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Social Value of Marine and Coastal Protected Areas in England and Wales

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The U.K. government is committed to establishing a coherent network of marine protected areas by 2012 and the recent Marine and Coastal Access Act, 2009 will designate marine conservation zones and provide wider access rights to the coast. To fulfill these goals, this article argues the need for a clearer, shared understanding of the social value of protected areas in creating new designations and managing existing ones. Although marine and coastal environments attract many people and are vitally important in terms of realized and potential social value, the majority of the public in the United Kingdom lacks understanding and awareness regarding them. Combined with this, the social value of marine and coastal protected areas (MCPAs) have been largely ignored relative to conservation and economics, with the latter invariably taking precedence in environmental policymaking. Social value reflects the complex, individual responses that people experience in a given place. Many reasons determine why one area is valued above another, and this research investigates the social value of MCPAs from a practitioner's perspective through a series of interviews. Understanding why we "socially" value MCPAs will ultimately equip managers with an informed understanding of these spaces, influence management decisions, and, potentially, policymaking. This article defines social value in the context of MCPAs in England and Wales from a practitioner perspective, explores key concepts, and suggests possible improvements in decision-making.

Keywords coastal protected areas, marine protected areas, social value, value of protected areas

Introduction

Marine and coastal protected areas (MCPAs) are the predominant inter-governmental response to biodiversity loss and the continual degradation of the marine environment (IUCN, 2008). Within the United Kingdom, many initiatives have been established to create MCPAs that feed into coherent marine protected networks such as those established by OSPAR[1] and

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HELCOM,[2] the Convention on Biological Diversity (CBD) network, Natura 2000, and the marine conservation zones (MCZ) that will be created by the Marine and Coastal Access Act (DEFRA, 2009).

MCPA establishment is heavily based on economic drivers and conservation priorities yet these tend not to be the main reasons that people visit these areas. People may visit to experience the natural beauty of an area, for recreation, solitude and reflection, and to experience a sense of connecting with something greater than themselves (Harmon & Putney, 2003). These social factors are as equally significant to the economic and conservation benefits that MCPAs also provide. Over the last decade there has been increasing reference made to the social elements of MCPAs in terms of their establishment and management (Harmon & Putney, 2003; Lockwood, 2006), but it is still unclear precisely what factors produce social value and it can be argued that a clearer understanding would benefit decision-makers, practitioners, and the public. This research investigates these problems through in-depth interviews with MCPA practitioners in England and Wales.

Rationale

Over the last 20 years, loss of biodiversity has been the primary rationale for establishing protected areas (Putney, 2003; Mose & Weixlbaumer, 2007). However, there have been several paradigm shifts in protecting areas particularly from the 1980s and 1990s (Hammer, 2007). Hammer described these shifts first, as a call for sustainable development protection, second, replacing small, segregated conservation efforts with larger-scale conservation and, last, in the area of regional policy. This last shift is connected to the growing importance attached to favoring of all types of local resources, including social, cultural, economic, natural, and technical. During the last century global protected areas have predominantly been managed through centralized administrations that have tended to exclude local communities, although this situation is gradually changing (Kothari, 2008). Evidence of new paradigms in protected areas were demonstrated at the World Park's Congress at Durban in 2003, which showed protected areas to be increasingly run with social and economic objectives with many partners and local stakeholders, viewed as a community asset and managed with more sustainable goals (Phillips, 2005). These paradigm shifts have placed humans and nature together at the center of conservation and protection efforts (Hammer, 2007) but there are still gaps in understanding the value attached to MCPAs, particularly their non-monetary value.

Much work surrounding marine protected areas (MPAs) focuses on conservation of biological diversity and resource management, although the socioeconomic benefits are also acknowledged as important. Social, cultural, economic, and political factors help to shape the development, management, and performance of MPAs more than the biological or physical factors (Pomeroy et al., 2003). Furthermore, most social values associated with protected areas are assumed to have accompanying economic value. In many cases increasing social value will increase revenue. For example, the Great Barrier Reef Marine National Park supports a significant percentage of Australia's economy from tourism on the reef with an annual estimated worth of $AU 6 billion (Reichelt, 2008). However, it is extremely difficult to determine the true value of marine resources and the support systems that generate them, particularly when there are few tangible measures implicated (Gubbay, 1995). The need to understand MCPAs in terms of non-monetary value is important so it is possible to evaluate tradeoffs that can be made between scenarios such as alternative development, management and conservation strategies. Understanding MPAs in terms of

non-monetary value offered through the social function they can provide also gives an insight into the overall changing values of MCPAs and the implications of this to stakeholders (Pomeroy et al., 2003). The values of intangible sociocultural functions are hard to convey to decision-makers and are lacking in conventional valuation tools, primarily due to their largely unquantifiable nature. Intangible social value can be based on many different cultural and individual belief systems making this an area fraught with complexities (Verschuuren, 2006). However, it is often the non-physical dimension of human life such as aesthetic qualities and spiritual value that are increasingly important to humans (Putney, 2000) as our modern lives become faster and more pressured.

Despite recent efforts to address the problems faced by the marine environment and the numerous MPAs being established worldwide (Chape et al., 2003), global estimates indicate that the total area of the world's oceans currently in an MPA is less than 1% (Day, 2006). There is a genuine need to understand more than just conservation values when considering MCPAs to extend people's essential reason for caring about these areas to include their non-material and non-tangible values (Harmon & Putney, 2003). Harmon suggests that the ultimate motivation for caring about protected areas will come from these values. Values can provide meaning and the motivation to establish and manage protected areas (Lockwood, 2006). Understanding how society values MCPAs could make a significant difference to optimizing management direction and the implicated outcomes.

Historical Background

Protected areas around the world vary immensely in terms of purpose, size, management, habitats, and strength of protection (Brown et al., 2005). Marine protection is a comparatively recent development in conservation terms (Day, 2006). It is generally agreed that marine conservation lags several decades behind the terrestrial environmental movement (Agardy, 1997; HELCOM, 2005; Postnote, 2004) particularly in terms of funding, science, and implementation (Kareiva, 2004). This may be due to the legal complexities of addressing marine issues that generally involve two or more levels of jurisdiction (Kenchington, 1990). Historically terrestrial ecosystems have been given higher levels of protection in comparison to marine ecosystems, but this is gradually changing through improved access to the marine, allowing scientists and the public a better understanding of the issues and importance of conservation (Roberts et al., 2003a). Marine protected areas have grown on an *ad-hoc* basis with the first MPAs often being small extensions of terrestrially protected areas (Gubbay, 1995). Growing understanding and support for MPAs has meant increasing numbers have been established in their own right, particularly in coastal and inshore waters where conflicts in the marine environment are greatest (Gubbay, 1995). Momentum for MCPAs did not gather significantly until the first World Congress on NPs (1962), which was one of the first international conservation meetings to focus on marine protection issues The IUCN's international conference on marine parks and protected areas in 1975 also helped provide major impetus for marine protection (Kelleher & Kenchington, 1992). Since then increasing support for marine protected areas has been driven by numerous international initiatives including the Convention on Wetlands of International Importance, the Ramsar[3] convention, 1971 (Ramsar, n.d.). As well as a range of objectives developed by the international community some of which are mentioned in the 1987[4] Bruntland Commission report and the United Nations Conference on Environment and Development, and the Rio Earth Summit, 1992 which promoted MPAs as part of international marine conservation efforts (Gubbay, 1995). In 2002 the World Summit on Sustainable Development committed to establishing an MPA network by 2012.

Historically there are also many challenges faced by MCPA managers from legal and administrative complexities. Previous reliance on sector-based governance approaches in this area within the United Kingdom has had the effect of creating an uncoordinated governance framework, which became more complex in the 1990s due to devolution (Fletcher & Potts, 2008). This has impacted the establishment of MCPAs.

Defining MCPAs

When examining MCPAs through the global literature it becomes apparent that there are many non-standardized definitions in use. MPAs can be used as the umbrella term for different types of marine protection, but in some countries it describes a specific designation. According to the IUCN there are over 50 different terms in use for MPAs around the world, many denoting different forms of protection depending on the country involved (MPA News, 2007). This research adopts the definition used by the Convention of Biological Diversity to describe MCPAs as, "Any defined area within or adjacent to the marine environment, together with its overlying waters and associated flora, fauna, and historical and cultural features, which has been reserved by legislation or other effective means, including custom, with the effect that its marine and/or coastal biodiversity enjoys a higher level of protection than its surroundings" (CBD, 2003, 10). The key difference with the CBD's definition over others is the inclusion of the coast. In this research, the term MPA is still applied as a generic definition for marine protected areas.

Methodology

The requirements of this research, to establish views on the perception of social value and collect data in a predominantly non-statistical manner, sets this research firmly in the qualitative area of enquiry (Strauss & Corbin, 1998). Consistent with the nature of the research an inductive approach was adopted with the ultimate objective of producing a statement of best practice and evaluative framework of social value The exploration of social complexities involves looking in-depth at individuals' belief systems, their lived experiences, and their cultural background (O'Leary, 2004). Inductive research is often associated with the research methodology of grounded theory. This is set in a qualitative area of study where the researcher develops theoretical meaning from the data (Mason, 2002). By using grounded theory, a phenomenon is explored by identifying its key elements. The relationships of those key elements are then categorized to the context and process of the research, going from general to specific, while keeping focus on what makes the subject of study unique. In grounded theory the data is constantly compared with emerging themes, categories and this pattern persists until the category is considered "saturated" (Strauss & Corbin, 1998)

Twenty-four semi-structured, telephone interviews with MCPA practitioners were conducted for the study and sought to identify what practitioners understand by social value within their MCPA and activities that encouraged or discouraged it. The interviews were analyzed using established techniques consistent with grounded theory. These included memos and diagrams that helped with data organization and conceptualization, and coding that helped to sort, relate, and to continue to develop data categories in terms of their various properties, with final integration of key concepts (Strauss & Corbin, 1998). Data themes were assigned during analysis of the interview transcripts where direct comments were made. As analysis became more detailed sub-themes were applied and inferences were

noted and also assigned a category. Interconnections in the data were noted and pertinent quotes from the interviews supporting the results were also recorded.

Although there are inherent biases attached to this type of qualitative analysis, the coding system was undertaken with precision and consistency, which was applied throughout the analysis. As grounded theory data is most suitably analyzed by the researcher using manual methods rather than computer software (Morse, 2006), it was important that the information collected focused on quality rather than quantity, and implied a bias in that the data is largely, deliberately selected to obtain the best data results (Morse, 2007). Although computer software can be helpful in organizing data to assist the researcher it cannot replace the cognitive process that must take place. This analytical process therefore relies on the researcher's powers of inquiry and not a computer program (Morse, 2006).

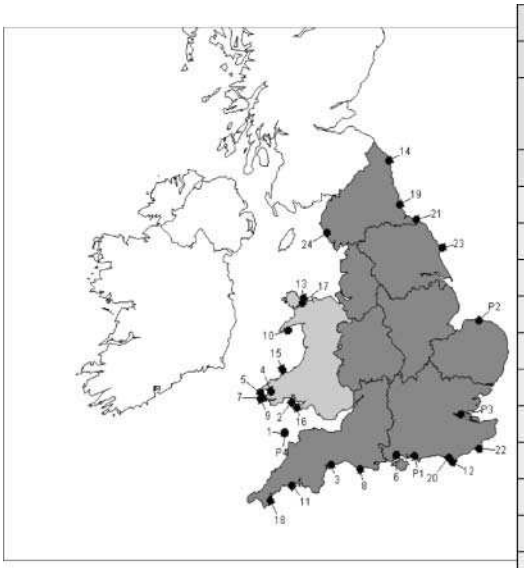
A range of protected area designations affecting the coastal areas of England and Wales were chosen for the research to reflect certain categories of governance and geographical boundary. They were chosen from the most dominant nature and landscape protections and in certain cases represented the longest stretch of coastline incorporated by the designation.

The selection criteria produced a list of ten designations types and the final list of research MCPAs are indicated in Figure 1. They included representative MCPAs from international, European, national, regional, and local levels that were either statutory or non-statutory and marine with coastal boundaries or terrestrial with coastal boundaries. Interviewee selection was determined partly by the designation and partly by geographical location within England and Wales. As Creswell (2003) points out, in qualitative research sites, individuals are purposefully selected for the study. Interviewee selection was partly pre-determined by the MCPA designation selection and their geographical spread within England and Wales. Interviewees were also selected for their specific working experience within protected areas. There are many hundreds of people working within MCPA designations in England and Wales. In consideration of this, the main agencies responsible for MCPAs, including Natural England (NE), Countryside Council for Wales (CCW), as well as the Joint Nature Conservation Committee (JNCC) were phoned in the first instance and then contacts suggested by them were followed up until appropriate candidates were established. During the actual interviews, contacts in the same or different designations were often suggested as people who would be able to provide additional useful information, and these contacts were always followed up. The criteria for "appropriate" interview candidates was established by the length of their experience working in protected areas, by various recommendations made through contacts, and with additional consideration of the MCPA designation they worked in. In total the interviewees had an average of seven years and two months experience and expertise gained working in protected areas.

Key Findings and Analysis

Practitioners identified nine key themes of social value within MCPAs, which are discussed in the following sections, indicated in Table 1. The themes are not prioritized.

A statement of best practice of social value criteria and a conceptual model summarize the work, followed by conclusions. Criteria are not weighted in terms of importance but are based on the number of times they were mentioned directly or inferred by interviewees in respect to contributing to social value. Researcher bias is recognized here; however, interviewees were only prompted for more information, or if failing to answer the question. If the practitioner established that certain criteria were not applicable to social value, it was recorded thus. Results and analytical comment are supported by direct quotations from interviewees. The quotations are anonymous, in accordance with assurances given



P1	Chichester Area of Outstanding Natural Beauty
P2	Holkham and Scolt's Head National Nature Reserve
P3	Mucking Flats and Marshes Sites of Special Scientific Interest
P4	Lunday Marine Special Area of Conservation
1	Lunday Marine Nature Reserve
2	Camarthen Bay and Estuaries European Marine Site
3	East Devon Area of Outstanding Natural Beauty
4	Pembrokeshire Coast National Park
5	Pembrokeshire Marine Special Area of Conservation
6	New Forest National Park
7	Skomer Island National Nature Reserve
8	Dorset World Heritage Site
9	Skomer Marine Nature Reserve
10	Pen Llyn a'r Sarnau Special Area of Conservation
11	Looe Voluntary Marine Conservation Area
12	Seven Sisters Voluntary Marine Conservation Area
13	Llangoed Local Nature Reserve
14	Northhumberland Coast Area of Outstanding Natural Beauty
15	Cardigan Bay Special Area of Conservation
16	Gower Area of Outstanding Natural Beauty
17	Menai Straights and Conway Bay Special Area of Conservation
18	Helford Voluntary Marine Conservation Area
19	Durham Heritage Coast
20	Castle Hill Local Nature Reserve
21	North Yorkshire and Cleavland Heritage Coast
22	Dungerness National Nature Reserve
23	Flamborough Head Heritage Coast
24	Drigg Coast Special Area of Conservation

Figure 1. Map of United Kingdom showing MCPA research sites where interviewees worked.

prior to interview. The views expressed by the interviewees are their personal opinions and did not necessarily reflect official policy or the position of their organization. Due to the interlinking nature of the following themes of social value, it is acknowledged that some of the criteria may be appropriate to one or more of the themes, and this is brought into the general discussion.

Management

The research demonstrated that social value within a MCPA is created by a combination of criteria that are predominantly dependant on the natural environment and the management of

Table 1
Key themes of social value in MCPAs

1.	Management
2.	The natural environment
3.	Spirituality
4.	Activities
5.	Community involvement
6.	Research, education, and interpretation
7.	Built infrastructure
8.	Access
9.	Marketing and promotion

the site. The following points combine management practices and observations contributing directly or indirectly to the social value of MCPAs.

Staff and funding: Staff numbers were largely dependent on available funding and the priorities assigned to the MCPAs by their designating bodies, rather than by MCPA size and length of coastline. Annual application for funds, including salaries, was the norm within MCPAs. The interviews showed that the short term aspect of staff employment in many MCPAs without secure core budgets can have a detrimental effect on long-term planning and sustainability, factors that have been identified as increasing social value, as demonstrated by the following quote: "If you do have permanent staff members in post that's good because they will look after the SAC as part of their remit and provide continuity in that way. In terms of seeking funding it is done very much on an issues-based approach. The way things are there is no guarantee of continuity in terms of funding." Notably, the largest MCPAs did not have the largest budgets or number of staff, although the smallest three sites had either no annual budget or a very low one (£2000). The largest budget holders were both National Parks (NP) with the New Forest at £4.82 million and Pembrokeshire Coast with £6.5 million.[5] These sites also employed the most staff, 70 and 120, respectively. NPs have designation-specific grants available to them as well as levies that can be made against County Councils in England and Wales. There was not a notable correlation between the length of coastline and budget or staffing.

The total size of a MCPA appeared to have little bearing on social value except where a larger MCPA was accompanied by higher staff numbers and budget that contributed resources to provide opportunities to the public such as community-based projects, education, and wardening of the area. MCPAs with higher annual budgets were more likely to set aside a portion of it for site interpretation and promotion. Optimum staff numbers and budgets were not investigated, but may provide an interesting area for future research. The main providers of core budgets were DEFRA, CCW, Natural England, and Local Authorities with additional funding coming from various sources, including donations, grants, and project funds such as the Arts Council, the Heritage Lottery Fund, European funding including LIFE and the Objective One Programme, the Crown Estate (Marine Stewardship fund), and many others. Funding was dependent on what was being applied for and the time available for staff to apply for it.

Overlapping designations: All the MCPAs fell within the boundaries of other designations or encompassed others within their own boundaries. Several of the same type of designation

can exist within a site's boundaries, notably Local Nature Reserves (LNR) and Special Sites of Scientific Interest (SSSI),[6] which are generally the smaller and more prolific MCPA designation type in the United Kingdom. Management have to consider multiple layering of designations when assessing social value and how MCPAs interact. Overlapping designations have been associated with confusion among practitioners and the people who visit them, as well as potentially giving a false sense of protection (Roberts et al., 2003b). For example, Pembrokeshire Coast NP has overlapping boundaries with one LNR, 60 SSSIs, five Special Protected Areas (SPA), 12 Special Area of Conservation (SAC), one Marine Nature Reserve (MNR), and six National Nature Reserves (NNR). This implies that the social value of the NP is in fact the social value of the collective over-lapping designations, although the interviews affirm that it is generally the NP "credentials" (historical, recreational, open access, community driven, high profile credentials) that people are associating with.

The organization's reason for interest in environmental qualities and features: MCPAs by their nature provide a diversity of environmental qualities, such as high aesthetic value where scenic view points exist. Interviewees were asked to give a score out of five indicating their designation body's interest in the environmental qualities and features that they valued in terms of specified criteria. The combined interview results are indicated in Figure 2.

As Figure 2 indicates, ecological interest scored highest with a significant decrease of 31 points assigned to spirituality, placing far less organizational interest in this area. Despite this, an example is provided by an Area of Outstanding Natural Beauty (AONB) interviewee demonstrating the significance spirituality can play in terms of social value. "Countryside and landscape should be about spirit. I think this means heart and soul and mind to a lot of people. People like visiting the countryside because it makes them feel good." MCPA remits tended to focus on-site activities, commercial and recreational, that "used" the area without impact, as opposed to having some impact, such as allowing fossil collection, or just valuing the site for its own sake.

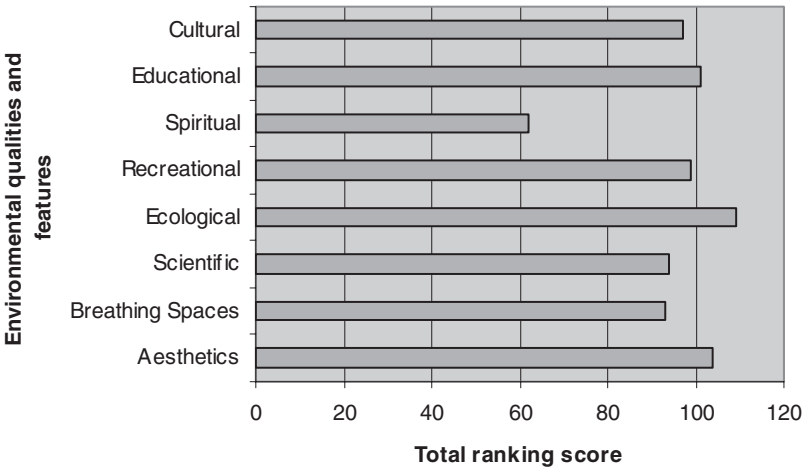


Figure 2. Designation body's interest in the environmental qualities and features of the MCPA most valued to them.

The Natural Environment

The importance and value of the natural area was constantly reinforced throughout the interviews. The natural environment provides a strong and inextricable link to the social value of a MCPA and interviewees cited the natural environment as the main reason they understood for people visiting these areas. Confirming evidence from the literature, 17 interviewees identified coastal margins as the most popular places in their protected areas (Green, 1996). Specific reference was made to the coastal countryside and natural features, places with good coastal views and for some, an area where they could experience a sense of getting away from it all. The majority of interviewees identified the variation of habitats and ecology within their sites, providing a mix of areas people can visit for different reasons, be it the stereotypical day out on the beach of picnicking, swimming, and rock-pooling to a solitary walk along wind swept coves and inlets.

Dynamic social changes: Nearly all the interviewees felt that the dynamic nature of the coastal environment causes change in people's use patterns and the value of the area, for example: "The dynamic nature of the coast and sea influences people's recreational activities, if it's flat calm you won't get anyone sailing but you might get people canoeing or swimming in the sea, so it has quite an impact." Interviewees mainly associated these changes with sea-level rise and climate change, attaching negative associations to them, holding a perception of decreased value. Impaired access was defined as the major result of dynamic coastal changes by four interviewees, reinforcing the importance of access within protected areas and the idea of public resistance to change. Examples included sand loss from beaches impacting on recreational activities, coastal erosion causing the loss of several cottages within one Voluntary Marine Conservation Area (VMCA), coastal path instability and rock slips, preventing access and causing safety issues. For the aforementioned reasons a method to map current events and then forecast, as far as possible, future ones in terms of the changing coast, would help MCPA managers cater for the longer term impacts on recreation and the access and safety issues of the site. Interviewees also discussed the conditions of coastal change, for example, the severity of the changes taking place in relation to loss of habitats, the differences in sea states, with implications for coastal and marine recreation, and weather conditions that were closely linked to coastal dynamics and their impact on visitor numbers.

Spirituality

Defining spirituality in the context of social value is complex, as it is an area that is largely intangible and therefore difficult to quantify. It can be considered on one level as a sense of place that can be experienced collectively or individually and is essentially an emotional connection that develops between people and their environment (Lockwood, 2006). For protected areas this would apply to people's "relationship" with the natural environment. Several practitioners placed significance on the peace and tranquility of their MCPAs, providing places for solitude, reflection and inspiration for creativity. This point was illustrated by an AONB practitioner, "... there are plenty of places you can go to on your own, either by walking or riding and it can be a place of reflection and solitude. Such places, where time is measured more by the rhythms of nature, are increasingly at a premium in England." Although spirituality was assigned a low score according to how interviewees felt their designating body viewed it, the interviewees themselves throughout the research made associations to the importance of spirituality in connection with social

value. This disparity reinforces the need for a shared understanding of all social values effecting MCPAs if a full and effective contribution to MCPA development is to be made.

Activities

The ability to engage in recreational and educational activities within a MCPA directly contributed to social value. Activities undertaken within MCPAs varied according to the physical site conditions. Although the majority of interviewees welcomed passive types of recreational activities, the physical nature of some MCPAs may mean that more disruptive activities are undertaken, such as quad biking and jet skiing. It is therefore important that MCPA managers have a thorough knowledge of their site and an understanding of visitor activities and trends[7] to appreciate how resources should be utilized to cope with larger numbers of people undertaking potentially harmful activities. Managers must also consider health and safety issues generated by the site for their own staff and visitors and three practitioners identified this point specifically.

Different social engagement requirements of various user groups tended to determine the most popular areas within the MCPAs, and the site's natural features generally dictated the activities taking place there. Other factors such as infrastructure and promotion also determined whether people visited to undertake certain activities or not. In the marine environment popular areas for activities were predominantly inshore waters used for boating and fishing activities. The research identified the popularity of the entire coastal strip concurring with literature such as Fabbri (1990) and Johnson and Seabrooke (1996). Other features emphasized by practitioners included coastal paths, headlands, harbors, sand dunes, caves, and inlets as places on the coast the public were attracted to. Beaches drew particular comment with both traditional bucket and spade, as well as the unspoilt and totally undeveloped types of beaches being mentioned. Terrestrially prominent man-made features also drew people to certain areas, including lighthouses, castles, steam railways, and coastal towns and villages.

The top four activities identified were walking, dog walking, fishing activities, and boat leisure. Interviewees felt that increasing or adding activities within a MCPA did not necessarily increase its social value. Nearly half the interviewees felt their site had no capacity to do this anyway. Rather than increasing activities, interviewees mainly discussed various ways of improving existing ones by better and more sustainable management and by widening the target group to include under represented members of the public. It was interesting to note that in one European Management Site (EMS), "An activities GIS [was] currently being compiled. Some activities are reasonably easy to get a handle on but for most there is almost no systematic or formal recording, because most of them here take place below mean low water or on other patches of land—and it is nobody's job to record the data." These comments reflect the general situation in MCPAs where formal recording of activities within the site does not occur. There are obvious management advantages in obtaining accurate data of how the site is being used. Given resources, recording such information on Geographic Information Systems (GIS) would provide benefits such as a view of an MCPA's "hotspots" and potential wear and tear, where clashes of activities are occurring, and over time, an insight into emerging patterns and new trends of activity.

Community Involvement

Discussing additional activities within MCPAs, practitioners predominantly indicated ones that demonstrated good practice in community participation and working in local

partnerships and local people, helping to raise awareness of MCPA designations. The following quote indicates some of the initiatives taking place: "There are various partners that are interested in developing environmental respect among the local community to reduce the impacts they have in terms of fly tipping and antisocial behaviour etc. So there are a group of five of us who get together . . . and run a series of events in the villages . . . and also within the main shows within the sub-region." Voluntary approaches to community work and inclusion of under-represented groups of people from the community were specifically mentioned. Nine of the sites were involved in local events' programs running in partnership with other local organizations aimed specifically at promoting MCPAs and raising public awareness, which has strong links to the education theme. Activities, including work with the probation service conducting youth offenders' programs on-site, clearing scrub and habitat management, and corporate team building days within the MCPA involving habitat management, illustrate how management initiative can achieve collaboration and mutual interest on a minimal budget and human resources. The aforementioned community-based activities could be applied in any MCPA at virtually no cost, if working in collaboration with suitable partners. As the activities suggest, both parties benefit from the arrangement and wider social value is realized for the whole community.

Research, Education, and Interpretation

It is acknowledged that research and education are substantially different entities but ultimately they are both about furthering knowledge. This is achieved in research by investigation and establishing new facts and, in education by informing people, particularly the young. Interviewees were only specifically asked about school visits made to the MCPAs, guided walks, and guided talks but in discussion many interviewees also spoke about the research opportunities in their area and what they did or did not do to encourage this. Education was regarded as a key method of raising public awareness of MCPAs and all the research sites provided an environment of educational interest through school visits and/or research and other student visits. Fifteen MCPAs organized and ran the school visits themselves and another two did this in an *ad-hoc* way by talking to educational groups if they arrived but offering no official provision for this. Seven hosted school visits conducted by other organizations. Certain school groups and other students and researchers visited the sites independently. NPs were seen to organize and conduct the most school visits in a year themselves and the number was higher if other organizations operating within the park were also counted. No significant regional, size, or total area differences were indicated by the frequency of organized school visits. However, the relatively high budgets and strong educational priorities of NPs did have some bearing, as they were shown to have the highest budgets and number of school visits. The following comment from a MNR interviewee served to highlight the importance of a MCPA's environmental qualities in the context of its educational function: "the academic value of the site being left alone as much as possible in terms of being able to use it for study and compare it to the rest of the marine environment which has pressures on it. . . . Most of the people coming to the MNR are just coming to see it, and looking doesn't hurt anything as long as it is done sensibly and this applies to the surface of the water as well as underneath it."

Visitor centres: Most practitioners thought the provision of information about a site provides an important public service increasing social value through public understanding and awareness of the area. Interpretation centers, information kiosks, and tourist information centers can be associated under the banner of "visitor centers" when they supply information regarding the designation itself, its purpose, and key messages. In essence they are

all methods of promoting and raising awareness about the site once people arrive there. MCPAs without visitor centers generally attributed this to lack of funds to set one up. Site interpretation was also achieved through strategically placed information panels at locations within the MCPAs.

Research: Research was permitted in all of the MCPAs in the study, although there were varying degrees of control over what could be done in this context depending on the statutory powers of the MCPA and the nature of the work. Some research was conducted independently and not formalized through the MCPA itself. However MCPAs such as Lundy MNR, required various permits, consents, and permissions to be obtained depending on the research being undertaken (Lundy Field Society, n.d.). Lundy also provides small research grants and other MCPAs such as Looe VMCA, Pembrokeshire Coast NP, and Chichester AONB will direct students in research topics, sometimes funding the work[8] (Chichester Harbour Conservancy, 2006; Pembrokeshire Coast National Park, n.d.).

Built Infrastructure and Capacity

Achieving a good balance of supporting infrastructure in an MCPA such as the provision of goods and services, for example, cafes, car parks, and access roads, were, according to practitioners, perceived as very important to visitors. Practitioners also realized that lack of facilities could be used to discourage visitors and is a technique sometimes used to manage visitor capacity. Car parks were highlighted as one of the key mechanisms of attracting more people to a certain area (Selman, 1999), often creating a honeypot[9] area, or when closed or simply not provided, discouraging people from going there. One NP interviewee said, "We could cope with more visitors but it would have to be in a very sustainable way. We wouldn't build any more car parks, we would have to make better use of public transport and more of these sustainable ways of working with operators and providers. . . ." Understanding visitor numbers has an economic significance to the supporting businesses and commerce in the area, translating to "visitor spend" figures. Driven largely by this economic pressure, three interviewees talked about tourism operators trying to extend the high season. This would "spread" the numbers of visitors more evenly throughout the year providing benefits in terms of lessening high visitor density at certain times of year as well as increasing the site's annual carrying capacity. If site management is to be effective, achieving the optimum carrying capacity of the area is vital. Nine interviewees directly monitored visitor numbers to their site or had plans to do so.

Different activities have different carrying capacities. The more passive recreational types, for example, walking and bird watching, are far more sustainable in larger numbers than horse riding or quad biking. Being able to evaluate the correct number of people visiting an area through assessing visitor behavior and trends was mentioned as an important management role. Practitioners recognized that site capacity depended on the correct balance of visitor numbers; conflicts will arise from an imbalance of carrying capacity, particularly between the local population and visitors to the area. Two interviewees spoke about the quality of the visitor experience, helping them to gain something of value from their visit, rather than focusing on the quantity of visitors. Fourteen MCPAs had various provisions for overnight accommodation within their boundaries and the other ten had accommodation relatively near to the site (within a maximum of a five-mile radius). Accommodation attracts visitors from further afield, making it easier for them to get to the site and enjoy a more relaxing visit. A wider footprint of MCPAs beyond their own boundaries was particularly noticeable in the marine sites where there was almost complete reliance on terrestrial and coastal supporting infrastructure to access and use the area.

Access

It is recognized that access and infrastructure are closely linked. Key differences exist such as land ownership, access restrictions and the perception of access. Public access was allowed in all the MCPAs ranging from one main point of access to countless. It is therefore important for the site's management to consider issues arising from MCPA access. Countable access points are areas such as car parks, train stations, harbors, towns, and villages that create a honeypot effect providing a conduit into the site. Where people gather economic opportunities arise, and are often where public facilities will be placed in order to harness this potential. Site managers also tend to focus interpretation, notices and codes of conduct and visitor centres in these areas in order to draw the public's attention to the site.

Twenty-one MCPAs had some form of restricted access, nine because of private land ownership, six of these being Ministry of Defense (MOD) property. Practitioners did not comment that this undermined the social value of the area, possibly because in the main they worked with land owners, particularly where legislation needed to be considered. Six MCPAs relied on voluntary restrictions and specific codes of conduct to limit access within their site, mainly to protect nesting birds and other wildlife from disturbance. Some MCPAs do not in fact have the statutory rights to impose anything other than voluntary codes within their sites. Where feasible, the public were allowed access to the land following the MOD's presumption in favor of public access to its estate as specified in its defense estate strategy (MOD, 2006). Despite nearly half the interviewees saying that public access was restricted by private land ownership, access could still be gained on public rights of way or on common land designated under the Countryside Rights of Way Act, 2000. Natural restrictions through the physical geography of some MCPAs were also evident, making human access impossible or dangerous.

Marketing and Promotion

The majority of interviewees used local, low key promotional strategies primarily aimed to inform people about the area once they were at the site. These strategies were largely intended to create a sustainable balance between an MCPA's conservation remit and the number of people visiting the area. A notable exception was the World Heritage Site (WHS), which actively markets the site with the brand "Jurassic Coast" nationally and internationally, placing importance on large visitor numbers. Other businesses supporting the MCPA's infrastructure often made use of the designation as a direct marketing tool for their businesses, for example, "As they are not a commercial operation they are not looking to 'sell' it [the AONB]. Marketing is not done by [themselves] it is promoted by other people eg. dive charter companies, who promote their own businesses on the basis that there is a marine nature reserve within their operating area. The MNR is used as a marketing tool—but not by [themselves]." Many MCPAs were involved in community events to particularly promote local participation, educate, and raise awareness of the site. Nineteen interviewees said money was allocated from their funds toward a variety of promotion techniques. Six MCPAs use no direct marketing or promotion, although they acknowledged that their designations may be hosted on other people's websites or brochures. Five sites did have a deliberate marketing strategy primarily designed to encourage visitors from outside the locality. Methods of marketing and promotion included websites, road shows, local events, leaflets, and monthly newsletters. Interestingly, the two NPs with the largest budgets and visitor numbers did little in the way of direct promotion and nothing in terms of

promoting tourism. One NP interviewee pointed out that within their designation there are several hundred providers of facilities all with their own individual marketing campaigns that contribute to the collective promotion of the NP.

Social value: Interviewees were asked, "What does the term social value mean to you?" Several key areas emerged including the sense of community that social value fostered. Seven interviewees identified social value as the value of communities themselves and linked it with the history and culture of the community, community participation, and sustainable project development as well as people's own values within the community. Other responses were generated, including how important social value is to the collective, for example, "The level of importance we place on things that society values, whether it is heritage, culture, history, sense of belonging, civic pride. . . ." There was also an understanding that social value could be a measure of the importance that people place on certain things. For example, "Social value is how important a measure something might be to a particular section of society or group of people."

Eight interviewees focused on "value," classifying it into value to people and the intrinsic value the public associated with the environment. In the context of the area they worked in, a marine SAC interviewee thought social value extended to coastal and marine ecosystem services, for example, the provision of medical resources and climate regulation. Marine sustainability was a key area of social value with one interviewee thinking that people conserve the things they value and therefore a direct relationship between the activities people get involved with and the things that they "cherish" or value within society exists. Seven interviewees mentioned social value in the context of benefits, provision on a personal level, as well as what can be offered to society in general. Six other interviewees related social value specifically to economics, focusing on the MCPA's financial benefits to society.

Marine and terrestrial social value: Responses regarding whether marine and terrestrial environments have the same social value were heavily associated with awareness and perception of these environments. Principally, consensus found the marine environment holding enormous social value, but interviewees felt that general public perception did not find it as valuable compared with the terrestrial environment, which is accessible by a much wider cross section of society. The following quote helps to illustrate this point, "Certainly yes, the values should be the same, but unfortunately that is not always the case. People are more aware and in contact with their terrestrial habitats; people love their local parks, the green spaces, but with the sea there is often an out of sight out of mind attitude which leads to mismanagement and misuse of the area." Five interviewees felt that marine awareness needs to have a much higher profile that supports recent research commissioned by Natural England, 2005, where the general U.K. public were found to have a very low appreciation and awareness of the marine environment (Rose, 2008).

MCPAs with the most and least social value: Interviewees were asked which MCPAs held the most and least social value. Sixteen felt that NPs were perceived to hold the most social value. The reasons for this ranged from the high profile of NPs, their recreation and conservation remits being equal, and their promotion in this respect. The age and historical background of these parks were also mentioned, as well as the clarity of the name "National Park" itself. The research demonstrated that NPs have higher budgets and staff ratio to total area than the other research sites. This contributed to people's perception of social value as NPs can afford to put money into realizing their management strategies, for example,

education, raising public awareness of the designation, community initiatives, and so on. NPs are also planning authorities, and as such have an impact on the community by locally raising the profile of NPs through planning applications. People will be more aware of the way in which this influences change and development within the area. LNRs were cited by three interviewees as having the most social value, followed equally by MNRs, and VMCAs. LNRs and VMCAs were considered high in social value due to their proximity to urban communities and the community involvement in establishing them.

The research showed that people's awareness and perceptions of MCPAs are closely related to the terminology used to describe them. For example, an NP is a well- established designation and a known name that people can relate to. Whereas, the data demonstrated the term SSSI was strongly linked to a general lack of public awareness and understanding. SSSIs were associated with science and research rather than somewhere that was accessible for recreation. SSSI designations were generally felt to hold the least social value by 11 interviewees despite the important role they provide environmentally and ecologically, both of which were seen by managers and their organizations to rank high in social value terms. Lack of publicity, signage, and interpretation was identified as part of the public perception problem surrounding SSSIs, and the fact that many are designated on private land with no public access to them. A MCPA may also have potential social value to society, but depending on how the site is managed and used this may not become a reality. The following quote provides an example: "Speaking in terms of the value to society, there are differences between the potential value if a protected area was used properly or as required, and the actual value—and the two maybe many miles apart in terms of what they are delivering and capable of delivering. There's a difference between what people consciously value and what value protected areas afford to society that people are unaware of."

Ideas to add social value: Key methods identified as enhancing social value included local community and public participation of the MCPA achievable through various organized events and projects as well as inclusivity of these groups within the MCPA management process. Broadening public knowledge and understanding of the MCPA through education, interpretation, and raising awareness, for example, through arts projects and participation in management processes, was also mentioned. These included examples such as "junior management boards" and "junior rangers." Encouraging sustainable development, good site access, and using voluntary approaches in facilitating community participation were also identified by practitioners as methods of increasing social value. It was noticeable that the ideas put forward to increase social value were tangible management goals and did not consider intangible values, perhaps because they are hard to set indicators for, do not "tick boxes," and are difficult to measure in terms of success.

Social value, statement of best practice: The statement of best practice highlights the key themes of social value and provides examples of best practices generating this value within MCPAs, taken from practitioner's interviews (see Table 2). The examples are not weighted in terms of importance or priority but have been drawn from the majority of times they were mentioned directly or inferred by interviewees as generating social value. The criteria have been placed into categories that most apply to them, while recognizing that many of them are interlinked to a greater or lesser extent.

The statement of best practice can be used in conjunction with the conceptual model to help assess the social value potential of an MCPA and its current position in relation to the statement.

Table 2
Social value, statement of best practice

Category	Criteria
1. Management	Experienced, innovative staff
	Reliable annual budget
	Sustainable goals
	Management plan
	Enforceable regulations/Codes of conduct
	Health and safety
	Site wardens
	Study and analysis of management pressures
	Collaboration with other managers in the area
	Forecasting impacts of coastal dynamics and implications to recreational use of the coast
2. Natural Environment	Diversity of habitats and environmental features
	Rare species, birds and wildlife
	Good view points of land or seascapes
	Coastal
	Natural beauty
3. Spirituality	Areas of tranquillity
	An area that inspires creativity
	Places for solitude and reflection
4. Activities	An evaluation of visitor activities and trends
	Passive activities
	Coastal paths
	Walking areas
	Beach activities
	Recreational fishing
5. Community Involvement	Local involvement with the site
	Community arts projects
	Voluntary approaches
	Participation and activities of under-represented groups
	Community participation in management processes and decision-making
	Involvement with other organizations
	Public consultations to find out what the public specifically value about the site
6. Research, Education, and Interpretation	Visitor's center
	An evaluation of the condition of the protected area
	School visits organized by the protected area itself
	Public talks by protected area staff regarding the protected area itself
	Guided walks organized by the protected area itself
	Appropriate and clear strategically placed site interpretation
7. Infrastructure	Knowledge of visitor numbers and method of recording them
	Balanced site capacity
	Coastal villages/towns on-site or in close vicinity

Table 2
Social value, statement of best practice *(Continued)*

Category	Criteria
	Supporting infrastructure and amenities
	On-site or nearby accommodation
8. Access	Countable access points where visitor numbers can be monitored
9. Marketing & Promotion	Low key or indirect promotion
	Awareness raising, particularly of the marine environment
	Clear signage within a protected area
	Clear, understandable designation name

Conceptual model of criteria best promoting social value: The conceptual model is a theoretical construct that, in respect to MCPAs, represents the key criteria responsible to achieve optimum social value (see Figure 3). Acknowledging that site conditions within MCPAs may vary, the model's flexibility can be applied to suit current site status and can be used as high-level guidance to increase social value within a site where possible. The model shows that social value within MCPAs is created by a combination of factors that are largely dependent on the natural environment and site management. Seven main criteria contributing to social value were identified by interviewees, including: activities, community involvement, research and education, built infrastructure, marketing, promotion and interpretation, access, and spirituality. Fundamentally the criteria in the model need to be balanced to achieve optimum social value. As with most aspects of a natural environment, if balance is not achieved, conflicts and degradation will occur. For example, creating good

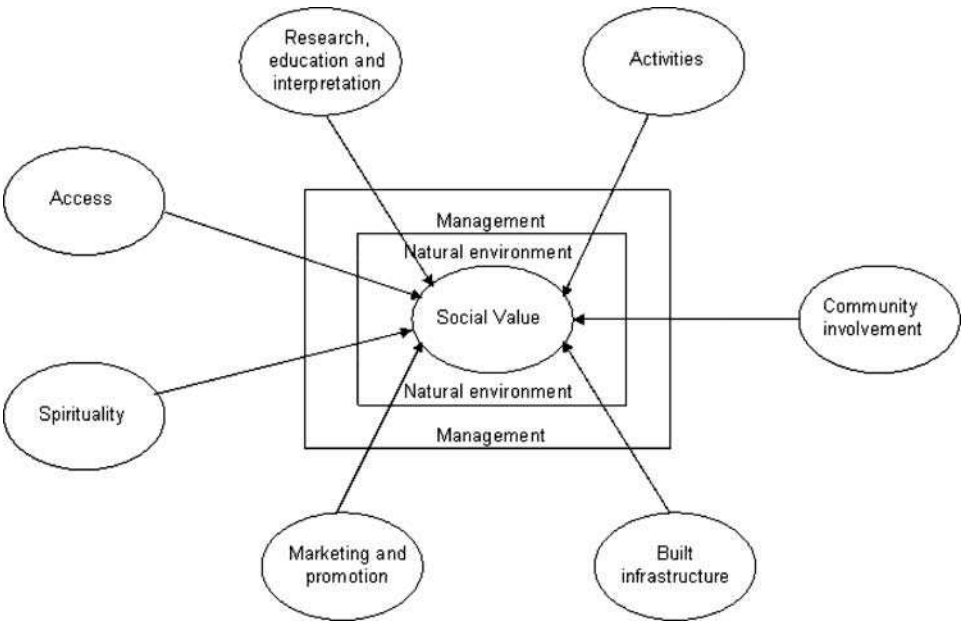


Figure 3. A conceptual model of criteria best promoting social value.

access and allowing people the freedom to explore a MCPA promotes social value. However, this value is lost if visitor numbers exceed site capacity, potentially causing damage and conflicts. It is therefore vital that a balance is struck. The model does not prioritize the importance of the criteria as this will vary between sites where built infrastructure and facilities, for example, will be more important to one designation than another.

Key Conclusions and Recommendations

The research identifies seven key interlinking themes of social value that connect through the natural environment and can be shaped directly or indirectly through management of the site. The natural environment was identified as the primary reason the public visited MCPAs, particularly within the coastal margins of the site's boundaries. There were no notable differences between social value of English and Welsh MCPAs, but designation types were significant, with NPs, LNRs, VMCAs, and MNRs being perceived to have higher social value, and SSSIs and the European designations perceived to have the least, despite the important statutory underpinning that SSSIs contribute to the designation of other MCPAs (JNCC, n.d.). The perception surrounding the lack of social value of SSSIs demonstrates an issue with the statutory conservation bodies in communicating their social value, again showing the emphasis on ecological and economic value rather than social value. Better promotion and communication of social value of SSSIs in particular, and other MCPAs, would help to increase public understanding of these areas and the reasons for protection.

Overlapping MCPA designations were the norm at all of the research sites and something that practitioners have to consider in respect to management and communication of the designation within their own remits. Ecological and aesthetic reasons were assigned the highest scores for the organization's interest in the environmental qualities and features of their MCPA, with spirituality being scored significantly lower despite many references being made to it throughout the research. Spirituality was a complex but highly significant contributing factor of social value, being largely intangible and therefore less manageable. Spirituality within MCPAs was associated with emotive responses to the natural environment, including the significance of peace and tranquility, natural beauty, inspiration for creativity and for the provision of areas for reflection and solitude. The research demonstrated that managers could benefit by understanding visitor numbers in terms of capacity, site wear and tear, and various seasonal influxes influencing this. However, MCPAs with multiple access points often had great difficulty in accurately recording visitor numbers.

Management duties contributing to the increase of social value included balancing site capacity, sustainable planning, and the implementation of various projects and initiatives that involve the local community. Long-term planning, however, was shown to be restricted by unreliable funding, which was the norm in the research MCPAs. In context of increasing social value, this demonstrates a need for long-term funding and/or reasonable core budgets for MCPAs to be able to provide consistency, build up public relations, and increase social value potential.

It is proposed that the conceptual model and best practice statement can be used together as a starting point for increasing social value within existing or new MCPAs. The model can be used as a preliminary, high-level, guidance tool for policymakers to make more informed decisions during the development of MCPAs and adopted at a practitioner level and flexibly interpreted on a site by site basis. Increased recognition of the full range of social value of MCPAs could help to generate public support, improve the policy and process of selecting and managing MCPAs, and provide a basis for shared understanding of social value. The practitioners' interviews have highlighted some key areas for further investigation including

uncertainty over the strength of importance of the social value criteria within different user groups, particularly the public, which would make an interesting study combined with the practitioner perspective. This research has shown that MCPAs are of great importance economically and in terms of conservation and to the tourism industry. Yet the reasons why people value them often have little to do with money. Social value is a combination tangible and intangible factors that must be considered equally if a full and effective contribution to MCPA development is to be made.

Notes

1. OSPAR, Oslo Paris Convention. Protecting and conserving the North-East Atlantic and its resources.

2. HELCOM, Helsinki Commission. Baltic Marine Environmental Protection Commission

3. Ramsar refers to the city of Ramsar in Iran where the convention on wetlands was held in 1971.

4. The Brundtland Report, 1987, also known as "Our Common Future," was the first report to bring social equality, economic growth, and environmental protection together under the name of sustainable development (Sustainability-Ed, 2005).

5. Figures correct for 2008.

6. SSSIs are statutory designations that provide the best examples of flora, fauna, or geological or physiographical features within England, Wales, and Scotland. They are often used as the foundation for other national and international nature conservation designations (JNCC, n.d.).

7. For example, coast steering is a relatively new sport that is particularly popular in rocky cliff stretches of coast such as those found in Devon, Cornwall, and Wales.

8. With the exception of the VMCA.

9. A honeypot is a term used in human geography to indicate "a place of special interest, especially with reference to tourist visitors. Honeypots may be developed deliberately as a way to concentrate tourists into manageable areas and reduce pressures on surrounding fragile environments" (ITS, 2005).

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