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Marine and coastal policy in the UK: Challenges and opportunities in a new era

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ABSTRACT

Marine and coastal policy in the UK has faced a number of significant changes in recent years, most notably the passing of the Marine and Coastal Access Act in 2009. These changes have brought significant challenges and opportunities for all those involved in the management and use of the UK's marine and coastal environment. This new era of marine policy inspired the UK's first Marine and Coastal Policy forum held in June 2011. In this introductory paper the global context of marine policy changes and the themes which emerged from the forum, forming the basis of the articles in this special issue, are outlined. It is concluded that there is a high level of engagement, capacity and willingness of key stakeholders to work collaboratively to address the environmental, social and economic complexities of managing the marine and coastal environment. It is both evident and encouraging that progress is being made and the many challenges faced in this new era give rise to a number of opportunities to develop new ideas and effective mechanisms for finding solutions.

1. Introduction

In November 2009 the Marine and Coastal Access Act (MCAA) [1] was passed, which marked the beginning of a new era in the management and protection of the marine and coastal environment in the UK[1]. This ambitious and complex legislation brings with it both opportunities and challenges for policy makers, coastal managers and practitioners. It has eight main components which include: the establishment of the Marine Management Organisation (MMO); a marine planning system; a reformed marine licensing system; a new mechanism for marine nature conservation; modernising of inshore fisheries management and marine enforcement; a new authorisation scheme for migratory and freshwater fisheries; improvement in coastal access; and a more 'joined up' approach to coastal and estuarine management. It is the opportunities and challenges that this act brings with it which inspired the UK's first Marine and Coastal Policy forum, 22–24th June 2011. The forum was hosted by the Centre for Marine and Coastal Policy Research, based within the Marine Institute, Plymouth University. It aimed to bring together marine experts to explore the key influences, approaches and techniques within

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[1] The Marine and Coastal Access Act is focussed on England and Wales. The Scottish Government passed devolved legislation in the form of the Marine (Scotland) Act, 2010. Northern Ireland will have its own policy approach with supporting legal instruments.

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what is a changing policy climate for the sustainable use of the marine and coastal environment.

The aim of this paper is to outline the main challenges and opportunities for marine policy which were first highlighted at this forum and that have subsequently been developed into research articles to form this special issue. In the following section, the global context of policy surrounding the marine and coastal environment is established. Then the four cross-cutting themes covered by the forum and related research articles are presented and discussed in brief. These themes are: management and planning of the marine environment e.g. [2–8]; science-policy integration and communication e.g. [9,10]; social and economic issues e.g. [11–14] and marine conservation and ecosystem services e.g. [15,16]. The key findings of forum workshops directly linked to these themes are described in boxes. The challenges and opportunities are then put in the context of sustainability and solutions which can be generated by better communication are discussed. Finally a number of overarching conclusions as to the future of marine policy in the UK are drawn.

2. The global context

The global context and the key ideas that are driving work in the marine environment from a global to a local scale were outlined in the keynote talks by Laurence Mee (Scottish Association of Marine Science (SAMS) and Dan Laffoley (International Union for Conservation of Nature (IUCN). In his talk entitled 'Designer seas or stewardship, a people's choice?' Professor Mee, Director of SAMS discussed: the changing use of the marine environment; the increasing demands for exclusive and shared use of marine space which is triggering conflicts; and the designation of access and property rights through marine spatial planning. Mee illustrated his point with the example of the Dogger Bank in the North Sea where conservation and wind farm interests are juxtaposed. Coupled with this problem, there is a change in human perception about our seas, sometimes coloured by the phenomenon of slipping ecological baselines where standards and expectations of natural environmental quality gradually decline with each generation. A survey carried out in seven EU countries as part of the EU funded Knowseas project demonstrated that popular perceptions of the problems afflicting the marine environment do not always coincide with those held by scientists [17]. In this example the foremost popular concern of respondents was found to be industrial pollution even though the worst polluters are regulated or have moved to Asia. Mee concluded that it is difficult to deal with or communicate complexity and political systems tend to focus on the linear causality of 'easy wins' rather than the complex, 'wicked' problems related to trade-offs and human values. Furthermore, there is no simple mechanism to balance the prerogative to conserve natural capital whilst optimising economic return and maintaining human well-being. Adaptive management, which offers one mechanism to set environmental and social objectives and work towards them, is at the heart of the EU Marine Strategy Framework Directive. This new strategy requires 'buy in' from the public but opinion surveys have shown low confidence in current institutions and efforts to build public understanding have been minimal. There is no way to return to pristine marine systems of the past and the mix of conservation and 'designer seas' projected for the future will require clear benchmarks, new human values and a common understanding of stewardship.

Continued emphasis on the global scale of problems and potential solutions, was given by Professor Dan Laffoley, Senior Advisor, Marine Science and Conservation for the Global Marine and Polar Programme in the IUCN. Laffoley focussed on the use of new technologies in communicating key messages about how to achieve a positive future for the marine environment. He showed how the IUCN is making great strides in bringing information about the marine environment to the general public and policy makers through media using tools such as Google and how in the future 'apps' for mobile handheld devices may be developed to make information more accessible [9]. It was proposed that through better communication, people can develop their knowledge and understanding, so that they could become more involved in the decision making processes which should lead to better informed decisions being made. He emphasised the need to inspire people to care enough so that change, in the form of better protection of the marine environment, can become a reality.

3. Management and planning of marine resources

With the variety of emerging legislation and policy such as the Marine and Coastal Access Act 2009 and the EU Marine Strategy Framework Directive and the formation of the MMO, there is now a stronger mandate than ever before for marine planning. The UK Marine Policy Statement published in March 2011 [18] establishes the policy framework for marine planning and decision making for the whole of the UK's marine environment. Its aim is to help achieve the UK Government's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. The evolution of the coastal and marine governance framework in recent years has been both significant and pronounced. This is the focus of the paper by Fletcher et.al. [2] which highlights the main changes in how England's marine and coastal spaces are governed. The evolving governance framework is a response to the multitude of management challenges facing the marine environment in the coming years, such as the management of historic marine sites in the face of increasing use of the marine and coastal environment [3]. Marine management and planning requires a robust understanding of a variety of disciplines and their interactions with natural and anthropogenic activities in a given area. Potential approaches to help find sustainable solutions include the use of effective fisheries management tools, ocean front modelling, Vehicle Monitoring Systems (VMS) tracking and mapping, innovative technologies, predictive modelling, decision support tools and stakeholder engagement. In all these approaches data access is deemed to be a common and crucial issue (Box 1).

Using Cefas Observer Data, Harriet Condie and colleagues [4] have analysed the potential impact of implementing a fisheries discard ban, in conjunction with effort restrictions or catch quotas, on otter trawlers operating in the North Sea. They found that a discard ban in isolation will not incentivise more selective fishing. However, if suitable market size regulations are in place, a discard ban in conjunction with effort restrictions can generate a small incentive to fish more selectively. Research identified that whilst catch quotas can create strong incentives for fishers to operate more selectively, they may not be suitable for all vessel segments due to dramatically shortened fishing seasons that may render fishing unprofitable.

Gear-specific VMS data have been employed by Campbell and colleagues [5] to map fishing effort in and around the Western English Channel from 2005 to 2008. The resulting maps highlight potential effects of fisheries closures around a renewable energy installation, Wave Hub in Cornwall, and at a candidate offshore Marine Protected Area, Haig Fras, on the distribution of an international fishing fleet of large (>15 m length) vessels and spatial differences in the intensity of fishing by different gear types. Patterns in fishing effort reflect the suitability of different substrata for each gear type and the availability of target species and the data clearly show that intensely fished 'hot-spots' varied