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Developing benefit schemes and financial compensation measures for fishermen impacted by marine renewable energy projects

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HIGHLIGHTS

- There is uncertainty among fishermen over benefits from MRE projects.
- Re-training is required for fishermen to avail of employment opportunities.
- Evidence-base is required for calculation of disruption payments.
- Formal guidance on the provision of benefit schemes is recommended.
- Sustainable schemes providing multiple benefits are likely to enhance acceptance.

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ABSTRACT

Commercial fishermen are arguably the stakeholder group most likely to be directly impacted by the expansion of the marine renewable energy (MRE) sector. The potential opposition of fishermen may hinder the development of MRE projects and the provision of benefit schemes could to enhance acceptance. Benefit schemes refer to additional voluntary measures that are provided by a developer to local stakeholders. The aim of this study is to explore the issue of the provision of benefit packages to local fishing communities and financial compensation measures for fishermen who may be impacted by MRE projects. Semi-structured interviews were conducted with fourteen fishermen from three separate case study sites around the island of Ireland where MRE projects were being developed. In addition, ten company fisheries liaison officers (CFLOs) who have worked on MRE projects in the UK and Ireland were also interviewed. The interviews were analysed under the headings of local employment, benefits in kind, compensation and community funds and ownership of projects. Analysis shows that there is uncertainty among fishermen over whether they would benefit or gain employment from MRE. Provision of re-training schemes and preferential hiring practices could be used by MRE developers to reduce this uncertainty. There was also agreement between fishermen and CFLOs on the need for the provision of an evidence-base and a standard approach for the calculation of disruption payments. A formal structure for the provision of benefit schemes for fishermen would be useful. Furthermore, schemes that provide a range of benefits to fishermen and other stakeholders over the lifetime of a MRE project are more likely to be successful at enhancing acceptance.

1. Introduction

Marine renewable energy (MRE) refers to offshore wind, wave and tidal energy and is a sector which could potentially be a significant contributor towards global energy supply (International Energy Agency, 2013). It has been suggested that MRE developments are less likely to experience public opposition and objection as such projects are generally located away from the public eye (O'Keeffe and Haggett, 2012). Rather, it is the potential opposition of stakeholder groups who depend on the marine resource for their livelihood that may hinder the development of MRE projects (O'Keeffe and Haggett, 2012). The commercial fishing sector is arguably the group most likely to be directly impacted by the development of MRE (Alexander et al., 2012; Yates and Schoeman, 2013). Loss of access and displacement from traditional fishing grounds could result in economic impacts in terms of reduced income. This in turn could potentially lead to the opposition of fishermen and conflict over the use of sea space. The need to keep local stakeholders on side has been recognised (Walker et al.,

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2010). As such, the mitigation of these negative impacts and planning for the co-existence of both sectors is crucial to enhancing the acceptance of projects among fishermen.

Community benefit schemes refer to additional voluntary measures that are provided by a developer outside of the planning and licencing processes (Scottish Government, 2015). As the wave and tidal sectors advance towards commercialisation and the offshore wind sector expands, the issue of benefit schemes and financial remuneration to coastal and fishing communities is increasingly being raised (Dalton et al., 2015). Types of community benefits for onshore wind include the creation of local jobs during construction, benefits in kind (such as improvements to local harbour facilities), community funds, and operation and local ownership of the energy project (Department of Trade and Industry UK, 2007). Opposition to onshore renewable energy projects is more likely if benefits are not generally shared among local stakeholders (Walker and Devine-Wright, 2008). Recent reports from Scotland have examined good practice in developing and implementing community benefit schemes from offshore renewable energy developments, finding that the UK is leading the way in this area (Climate Xchange, 2015; Scottish Government, 2015). Such benefits could help to mitigate and offset some of the potential negative impacts that MRE developments may have on fishermen. This could also enhance acceptance of projects and reduce the likelihood of opposition and spatial conflict. The provision of adequate benefit schemes are currently not mandatory, however they are an important part of the planning process and should be given considerable attention by planners and developers of MRE projects.

The issue of benefit schemes and monetary compensation payments to fishermen for economic losses due to exclusion from fishing grounds as a result of MRE projects has not been fully researched. The aim of this study is to explore the issue of the provision of benefits packages to local fishing communities and financial compensation measures for fishermen who may be impacted by MRE projects. This involves investigating the attitudes and perceptions of fishermen and fisheries liaison officers using a qualitative approach based on semi-structured interviews. Four key areas were explored with regard to the provision of benefit schemes and compensation to local fishermen. These are:

(i) creation of local employment,
(ii) the provision of benefits in kind,
(iii) community funds and financial compensation,
(iv) ownership of projects.

2. Background and context

The provision of a community benefits package has become an established component of terrestrial project development in the UK, particularly for onshore wind projects (Cass et al., 2010). There is increasing interest in establishing good practice principles and guidance on designing and delivering community benefits packages from MRE (Climate Xchange, 2015; Scottish Government, 2015). Community benefits are conceived and provided in various ways and are discussed in the following sections with regard to their potential applicability to MRE. Table 1 provides a comparison of the types of benefit schemes currently provided to fishermen by the onshore wind, oil and gas and marine renewable energy industries. In this table MRE predominantly refers to the offshore wind sector.

2.1. Local employment

The potential for fishermen to diversify and find alternative employment on MRE projects could be a major benefit (Perry and Smith, 2012; Alexander et al., 2013a; Reilly et al., 2015). A report on fisheries mitigation options for offshore wind farms acknowledged the fact that fishermen typically possess knowledge of the local marine area and have relevant skills and attributes that could be applied to marine developments (Blyth-Skyrme, 2010). Employment opportunities for fishermen on MRE projects include providing maintenance support and surveying services, however, it should be noted that converting commercial fishing vessels to other uses can be costly (Blyth-Skyrme, 2010), which may deter some fishermen from diversifying. Despite this, there is evidence of fishermen working on offshore developments in the UK. In response to the expanding oil and gas sector in the North Sea, services companies were set up by the two major fishing organisations in the UK, the Scottish Fishermen's Federation[1] and the National Federation of Fishermen's Organisations,[2] in order to maximise the alternative employment for fishermen. The type of employment obtained includes guard vessel work, crew transfer and marine mammal observation.

Table 1
Comparison of benefit schemes.

	Onshore wind	Oil and Gas	Marine renewable energy
Benefit scheme	Local employment Benefits in kind Community and compensation funds Ownership of projects	Local employment Benefits in kind Community and compensation funds	Local employment Benefits in kind Community and compensation funds

2.2. Benefits in kind

Benefits in kind to fishermen could generally include improvements to harbour facilities and new port infrastructure. The development of MRE projects may result in improvements to ports and harbour facilities due to increased vessel activity in the area. Separate studies in Ireland and Scotland have found that fishermen perceive harbour improvements to be one of the benefits of MRE projects (Alexander et al., 2013b; Reilly et al., 2015) and this can help to garner support. The wave energy pilot plant in Mutriku, Spain consists of 16 turbines based on the Oscillating Water Column (OWC) principle that have been integrated into a breakwater which also serves as a protection mechanism for vessels in the harbour. The construction of a breakwater had been discussed for a number of years and the idea to integrate this with a wave energy project was supported by fishermen as they saw it as an improvement to their harbour (Stefanovich and Fernandez-Chozas, 2010). The fishermen were supportive of the project from the outset as the breakwater in which the OWCs were integrated increased safety by protecting their vessels from incoming waves.

2.3. Community and compensation funds

The establishment of community funds has become common practice for onshore wind farms in the UK. The Highland Council in Scotland was the first in the UK to make specific recommendations for community payments from onshore wind in 2003, recommending fixed annual payments per megawatt installed (Dalton et al., 2015). A community fund is seen as a fundamental part of any benefits package arising from a MRE project (Scottish

[1] http://www.services.sff.co.uk
[2] http://nffoservices.com/offshore-renewable-energy