors on these different approaches and the related issues in order to assess the key tensions and opportunities.

Policy Context

The conservation of marine sites is a recent policy challenge arising from the EC's Habitats Directive (1992), which requires the designation of sites of international importance for biodiversity conservation, including marine special areas of conservation (MSACs) for listed marine habitats and species. Prior to the EC Habitats Directive (1992) and the UK Regulations (1994) that transpose them, there were only 3 small statutory marine nature reserves in the UK, augmented by an *ad hoc* network of voluntary marine nature reserves (Jones 1999). By contrast, 68 marine Special Areas of Conservation (MSACs) with an approximate total area of 1.5 million ha are currently being pursued in the UK.

The regulations for MSACs represent a challenge in that they rely primarily on the voluntary cooperation of stakeholders, national policy guidance (DETR 1998) stating that statutory enforcement should only be employed on a back-up basis, but the maintenance of the

favourable conservation status of MSAC features is a statutory duty to the EC. Similarly, relevant authorities (RAs) are encouraged by policy guidance to work together on a partnership basis to manage MSACs, including providing for the participation of stakeholders, but no one RA has executive powers to direct other RAs, such powers being available only to the Secretary of State on a back-up basis. The management of MSACs therefore relies primarily on voluntary cooperation and partnerships amongst RAs and stakeholders, through which strategic, statutory commitments to the EC must be fulfilled. As such, this policy area represents an opportunity to explore the tensions between bottom-up and top-down institutions and different ways of managing these tensions in order to achieve strategic objectives through local partnerships and the promotion of cooperation.

The proposed study will also support policy initiatives at national, European and international levels. English Nature is currently developing a Maritime Strategy, which is likely to include proposals for expanding England's network of marine protected areas (MPAs) beyond the 19 MSACs currently being pursued, including sites of national importance. Their management will also rely largely on partnership approaches, which are themselves also likely to be an important theme in the Maritime Strategy. At an EU level, the assessment of different approaches to developing management partnerships for SACs will make an important contribution to the implementation of the Habitats Directive. At an international level, the 5th IUCN World Parks Congress (September 2003) recommended that stakeholder participation in protected area management be promoted through the strengthening of collaborative management frameworks. Furthermore, the IUCN guidelines (in press) for evaluating MPA management effectiveness include five governance indicators, analyses employing which will be supported by the findings of the proposed study.

Theoretical Context

The proposed study will draw and build on the work of a number of workers who are also addressing these questions, including Ostrom (1998, 1999), concerning the use of local partnerships to achieve strategic objectives by overcoming collective action problems; Goodwin (1998, 1999) and Pennington and Rydin/Rydin and Pennington (2000), concerning social capital and the development of incentive structures to overcome such problems; and Jones and Burgess (in prep.), concerning the potential of different partnership models to achieve strategic objectives; as well as the developing literature on the potential of collaborative management approaches for protected area management (*eg* Borrini-Feyerabend 1999). It also addresses a key gap in the literature concerning the empirical testing of arguments on the merits of environmental governance approaches in different case study contexts.

This proposal specifically builds on recent work (Jones et al. 2001, Jones and Burgess, accepted subject to revisions) that involved a preliminary evaluation of different approaches for promoting RA and stakeholder participation in MSACs in the UK. This study drew on the concept of social capital and analysed the development of different governance models for developing partnership capacity amongst RAs and stakeholders in different contexts. It involved fifteen case studies, through which some approaches were identified which have been developed to provide for the participation of RAs and stakeholders which would appear to be effective in establishing effective partnerships for MSAC management. However, this evaluation was at an early stage in the process, when the management schemes were still being formulated. The issues emerging from the use of different partnership approaches to effectively manage MSACs remain to be investigated, particularly the views of different actors on the potential of different approaches for the management of tensions between different perspectives. The proposal also builds on recent work (Jones 2001) which contrasts top-down and bottom-up perspectives on MPAs and considers the potential to pursue a 'middle ground' post-normal approach.

Methodology

The proposed questions will be addressed through case studies involving 2-3 MSACs in England. These will be selected from amongst the 9 case studies for English MSACs undertaken by Jones at al. (2001) in order that the findings from these preliminary analysis can be drawn and built upon. The initial phase of the research will involve an analysis of the developments and current status of these 9 MSACs involving discussions with English Nature staff in order to provide for the identification of 2-3 case studies which are comparable and will provide good contexts for addressing the above questions.

The 2-3 in-depth case studies will involve a programme of semi-structured interviews with a representative range of actors for each MSAC. The semi-structure employed will be developed by a thorough analysis of the theoretical and policy issues through literature reviews and discussions with English Nature project officers, and will be further developed by issues which emerge during the programme of interviews. This will enable flexible but in-depth and rigorous analyses of the issues related to the above questions for each case study, including consideration of the differences between case studies and amongst different actors, and the influence of any differences in context. The interview findings will be 'triangulated' with information gleaned from grey and published literature in order to provide for informed and cross-referenced analyses. The concept of social capital, including the use of appropriate incentive structures and the role of the state in partnerships, will be employed to assess the effectiveness of different approaches to developing constructive partnerships amongst RAs and stakeholders. The application, adaptation and refinement of this methodology to explore the above questions and thus to promote further empirical analyses of environmental governance approaches in different contexts will also be an important contribution to the field.

Outcomes

The project will support and contribute to a partnership project in which English Nature is involved to apply and test the IUCN MPA effectiveness indicators. In particular, it will provide further information on the issues underlying the indicators of effective stakeholder participation and thus support their development and application. It will also support the implementation of English Nature's Maritime Strategy through the identification of good practice in promoting partnerships to achieve strategic objectives, on which the new strategy will significantly rely.

The project will also make an important contribution to the literature on the issues underlying the use of partnerships to overcome collective action problems and achieve strategic objectives, moving beyond simply considering the level of stakeholder empowerment. It will contribute to discussions based on empirical studies of these issues, as well as contributing to the development of methodologies for further such studies.

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Planned research on the Thanet Coast

I am a PhD student at University College London funded jointly by the Economic and Social Research Council and Natural England. My PhD aims to explore the perspectives of stakeholders on the partnership approaches adopted to achieve the strategic marine conservation objectives of the European Marine Site (EMS). I began my research in January 2006 and have spent the last year gathering together and analysing the relevant literature on approaches to marine conservation and local governance. I have now moved in to the second stage of the project, the primary research.

From the outset it was clear that there were two ways of approaching the research. I could conduct a large scale survey of stakeholders from all the EMSs in the country to identify a wide range of perspectives on different approaches to the management of the sites. Or I could analyse two or three case studies in depth and explore the wider context behind stakeholder perspectives. Early on in the study it was decided that the latter approach would be more suitable as an in depth analysis of the reasons behind stakeholder perspectives would be more relevant for aiding future policy development and more importantly policy implementation.

Two EMSs have been selected as case studies, Thanet and the Wash and North Norfolk Coast. These sites were selected on the basis that they are currently facing very different challenges and will provide a wide range of stakeholder perspectives. Furthermore, another PhD student looked at these sites four years ago and his findings provide me with an excellent starting point as well as the opportunity to examine the changes which have occurred over a longer period of time.

The Thanet case study will focus on the recent review of the management scheme and the adoption of the ecosystem approach. The research aims to establish the perspective of a wide variety of stakeholders on the process leading up to the launch of the new management scheme. In particular I will focus on:

- Exploring the nature of the consensus which has reportedly been achieved
- Establishing the stakeholders views of the “dialogue process” which resulted in the consensus
- Stakeholders understanding of the term the “ecosystem approach”
- The value stakeholders attribute to having a management scheme
- Why stakeholders choose to participate (or not)
- Whether stakeholders feel they are able to influence the contents of the management scheme

The research will employ four different methods: semi-structured interviews; focus groups; participant observation and documentary analysis. It is my intention to spend as much time as possible living and working on the two sites over the next nine months (April – December 2007) engaging with stakeholders, getting to know the challenges faced in relation to the two sites and conducting interviews.

If you are willing to be interviewed as part of this project or would like to comment on the above I would be grateful if you could contact be either by E-mail: t.roberts@ucl.ac.uk or phone 07713455048.

Many thanks

Tom Roberts
PhD researcher

Planned research on the Wash and North Norfolk Coast

I am a PhD student at University College London funded jointly by the Economic and Social Research Council and Natural England. My PhD aims to explore the perspectives of stakeholders on the partnership approaches adopted to achieve the strategic marine conservation objectives of European Marine Sites (EMSs). I began my research in January 2006 and have spent the last year gathering together and analysing the relevant literature on approaches to marine conservation and local governance. I have now moved in to the second stage of the project, the primary research.

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The Wash and North Norfolk case study will use a Public Inquiry (PI) which took place on the Wash in June 2006 as a starting point. The PI was convened to resolve a disagreement between English Nature (EN[1]) and mussel farmers working on the Wash. The previous year the lay holders had applied to EN for permission to scare Eider ducks of their lays using sonic bird scaring devises (Wailer Mark VI[2]). They argued that Eider numbers had increased dramatically since 2003 and were decimating the mussel lays, rendering mussel farming on the Wash unsustainable. However, EN refused their request on the grounds that the Wash is an important foraging area for large numbers of birds and the use of bird scares is likely to disturb them, to the detriment of the ecological integrity of the site and in contravention of the 1992 Habitats Directive.

The aim of the research is to explore the wider implications of the PI on the management of the EMS and the relationship between Natural England and the stakeholders. It is clear that a significant element of the research will be to examine the impact of the PI on the relationship between the mussel farmers and Natural England. However, it is important to note that the scope of the research extends beyond those directly involved. In particular I will focus on:

- The perceptions of stakeholders **directly** involved with the PI on the impact of both the result of the PI and the process which led to it on the management of the European Site
- The level of understanding about the PI of stakeholders **not directly** involved with the PI and its impact
- Whether stakeholders feel the regulations set down by the habitats directive restrict the economic development and/or conservation
- The value stakeholders attribute to having a management scheme
- Why stakeholders choose to participate (or not) in the partnership

[1] Since the PI English Nature has merged with the Countryside Agency and been re-named Natural England. However, all the documents regarding the PI refer to EN.
[2] www.scaringbirds.com

- Weather stakeholders feel they are able to influence the contents of the management scheme.

The research will employ four different methods: semi-structured interviews; focus groups; participant observation and documentary analysis. It is my intention to spend as much time as possible living and working on the two sites over the next nine months (April – December 2007) engaging with stakeholders, getting to know the challenges faced in relation to the two sites and conducting interviews.

If you are willing to be interviewed (or know someone who would be) as part of this project or would like to comment on the above I would be grateful if you could contact be either by E-mail: t.roberts@ucl.ac.uk or phone 07713455048.

Many thanks

Tom Roberts
PhD researcher
University College London

Draft Interview Guide The Wash

1. Biographical details:

- Position/ role within EMS partnership (if one)?
- Reason for involvement or not
- How and why did you first get involved (if involved)?
- Length of time involved
- Were you previously involved with the management of the site

2. Social capital:

- How do you feel about the site do you have a connection to it. Why?
- Local? How long have you lived in the area?
- Interaction with other stakeholders: Relationship/ work/ social/both/ none
- Interaction with local authority/relevant authorities
- Interaction with national policy representatives (NE National office/ DEFRA etc)

3. Understanding and impact of the management scheme:

- What do you think of the management scheme?
    - Is it beneficial?
    - Has it made a difference?
    - How has it effected you (is it at all restrictive)?
- Do you feel you were able to influence the contents of the management scheme?
- Impact of European involvement

4. Perceptions of the impact of the PI

(Directly involved)

- How has the PI affected you (result and process)?

(Not directly involved)

- What is your knowledge of the PI?

(All)

- What impact has the PI had on relationships within the EMS partnership?
- Has the impact been wider than the mussel fishermen
- Has it affected community cohesion
- Was it the result of the PI or the process leading up to it which had the biggest impact on relationships
- Has the outcome of the PI effected the economic/conservation development of the site? How?
- How well do you think the dispute was managed?

5. Dealing with future disputes

- What future challenges do you think the site faces?
- In the future if the site faces similar disagreements between stakeholders and conservationists how do you think they could be delta with to avoid another PI?

Draft Interview Guide Thanet

1. Biographical details:

- Position/ role within EMS partnership (if one)
- Reason for involvement or not (if involved)
- How and why did you first get involved?
- Length of time involved
- Were you previously involved with the management of the site?

2. Social capital:

- How do you feel about the site do you have a connection to it? why?
- Local? How long have you lived in the area?
- Interaction with other stakeholders: Relationship/ work/ social/both/ none
- Interaction with local authority/relevant authorities
- Interaction with national policy representatives (NE National office/ DEFRA etc)

3. Understanding and impact of the management scheme:

- What do you think of the management scheme?
    - Is it beneficial?
    - Has it made a difference?
    - How has it effected you (is it at all restrictive)?
- Do you feel you were able to influence the contents of the management scheme?
- Impact of European involvement

4. Stakeholder dialogue process:

(PEOPLE INVOLVED)

- Were you involved in the first process/ second process / both (why)?
- What did you think of the stakeholder dialogue process which led up to the publication of the management scheme (first and or second time round depending on involvement)?
- Did it help foster community cohesion/ involvement?
- Was it effective?
- Were the right people involved? Can you think of anyone/organisation which was not involved which should have been?
- Do you feel a true consensus was reached? If yes, what was the key to this?

(PEOPLE NOT INVOLVED)

- Were you involved in the first process (why)?
- Why were you not involved?
- Would you like to have been?
- What would have made you get involved?

5. Understanding of the term the "ecosystem approach"

- What is your understanding of the term the eco-system approach and how it has been interpreted for the new management scheme?

- Why do you think this approach was adopted?
- Is it effective?
- Was it necessary?

6. The future

- What challenges do you think the site faces in the future? How do you think they will/should be approached?

Codes

Emic	Etic
Descriptions of governance arrangements The Wash and North Norfolk Coast	Perceptions of governance arrangements The Wash and North Norfolk Coast
Descriptions of governance arrangements NE Kent	Perceptions of governance arrangements NE Kent
Descriptions of consultation Arrangements The Wash and North Norfolk Coast	Perceptions of consultation Arrangements The Wash and North Norfolk Coast
Descriptions of consultation arrangements NE Kent	Perceptions of consultation arrangements NE Kent
	Perceptions of Changing coastal economy/ community
Descriptions of the use of ecosystem approach in NE Kent	Perceptions of the use of ecosystem approach in NE Kent
Historical and back ground information	Perceptions of European legislation
Attitude towards NCA and RA	Perceptions of the role played by NCA and RAs
	Perception of management scheme
Distribution of power within partnership	
Conflict resolution techniques	Reasons why some people chose not to engage with the process
Future challenges	Examples of social capital • Level of trust within stakeholder groups (bonding) • Level of trust between stakeholder groups (bridging) • Level of trust within institutional arrangements (bracing)
Methods of engaging stakeholders	
Descriptions of Eider PI on The Wash and North Norfolk Coast	Impact of Eider PI on The Wash and North Norfolk Coast

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Wildlife and shellfish industry to prosper thanks to new fishery management agreement in The Wash

Wildlife and fishermen in The Wash are to benefit from a new agreement to improve shellfish management and protect the natural environment.

The Shellfish Management Policies for The Wash were agreed last month by Eastern Sea Fisheries Joint Committee (ESFJC) and set out the sustainable management of the cockle and mussel fisheries within The Wash – a designated Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI).

The Policies' agreement is testimony to the efforts made by all parties to bring about a massive turn-around in the health of The Wash. Over-fishing contributed to a collapse in shellfish stocks in the early 1990s and for the next 10 years there were few signs of recovery. The number of mussel beds fell from over 30 beds in peak years to just one recorded bed in 1997, and cockle stocks also reached record lows.

This had disastrous effects on shellfish-eating birds and on the fishing industry. Major die-offs of oystercatcher were recorded in three different winters during the 1990s, with thousands of birds being found dead, and knot counts fell by

tens of thousands as a result of suspected emigration from The Wash. The cockle fishery was closed in 1997 through lack of stocks, and the harvesting of mussels from the natural beds remained at unprecedented low levels between 1993 and 1998.

This led Natural England to classify nearly half of The Wash Intertidal mud and sandflats, the second largest area of this habitat in England, as in an 'unfavourable declining' condition. High-level scientific meetings were convened to look at the problems, and new research was commissioned to investigate factors inhibiting the site's recovery. ESFJC made immediate changes to management of the fisheries, introducing a quota to the cockle fishery in 1998.

With the Policies in place Natural England has been able to re-assess 15,000 hectares of intertidal mud and sandflats within the SSSI from Unfavourable Declining to Unfavourable Recovering condition. This represents 25 per cent of the total improvement in condition Natural England is required to make in 07/08 across England.

In 2007, cockle stocks were found to have reached their second highest level since records began, and mussel stocks reached levels not recorded since the late 1980s. The improved shellfish stocks have created more sustainable fisheries, but more importantly the Policies have shown that successful commercial fisheries can continue to operate whilst safeguarding the wildlife interests of the site.

The Policy represents the culmination of nearly 10 years of research and dialogue between Natural England, the fishing industry and the fisheries managers, Eastern Sea Fisheries Joint Committee. Collaboration between these traditionally divergent stakeholder groups was paramount to achieving consensus on practical and effective policy measures. It has only been in the last few years that, by taking an adaptive, co-management approach, this agreement has been reached.

Speaking about this turn of fortune for the Wash, Sir Martin Doughty, Chair of Natural England said: “The Wash is one of the most outstanding Wetlands in Europe and of exceptional importance for it’s wildlife and biodiversity. Through working closely with the Wash fishermen and the ESFJC, sustainable management of Wash shellfisheries has been secured.

“We will continue to work with the industry including fishermen and fisheries managers in other important sites to achieve similarly effective agreements. The Wash is an example of how, through partnerships, we can achieve a sustainable future for both the natural environment and the economy,” concluded Sir Martin.

Mat Mander, Chief Fishery Officer for the Eastern Sea Fisheries Joint Committee, said: : “The development of these Policies by the Joint Committee and their recent agreement is an important milestone for the industry, natural environment and local people. Our work is already making a positive impact, enabling Natural England to change the conservation status of many parts of the SSSI, which is fantastic news and a huge step towards where we want to be in the future.”

Shane Bagley of Boston Fishermen’s Association and Bob Garnett of King’s Lynn Fishing Industry Co-operative said: “Agreeing these policies is important as it has enabled the industry to have direct involvement in management of these fisheries upon which our livelihoods depend and also the wildlife of the site which we live and work side by side with.”

Notes to editors

1. Natural England works for people, places and nature to conserve and enhance biodiversity, landscapes and wildlife in rural, urban, coastal and marine areas. We conserve and enhance the natural environment for its intrinsic value, the wellbeing and enjoyment of people, and the economic prosperity it brings www.naturalengland.org.uk

2. The Joint Committee is composed of 20 members consisting of four county councillors from Norfolk and three from Lincolnshire and Suffolk respectively. Nine additional representatives are appointed by Defra for their knowledge and experience in either fisheries or environmental matters. The Environment Agency appoints the final member.

3. The Joint Committee is an autonomous Local Authority in its own right but does not receive any funding from central government. Funding of the Joint Committee is provided by a direct levy upon its three

constituent County Councils. The Joint Committee conducts its business at quarterly Statutory meetings and a number of specialised sub-committee meetings.

4. The Wash is of exceptional importance to marine wildlife internationally and nationally important for wildlife and is designated as a Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI).

Issued on behalf of Natural England by GNN East Midlands. Media enquiries to Gaby Hateley at GNN East Midlands on 0115 971 2797