

Assessing the significance of the economic impact of Marine Conservation Zones in the Irish Sea upon the fisheries sector and regional economy in Northern Ireland

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ABSTRACT

This paper highlights the tension between advocacy for 'Blue growth' in maritime policy and efforts to safeguard future economic growth via the Marine Strategy Framework Directive. In 2015, policy-makers withdrew three of four proposed Marine Conservation Zones (MCZs) in the Irish Sea from consideration for designation, due to concerns that they could significantly impact on the fisheries sector in Northern Ireland because they overlap with prawn fishing grounds in the Irish Sea. Although research has quantified the potential impact upon fishing vessels, none has quantified the impact upon the fisheries sector nor assessed the significance of this impact. Arguably, MCZ designations (or lack thereof) based on the 'significance' of an impact require robust underpinning evidence. This paper reports the findings of an Economic Impact Assessment, which has quantified the impact of a decline in landings upon the Northern Ireland fisheries sector and regional economy (data which is currently absent from the evidence base for the MCZ designation process in England). It finds that this will incur job losses in three fishing ports in Northern Ireland, but is unlikely to have a significant impact upon Northern Ireland's fisheries sector and regional economy in terms of jobs and Gross Value Added (GVA). In the worst case, the resulting economic impact is a decrease of £1.05–1.12 m/year GVA in Northern Ireland, which is 1.1% of the contribution of fishing and fish processing to the regional economy. Economic significance assessments, using this methodology, may be useful in supporting the evidence base underpinning MCZ designation and other aspects of marine planning.

1. Introduction

Over recent years, there has been an unprecedented growth in marine regulation. It previously comprised mainly elements of general law and some sectoral regulation. Now, both EU and Member States have developed their own comprehensive regulatory frameworks for marine regulation. The UK and its devolved administrations have passed Marine Acts and the EU has enacted the Marine Strategy Framework Directive and the Maritime Spatial Planning Directive. The development of Marine Protected Areas (MPAs) has been central to this legislation to ensure the future protection of biodiversity and to set the framework for sustainable blue growth.

England and Wales have enacted legislation for Marine Conservation Zones (MCZs); a form of MPA aiming to safeguard vulnerable marine habitats and species and the benefits that they provide to society [15]. Such spatial management measures are playing an increasingly important role within the context of habitat and biodiversity loss, pollution and depleting fish stocks [24]. The potential

benefits are numerous and include climatic regulation, nutrient recycling, carbon sequestration, recreational opportunities, fisheries recruitment and aesthetic values [14]. However, they can also be regarded as a direct threat to livelihoods and have the potential to significantly impact on some fishing activities (such as fisheries which deploy bottom-towed fishing gear) while other fisheries (such as those which deploy static, less invasive, fishing gears) may prosper from being permitted an increased range [32]. The decision-making, regarding the designation of MCZs, is therefore subject to conflicting objectives and requires the use of suitable tools to assess the environmental and economic consequences.

In the UK context, the designation of MCZs is an ongoing debate. Twenty seven MCZs were designated in English waters in 2013 and a further twenty three in 2016; under the requirements of the Marine and Coastal Access Act (2009) [16]. MCZ designation in the Irish Sea is of particular controversy as four MCZs overlap with important prawn (*Nephrops norvegicus*) fishing grounds [13]. One of these MCZs (West of Walney) was designated in early 2016. Whilst, the other three (Slieve

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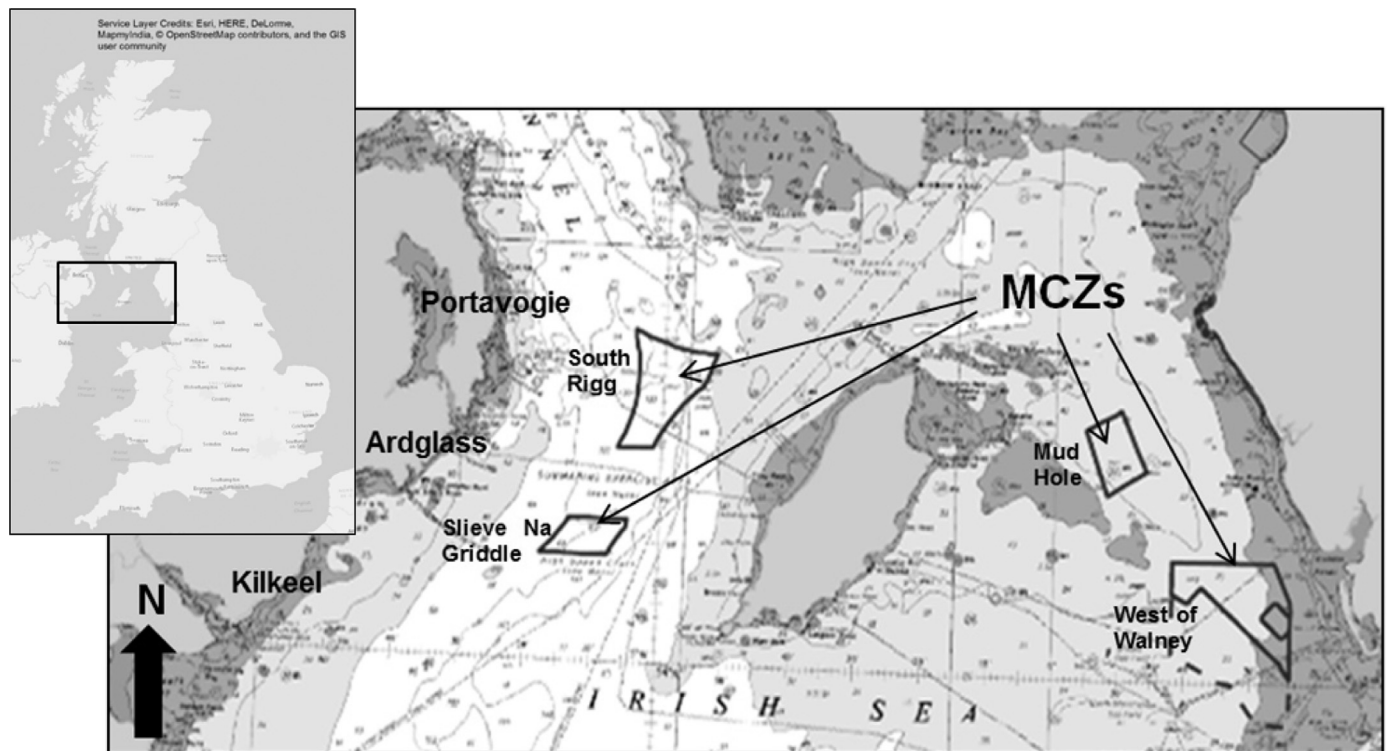


Fig. 1. Location of proposed MCZs and principal Northern Ireland fishing ports © Crown Copyright and/or database rights. Reproduced by permission of the Controller of Her Majesty's Stationery Office and the UK Hydrographic Office (www.ukho.gov.uk).

Na Griddle, South Rigg and Mud Hole – see Fig. 1) were withdrawn from consideration for designation in January 2015, due to concerns that they: “could have a significant impact on the fishing sector, particularly in Northern Ireland” (Defra, p.5, [9]) assuming that bottom-towed fishing gear would be prohibited within them. These MCZs were re-classified as “sites for further consideration” (Defra, p.1, [9]) in later years.

Although research has quantified the potential impact upon the fisheries sector, the significance of this potential economic impact has received less attention. In order to address this gap, this paper has sought firstly to quantify the economic impact of designating four MCZs in the Irish Sea upon Northern Ireland's economy, paying particular attention to the fish processing sector and the fishing ports of Kilkeel, Portavogie and Ardglass; and secondly, to assess the significance of this economic impact upon the Northern Ireland fisheries sector and the regional economy.

2. Background

The economic impact assessment¹ (Econ IA) is increasingly part of the statutory architecture of decision-making. The UK Marine and Coastal Access Act 2009 [16] explicitly states at section 117(7):

“In considering whether it is desirable to designate an area as an MCZ, the appropriate authority may have regard to any economic or social consequences of doing so.”

An Econ IA attempts to meet these statutory objectives by describing, quantifying and monetising the impact of an intervention within an industry. An Econ IA does not necessarily quantify net economic impact as one industry's cost may be another industry's revenue [18]. It is usually sector-specific and is not generally used to compare changes in different sectors or the efficiency of policy decisions [18]. Care needs to be taken when commissioning and interpreting an Econ IA as it is

part of the decision-making landscape, and not a substitute for human judgement. However, Econ IA has been used to quantify the wider repercussive effects of MPAs on regional economies (e.g. for the Gulf of Maine [5]; the Stellwagen Bank National Marine Sanctuary [30]) and also in terms of restrictions on marine resources (e.g. upon fisheries [21,37,38]). It appears that this has arisen primarily to capture the concerns of industry (indirect costs, as well as direct costs) regarding MPAs and for policy makers to consider this evidence in their decisions.

Guidance on assessing the significance of economic impact is lacking. The Government's own guidance says that: “analysis should give a sense of the significance of the proposal. Orders of magnitude rather than detailed quantitative analysis should be sufficient” ([8], p. 74). Detailed analysis is rarely required and judgement seems to be based on ‘expert’ opinion. There is no definition of significance in the Marine and Coastal Access Act 2009 in relation to economic impact beyond the opportunity to ‘have regard’ for the findings, and the Econ IA itself is not mandatory.

This paper is an extension to analysis which has already quantified the impact of MCZs in the Irish Sea upon the UK fisheries sector. The impact assessment prepared for UK Government regarding proposed MCZs in English waters [13]), hereon after referred to as the MCZ IA, assumed that bottom-towed gears would be prohibited within the four MCZs of concern in this paper, based on advice from the statutory nature conservation bodies in the UK (Natural England the Joint Nature Conservation Committee).

The MCZ IA [13] found that, in the best estimate,² the prohibition of bottom-towed gears in these four MCZs would decrease landings by all UK vessels to the value of £1.7 m/year (roughly £0.6 m GVA/year).³

² The best estimate was defined by Defra [13] and assumes that 50% of the value of landings from fishing grounds in the MCZ will be lost (to allow for some uncertainty around the value data and for recovery of some landings from other fishing grounds).

³ Based on GVA factor of 0.35 for fishing vessels (average of operating profit + crew share of total turnover for Area VIIA nephrops single-rig trawl, Area VIIA nephrops twin-rig trawl and Irish Sea demersal trawl over 10 m from [33]).

¹ Often referred to as an economic impact appraisal.

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