



The development and testing of a multiple-use zoning scheme for Scottish waters



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ABSTRACT

Marine Spatial Planning attempts to develop integrated planning frameworks for the management of activities within marine ecosystems and support sustainable development. This study demonstrates the application and testing of an existing multiple-use zoning scheme within Scottish territorial waters. The zoning scheme developed is based on integrating existing legally permitted management mechanisms to develop a series of zones where increasing number of activities are restricted. When applied, the zoning scheme allows for assessment of the ability of current governance mechanisms to cope with the increasing number of activities and developments in the marine environment and the pressures associated with them. The zoning scheme was tested by evaluating how the zones defined relate to the protection of features of conservation interest. Specifically, it was tested by determining the proportion of the five rarest marine landscapes as classified by UKSeaMap 2010 and also a selection of OSPAR Priority Marine Features that fell within different zones within Scottish waters.

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1. Introduction

Marine space has historically been regulated and allocated in a number of different ways, but crucially this has largely been approached from a strongly sectoral point of view, with little priority given to integrating or managing multiple uses within different economic sectors e.g. aquaculture, oil and gas and others (Douve, 2008). This approach does not adequately address the conflicts between alternative uses that have arisen and more recently an emphasis has been placed on broader scale, ecosystem approaches to manage the marine environment and its resources (Stelzenmüller et al., 2008). Marine Spatial Planning (MSP) is an example of a management framework that would allow for the integration, consistency and progression in decision making between sea uses and furthermore can also aid conflict resolution in areas where there is a great demand on space and resources (Boyes et al., 2007). MSP is now widely accepted as an established tool which can support the implementation of an ecosystem-based approach to management (Crowder and Norse, 2008; Douve, 2008). Through the management of current and future sea uses, marine planning can assist in avoiding or solving conflicts between multiple marine users (Stelzenmüller et al., 2008). Although there

are no specific definitions of MSP available, it has previously been summarised as ‘a strategic plan (including forward looking and proactive) for regulating, managing and protecting the marine environment, through allocation of space, that addresses the multiple, cumulative, and potentially conflicting uses of the sea and thereby facilitates sustainable development’ (Boyes et al., 2007). However, it should also be acknowledged that the process involved is equally both part of the plan itself and the final outcome of implementing that plan.

The new Marine (Scotland) Act 2010 (MScA) contains legislation and a management framework that are both aimed at overseeing the competing demands for space and resources in Scotland’s marine waters, providing for MSP, streamlined licensing and marine nature conservation. Since the 6th April 2011, under the MScA, the Scottish Government has been responsible for the marine licensing system for activities carried out in the inshore region of Scottish waters from 0 to 12 nm. Additionally, under the UK Marine and Coastal Access Act 2009 (MCAA), Ministers also have the responsibility of licensing (and enforcing) the Scottish offshore region from 12 to 200 nm (The Scottish Government, 2011a). Scotland also has full responsibility for nature conservation out to 12 nm and, within the framework of the Common Fisheries Policy (CFP) for fisheries management out to 200 nm. This study therefore considered the area extending out to 200 nautical miles to reflect the responsibilities of the Scottish Government.

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Part 3 of the MScA also delegates Scottish ministers with the specific task of preparing and implementing a National Marine Plan and following on from this, Regional Marine Plans (The Scottish Government, 2011b). Furthermore the National Marine Plan has also been designed to deliver Scotland’s international obligations such as meeting the standards laid out by the Marine Strategy Framework Directive (MSFD). Scottish marine space until very recently has been allocated without a comprehensive spatial planning strategy that determines priority uses in different sea areas. As mentioned above, Scotland has national legislation for authorising MSP with the aim of delivering an integrated, policy based approach to the regulation, management and protection of the Scottish sea area (Day et al., 2008; The Scottish Government, 2011a). Any plans that are to be developed will require not only the assessment of the most suitable locations for any future development but also the consideration of how such development may interact with other potential or existing uses and activities.

1.1. The multiple-use zoning scheme

The multiple-use zoning scheme applied in this study was based on a *posteriori* zoning scheme, based on summarising and classifying existing zones and regulations, that was originally developed by Boyes et al. (2007). It was based on existing legislation in order to provide a tool that would aid Marine Spatial Planning at a national scale. It is not an objective-based comprehensive zoning scheme for Scottish waters; this would require a policy-led approach whereby zones are created specifically to protect features requiring conservation or other objectives e.g. promoting

productive seas whilst maintaining diversity. It is not the intention of the current zoning scheme to propose policies for application to each of the zones but only to identify areas where different levels of restriction apply to existing activities and where future developments may be, or not, advised.

Scottish seas support a variety of users and activities that all compete for space. These include: aquaculture, archaeology, fisheries, dredging, conservation, military activities, oil and gas, shipping and transportation, submarine pipelines and cables and potential CO₂ storage. Scottish and European legislation and regulations related to marine activities and designated conservation sites presently in force within Scottish waters were identified and summarised. Various non-statutory management measures are in place within Scottish waters, including recommendations and codes of practice. The analysis undertaken in this study however, only considered statutory measures and jurisdictions. It excluded local authority bylaws and therefore did not take into account activities that occur below the high water mark i.e. within intertidal areas.

The current study extends the approach of Boyes et al. (2007) in two key ways. Firstly it determines whether it is possible to adapt the existing scheme to a larger spatial scale, and incorporate a wider range of legislative measures within the categories defined. Secondly, it also determines how well existing legislative and regulatory provisions provide protection for marine features of conservation interest; specifically here rare marine landscapes classified by the UKSeaMap scheme (Connor et al., 2006; McBreen et al., 2011) and a selection of taxa defined as Priority Marine Features within Europe by OSPAR (2008).

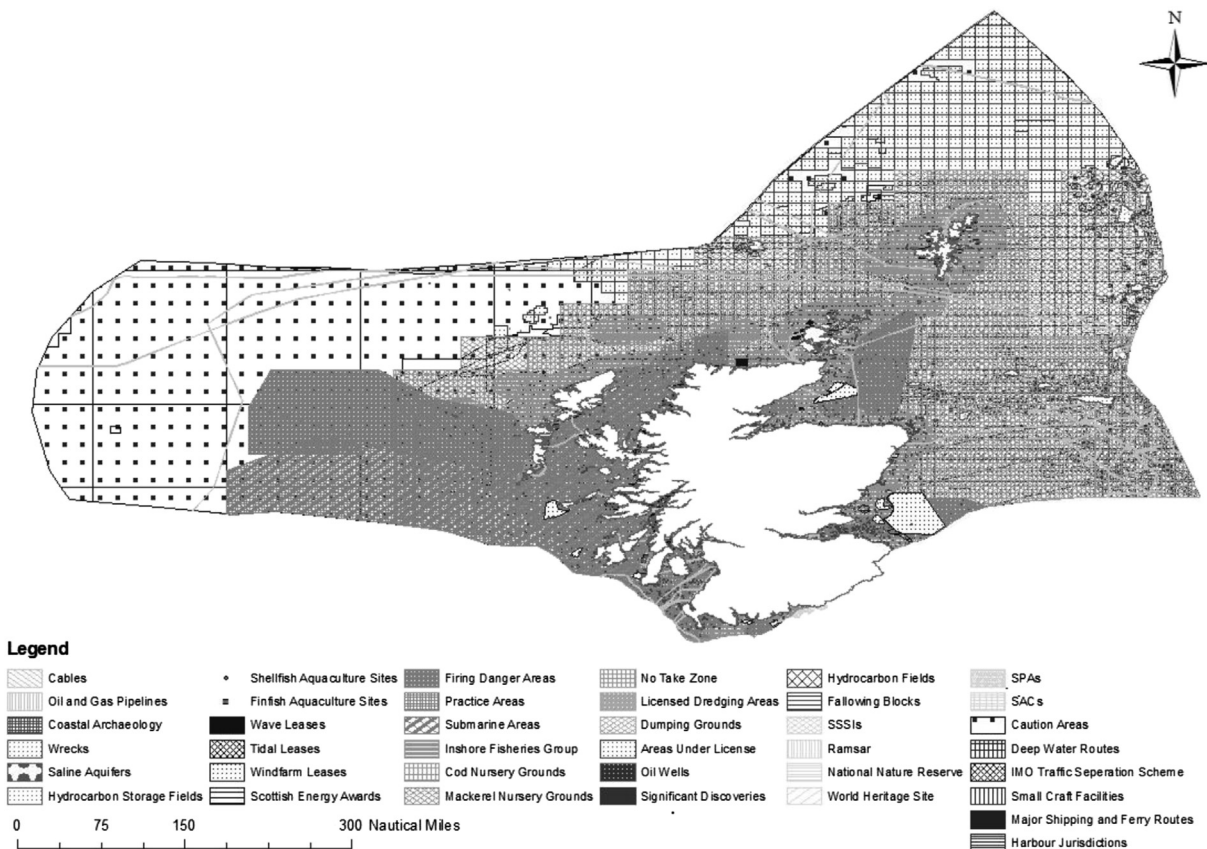


Fig. 1. A representation of some of the main activities and important environmental designations within Scottish Waters[©] Crown Copyright 2014. Data from Various Sources.

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