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Governance and power in the planning of Scotland's seas

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"***Don't gain the world and lose your soul…***"

- Bob Marley

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Summary

This thesis examines Marine Spatial Planning (MSP) from a governance perspective. It considers the effect that MSP has on the governability of complex marine environments. An attempt is made to demonstrate how MSP is reliant on the creation of different types of space that are used to further reinforce marine planning processes. These include map spaces, physical meeting spaces, graphical representations of sea space, and online spaces. The spaces are used to share detailed information about the sea, along with visions of how its resources might be exploited and/or preserved, thus also further reinforcing the MSP approach and anchoring it in society. It can be said that the MSP system, the governance system, and a specific marine planning mentality (a form of 'governmentality') co-evolve and are mutually supporting.

Further, the case of MSP in Scotland is used to explore the topics of transparency and participation in MSP processes. This includes considering the roles played by stakeholders and the public. It appears that MSP does little to level the playing field in the power relations that already existed between stakeholders. It is argued that MSP in Scotland is not meeting its potential in terms of being transparent and participatory. This seems to coincide with conclusions made about other MSP systems in other countries.

The concept of power is explored further to consider what might happen in instances where MSP processes are not perceived to be representative. This perception might emerge from the fact that early stages (or 'step zero') in planning are dominated by a select group of stakeholders, whilst others are invited to contribute at a later stage when certain decision making parameters might already have been set. The role of the public as stakeholders is also considered on the grounds that MSP is often described as a 'public process'. A comparative analysis with land use planning in Scotland shows that the public is able to organise itself to form opposition to a system that lacks transparency and opportunities for participation. Modern governance theories accurately describe their forms of resistance there and the same might occur in MSP.

Finally, some recommendations are made for the governance of MSP processes in Scotland that could help to prevent the later 'transaction cost' of people opposing the processes or outcomes.

List of papers

I: Smith, G. (2015). Creating the spaces, filling them up. Marine spatial planning in the Pentland Firth and Orkney Waters. *Ocean & Coastal Management*, **116**, 132-142.

II: Smith, G., & Jentoft, S. (2017). Marine spatial planning in Scotland. Levelling the playing field? *Marine Policy*, **84**, 33-41.

III: Smith, G. (2018). Good governance and the role of the public in Scotland's marine spatial planning system. *Marine Policy*, **94**, 1-9.

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List of abbreviations

CMPP	Clyde Marine Planning Partnership
EBM	Ecosystem based management
EC	European Commission
EIA	Environmental Impact Assessment
EU	European Union
GBRMP	Great Barrier Reef Marine Park
GIS	Geographic information system
GPS	Global positioning system
HELCOM	Baltic Marine Environment Protection Commission - Helsinki Commission
ICES	International Council for the Exploration of the Sea
ICZM	Integrated coastal zone management
IOC	International Oceanographic Commission
JNCC	Department for Environment, Food and Rural Affairs
MARs	Marine Resource System
MMO	Marine Management Organisation
MPPs	Marine planning partnerships
MSP	Marine spatial planning
NMP	National Marine Plan
NMPi	National Marine Plan interactive
OIC	Orkney Islands Council
OPP	Obligatory passing point
PFOW	Pentland Firth and Orkney Waters
SMRs	Scottish marine regions
SSMEI	Scottish Sustainable Marine Environment Imitative
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total allowable catch
UNESCO	United Nations Educational, Scientific and Cultural Organization

1. Introduction

How do we manage and govern complex natural environments? For answers to this question we might look to our seas and coasts as an example of a complex environment. The physical components of this environment – the coastlines, waves, tides, reefs, sandy seabeds, estuaries, and under water troughs and ridges – support a myriad of marine biota: flora and fauna that coexist in intricate ecosystems. Humans are an active part of many of these ecosystems. We pursue activities such as oil and gas extraction, fishing, marine renewable energy development, aquaculture, recreation, transport, and in so doing form part of the socio-ecological whole (Olsson et al., 2004). The physical components and the marine biota cannot be directly managed. We cannot manage a coral reef, or a shoal of cod, or a mussel bed. When we talk about managing marine resources we talk about managing human action and inaction in a socio-ecological system. For example, total allowable catch (TAC) quotas are set to regulate how much fish humans are allowed to catch, marine protected areas (MPAs) are designated for the conservation of vulnerable species or ecosystems, robust laws help ease conflicts between fishing sectors (and between these and other maritime activities), and all extractive industries and development projects are carefully regulated and monitored. Each country or region manages these activities within given ecological, environmental, political, economic, and social parameters, which form the basis of management objectives, targets and methods.

In many regions these management efforts are facing increasingly complex challenges as maritime industries continue to grow and diversify. In the European Union (EU), for example, 'blue growth' is billed as the maritime contribution to the Europe 2020 strategy aimed at achieving "smart, sustainable and inclusive growth" (EC, 2020). Blue growth refers to the recognised potential for expansion in five maritime industries in particular: aquaculture; coastal tourism; marine biotechnology; ocean energy; and seabed mining. In many areas this will likely result in a larger number of actors accessing and using marine resources, a greater competition for space, increased conflicts between users, and increased cumulative impacts upon marine environments. This complex scenario has been referred to as the 'marine problem' (Ritchie & Ellis, 2010).

Over time the need to sustainably manage growing maritime industries whilst conserving vulnerable marine ecosystems and human livelihoods (i.e. the marine problem) increasingly led experts to the more holistic approach of ecosystem-based management (EBM). EBM "seeks to broaden the scope of traditional resource management so that it

considers a wider range of ecological, environmental and human factors in the exploitation of resources" (Curtin & Prellezo, 2010: 821). The focus of marine management began to move from single species to habitats and ecosystems (Day, 2008). By accommodating the complexity and co-development of socio-ecological systems (Berkes, 2010) it can better inform attempts to improve the condition or abundance of individual fish stock species, for example, or of a vulnerable ecosystem such as a coral reef, whilst minimising the risk of this outcome having a negative impact on other species or ecosystems. It is a means of looking at the bigger picture and considering what the natural and anthropogenic pressures on the specified entities are at all levels, including the cumulative impacts of these. Management initiatives can then be applied at all of these levels to aim at positive management outcomes (Link & Browman, 2014). Marine management tools need to be designed to cope with this complex scenario.

Marine spatial planning (MSP) is promoted as one such set of tools. MSP is essentially a decision-making framework to help manage the spatial distribution of human activities that impact coastal and marine areas, considering interactions between sectors, changes over time, and informed by extensive data collected on all relevant ecological, environmental, political, economic, and social factors. It has gained traction worldwide as a leading approach to tackling complex marine management scenarios. As of June 2017 the International Oceanographic Commission (IOC) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) claim, "about 65 countries were preparing or had prepared about 140 marine plans at the national, regional, or local levels".[i]

For MSP to be effectively used to support marine management actions it requires the coordination, cooperation, involvement and expertise of a large range of people who affect – or are affected by – the problem-framing, system design, implementation, and monitoring. In many ways it is unprecedented in its participatory approach to marine management, being defined as a "public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social that are usually specified through a political process" (Ehler & Douvere, 2009: 18). This definition is interesting because it draws attention to the political and social aspects of MSP and acknowledges the involvement of the public. In order to carry out the technical tasks of marine management through MSP such as allocating space, deciding on marine consents and licenses for projects, and preparing for future sea use changes, people need to be organised in some way, and they need to be clear of their roles. Whilst the final marine spatial plan will be

comprised of a series of well-defined actions, rules and regulations with a supporting legal basis, there is a lot of organising to do before this written plan can be created, and, indeed, once it has been. The definition of MSP as a 'public process' suggests that the range of participants in MSP processes could potentially be very broad.

Viewed as an exercise in organising people and their roles, we are encouraged to also consider how marine environments can be governed. Approaching MSP from a governance perspective allows us to pose a range of interesting questions. Who governs in an MSP system? Who can contribute to planning, and at what stages? How are planning frameworks and priorities set? Who is affected by plans, and can these people affect plan making in turn? What can be said about transparency and participation in MSP processes? How are decision-making processes institutionalised? Who has input to these institutions? These questions are also strongly tied to the democratic principles of fairness, participation and, thus, legitimacy (Birnbaum, 2016). MSP itself is tied to these democratic principles. The extent to which it upholds these can influence the social acceptability of the marine management actions decided upon under MSP (Voyer et al., 2015). This fact was not lost on early advocates of MSP who stressed the need for stakeholder engagement (Pomeroy & Douvere, 2008), which should begin with bringing stakeholders to the table early (Gopnik et al., 2012; Olsen et al., 2014) and continue through to plan implementation and monitoring (Carneiro, 2013). However, as we shall see, there are plenty of concerns about the inclusivity of MSP regimes.

With MSP being a public process it also stands to reason that the way it is governed would be heavily influenced by the socio-political and cultural traditions of the given location. This is why MSP appears in so many different guises across the world. The building blocks of every MSP system seem to be "socially and experientially based, local and specific in nature (…), and dependent for their form and content on the individual persons or groups holding the constructions" (Guba & Lincoln, 1994: 110-111). It appears that many of the realities of MSP are socially constructed. They are formed in situ when participants define the issues that need to be addressed, discuss methods to deal with these, decide to move forward with MSP, establish planning priorities, form the necessary governance and management frameworks, and then begin to use – and improve – these frameworks. As such, MSP cannot be stripped of its given context (Guba & Lincoln, 1994). It is heavily influenced by traditional and cultural ways of 'doing things', that are site-specific, and also influenced by site-specific needs. For example, objectives in The Netherlands include improving coastal defences against sea level rise (Jay, 2010-b), whilst the long standing planning tradition in Israel is more

heavily influenced by military defence objectives (Soffer & Minghi, 1986). MSP practices can also vary in accordance with local political traditions and do not always follow expert recommendations (Jay et al., 2013; Olsen et al., 2014).

In light of the diverse approaches to MSP – and the incentives that drive it – it is useful to choose one example to study. This particular thesis focuses on MSP in Scotland, which is still very much 'in the making' and where existing governance structures are being rearranged to accommodate MSP processes. In Scotland MSP can be studied both as a governance tool, and as something that might impact the role and position of governors and stakeholders in Scottish waters. I return to introduce the Scottish case in more detail below.

2. Research questions and objectives

The main objective of this thesis is to understand how MSP affects the governability of complex marine ecosystems. In order to do this the focus is on governance structures and processes and the roles played by both stakeholders and the public. This objective is designed to contribute to recent attempts to evaluate MSP processes (e.g. Carneiro, 2013; Collie et al., 2013; Scarff et al., 2015; Jones et al., 2016; Flannery et al., 2018). It is driven by the following three central research questions:

Q1. Has MSP contributed to the increased governability of complex marine environments?

Q2. Do MSP processes in bring stakeholders to the table early?

Q3. What opportunities exist for public participation in MSP processes?

All three of these questions relate to the way in which marine environments can be governed through the mechanism of MSP. The potential contribution of this exercise is clarified below in sections 4 and 5 where I outline the relevant governance theories and then link them to MSP. The link is comprised of a number of important themes. Firstly, if we accept that MSP is about organising people then it seems relevant to look beyond MSP itself and consider how people are governed, more generally. There is no reason to believe that things should be different just because of the uniqueness of the marine socio-ecological system. Secondly, the governability of that system might be closely linked with technologies of power and the means by which people are convinced to accept a new system of rule and then to adhere to it. How do we get people to think in a way that will ease the transition to something new? And if we are asking people to

think about something new then at what stage are we doing so? And can we make – *and maintain* – a promise that their contribution is important to decision outcomes? These people in MSP are known as stakeholders. And do we count the public as stakeholders? Where do we draw this line? Following on from that it also seems appropriate to assume that not everybody *will* adhere to that new system of rule. If there is cause for resistance that emerges from any existing barriers to public participation, then how might this manifest itself? As we shall see, modern governance theory provides the necessary tools with which to pose and explore important questions of MSP.

I use section 5 below to further contextualise the three research questions and explain how they were tackled in the three research papers. Before this, however, it is important to introduce MSP in more detail, which I do next in section 3. Sections 4 and 5 are used to outline the theoretical basis of this thesis and to contextualise the research questions. In section 6 I outline the methodological approach used in this project and section 7 describes the MSP system in Scotland. All of the results are presented in section 8. I use section 9 to discuss the results in relation to the theoretical basis and also propose a possible improvement to MSP in Scotland. I finish with concluding remarks in section 10.

3. Marine spatial planning

MSP traces its roots in the pioneering zoning approach to marine management in Australia's Great Barrier Reef Marine Park (GBRMP) (Day, 2008). The original GBRMP management approach relied on relatively rudimentary matrices used to decide on permitted, prohibited, or permit-based human activities in various marine zones, with the overarching goal of protecting the coral reef. However, monitoring and evaluation of the GBRMP have led to a better understanding of the wide range of factors that can affect management strategies, and multiple improvements have been made to that regime since its introduction in 1981. For example, the GBRMP system originally did not cater sufficiently for tourism and recreation and so additional statutory management plans were introduced for these sectors; the increasing access to Global Positioning Systems (GPS) technology meant that more accurate boundaries could be identified; and the original zones did not consider the range of biodiversity within an ecosystem, instead favouring one habitat type, namely the coral reef itself (Day, 2008). So management of the GBR improved significantly over time. But there is no reason to suggest that lessons learned from one model of how the sea can be *managed* – as advanced as the model may be – should necessarily lead to the idea that our seas can be

planned. To understand this progression it is necessary to leave the sea for a while and consider the evolution of planning more generally.

3.1. Developments in planning

MSP reflects the "dominant spatial planning paradigm of the present era" (Kidd & Shaw, 2014: 1537) and has also been informed by terrestrial – or 'land use' – planning. The accelerating rate of industrialisation in the United Kingdom during the 19th Century, for example, had caused towns and cities to expand rapidly. It soon became clear that human activities in these areas needed to be planned to make a more efficient use of space and improve living conditions, hygiene levels, logistics, etc. The original Housing, Town Planning, &c. Act 1909 required local councils (municipal government) to introduce town planning systems, which constituted a form of rational decision making over the allocation of space. However, this seemingly straightforward task soon became more difficult in the face of globalisation, neo-liberalism, multiculturalism, and postmodernity, because societies (and their needs) were becoming more complex.

Consequently, Friedmann (1973) argued that more attention should be paid to the relationship between knowledge and action. Friedman himself claims that "this shifted the discourses of planning theory away from planning as an *instrument of control* to one of *innovation* and *action,* which in turn, raised questions about what values ought to guide our practice, what strategies should be adopted, and how participation by community and/or stakeholders might be furthered" (Friedmann, 2003: 8, emphasis in the original). It became increasingly important to consider other forces that affect urban areas, such as the aforementioned globalisation, neo-liberalism, multiculturalism, and postmodernity. How were these forces affecting the social and cultural dynamics of communities? And how were the planning needs of these communities changing as a result?

The task of increased participation by community and/or stakeholders is now a key theme in planning. In the context of sweeping neoliberal reforms in the UK in the 1980s Patsy Healey was involved in a project aimed at examining "how far development plans were being implemented" (Healey, 2003: 102). Much like with the earlier criticism of planning as an instrument of control, it was found that the idea of development plans simply being 'implemented' "reflected a very traditional conception of a plan as a spatial blueprint, which would steadily be translated into built form on the ground" (Ibid). This was exposed as an out-dated view, and instead development plans started to become "statements of policy

principles and regulatory norms to guide land and property development processes" (Ibid). Rather than a spatial blueprint, Healey describes how plans represented a series of principles and norms that helped shape human interactions in planning. As such, plan implementation was a negotiative process involving a wide range of actors, and centralised, top-down planning was being frustrated by localised, bottom-up forces, as communities resisted straightforward control by planning. These processes emerged in "the reduced certitudes and predictabilities of a complex world" (Brand & Gaffikin, 2007: 283).

Healey was one of several scholars, including Innes and Booher (1999) and Swyngedouw et al. (2002), who began to develop an approach to planning that took account of Friedmann's call for broader considerations to inform the process, and also of the observed reality of planning as a negotiated process involving a plethora of groups and individuals in a complex, modern society. Such perspectives were compatible with the concept of 'collaborative planning', exposed the interactive process of 'planning through debate' (Healey, 1992). Collaborative planning draws more attention to governance processes, especially those that "focus on developing qualities of place and territory" (Healey, 2003: 107). Critically, collaborative planning helped reinforce the importance of participation in planning, and also the fact that planning occurs in complex institutional environments that are influenced by wider social, economic and political. However, whilst the case for improving participation is strong, it is not very easily achieved in practice. For example, Brand and Gaffikin (2007) point to the dichotomy between the desire to improve the speed and decisiveness in plan making on one hand, and the fairness of participatory processes on the other. The dilemma here is between upholding the democratic principle that people have a right to be heard when the decisions being made concern them (Dahl, 1989), and the danger of suffocating the planning process by taking all views into account.

3.2. Returning to the sea

The changing approaches to planning described here dealt with land use. The jurisdiction for land use planning usually reaches just beyond the shoreline. In the case of the UK this equates to the mean low water mark of ordinary spring tides, as shown on Ordnance Survey maps (Jay, 2010). This demarcation is not very accurately defined and is often context dependent, with local councils, developers and landowners frequently turning to a series of byelaws to decide on individual planning cases. But whatever the ambiguities over terrestrial limits, planning beyond them was previously not considered possible for two main reasons. Firstly, the land is more easily demarcated, traded, and built upon. The sea, on the other hand, "by its

very nature, resists these conditions; its physical characteristics militate against detailed human organisation and manipulation, making it largely undevelopable and therefore unplannable" (Jay, 2010: 175): "the antithesis of modern land space" (Kerr et al., 2014: 120). Secondly, "the jurisdiction of coastal states over their surrounding seas has historically been far weaker than over their land areas" (Jay, 2010: 175). Although state control over near shore waters is now much more clearly established, access to and use of the marine environment has been characterised by legal ambiguities and contestation.

Kerr et al. (2014), demonstrate how rapid growth in the offshore oil industry in the 1970s began to challenge this view, as it demanded greater human interaction with the seabed and marine space. The industry drove efforts to research, understand, and map the sea and the seafloor. In the last decade the aquaculture and renewable energy sectors have added impetus to these efforts. The combination of greater pressures on marine resources and the improved understanding of that environment have brought about a "complete re-think" of the way the seas could be developed and, therefore, planned (Ibid: 120). This is bolstered by the widespread use of GPS from the 1980s onwards, and advancements in mapping techniques, which expanded the limits of what was technically possible in marine planning.

In order to demonstrate the influence that planning has on efforts to manage human activities in marine and coastal environments it is useful to consider an example. The maps presented in figure 1 have been created using geographic information systems (GIS) technology, which is designed to capture, store, manipulate and present data in relation to positions on the Earth's surface. They depict a section of the Northeast coast of the USA.

Two principle user groups of this area are represented: the seagoing vessels as shown on the left, and the baleen whales and turtles on the right. Even to the untrained eye it becomes apparent that conflict might occur between these two users of space, and a range of questions begin to emerge. We might consider, for example, direct contact between ships and marine mammals that might have consequences for shipping safety, and might threaten the survival of these mammals. Does the main threat to the mammals come from direct collision with vessels, or from (noise) pollution? What types of vessels are using these lanes? Which ones have priority and which ones are restricted in their movement by regulations, water depths, or currents? Are there any fishing grounds to which fishing vessels need access? Many of these questions have been considered by conventional marine management, and will have been covered by early zoning regimes such as that in the GBRMP.

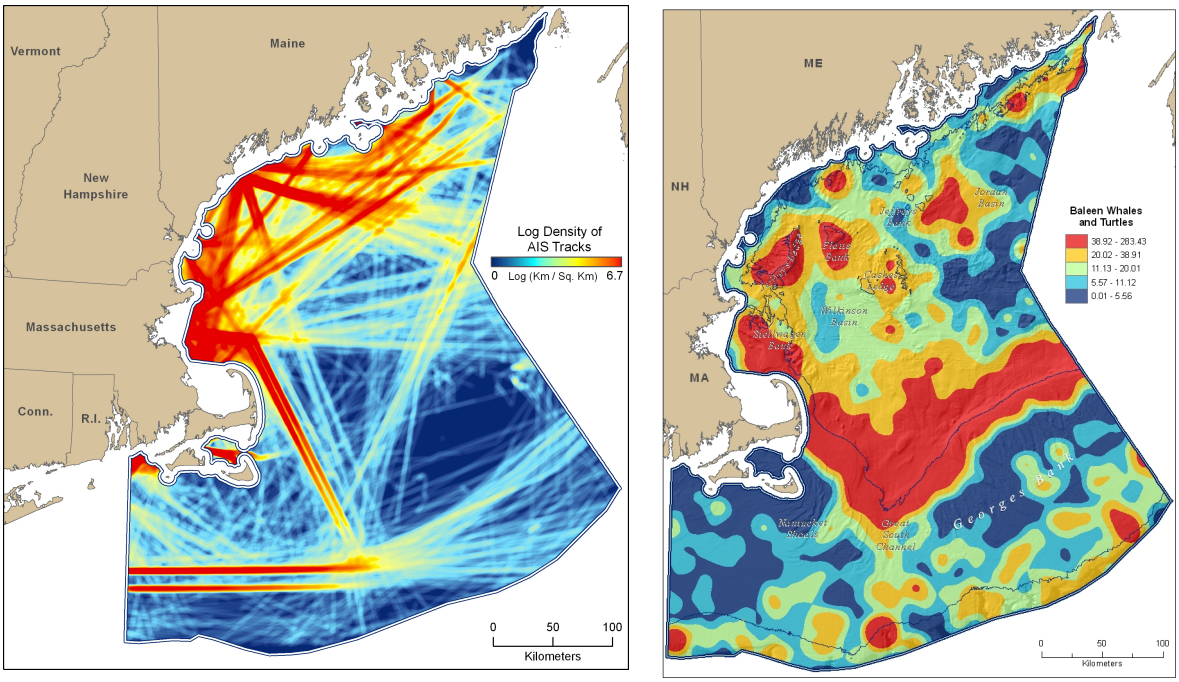

Figure 1: GIS produced maps showing the shipping density (left) and baleen whale and turtle distribution (right) off the Northeast coast of the USA (Tlusty, 2012).

However, experiences in terrestrial planning prompt us to explore the situation further. For example, there are temporal factors: things that might change over time. At some point in the future there might be the potential for whale tourism in the area, resulting in more shipping activity being sanctioned. Is local government considering this prospect? What is the status of the local fishing industry? Is it stable, growing, or shrinking? Is it being affected by the migration of fish stocks due to climatic changes? Is a new, alternative industry luring its workforce away? Which other, less apparent, stakeholder groups can contribute to the planning process, or be impacted by it? Is it a popular recreational area for sailors, kite surfers, and SCUBA divers? If so, what might these groups have noticed about changing conditions in the area, whether ecological, climatic, or physical? Can they contribute to the scientific understanding of the mapped area? Are there other vulnerable species or ecosystems in the area to consider?

It is in these ways, and in relation to the newly acknowledged complexity of modern society in planning more generally, that MSP develops and expands rudimentary zonal management practices. Crucially, MSP must be thought of in four dimensions, taking into account the three-dimensional space in between the seabed and sea surface, and the fourth dimension of time. “MSP by definition involves some kind of forward look. It includes

expressing a vision about what is desired in the future, forecasting future needs and conditions, and deriving scenarios based on objectives and targets, and ensuring that decisions are led by planning as far as possible rather than being simply reactive." (Jay, 2010: 175).

3.3. Participation in MSP

To help formulate a vision for the future of marine and coastal areas, and to collect enough information about these areas, and to move towards a point where we can describe MSP as a form of collaborative planning, it is useful to invite those who will be affected by marine plans and management decisions to contribute to the required knowledge base. Those people are the stakeholders. Whilst MSP is reliant on strong leadership and clarity on who will be making the final decisions (Ehler & Douvere, 2009), there is consensus in ecosystem based approaches to management that simply telling stakeholders what to do in a 'command and control' approach presents a "danger of failure" (Katsanevakis et al., 2011: 809). The balance is not easy to strike. Despite the core aspects of EBM approaches having been well formulated, an "implementation gap" persists (Koehn et al., 2013: 32), caused partly by the difficulty in integrating social information, i.e. about resource users, stakeholders, and diverse coastal communities (Ibid.). This information can refer to the history, heritage and cultural dimensions of fisheries, for example: information that can be very useful in marine management decision making but that is somewhat intangible in scientific terms.

However, when invited to participate, stakeholders are able to bring these knowledge types to the planning processes and contribute to a number of important actions, including "developing goals, synthesizing data, assessing impacts, suggesting designs […] and areas for MPAs" (Collie et al., 2013: 5). The stakeholders can provide detailed knowledge of marine areas because many of them interact with them on a regular basis. The benefits of incorporating this knowledge into plan and decision making where possible demonstrates the functional value of stakeholder engagement in MSP (Smith & Jentoft, 2017): so stakeholder engagement plays a practical, informative role. But there is also inherent value to stakeholder engagement (Ibid.), which refers to the commitment to democratic principles, as mentioned above. This adds a normative prescription to MSP.

There is no agreed recipe for success for how to ensure that stakeholders are effectively engaged in MSP, and the levels to which this is achieved across the globe do vary (Collie et al., 2013). This is partly an issue of how to identify stakeholders. They have at times been selected on 'dangerously oversimplified' terms (Pomeroy & Douvere, 2008),

which often results in only the prominent marine space users being invited to contribute. The danger of this approach is that broader (social) consequences of decisions remain unforeseen and the planning legitimacy might be undermined. Conversely, though, there is often a perception that broader definitions of stakeholders, such as opening debates to the public for example, means that people are commenting on marine management issues who do not know enough about the topic (Fleming & Jones, 2012), and planning processes might become slow and laborious. No single model exists for selecting stakeholders but it is regarded as an important task in order to balance top-down and bottom-up processes (Jones, 2009). And what happens when a wide variety of stakeholders are engaged but a final decision is taken that appears to contradict popular opinion? These people might then feel alienated from future engagement (Fletcher et al., 2014), or fatigued by processes that require considerable effort with little discernable benefit (Johnson et al., 2016). Participatory processes can also face simple logistical challenges where people lack the time or money to attend events (Nutters & da Silva, 2012). In MSP there is also an important difference between stakeholder engagement for the purpose of preparing marine plans and for the purpose of deciding on individual marine consents and licenses, with plans acting as guidance documents for these. The latter, especially, is meant to be more streamlined under MSP, but there is continued scepticism over the extent to which this efficiency has been achieved (Scarff et al., 2015).

It has been said of the construction of MSP that "the dominant logic remains that of scientific rationalism, filtered through the precepts of environmental and resource management" (Jay, 2010: 186). What can be said about the prioritisation of participatory practices in this dominant logic? Research suggests that in many areas MSP is not as participatory as is recommended in guidelines. There is some concern that "MSP is not facilitating a paradigm shift towards publicly engaged marine management" (Flannery et al., 2018: 32), thus missing out on its potential for "democratising management of the seas" (Ibid). This is mainly because "[t]op-down processes tend to dominate, [with] more participative platforms tending to be 'disconnected by design' from executive decision-making" (Jones et al., 2016: 256). It seems there is little scope for "participation through a two-way exchange of information" (Jarvis et al., 2015: 21). This two way exchange of information can bolster chances of planning outcomes becoming more widely accepted (Collie et al., 2013), and has a bearing on how transparent MSP processes are perceived to be.

In particular the special issue edited by Jones et al. (2016) demonstrates how many countries have struggled with participatory processes in MSP. In Belgium there was a

perception that top-down forces were dominating management of the Belgian part of the North Sea (BPNS) and more effort was directed towards consultation (Pecceu et al., 2016). In England the opposite trend occurred, with strong participatory structures that were in place initially being replaced by a more top-down approach, meaning that confidence in stakeholder engagement was damaged (Lieberknecht & Jones, 2016). MSP in northern Scotland has struggled with consultation fatigue and some actions by certain key players that undermined the trust of stakeholders (Johnson et al., 2016). Even where some elements of planning have been very transparent, a core group of actors operating behind closed doors can create some scepticism, as was the case in Norway (Olsen et al., 2016). And where engagement and participation levels are seen as acceptable, there are normally calls for these to be increased further, such as in the Mediterranean (D'Anna et al., 2016).

4. Governance, power and MSP practices

So where might we look to help explain why MSP practices have not been as inclusive as they might be? A useful point of departure lies in highlighting two key characteristics of MSP. The first is that it is a *process*, and not a single plan or outcome (Halpern et al., 2012). Plans are an output of MSP but it is the process that matters because it is through the process that objectives and roles are continuously redefined. Another important distinction comes in what we might term the 'essential elements' and 'existential characteristics' of MSP (de Gialdino, 2009). The essential elements include scientific research into the components that make up the socio-ecological system in question, mapping processes involving GIS, and logical decision-making processes operating in the context of well-established frameworks, such as maritime law, etc. These elements lie at the core of MSP, and help define it. The 'existential characteristics' of MSP include the reasons for implementing MSP, the make-up of its supporting institutions and political processes, the level of transparency and central government control, MSP's guiding principles, the means of selecting and engaging stakeholders in planning processes, etc. The existential characteristics of MSP vary considerably from region to region.

The existential characteristics of an MSP process determine how it is governed and it might be the case that inadequate institutional frameworks create barriers to participation in MSP by resource users, stakeholders, and diverse coastal communities. The task of organising people for MSP requires a robust but flexible governance system. So any problems that exist might be structural. It is important here to clarify the difference between management and governance, which have both been mentioned in this thesis already. According to Johnsen

(2014) marine management denotes the targeted formal actions that are undertaken to regulate the behaviour of certain people who are accessing and/or using marine resources, in his case fishers. The examples given earlier in the introduction were TAC fishing quotas, MPAs, shipping lanes, and EIAs. These are management interventions that regulate human behaviour in the marine environment. The governance system, on the other hand, refers to the organisational and institutional arrangements that shape how these management actions are created (and by whom), how they are enforced, how and when they are discarded, replaced, changed or updated, and how power is distributed in the management system. It refers to "the processes by which societies, and social groups, manage their collective affairs" (Healey, 2003: 104). In short, governance manages the rules of the game (Kjaer, 2004). So the TAC system in Europe, for example, is governed at the highest level by the European Commission on the basis of advice from the International Council for the Exploration of the Sea (ICES) and the Scientific, Technical and Economic Committee for Fisheries (STECF). It is also governed at state level by the various domestic fisheries governing bodies of the member states. In the case of Scotland (for which fisheries management is a power devolved from UK Government) the main governing body is Marine Scotland. For the international MPA network in Europe, the OSPAR Convention helps to identify threats to the marine environment and is used to guide marine environmental protection measures. Once again, governance systems for this operate at different levels where they are adapted to suit socio-ecological conditions and needs, such as the regional Baltic Marine Environment Protection Commission - Helsinki Commission (HELCOM) and the Joint Nature Conservation Committee (JNCC) and the Department for Environment, Food and Rural Affairs (Defra) in the UK.

However, one could conclude from these examples that governance is a straightforward, hierarchical process between a governing body and a governed subject, much like with Hobbes' all-knowing, rational Leviathan (Hobbes, 2006). But modern governance systems are complex. For marine issues they are characterised by continuous interactions between governing institutions, marine resource users, and scientists, and by the notion – described above – that ecosystems do not exist independently of humans. The socio-ecological 'system to be governed' provides feedback loops that inform the governing system (Johnsen, 2014). And so it seems reasonable to use what we know about modern governance to further our understanding of MSP processes.

For example, it is relevant for the study of MSP to note the influence of political modernisation more generally. This has caused the centres of power to shift between the nation-state, market actors, and civil society. In a process that Rhodes (1996) describes as the "hollowing out" of the state, governance is now beyond government (Rhodes, 1997; Lefèvre, 1998). As noted by Van Driesche and Lane (2002), the "new political culture no longer places much faith in solutions imposed from above, increasingly relying instead on a network of decision-making relationships that link government and civil society across many scales" (p. 283). According to Van Tatenhove (2011) some of the governing powers have been drawn away from the nation-state (i.e. away from 'above') due to the re-politicisation of society through action groups who strive to take on more governing responsibilities that more closely match the will of citizens, and the (resulting) pressure for market actors to be more socially responsible. These market actors are also active in the marine sphere as nations and regions chase blue growth targets. Governments have also outsourced many governing activities to the private sector, which is able to provide the specialised skills, flexibility and human and financial resources. The market economy is relied upon to assume public service responsibilities, whilst cutting costs and stimulating growth and competition in the process. Public-private partnerships are key to meeting the "the mushrooming demands" of governance (Rosenau, 2004). Many of the technical competencies required for planning our seas, such as GIS software and databases, are provided by the private sector (Smith, 2015).

Another reason that MSP processes cannot be run in a simple command and control approach is that informal governance institutions have become much more important. These include conventional practice, beliefs, social networks and cultures that rest alongside, challenge, or reinforce more formal structures such as laws, written contracts, and codified artefacts (Prell et al., 2010). Modern governance is partly characterised by greater civic action, so when we describe MSP as a 'public process' it is worth noting that the 'public' is not necessarily a pre-existing category of people but the group that emerges in the process of issue-based political engagement (Dewey, 2012). In any given moment, the group self-nominates and self-organises to face social challenges or seize opportunities (Ibid.). In this way communities and groups of citizens who are bound by a common interest and form organisations (Prell et al., 2010) are challenging the status quo on a wide range of issues, including marine renewable energy, MPAs, the state of the fishing industry, or as a reaction to instances where local democracy is perceived to be undermined. Civic action rarely results in a direct shift in statutory powers over marine planning or management, but they play a key

role in drawing attention to issues that matter to coastal communities. And informal governance institutions have demonstrated that power relations are not necessarily hierarchical, but are nested, or networked.

Overall it is clear that "changes have taken place in the forms and mechanisms of governance, the location of governance, governing capacities and styles of governance" (Kersbergen & Waarden, 2004: 143). New institutions, community groups, private companies, advisory councils, scientists, managers, and non-governmental organisations are among the actors cooperating to find solutions to societal problems and influence policymaking. Key to this is that they are able to deploy resources independently (Peters & Pierre, 2001) and they appeal to the re-politicisation of society (Van Tatenhove, 2011). The modern governance system closely resembles a network and is characterised by participatory practices, which involve a wider range of people from groups such as those mentioned above. One example of this is the Community of Arran Seabed Trust (COAST) in Scotland. Even without statutory powers this group has fought to keep sustainability issues at the top of the MSP priorities list. In doing so COAST has not only demonstrated its importance to scientific research (Howarth et al., 2011; Potts et al., 2014) but also that it is possible to affect subtle changes in power relations within a governance system.

Information is the currency of governance. This statement is true also of MSP, especially in the age of instant and widespread digital information sharing. Using the example of environmental governance, Mol (2006) has suggested that we are living in the informational governance age. The author states, "where conventional environmental governance relies on authoritative resources and state power, in informational governance information becomes a crucial (re)source with transformative powers for a variety of actors and networks" (Mol, 2006: 501). The access and use, gathering and construction, and handling and transmission of information are key elements for this resource, and these processes make up the 'space of flows'. 'The environment' can be represented in the space of flows, and this representation is very different to our sensory experiences of it. Instead, it exists in the space of flows in the form of symbolic tokens that can now travel freely and with little regard for national or bureaucratic boundaries. The environment is now defined by the movement of waste, biodiversity, polluted water, emissions, numbers of surviving endangered species, etc., and is not bound to a physical place. Society is now structured and governed differently with networks and the 'space of flows' characterising decision making (Mol, 2006). At the space of flows are those who "know how to handle the switches that govern

flows of money, capital, and information, at the expense of the vast majority of ordinary people living their lives in the 'space of place'" (Ibid: 499). This latter group remains more static and place-bound. If we consider for a moment the example maps presented in figure 1 above we see that any information withheld from a study, or owned by a private company, might easily determine the outcome of important decisions relating to the conservation (or not) or whales and turtles.

Importantly, "informational governance is strongly related to the disenchantment with science" (Mol, 2006: 502). According to Mol, science (and especially scientific institutions) are no longer perceived as being able to describe modern, complex societies, and are even less well equipped to predict what will happen in them so as to prepare policy makers, resulting in a "call for more accountability, transparency, openness, and thus (access to) information" (Ibid: 503). The central role played by information in MSP might have a bearing on how it operates in practice and, perhaps more importantly, how it is perceived by different actors. The combination of calls for greater accountability and transparency, and the flux between the space of flows and the space of places, might mean that power is redistributed in new ways. Continuing with this line of enquiry into the redistribution of power and the reorganisation of people it was also deemed useful to consider the arts and mentalities of governing and of being governed.

In studying the arts and mentalities of governing and of being governed there is an opportunity to understand why MSP processes might fall short of their potential for inclusivity. With the emergence of new governance arrangements it is worth considering the means by which certain actors manoeuvre themselves into positions of influence, and the way the governed are rendered governable. It appears that this outcome is not wholly dependent on the skill or power of the governor. Instead, by adopting Foucault's concept of the 'conduct of conduct' the concept of governmentality allows us to extend the notion of government to practices of self-government. "Thus the notion of government extends to cover the way in which an individual questions his or her own conduct (or problematizes it) so that he or she may be better able to govern it." (Dean, 2010: 19) Governmentality "conceptualizes the citizens' willingness to be governed" (Johnsen, 2014: 14). The willingness to be governed (or lack thereof) might explain how communities, stakeholders, and even wider society react to decisions made through MSP. It might also influence their desire to become involved in the decision making processes and, ultimately, the extent to which they are able to.

One way in which the governed subject, such as the citizen, problematizes their own conduct, or perceives a new system, or becomes willing to be governed, is through the influence of certain "mechanisms, techniques, and technologies of power" (Foucault et al., 2003: 11). In this thesis I interpret an effective technology of power as being capable of disciplining actors to some degree. It does this by representing things, people and processes in a compacted and usable form that people are able to relate to more easily. In other words, "processes or people are handled indirectly through a system of representation" (Holm, 1996: 179). The system of representation often includes financial bookkeeping, flow charts and work diagrams. Maps have been shown to work in this way (Smith & Brennan, 2012). The relevance of governmentality to this thesis comes from contemplating MSP as an experiment in the arts of governing, and in the techniques of organising governed subjects. From this perspective MSP cannot operate in isolation as a series of technical fixes to marine management problems. It must somehow be embedded in the social (as are the management problems themselves) in order to function.

Much in the way that MSP is a product of social, political and cultural ways of 'doing things', the subject (e.g. the stakeholder or the citizen) is not a rational self-governing agent but a product of social structures, epistemes and discourses (Bevir, 1999). There is a critique of objectivism in this line of thought, with epistemes helping to define the conditions for discourse. So discourse is not centred on the issues that matter in any objective sense. Power relations and the dissemination of information ultimately determine what matters. The power/knowledge relationship is played out in new ways when a new regime is introduced for governing decision making, such as is the case with MSP. So there might be some value in examining the ways that the subject is continually suppressed, thus being recreated as a set of beliefs and desires (Bevir, 1999). How is this achieved in relation to the marine environment? There is a need for critical though on how "environmental issues come to the fore in given societal agendas" (Peel & Lloyd, 2004: 362). MSP has been promoted as a means to tackle problems that *need* to be tackled: it is a set of tools that *need* to be implemented. These needs have to be communicated a promoted in the right way. Once again, MSP has to be embedded in the social. To find out how this takes place it is worth taking a closer look at mechanisms, techniques, and technologies of power in MSP, within the context of the locations and forms of modern governance and changing spheres of influence (if not direct, statutory power).

5. Contextualising the research questions

Considering MSP's apparent embeddedness in social, political and cultural ways of 'doing things', and what modern governance theory tells us about how society is governed, there is an opportunity to further our understanding of MSP processes, and to comment on how they may be made – or kept –participatory. In order to do this it was deemed useful for this study to examine an empirical case of an MSP system that is being designed and implemented: to look at how it is being set up to help manage a complex 'marine problem'. By studying an example of MSP in the making it was possible to form more detailed questions based on the central research questions stated above. These more detailed questions formed the basis of the three published papers presented in this thesis.

Scotland is one example of where a new system of MSP is being designed and implemented. With the Scottish Government keen to pursue blue growth in key industries, most notably in the aquaculture and marine renewable energy sectors, the marine and coastal environments are coming under increased development pressures. So changes to marine industries and to the marine and coastal environment have become heavily politicised in Scotland. Whilst the country's MSP system is described in more detail below in section 7, and also in paper 1, a key aspect of it is that the National Marine Plan of 2015 will be partly implemented through governance frameworks in eleven Scottish Marine Regions, which are designed to facilitate greater local input into decision making. These unique frameworks focus on planning for Scotland's inshore waters, which extend to 12 nautical miles from the Mean High Water Springs. Being constituted in this way means Scotland provides a good example of strong centralised leadership in MSP but with the promise of localised stakeholder engagement. So it is comprised of both top-down governance elements, but with great potential for alternative, modern forms of networked governance to emerge.

It is here that the elements of governance theory outlined above help us shape some interesting questions about participation and the distribution of power. Firstly, whilst the new MSP system borrows from existing marine management infrastructure in Scotland, it is a largely new approach. Therefore, it is likely that MSP required some way of gaining traction and support among those who will be somehow affected or involved. So how was this achieved? How are people encouraged to get on board with MSP? This topic relates directly to the first research question: has MSP contributed to increased governability of complex marine environments? In order to provide an answer it was necessary to gain access to the initial stages in planning when problems were framed, priorities set, and people invited to

participate. One area of Scotland's inshore seas that is facing greater blue growth pressures than most is the Pentland Firth and Orkney Waters (PFOW) off the Northeast coast of the Scottish mainland. This site was used to test the MSP procedures introduced in the Marine (Scotland) Act 2010. Planning here was in the early stages as I was beginning this research project and so provided an excellent opportunity to witness plan development. So in paper 1 (*Creating the spaces, filling them up. Marine spatial planning in the Pentland Firth and Orkney Waters*) I explore the effect of MSP on the governability of marine management processes by asking: "how does MSP contribute to making the strategic planning area of the Pentland Firth and Orkney Waters governable, and who will govern it?" (Smith, 2015: 133). As we shall see, these questions provided an opportunity to mobilise the concepts of technologies of power and their role in shaping governmentality.

The second part of that question – about who governs – quickly led to a deliberation of the opportunities that stakeholders and the public have to engage in MSP practices, which are the topics addressed by the second and third central research questions. The second research question asks: do MSP processes bring stakeholders to the table early? This question delves into both the functional and the inherent value of stakeholder engagement. Stakeholder engagement can help to inform MSP but it also ties MSP to principles of good governance. The levels of engagement can influence the perceived fairness and legitimacy of the system by upholding basic democratic principles. But the answer to the question might not be as simple as proving that a meeting was held early on to which a number of local stakeholders were invited. It is important to scrutinise who was invited and what we describe as 'early'. It was also important to bear in mind that stakeholder inclusion was not invented under MSP, and that there were pre-existing relations between stakeholders: many of these having developed over decades, or even centuries. And there are powerful actors at play, such as the Crown Estate. So it was important to focus on the diversity of stakeholders and avoid an over simplistic definition of these. Existing power dynamics are acknowledged in paper 2 (*Marine spatial planning in Scotland. Levelling the playing field?*), which asks: "firstly, how is the diversity of stakeholders considered in Scottish MSP? And secondly, what is done to address existing power struggles between stakeholders?" (Smith & Jentoft, 2017: 34)

An attempt is then made to cast the net a little wider and consider the role of the public in MSP. The definition of MSP given in the introduction above describes it as a 'public process' and so another central objective of this thesis is to assess what is being done to warrant this description? If it is indeed a public process then there need to be opportunities for

the public to get involved. The third central research question asks: what opportunities exist for public participation in MSP processes? The question formulation in paper 3 (*Good governance and the role of the public in Scotland's marine spatial planning system*) follows this line of enquiry quite directly: "what opportunities do members of the public have for making some form of contribution to the decision-making process, and what are the barriers to this"? (Smith, 2018: 2). It is here that the full potential of examining MSP from the perspective of modern governance theories began to emerge, as we will see in the discussion section below. To draw attention to the relevant opportunities and barriers it was necessary to scrutinise the regional MSP governance system in more detail. Not only would this allow me to problematize the concept of 'the public' but also what threat any public discontent over MSP processes might bring with it. Should MSP practitioners be mindful of the alternative governance mechanisms, locations, capacities and styles that have arisen in other public policy areas? And what can be said of the role of informal governance mechanisms in MSP? In this line of enquiry it proved useful to consider the trends in Scotland's land use planning system in paper 3.

Before addressing these issues in the context of MSP in Scotland I first describe the methodological approach of this project.

6. Methodology

The first task in designing a research project into MSP was to identify the main themes in the existing literature. A useful point of departure was previous research that I had conducted into MSP in Scotland (Smith & Brennan, 2012). Building on the basis of that research, the further reading allowed me to explore additional themes, key points of contention and important subtopics (Clifford & Valentine, 2003). Organising the literature helped me link the various cannons (Golden-Biddle & Locke, 2007) and begin formulating research questions, and a research strategy.

There were four themes relevant to the governance of MSP that stood out from the readings: its theoretical basis and early guidelines (e.g. Douvere, 2008; Gilliland & Laffoley, 2008; Halpern et al., 2008; Ehler & Douvere, 2009); the relationship between terrestrial and marine spatial planning (e.g. Jay, 2010; Smith et al., 2010; Kidd & Ellis, 2012; Kerr et al., 2014; Kidd & Shaw, 2014); stakeholder engagement and local empowerment (e.g. Pomeroy & Douvere, 2008; Ritchie & Ellis, 2010; Fleming & Jones, 2012; Gopnik et al., 2012); and, more recently, evaluations of MSP processes (e.g. Carneiro, 2013; Collie et al., 2013; Scarff

et al., 2015; Smith, 2015; Jones et al., 2016). Additional topics that are well covered in the literature relate to the technical aspects of planning, such as scientific practices that inform MSP (Christie et al., 2014; Shucksmith et al., 2014), and the development of specific tools within MSP (Mayer et al., 2013; Stelzenmüller et al., 2013).

It can be said that the first four topic areas mentioned above relate to the 'existential characteristics' of MSP. This is where I began to hypothesise that the realities of MSP are socially constructed and cannot be stripped of their given context. However, the aim of the research was not to prove or to disprove the broad hypothesis of the social construction of MSP systems. The research design was more inductive and focused on observation, description, and interpretation, followed by reinterpretations (Blaikie, 2009). The purpose of the hypothesis was to give purpose to the research (Yin, 2009), and as a prompt to mobilise the theories of governance used. The theoretical basis presented in section 5 has a strong bearing on the methodology of this thesis because it encouraged me to pose questions about how the institutional basis for MSP is developed. For example, the concept of governmentality urges us to question human behaviour in a political context by calling into question "how we shape or direct our own and others' conduct" (Dean, 2010: 38). Three broad questions emerged from this line of enquiry: "how do we govern?"; "how are we governed?"; and "what are the conditions that affect both of these processes?" So the research questions in this thesis were inspired by "how" questions designed to explore the processes of governing and being governed within an MSP system. For example, research question 1 (How does MSP affect the governability of marine management processes in Scotland?) is an attempt to mobilise these kinds of questions in the context of a particular case by focusing on human actions and their governance outcomes.

Given the diversity of approaches to MSP and the strong links to localised conditions and challenges, I decided to concentrate on one particular site for this study of MSP. I wanted to observe the 'in situ' governance of MSP that was local and specific in nature. A case study was deemed appropriate to explore governance in MSP because it allows us to ask 'how' or 'why' questions about a "contemporary set of events over which the researcher has little or no control" (Yin, 2009: 13). Furthermore, it is a method of investigating a phenomenon "within its real-life context and addresses a situation in which the boundaries between phenomenon and context are not clearly evident." (Yin, 2003: 59). Case studies help provide a 'thick narrative' of events and realities (Flyvbjerg, 2006), offering a detailed understanding of the "contexts or settings within which participants…address a problem or an issue" (Creswell,

2007: 40). A case study is also open to the use of theory or conceptual categories to help guide research and data analysis (Meyer, 2001). This was well suited to my intention to use governance theory to explore MSP. The thick narrative would be best provided by people's stories: qualitative descriptions that are "rich in participant commentaries" (Vaismoradi et al., 2013: 398).

Given my previous research, Scotland was a strong case study contender early on in this project. Furthermore, MSP was gaining momentum in Scotland as this new research project was getting under way in 2013. The 2006 Scottish Sustainable Marine Environment Imitative (SSMEI – see section 7.1 below) had long since paved the way for new and innovative management approaches, and the Advisory Group on Marine and Coastal Strategy (AGMACS) had concluded in 2007 that MSP should be introduced (Scottish-Government, 2007). But the real breakthrough came with the Marine (Scotland) Act in 2010 and the subsequent process of preparing the 2015 National Marine Plan. Leading up to the publication of the National Marine Plan – and even currently – all of the constituent parts of the MSP system (existing and new) were still being put into place: the science; the institutions; the regulatory frameworks; the geographical boundaries; the (emerging) marine industries; the stakeholder engagement procedures, etc. Marine planners, scientists, stakeholders, conservationists, politicians and local communities were given a new task of transitioning to MSP and were essentially learning by doing. So there was a clear opportunity to explore how this all comes together, including the participation of stakeholders and the public in the process.

The National Marine Plan also paved the way for regional marine planning where unique institutional arrangements were being made (see section 7.1). Upon learning of these planned arrangements I decided to focus on the planning of inshore waters and once again the timing helped to justify this decision, because the regional marine plan being put together for the Pentland Firth and Orkney Waters (PFOW) was receiving considerable media attention in 2013. Given that the PFOW case was a pilot that would be used to help guide planning in other Scottish Marine Regions I realised that it might be demonstrative of how a supporting governmentality can emerge. What could be said of citizens' willingness to be governed? What affects this willingness? In April 2013 a preliminary public consultation was hosted to discuss an '*Issues and Options*' paper for marine planning in the area. The event would be used to discuss what the most pressing marine management challenges in the area were, as well as the available options for tackling these. Attending the event would be a chance to

conduct interviews and observations to gain insights into how engagement happens in the context of MSP, who is in charge of these processes, and what actions and decisions precede public debate.

6.1. Methods and techniques

Before beginning the fieldwork it was important to analyse some of the key supporting documents for MSP in Scotland. Document analysis "entails finding, selecting, appraising (making sense of), and synthesising data contained in documents" (Bowen, 2009: 27). I subjected the texts to thematic analysis, searching for patterns (themes) within data (Braun & Clarke, 2006). It must be said, however, that the research was motivated by hypotheses, previous understandings and objectives, so it would be naïve to believe that thematic analysis can merely 'give voice' to the texts. I would agree that themes reside inside our heads and emerge through the way that we think about data (Anzul et al., 2003). But these are only prompts that can still lead to a rich diversity of findings. Hypothesising about the formulation of a governmentality associated with MSP, for example, still leaves plenty of scope for there being either no evidence for this in the texts, or a myriad of different references to ways that this governmentality might be shaped. So the thematic analysis of documents was more inductive and focused on observation, description, and interpretation, followed by reinterpretations (Blaikie, 2009). Inductive research allows themes to emerge and be used to formulate next stages of research. And although inductive research is not aimed at (dis)proving a theory, it can be guided by theories, and is therefore compatible with the case study approach, and with thematic analysis, which is suitable for use with a wide range of theoretical frameworks (Braun & Clarke, 2006).

The key policy documents analysed at this early stage provided the necessary background to the PFOW public consultation mentioned above. They included the Planning Issues and Options Paper (Marine-Scotland, 2013), the Workshop Information Pack (Working-Group, 2013), and the UK Marine Policy Statement (HM-Government, 2011). These documents were not subjected to full content analysis, which involves a compression of the text based on explicit rules of coding (Stemler, 2001). Instead, key themes and passages were identified and summarised. This was all done by hand, often with a colour coding system. Document analysis has several benefits, with notable ones including efficiency, document availability, cost-effectiveness, and lack of obtrusiveness and reactivity (the researcher does not affect the research topic in the same way that he or she might in during

interviews or observations, for example) (Bowen, 2009). One of the main limitations – lack of detail (Ibid.) – can be overcome by supplementing with other research methods.

During three research periods in 2013, 2014 and 2015 I conducted a total of 21 formal, semi-structured interviews with representatives from a range of bodies including (with the number of interviews given in brackets) The Crown Estate (2), The Highland Council (2), The Orkney Islands Council (2), Marine Scotland (2), the Marine Scotland Licensing and Operations Team (1), the Moray Firth Coastal Partnership (1), Community Land Scotland (2), The Development Trust Association (1), The University of Edinburgh (1), Heriot Watt University (2), The Cairngorms National Park Authority (1), The East Neuk Estates (1), the Community of Arran Seabed Trust (1), the Knoydart Foundation (1), and a Member of Scottish Parliament (1). Informal interviews were also held at public events with representatives from organisations such as the Orkney Fishermen's Society, the European Marine Energy Centre, and Scottish Natural Heritage. These bodies represent a broad range of sectors and interests including industry, academic, political, conservationist, planning, community, private landowners, and government.

The first of these was with each member of the PFOW Pilot Plan working group (representing Marine Scotland, the Orkney Islands Council and the Highland Council). The formal, semi-structured interviews averaged an hour in length and rarely exceeded ninety minutes. Most of the interviews began informally with chats about current affairs, the weather, and – quite often – recommendations for scenic or interesting sites for me to visit during my stay in the area. This proved an excellent way to build 'rapport' with interviewees (Creswell, 2007), and also some trust. On a more practical level it eased any nerves that either party might have felt. I often transitioned into the topic of marine management and planning by asking how the interviewee came to work for, and represent, their current organisation or company, which provided useful background information. The informal beginning to the interviews was followed by a formal, semi-structured format in which I would ask a limited number of pre-prepared questions (Seidman et al., 2004). Appendix 1 shows an example of pre-prepared questions used in one interview. Some of the pre-prepared questions were linked very closely to the central research questions of the thesis. For example, I found it appropriate to be direct about asking how stakeholders would be engaged in the process of preparing the PFOW Pilot Plan, and they were chosen. This direct approach was intended to allow me to compare the answer the official statements from Marine Scotland explaining how stakeholders would be engaged. I generally got around to asking all of these pre-prepared

questions in interviews but at times they were either anticipated or other, more interesting avenues opened up. Given that I was interested in how people engage with the topic of MSP this flexibility was important and underlined my decision not to opt for fully structured interviews (Meyer, 2001).

After every interview I would immediately revise my notes and fill in extra information or observations whilst the experience was still fresh in my memory. At this stage I would often come up with follow-up questions, which I pursued via telephone or email. I transcribed single sections of interviews that were directly related to my research questions. Mostly, the audio recordings were used to clarify important details during the writing process. I did not use any qualitative data analysis software, preferring instead to categorise my notes according to certain themes and consolidate these using mind maps. This proved an effective method for cross-referencing the themes with those identified in MSP literature and policy documents. I included descriptions of body language and of any props used by the interviewee, such as maps, pictures, or diagrams.

After the first round of interviews in April 2013 I conducted follow-up interviews in April 2014. The aim of these was to establish the lessons learned from the consultation process and assess the progress being made on preparing the PFOW plan. Follow-up interviews are a useful means of consolidating data from the previous round, establishing which attitudes might have changed, and gauging if and how people's understanding of a subject has developed. They are particularly valuable for recording how and why things change in a political process (Seidman et al., 2004). They provide a feedback loop that helps to reveal any apparent contradictions between different sources, or even in the account from one source, perhaps an interviewee (King et al., 1994). The added bonus of follow-up interviews is that my own understanding of the processes improved after each session and so I was able to pose increasingly relevant questions.

In addition to the document analysis and interviews I was able to attend various events relevant to planning in Scotland. The first was the aforementioned public consultation on the PFOW Pilot Plan. The consultation was held in two sittings in July 2013: one in Orkney, and one in Caithness (on the mainland). I joined these events as a participatory observer. It is worth noting the difference here between participatory observation and participatory research, with the latter being defined by collaborative project design (Clark et al., 2009), which was not the case here. In keeping with the inductive approach of this research, the participant observation was non-structured, which is useful for understanding and interpreting cultural

behaviour and does not seek to check for a specific list of expected behaviours in the field (Mulhall, 2003). Instead, it helps to add context to stories. It is possible to observe moods, body language, levels of respect between participants, and gauge the emotions behind people's reactions to policy in a way that might not be transmitted through a written consultation response. It was at these events that I also gathered the photographic evidence presented in this thesis and in paper 1.

The very fact that I was invited to join public consultation on the *Planning Issues and Options* for the PFOW marine spatial plan says something about the openness of the system, and also means it is important to address the role of the researcher. I was provided with all of the information that other stakeholders and local residents received, and was warmly welcomed in the venues. Nevertheless, I also had to be mindful of my conduct at these events. I always clearly communicated the purpose of my visit, stating my affiliation and what I was researching. Consultation events are intended to provide information and give a space for discussion and I was aware of the fact that I was not a stakeholder in the PFOW region by any definition of the term. So at any given event I would often alter the level of my participation from passive, to moderate, or active depending on the topic and the format (Spradley, 1980). But I generally played a reserved role, focusing on the points that residents, planners and scientists were bringing to the table and how their discussions developed. Participants at the events were divided into groups that sat around different tables. Very often I would move between these groups and listen in, so as to gauge a wide range of views. I also attended two public debates on land use planning reform, one on the 26th May 2015 at the AK Bell Library in Perth, and one in *The Scotsman Conferences* on 2nd June 2015 at the Scottish National Gallery in Edinburgh. At both of these events I observed more passively as land use planning was a new topic for me at the time and I was keen to learn as much as possible about the controversies involved. The events did, however, lead to three of the formal, semi-structured interviews conducted. By including official government statements, interviews, and participant observation in this study I was able to triangulate from various sources of primary and secondary data sources (Decrop, 1999).

It is also important to ensure that I followed ethical rules during the research. Guidelines for social science research are readily available in the methodology literature and helped shape my actions in the field in several important ways. For example, I typically contacted potential interviewees via email with a detailed description of the research scope and objectives. The transparency of this approach is a probable factor in most people agreeing

to take part. Emails also give recipients time to assess the offer so that they don't feel rushed into a decision about taking part (Brinkmann, 2014). Once at the interview, which was most commonly held at the interviewee's place of work, I presented a written summary of my research objectives and an interview agreement for each individual to sign. Here they agreed to audio recordings of the interview being made and to their statements being used in academic publications – anonymously if desired – once they had reviewed the context. It is important to reveal the context when quoting sources as the level of detail provided might jeopardise their wish to remain anonymous (Ritchie et al., 2013). The same goes for apparent contradictions between accounts given by different members of the same organisation (Ibid.), and so I was open about whom I had interviewed previously. As mentioned, I was always clear on my role and objectives during participant observation too. There are instances where deception and covert behaviour is the only way to gain access to certain observation opportunities (Ritchie et al., 2013) but this was not the case for the marine or land use consultation events. I also gained permission from people appearing in in photographs used in published material.

6.2 Methodological challenges

It is important to address some challenges that I encountered when designing and applying this research methodology. The first comes from the limitations of including only one detailed case study i.e. for the PFOW Pilot Plan. This marine spatial plan was the third one created in Scotland and a more comprehensive case study approach might have included a comparative analysis with the two existing plans. This would have added extra context to the site-specific needs and conditions in and around Orkney. However, there were practical reasons for not comparing these plans. The main one was a constraint on time, which had two components. Firstly, the thick narrative emerging from the multi-faceted PFOW case took time to study and analyse. Secondly, the PFOW Pilot Plan was actually being constructed during my research phase. As such it was the most concurrent of the three plans and I was able to observe it in the making. The two restrictions of overall time, and of timing, are common in social science research (Pettigrew, 1990). Nevertheless, the two other regional plans provided invaluable guidance for planners and scientists in the PFOW region, and some context for this study.

Including only one case study does raise the question of generalisability, or external validity. To what extent is it possible to generalise from one case? In a small country such as Scotland with a centrally governed MSP system the government retains a lot of control over

the Scottish Marine Regions, under the auspices of the Marine (Scotland) Act 2010. However, part of the value of a case study such as the PFOW region lies in uncovering instances where plan making might deviate from centrally-prescribed frameworks. There was no real Marine Planning Partnership in the PFOW case, for example, and indeed questions remain as to how these will be constituted (see paper 2). In addition, there are significant development pressures there, more so than in other regions. In this sense the process of creating a marine plan in the PFOW region was site-specific and this imposes considerable limits on the generalisability of the case study. That being said, an in-depth case study such as this one can contribute to the development of theories about MSP (Yin, 2009). These theories might then be re-visited in other case studies, or can at least generate discussions of best practices for MSP. Interestingly, towards the end of this research project a report was published of experiences with MSP in 12 cases across Europe (Jones et al., 2016), which included a study of the PFOW Pilot Plan. The results of that report reflected some of the conclusions that I had reached for that particular case, and for MSP more generally. This fact goes some way to demonstrating the value of scrutinising MSP governance systems, and suggests that the results presented here might have some wider significance.

In terms of how the problem of generalisability affected my research design, I would follow Flyvbjerg (2006) in arguing that the site-specific nature of a case study need not damage its validity. He uses the famous example of Galileo's rejection of Aristotle's law of gravity, which was not carried out on a large scale and yet a generalisable finding followed. However, it is another of Flyvbjerg's arguments that I find more convincing, and more applicable to this thesis. It is that generalisation itself "is considerably overrated as the main source of scientific progress" (Flyvbjerg, 2006: 226). Generalisation should not be discredited and certainly plays an important role in science. However, the point is that a single case study can make a worthwhile contribution to the (social) scientific field. Case studies can present examples of process X, or phenomenon Y, with readers making their own interpretations: perhaps forming the basis of further working hypotheses and studies (Rowley, 2002). It is also significant, for example, that the authors of the PFOW Pilot Plan were tasked to follow it up with a 'lessons learned' report (see paper 2). The Scottish Government appears keen to avoid repeating any mistakes in MSP. This does not demonstrate an attempt to generalise from the PFOW case, but instead shows the pragmatism in considering which characteristics in one case might assist planning in other regions.

There was also room for improvement in my interviewing skills, especially in the early research phase. Part of the challenge was adapting to the level of understanding required to discuss MSP with practitioners. As mentioned previously, I could only develop my understanding so far through reading. In an interview, any gaps in your knowledge are soon exposed. This might be because of an event, process or document that you are unaware of. In this situation it is easy to believe you could have been better prepared for an interview. But as these instances occurred I soon learned to view them as opportunities to learn and to better understand how marine planning was unfolding. Rather than a flaw in my preparation for interviews, I saw them as their raison d'être, and the interviews rapidly improved along with my knowledge of the subject. One change I would have made would be to alter the conditions for quoting the interviewees in manuscripts. In the written agreements that they signed I stated that I would double-check any quotes, including their context, before publication. This seemed to be the most ethical practice, but it was a time consuming one.

7. MSP in Scotland

The key steps taken to introduce MSP in Scotland are outlined in more detail in paper 1 of this thesis (Smith, 2015). Very briefly, the implementation of MSP in the whole of the UK is linked to various EU initiatives. In 2007 MSP became one of the 5 main cross cutting policies in the European Integrated Maritime Policy (COM-574-final, 2007). A year later EU member states were given guidance on how to implement MSP in the *Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU* (The European Commission 2008), and this was consolidated into an official framework in 2014 (Directive 2014/89/EU)[1].

Marine planning featured in the High Level Marine Objectives agreed upon collaboratively by HM Government (the UK Government), the Northern Ireland Executive, the Scottish Government and the Welsh Assembly Government in 2009. In the same year the Marine and Coastal Access Act 2009 led to the creation of England's Marine Management Organisation (MMO), which is responsible for MSP in the country's 12 marine plan areas. In 2011 the UK Marine Policy Statement established a specific framework for preparing marine plans and taking decisions affecting the marine environment (HM-Government, 2011).

With the Scottish Government keen to pursue blue growth in key industries, most notably in the aquaculture and marine renewable energy sectors, the marine and coastal

[1] It is worth noting that in EU documents 'MSP' often refers to maritime-, rather than marine spatial planning. The difference is not entirely clear but I interpret the word maritime as being more focused on industry, i.e. maritime sectors.

environments are coming under increased development pressures. MSP is seen as a way to help sustainably manage these pressures. The Marine (Scotland) Act 2010 gave the national government unprecedented powers to plan its seas (i.e. powers devolved from the UK Government). The Act contained a duty for Scottish Ministers to publish a National Marine Plan (NMP). The Act (and therefore the remit of the NMP) covers all activities in Scotland's inshore waters (up to 12 nautical miles from the Mean High Water Springs – MHWS) and most activities in offshore waters (12-200 nautical miles), with the exception of some, such as defence, which are managed jointly through the UK Marine and Coastal Access Act 2009.

Planning in Scotland's inshore waters will be implemented through eleven Scottish Marine Regions (SMRs – see figure 2 below). In each of these a Marine Planning Partnership (MPP)[2] will produce draft plans based on the situational needs and opportunities in their region (Hull, 2013). This thesis focuses on MSP in inshore waters because it is here that the institutional framework exists to facilitate local contributions to collaborative marine planning. Furthermore, some plans have already been prepared for inshore waters and it is here that terrestrial and marine plans overlap and interact most acutely.

Marine Planning Partnership members will be chosen according to their relevant expertise, skills and knowledge of marine planning. Scottish Ministers (members of the Scottish Cabinet) delegate powers ('delegable functions') to Marine Planning Partnerships. It is important to note that under the Marine (Scotland) Act 2010 there are certain powers that cannot be delegated ('exempted functions'). These include (a) deciding under paragraph 4 of schedule 1 whether to prepare and publish a statement of public participation, (b) deciding under paragraph 6 of that schedule whether to revise a statement of public participation, (c) deciding under paragraph 9 of that schedule whether to publish a consultation draft, (d) deciding under paragraph 14 of that schedule whether to publish a regional marine plan or any amendment of such a plan (p.7). Here, the Scottish Ministers operate through Marine Scotland, which is the Directorate of the Scottish Government responsible for the integrated management of Scotland's seas.

[2] The abbreviations 'MPP' and 'SMR' are provided to reflect common practice. However, to reduce the number of abbreviations in this text I will continue to use the long form.

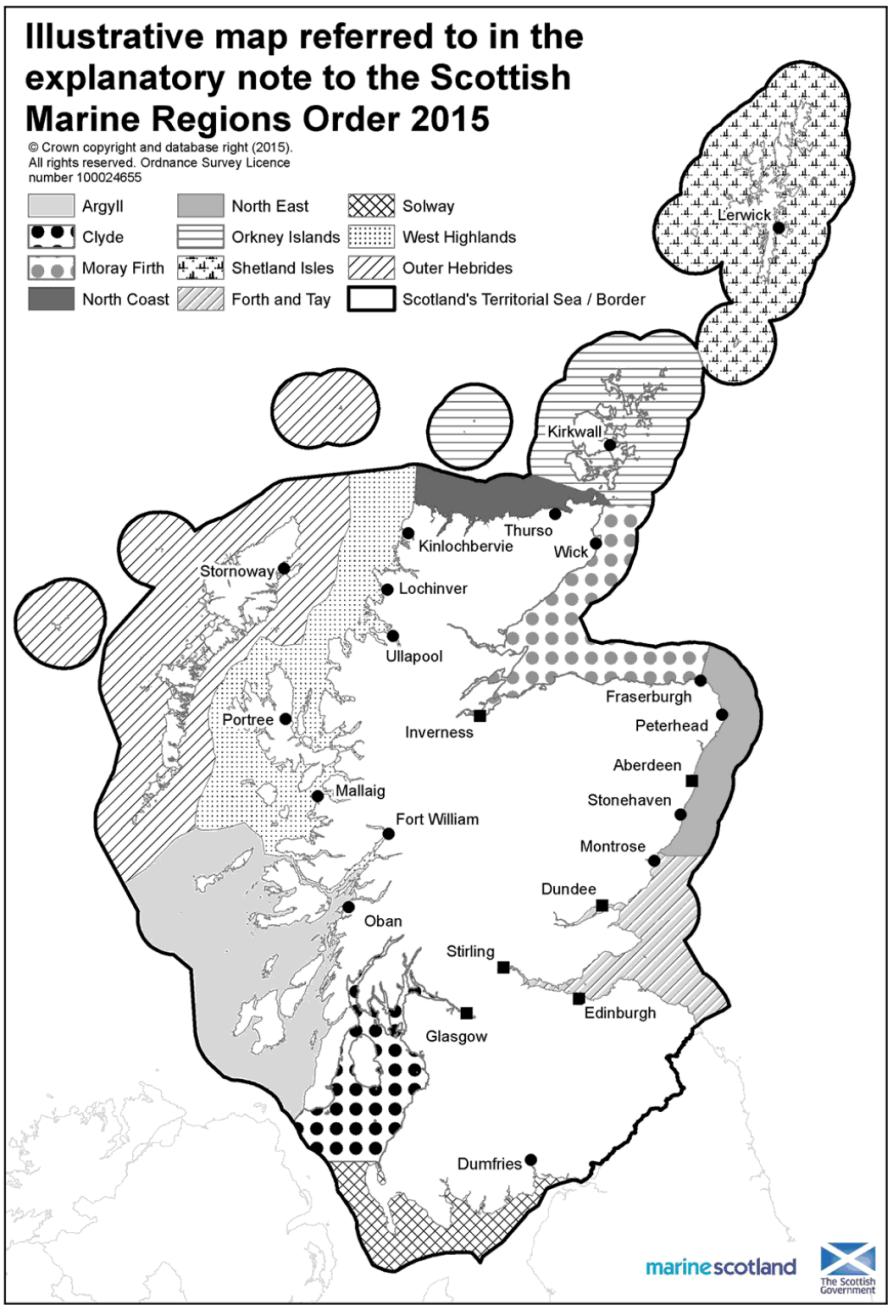

Figure 2: Map produced by Marine Scotland showing the 11 Scottish Marine Regions and the major towns and cities (MS, 2015).

Figure 3 provides a brief overview of the key actors:

Actor	Role
Marine Scotland	Directorate of the Scottish Government responsible for the integrated management of Scotland's seas. Responsible for overall marine policy, achieving 'good environmental status' according to the European Marine Strategy Framework Directive, promoting sustainable growth in marine

	industries, promoting sustainable, profitable, well-managed fisheries, ensuring compliance and enforcement, etc. Contributes to the scientific research of Scotland's seas and took a lead role in creating the National Marine Plan and the institutional framework for regional marine planning.
The Crown Estate	A unique and complex organisation in the UK. Technically, the 'Crown Estate' actually refers to a portfolio of land holdings and property administered by a statutory body run under the provisions of The Crown Estate Act (1961). The body is headed by a board of Crown Estate Commissioners (CEC). In the interest of simplicity, and in keeping with common practice, the body is referred to throughout this thesis collectively as the Crown Estate. Property includes 50% of the foreshore and almost the entire inshore seabed in Scotland. Further details follow below and in papers 1 and 3.
Scottish local councils	Sometimes also referred to as 'local authorities', these are Scotland's version of municipal government. There are 32 of them nationally; they are democratically elected and responsible for housing, education, leisure and culture, rubbish and recycling. The two mentioned most frequently here are the Orkney Islands Council and the Highlands Council.
The stakeholders	The number and diversity of stakeholders in Scottish inshore waters varies from region to region depending on the abundance of natural resources and the region's suitability for recreational activities such as sailing and SCUBA diving. Inshore fishers typically operate in vessels ≤10m in length and target the demersal species cod and haddock; the pelagic species herring and mackerel; and the shellfish species crabs, lobsters and scallops. Scotland is also inviting considerable investment to help develop its marine renewable energy sector, most notably for wind, tidal and wave power. Other notable uses include aquaculture, carbon capture and storage, shipping, marine aggregates, and oil and gas pipelines.

Figure 3. A brief overview of the key actors mentioned in this thesis along with their roles.

The overall governance arrangements for MSP in Scotland are summarised in the diagram in figure 4.

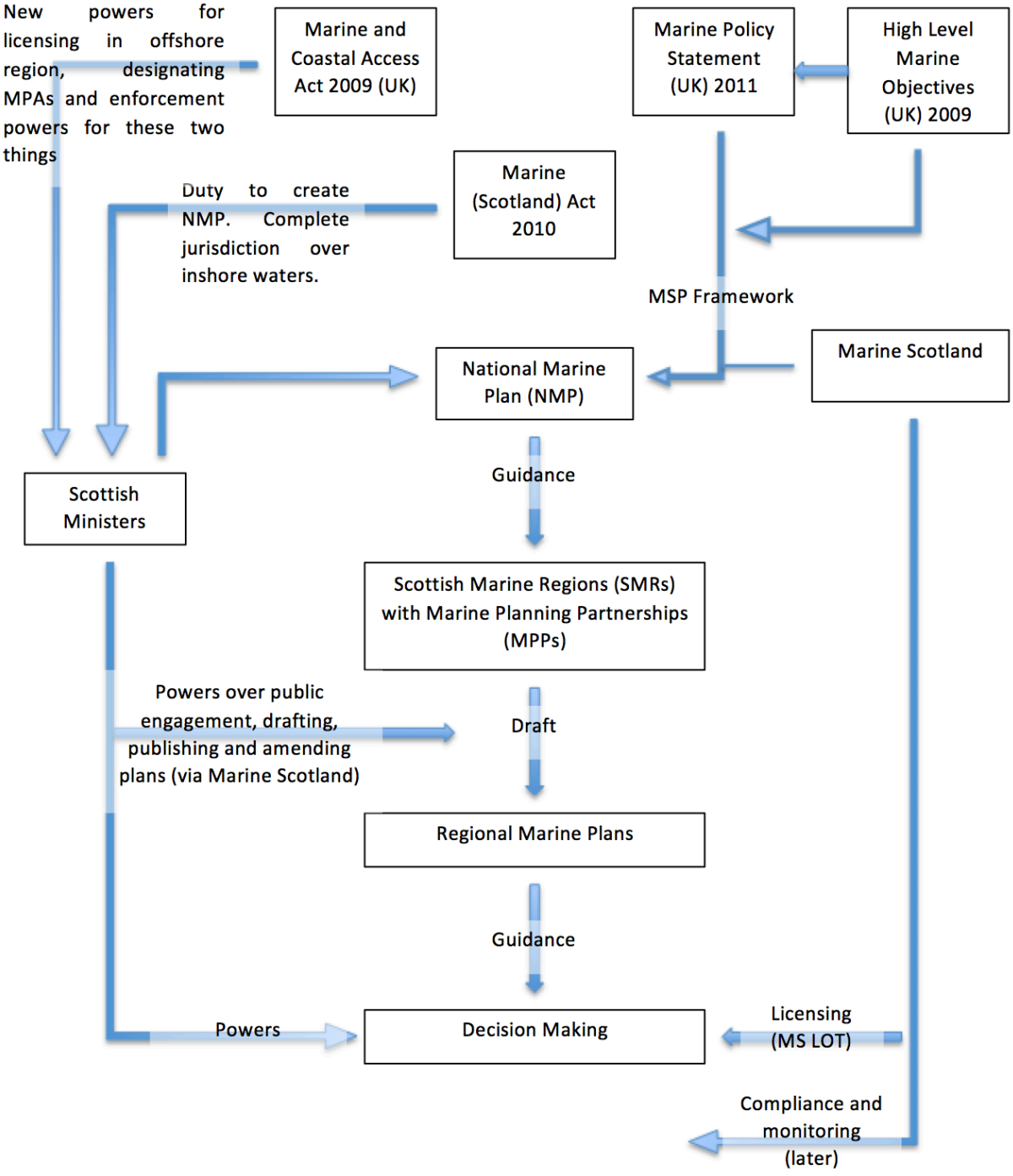

Figure 4. Diagram showing the overall governance arrangements for marine spatial planning in Scotland.

The Scottish MSP system builds partly on the existing system of Integrated Coastal Zone Management (ICZM). In 2002 the European Parliament and Council recommended that ICZM be implemented in all member states. Based on EU principles, the Scottish Government described ICZM as an approach that "considers the consequences of human

activities at the coast; is inclusive; fitting to local needs, and has national and regional backing"[ii]. It is similar to MSP in that it relies on interdisciplinary knowledge to understand marine and terrestrial issues that are inter-related (Stead & McGlashan, 2006: 24). However, its focus and remit is fairly limited to coastal issues and, in the UK, it would be implemented through a series of voluntary bodies. In Scotland this was the task of the Scottish Coastal Forum. The Scottish Coastal Forum was established in 1996 to "encourage debate at national level on coastal issues"[iii]. It consisted of seven Local Coastal Partnerships that were voluntary partnership groups of localised interests, mostly registered as charity organisations (see figure 5). These Local Coastal Partnerships welcomed anyone interested in their region to debate marine and coastal management issues and they shared management ideas with the partnerships in other regions. The Scottish Coastal Forum took on the responsibility of delivering ICZM for which each of its member Local Coastal Partnerships created Regional Policy Statements: "a mechanism to ensure all stakeholders can be involved in ensuring a balance of development, use and resource protection for the coastal and estuarine environment"[iv].

Figure 5. The seven Local Coastal Partnerships. Taken from the Scottish Government website: http://www.gov.scot/Topics/marine/seamanagement/regional/Scottish-Coastal-Forum

7.1. Regional MSP

At the time of writing three regional marine plans for inshore waters exist in Scotland, though these have emerged from different processes. The Shetland Marine Spatial Plan (now in its fourth edition: the Shetland Islands Marine Spatial Plan 2015) and the Clyde Marine Spatial Plan 2010 both originated in the 2006 Scottish Sustainable Marine Environment Imitative (SSMEI). The SSMEI aimed to "test and trial different approaches to marine management and to share any data and stakeholder engagement concerns" (Hull, 2013: 518). The Shetland Islands Marine Spatial Plan has now been made statutory meaning that it must be consulted as 'Supplementary Guidance' to the Shetland Local Development Plan.

The first regional marine plan to test procedures under the Marine (Scotland) Act 2010 was that for the Pentland Firth and Orkney Waters (PFOW) area off the Northeast coast of the Scottish mainland. The map in figure 6 shows the location of Orkney and the 12 nautical mile planning boundary.

Figure 6. Map showing the location and extent of the strategic area for the Pentland Firth and Orkney Waters (PFOW) Pilot Plan. Adapted from The Plan Scheme (MS(a), 2012: 1).

The non-statutory plan, referred to hereon in as the 'Pilot Plan', provides decision-making guidance for local inshore waters and has been integrated into the local Orkney Local Development Plan compiled by the Orkney Islands Council (OIC). The inshore waters around Orkney host a wide range of human activities and marine life, and the marine economy is

essential to the islands. The leading marine industries according to 2012 figures include pelagic and demersal fisheries (5,280 thousand tonnes live weight and £7.2m value), shellfish fisheries (3,440 thousand tonnes live weight and £6.5m value), and salmon farming (11,694 thousand tonnes, value not available) (OIC, 2013). The area also has busy shipping lanes that facilitate inter-island transport and bring large numbers of tourists to Orkney.

The main reason to prepare a plan for the area was because of the need to reconcile these existing uses of marine space, including marine conservation, with a rapidly growing marine renewable energy sector. Orkney lies between the tidal systems of the Atlantic Ocean to the West and the North Sea to the East. This has made it a leading testing and development site for wave and tidal flow energy devices. There is a potential to harness an estimated 1.6 Gigawatts (GW) from these sources, which "represents in excess of 1000 large devices moored or fixed close to shore" (Kerr et al., 2014: 119).

The PFOW Pilot Plan was drafted by a small Working Group comprised of staff from Marine Scotland, the Orkney Islands Council and the Highlands Council, with support from an Advisory Group[3]. In 2012 the Marine Scotland published the 'Plan Scheme', which "sets out step by step how the pilot plan will be prepared and outlines the opportunities for stakeholders to get involved" (MS(a), 2012: 1). The Plan Scheme included the map shown in figure 6 of the 'strategic area' for planning and I shall return to this point later on. It is worth noting that there was no Local Coastal Partnership in place for the PFOW region, and the Pilot Plan was not drafted by a Marine Planning Partnership.

In this thesis so far I have introduced MSP, including the functional and inherent value of stakeholder engagement, which is tied in to wider planning theory; the notion that MSP practices are linked to existing social, political and cultural systems; the potential value of studying MSP in the context of what we know about modern governance; the role of power; the methodologies applied; and an outline of Scotland's MSP system. The next section presents a summary of results from the questions posed in the three research papers.

[3] The Advisory Group consisted of representatives from Scottish Natural Heritage (SNH), the Scottish Environment Protection Agency (SEPA), Historic Environment Scotland, the Royal Yachting Association (RYA), Orkney Harbour, Scrabster Harbour, and Highlands and Islands Enterprise (HIE)

8. Results

In paper 1 I posed the question "how does MSP contribute to making the strategic planning area of the Pentland Firth and Orkney Waters governable, and who will govern it?" (Smith, 2015: 133). In response to the first part of this question, MSP practices were found to improve the governability of the marine environment through the creation of various types of spaces.

8.1. Creating map spaces

The 2012 Plan Scheme for the PFOW Pilot Plan included a 'strategic area' for which the plan would be devised (see figure 6). The strategic area provides a focus for planning: a space to be planned. Planning in the PFOW region shows how "space is created, communicated, and options for filling it are discussed" (Smith, 2015: 133 - paper 1). This space could now be filled "with various forms of use and non-use" (Ibid: 141). Crucially, a map can be used to generalise and to present amalgamated trends in data. Thus it can create a reality as easily as represent one (Smith & Brennan, 2012). MSP appears to rely on this process, both for practical planning reasons, and, more fundamentally, to present the sea as a 'plannable' space.

An example of what it looks like to fill the space this way is shown by the map in figure 7, where GIS software has been used to show the locations of aquaculture and marine energy sites in the strategic area. The map was produced by Marine Scotland Science on behalf of the PFOW Working Group as part of the Regional Locational Guidance that helps decide where to site renewable energy installations. In this case the zones marked on the map represent finfish farms, shellfish farms, shellfish water protected areas, tidal sites, wave sites, wind plan options, wave plan options, and tidal plan options. A process can now begin of deciding how these sites will be managed, located, or perhaps reassigned for other uses based on what is known about how they impact one another and the natural environment. During this process knowledge gaps can be identified for which further scientific research can be sanctioned.

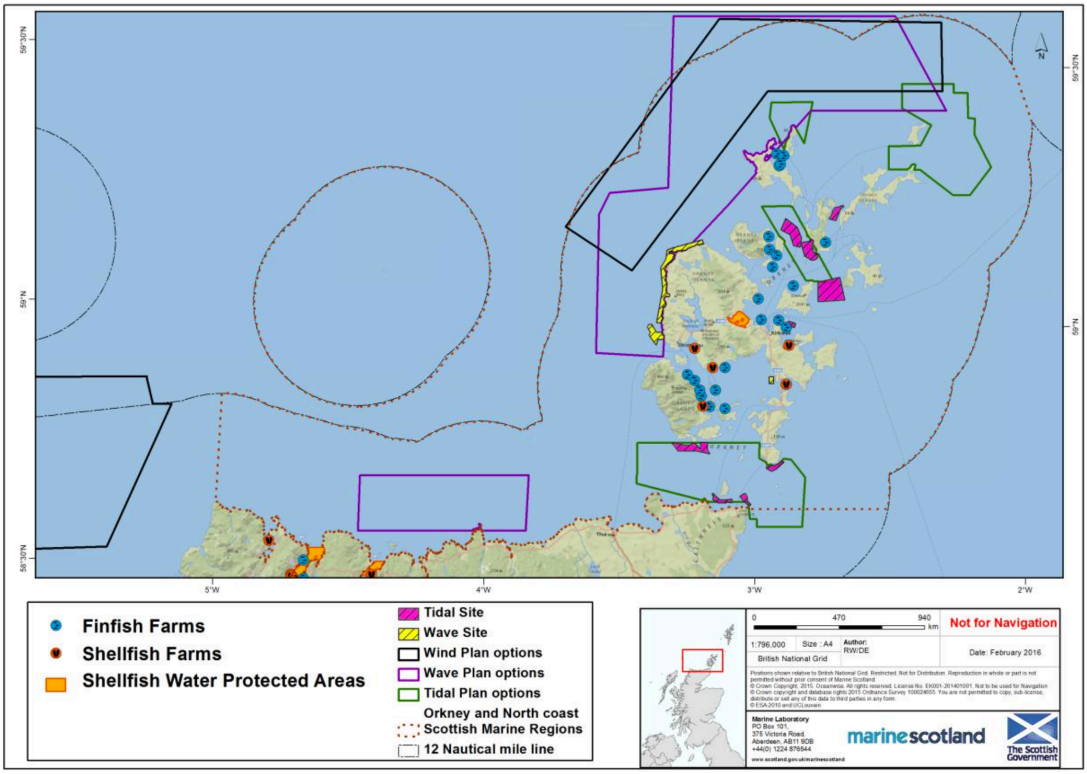

Figure 7. Aquaculture farms and Shellfish Water Protected Areas in the PFOW area and locational guidance for marine renewable sites (including future options). (MS(b), 2016: 13).

8.2. Creating three-dimensional spaces

Maps are often supplemented by images of what the demarcated zones might contain. This helps to objectify a marine zone as a three-dimensional space and helps participants in MSP processes to imagine what occupies this space. Images of how the sea is used, how it might be used in the future, and what condition it is in, are particularly effective for this. Paper 1 demonstrates how this happens at public events. Common examples in the PFOW area included graphic representations of the marine energy devices being developed by energy companies. These would be present on the tables and display boards at public engagement events, as shown in paper 1 (Smith, 2015: 139). An example image is given in figure 8, which depicts what tidal turbines might look like anchored to the seabed. Given that most people are unable to experience the submarine environment at first hand, this is a common technique for shaping perceptions of it, and perceptions of how it might be used or preserved. Simple and well-presented data and images have the power to capture the imagination. However, these images themselves are not anchored to the seabed. They can be used in a range of different spaces that MSP creates, such as planning spaces.

Figure 8. Image showing what tidal turbines might look like on the seabed. Institute of Mechanical Engineers 2017: https://www.imeche.org/news/news-article/tidal-turbine-giant-atlantis-to-enter-the-french-market Last accessed 10/01/2018.

8.3. Creating planning spaces

The influence of maps and diagrams becomes apparent when observing the role that they play in a planning space. These are the physical spaces where people meet to discuss and tackle planning challenges. Figure 9 shows photographs of this in progress: a local consultation event on the *Planning Issues and Options* document for the PFOW marine spatial plan held in Thurso on 4th July 2014. This document was produced by the Working Group and was the focus of attention in the first public consultation on marine spatial planning in the PFOW area. The photographs show how local residents, planners, scientists, and stakeholders are distributed in groups to discuss the various questions designed to improve the final Pilot Plan. During these exercises they themselves begin to make reference to maps, images and diagrams. One planner commented on the number of maps available for reference during consultations where "maps are just generally spread out on the tables" (25/04/2013). Another example is shown in paper 1 where general information on local marine planning issues is displayed for the public on display boards (Smith, 2015: 139). Participants at consultations use maps to communicate with one another about the strategic planning area, and as reference points when providing written consultation responses, such as with the three local fishermen pictured below.

Figure 9. Stakeholders participating in a consultation on the Planning Issues and Options paper, Thurso, 4th July 2014. Left, the discussion groups, right, three written responses. Source: author's collection.

8.4. Creating an online space

The internet is used to extend planning spaces. Marine Scotland organises the data used in MSP under the categories of physical characteristics; clean and safe; healthy and biologically diverse; productive; climate change; monitoring; administrative; regions; national marine plan, which originate in the UK's High Level Marine Objectives (HM-Government, 2009). Under these headings the Marine Scotland Information portal "provides access to descriptions and information about the Scottish marine environment while providing links to datasets and map resources that are made available by Marine Scotland and Partners"[v]. As indicated, the data is most useful to MSP when displayed spatially, showing locations, distributions and movements. This is done through the National Marine Plan interactive (NMPi), which is also based on GIS technology and allows users to view data layers on a map.

Anybody can access this tool for free and registered users can submit their own data to be considered for inclusion in the database. I have used the tool myself as a teaching resource. Regular email alerts are sent out to users when new data sets are added, or existing ones are updated. The role of the NMPi is not only significant because it serves as a functional tool for marine space users, scientists and planners, but also because the general public can immerse themselves in Scotland's marine and coastal environment and practice filling marine spaces. It can be said that this contributes to the mentality of space because anybody can try their hand at planning Scotland's seas from the comfort of their own homes. The NMPi is also linked to data presented in the 2011 Marine Atlas, of which hard copies were sent to all schools in Scotland (Smith & Jentoft, 2017 - paper 2). Figure 10 shows a screenshot of what the NMPi mapping tool looks like, with information displayed about recreational SCUBA diving sites, the 12 nautical mile boundary, and power cables.

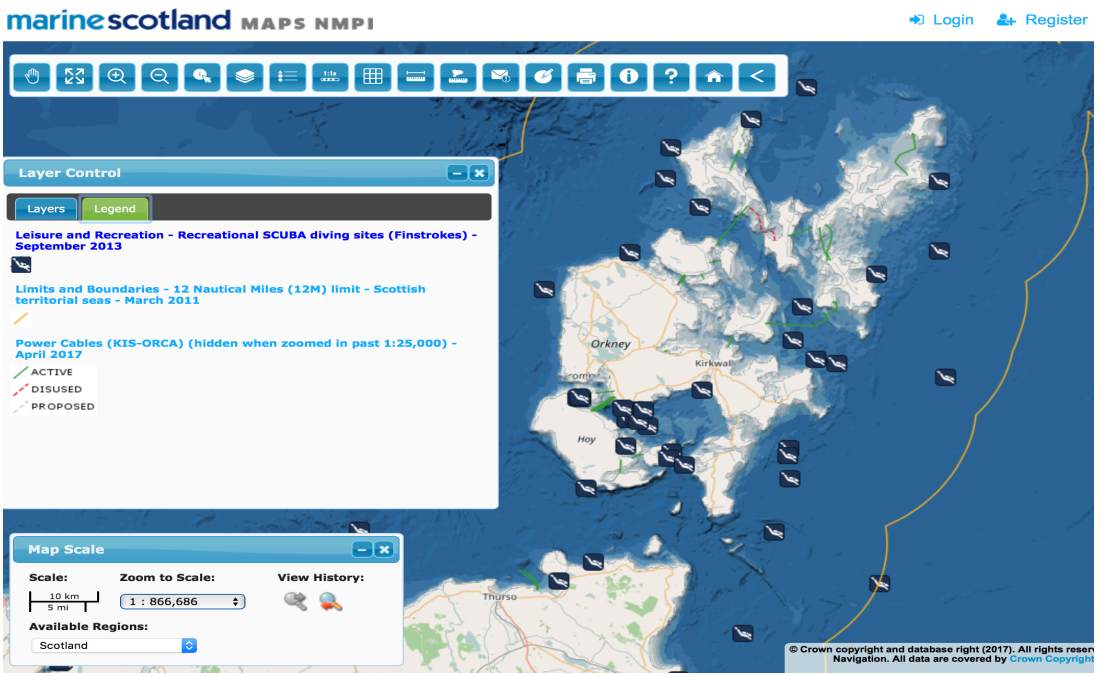

Figure 10. Sample map showing the use of marine space around Orkney and the Pentland Firth. Created through the NMPi: http://www.gov.scot/Topics/marine/seamanagement/nmpihome Last accessed 02/01/2018.

8.5. Co-evolution

For the PFOW region at least, it seems that the three vital elements of governmentality, MSP itself, and the governance system seem to co-evolve as depicted in figure 11. These three elements appear to mutually reinforce one another, with the process being facilitated through symbolic representations of governance processes known as governance objects (Johnsen & Hersoug, 2014). These might be anything from "a stretch of coastline, to a marine protected area, a marine current turbine, an environmental impact assessment, a total allowable fishing catch, or even the physical space where negotiations take place" (Smith, 2015: 140-1 - paper 1). Visual representations used in physical planning spaces and online help to underpin both a spatial vocabulary and a governmentality – or people reflecting on their willingness to be governed – that help make marine planning more real. For many at consultation events these props were a quick way to understand the challenges that will be tackled through MSP, and to raise important issues or concerns. In the case of marine renewable energy, for example, they helped some locals raise the point that "it's about putting manmade things into the natural environment" (Smith, 2015: 139).

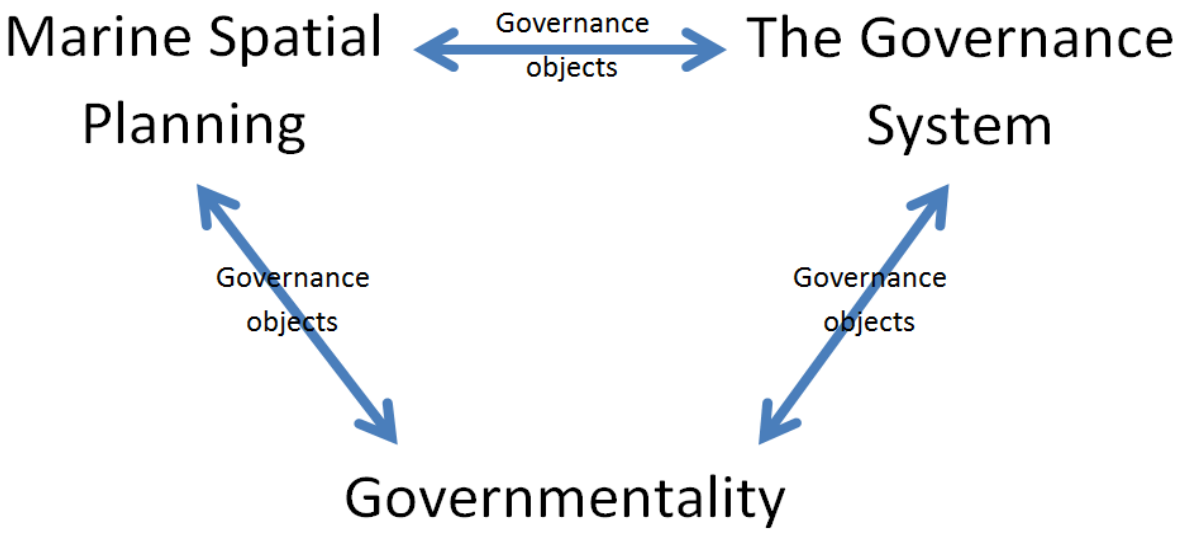

Figure 11. The co-evolution of Marine Spatial Planning, the governance system and governmentality as facilitated by governance objects. Adapted from Smith (2015 - paper 1).

These findings shed some light on how governance objects might help form a specific form of governmentality tailored to MSP. Given that governance objects – such as maps – can seemingly have considerable influence on people (Smith & Brennan, 2012), it seems natural to consider who governs.

8.6. Who governs?

The question of who governs is not a straightforward one, especially in the context of complex modern governance systems. But it does allow us to consider the range of actors who are allowed to contribute in some way to planning. In paper 1 the question is directed at the creation of the Pilot Plan for the PFOW region. It is interesting to note that the Pilot Plan was not created by a Marine Planning Partnership but by a Working Group, and there was no preceding Local Coastal Partnership in place. The answer to who governs MSP in the region appears relatively straightforward, with Marine Scotland and the Orkney Islands Council (OIC) enjoying strong governing roles. As the Directorate of the Scottish Government responsible for the integrated management of Scotland's seas this is to be expected of Marine Scotland. However, the OIC plays an increasingly important role as it tries to "manoeuvre itself into a central position in MSP" (in Smith, 2015: 136 - paper 1). The OIC provides the link to land use planning, for which it is responsible, and in its Orkney Local Development Plan already addresses the need for integration between these two systems (Smith, 2015 - paper 1). By facilitating a lot of the routine processes for MSP, such as consultations, and through its understanding of local cultures and norms, the OIC also provides a significant

level of 'institutional capital' (Haughton et al., 2010). However, the OIC does not have all of the necessary financial and human resources available for planning the inshore waters and would need to outsource some of its new responsibilities through the type of public-private partnerships and policy networks that typify modern governance systems.

Also, the strong governance role played by the OIC might not be replicable by councils in other Scottish Marine Regions. Many of Scotland's islands are a culturally unique and have a strong sense of identity (McKinlay & McVittie, 2007). A demand for greater autonomy over MSP processes on the islands is tied into the specific cultures of those islands, their remote geographical locations, and their great dependence on how the seas and coasts are used. The *Our Islands – Our Future* campaign discussed in paper 1 demonstrates this point. This was a campaign to bring greater planning and decision making powers to Scotland's island councils. It was led by the councils of Shetland, Orkney and 'Comhairle nan Eilean Siar' representing the Western Isles, and is tied to the broader European subsidiarity principle, i.e. that decisions should be taken as closely as possible to the citizen. The campaign has been important for attracting support for introducing an 'Islands Bill' that would bring greater control for these councils over local matters. It is an example of the impact of partnership work and how an informal governance arrangement can emerge to affect change in formal governance systems. It also demonstrates how 'a public' can emerge and define itself through issue-based engagement.

The question of who governs in the PFOW region – and in Scottish MSP more generally – becomes a bit more difficult to answer when we consider the role of the Crown Estate. This topic is handled most explicitly in papers 1 and 3 and the results are combined below. It is useful to first examine the roles of stakeholders and the public.

8.7. The role of stakeholders in MSP

The second question of this thesis asks: how is MSP in Scotland set up to bring stakeholders to the table early? In paper 2, *Marine Spatial Planning in Scotland – Levelling the playing field?* (Smith & Jentoft, 2017), two questions were posed to tease out answers to this. Firstly, "to what extent is the diversity of stakeholders considered in engagement of MSP in Scotland? And secondly, what does the system do to address existing power struggles between these?" (Smith & Jentoft, 2017: 34) The aim of the paper was to consider how MSP is performing in Scotland in terms of the guiding principles of good governance, especially those of participation and transparency.

The main point of contention in the findings was the narrow range of stakeholders chosen at key points during the formation of MSP in Scotland, in particular when creating objectives for the National Marine Plan. A clear line can be traced from the UK High Level Marine Objectives set in 2009 and the way that MSP is being implemented in Scotland. The system seems to be built upon the UK's and Scottish Government's prioritisation of blue growth initiatives where these are realisable, especially in the marine energy and aquaculture sectors.

On the one hand this can be seen as a necessary arrangement for MSP to facilitate growth in Scottish marine industries. MSP is reliant on strong leadership and clarity on who will be making the final decisions (Ehler & Douvere, 2009), but this needs to be carefully balanced with pressure to ensure that MSP remains transparent and participatory. With broad stakeholder engagement occurring late in the planning process in Scotland, the meta-order of governing, i.e. the guiding images, values and principles (Kooiman, 2003), had already been decided. The stakeholders who helped decide on this meta-order were those who have already been engaged in decades of maritime activities and the associated conflicts and power struggles, so it reflects the current status quo. In paper 2 we consider these stakeholders in terms of their salience, as judged by the power they have, the urgency of their needs, and the legitimacy of their concerns (Mitchell et al., 1997). The salience of a "definitive" stakeholder is high as all three attributes are deemed to be present, two are present in a moderately salient, or "expectant", stakeholder, whereas in a "latent" stakeholder exhibits only one of the attributes. The stakeholders involved in the formative phases of MSP in Scotland in April 2010 – those who came to the table early (Gopnik et al., 2012) – ranked highly in these terms and can be described as definitive. Again, this can be regarded as necessary for MSP because they best understand maritime activities. But this form of stakeholder identification assumes that others won't feel as much of an impact from the decisions taken, or are less qualified to inform these decisions.

This analysis points not only to the importance of stakeholder identification, but also of engagement timing. In another example it is shown that by the time wider consultation was undertaken on the National Marine Plan in 2013 its contents were regarded as largely decided. Again, this might be viewed as a practical solution to planning problems: to get the main marine sectors to contribute most to the plan. However, late public engagement might create some difficulties at a later stage. If the basis upon which marine development proposals are considered (i.e. the plan) lacks broad support, then individual projects might cause more

public opposition. These are potential 'transaction costs' (Jentoft & Chuenpagdee, 2009; Birnbaum, 2016). One of the stated objectives of MSP is to streamline marine consenting and licensing process. However, should a 'transaction cost' such as opposition to a plan arise at a later stage then the objective of streamlining these actions will be undermined. Despite this risk, there seems to be a tendency to work with definitive stakeholders early in plan conception, and during priority setting. This was the case for PFOW strategic area, where there were concerns about the process "getting bogged down" by the opinions of too many participants, thus stifling progress (in Smith & Jentoft, 2017: 38 - paper 2).

Rather than referring to this as 'getting bogged down' we choose in the paper to adopt the concept of 'enriching' the debates (Ritchie & Ellis, 2010). In the early stages of preparing the plan, an enriched debate might contribute to the legitimacy of MSP and guard it against some of the later complications mentioned above. Thus we are inspired by Chuenpagdee and Jentoft (2007) in their discussion of fisheries co-management to think about 'step zero' in MSP, i.e. who plans the planning? At step zero broader participation might mean the difference between asking, for example, "these are the current and emerging sectors accessing and using marine resources, how do we manage their activities?" and "what vision do we have, as a nation or a region, of the future of our seas and coasts?" We argue that the second question is equally important for creating a legitimate marine planning system, and widely accepted planning outcomes. However, this kind of question is largely absent from MSP in Scotland. A clear reason for this is that broader engagement is resource intensive. It takes a lot of time and money to find out what vision a region might be able to agree on for the use or non-use of natural resources. As explained in the paper, "[t]his point was indeed acknowledged in the 'lessons learned' report following the creation of the PFOW pilot plan [49]. There was an expressed desire to reach beyond the "usual suspects" during the engagement process (such as developers, Non-Governmental Organisations, government agencies etc.) and perhaps conduct polls on the streets to establish a fuller range of key issues" (Smith & Jentoft, 2017: 39). To ponder what the people on the streets might say is to consider the role of the public in MSP. This is the focus of question 3 and paper 3.

8.8. The role of the public in MSP

The third research question in this thesis asked: "what opportunities exist for public participation in MSP processes in Scotland?" In paper 3, *Good governance and the role of the public in Scotland's marine spatial planning system* (Smith, 2018), I return to the definition of MSP as a 'public process' and consider what this means in a system in which power is

centralised and in which certain actors play very important roles. As stated in the introduction to this thesis, other studies have pointed out that MSP processes tend to be top-down, lack meaningful participation, and do not facilitate publically engaged marine management (Jones et al., 2016; Flannery et al., 2018). These findings inspired the central question of paper 3, namely, "with MSP processes in Scotland purporting to encourage public participation, what are the practical barriers or limits to this?"

The paper examines the existing opportunities for the public to engage in MSP processes in Scotland and is less focused on one specific planning region. The role of the Marine Planning Partnerships as a concept is scrutinised more closely. Whilst it appears that this system helps to regionalise MSP processes in Scotland, the simple fact remains that central government still retains statutory decision-making authority, which affirms the top-down nature of the system and warrants a critique of how local views will feed into decision making. It appears that local input can only occur through public consultations, and the timing of these goes some way to determining how impactful they can be. Others have noted that this distinguishes MSP in Scotland from a co-decision-making system (Johnson et al., 2016).

The example used in paper 3 is the Clyde Marine Planning Partnership (CMPP). As the delegate in planning activities, it is the responsibility of the CMPP to produce and publish a Statement of Public Participation. This statement outlines the opportunities that will be given for public engagement. So the CMPP, to which membership is restricted, decides *when* public consultations will take place. Given that it held several closed meetings in the build up to public events, it is also in a strong position to decide *what* the public will be consulted on. In addition to this, one fairly open and informal channel of public debate has been removed through the institutionalisation of MSP, namely the voluntary Local Coastal Partnerships that made up the Scottish Coastal Forum. Although these will form the basis of some Marine Planning Partnerships, such as in the Clyde, in their new format they will have strict membership criteria and an official constitution. Whilst not discussed in the paper, it is worth noting that the CMPP website now includes a member login, and at the time of writing the 'consultations and events' page informs us "as further events are planned, details will be posted here"[vi]. The 'step zero' in regional MSP occurs just out of reach of the public, among CMPP members with a demonstrable interest in the coast and inshore waters, operating under centralised authority. On another side note, there isn't another body set up to facilitate public input in MSP in Scotland. For example, the Marine Strategy Forum was set up in 2009 and meets twice a year to provide advice on key strategies and priorities but does not plug that

gap. Overall, the governance arrangements in Scotland are indicative of a system designed to inform the public of a process (and its outcomes), rather than to recognise the public as legitimate stakeholders and make an effort to bring them to the table early.

Limitations to public involvement in MSP must also be understood in the context of the important role played by the Crown Estate. The Crown Estate is a unique organisation that is central to marine governance in Scotland. It therefore features in all three of the papers in this study, but most prominently in papers 1 and – especially – paper 3. Briefly, the Crown Estate is a statutory body that is run under the provisions of the Crown Estate Act 1961. It administers a property portfolio across the UK (the estate) worth around £14.1 billion[vii] and is mandated by the Act to generate a profit on this. Importantly for this project, it also owns approximately 50% of the foreshore in Scotland and almost the entire inshore seabed[4], and is the primary negotiator for leases to companies wishing to develop projects in inshore waters, such as for marine renewables. The Crown Estate is sometimes likened to a landlord, and in relation to the aquaculture industry has in the past been dubbed a de facto planning authority (Peel & Lloyd, 2008).

The Crown Estate still faces criticisms over its commitment to environmental protection, the transparency of its operations, its questionable proximity to planning, and the level of decision making input by local communities (Commons, 2012; LRRG, 2014). In the (admittedly unique) case of the PFOW region MSP was designed to help plan the renewable energy developments that were already in full swing. However, planners were playing catch up to the actions of the Crown Estate, with one interviewee commenting that "the cart had bolted before the horse" (in Smith, 2015: 137). So although actors such as the OIC have taken a lead on planning, industry – in collaboration with the Crown Estate – are leading the way with what is actually happening. Although this happens under strict consenting and licensing procedures, there is little doubt that the Crown Estate is tasked with achieving growth in certain marine industries and sets the tone for marine management in certain areas. This was made abundantly clear in its 2013 Enabling Actions Fund, which "supports work that accelerates and de-risks the development of the wave and tidal projects in the Pentland Firth and Orkney Waters, to facilitate successful and timely construction and operation" (Ibid: 138).

[4] The foreshore is defined in Scots law as the area between the high and low water marks of ordinary spring tides.

In paper 1 I also discuss Crown Estate's own web-based Marine Resource System (MARs). This is a GIS platform similar to the NMPi and provides "a wide range of data, maps and analysis facilities to aid in the planning of the marine environment" (in Smith, 2015: 138). However, it is not accessible to the public, but rather to "selected partners" (Ibid.). In this sense it can be viewed as an industry-only marine planning tool that operates alongside the official MSP system. It is difficult to tell whether this would enhance MSP processes, perhaps by carrying some of the workload, but it does point to the influence of private sector actors over marine management decisions, with stakeholders being carefully vetted and the public completely excluded. These actions behind closed doors also add to the widespread unfamiliarity with what it is that the Crown Estate actually does. One employee told how they were often sent to conferences to explain what it is that they actually do (Smith, 2018: 6). A lack of transparency is unlikely to instil confidence in its role in MSP. There are plenty who say of the Crown Estate that we "need to get it talked about"; that "streamlining the planning process though MSP helps the Crown Estate to increase revenue more quickly"; and that consultation on its operations is little more than a "bolt-on" at a late stage of the decision-making process (in Smith, 2018: 6). The results support the notion that "Marine Scotland had been too preoccupied with reacting to the steady release of renewable energy leases and licences by the Crown Estate and that the licensing system had been shaped by developers' needs" (Hull, 2013: 519-520).

If MSP processes are perceived to restrict public input in decision making, and are seen to favour the actions of certain key actors, then it is worth considering what the reaction might be. In paper 3 I take a look inland to the land use planning system in Scotland, which has faced criticisms along these lines in the past. I reflect on the consequences of this, and consider any lessons that might be learnt in MSP. The paper does acknowledge the considerable differences between the marine and land use planning systems. They operate in spaces with distinct access and use rights, for example, and land use planning is decentralised in Scotland, being administered by local authorities with central government only stepping in as a last resort. But, fundamentally, they both make claims to involving the public in the decisions taken over the use and non-use of space. The procedures for this are well tested in land use planning, and occur on a case-by-case basis. This is not to say that injustices do not exist, or that the system works faultlessly (see Pacione, 2013), but there is a structural mechanism in place for the public to air its opinions about proposed land use changes.

Where these opportunities are perceived to be missing, or where the land use planning system is deemed unrepresentative and unfair in Scotland, two noteworthy things have happened. Firstly, communities have sought alternative ways to increase their influence over determining land use patterns, and there are viable options available to them for this. They might set up a Development Trust, which utilise the skills and strengths of the community to make local plans and aspirations come to fruition. Or in some cases communities might look to purchase land so that they can assume more direct control of its use, often under the governance of locally formed decision-making committees, and with advice from the national organisation Community Land Scotland. Whilst planning regulations and processes must still be followed in these cases, the point stressed in paper 3 is that these begin with a vision that has come from the local community itself, and has been scrutinised locally.

Secondly, there is sustained pressure for the land use planning system to undergo reform. This usually occurs under a broader 'land reform' process. In the most recent round of land reforms the topic of the status and powers of Scotland's communities took centre stage, which was evident in the emerging Community Empowerment (Scotland) Act 2015 and the Land Reform (Scotland) Act 2016. The continual scrutiny and reform of land use patterns (and the way these are decided) is relevant to MSP because it demonstrates the importance of adaptability. The land use planning system has existed for more than a century and has been continually changed and adapted in this time to meet contemporary political, social, economic and environmental challenges and, crucially, to satisfy public demands. As noted by Gilliland and Laffoley (2008), "[m]any land use planning systems have evolved and improved over time, including the steps in the planning process and procedures for consultation and participation, and this should be expected of MSP" (p. 788).

The opportunities for public engagement in MSP in Scotland can be described as 'tokenistic' according to the Arnstein (1969) model used in the paper. At the highest (most participatory) levels there are degrees of citizen power where the public gains responsibilities over aspects of public policy. Public consultation for MSP in Scotland cannot be put in this category. This is partly down to the actions of the Crown Estate and the fact that ultimate powers for planning in Scotland's marine regions are retained by central government. With seemingly limited chances for genuine public participation in marine spatial planning at present, the key to its longevity might depend on meeting this expectation and adapting accordingly. The alternative might be a trend towards communities finding innovative and informal ways to increase their influence over decisions as they begin to "rebel against a

centrally driven process which allows national objectives to override local ones" (Johnson et al., 2016: 291).

9. Discussion

The three central research questions of this thesis all relate to the function of MSP as a governance mechanism. In this section I return to the original research questions, the theoretical basis of this thesis and, with examples from the results, discuss the way people are organised.

9.1. Has MSP contributed to the increased governability of complex marine environments?

Question one centred on the contribution made by MSP to the governability of complex marine environments. A major way that MSP helps to increase the governability of complex marine environments is through the creation of space. Space is not only important to the actual marine management decision outcomes achieved through planning (i.e. of helping to decide what goes where), but also to help get a better grip of the management situation through a variety of other spaces, which include planning spaces, marine spaces, and visual representations of what the latter might contain. It can be said that the visual representations of marine environments and of human interactions with these help cultivate a 'mentality of space'. Planners, scientists, stakeholders, and local residents create – and are exposed to – visual representations of what the sea is and what it could become. At most MSP meetings and consultations big maps are "laid out on the table" (Smith, 2015: 138). Participants share their interpretations of the maps and images and also problematize their own experiences and conduct in relation to them. This is a powerful technique that seems to contribute to a governmentality that supports MSP. In this context the maps and technical diagrams can be interpreted as the technologies of power (Foucault et al., 2003), where things and processes are handled indirectly through a system of representation (Holm, 1996). By inviting a range of actors to reflect on their position, views and conduct in relation to MSP, these technologies of power and systems of representation help to make a large and unpredictable environment more governable.

Previous research has shown how technologies of power have helped to order the people involved in MSP. Smith and Brennan (2012) have shown that for planning on the West coast of Scotland "[m]aps have become an obligatory passing point (OPP) for all involved in the management and use of Scotland's seas. Politicians, scientists and large

corporations are able to "impose and stabilise the other actors" that they define, a process that Callon also describes as their being 'locked into place'" (p. 214). One sign of their being locked into place is the growing prominence of a 'spatial vocabulary' for MSP, "such as is already well established in terrestrial planning in the UK" (Healey, 2004: 534). It is partly through the combination of a mentality of space, governance objects, and the resulting spatial vocabulary that the MSP framework "renders reality thinkable" (Moisio & Luukkonen, 2015: 6), and becomes anchored in society. If MSP helps to render reality thinkable then it can be said to increase the governability of complex marine environments. It provides entry points into the challenges at hand and invites participants into the process. In theory, MSP provides the complete package for increasing the governability of our coasts and seas through systems of representation: the vocabulary, the space to discuss, and the chance to integrate disparate maritime sectors. The governability toolbox provided by MSP is well stocked. But is it enough to just provide the tools and say, "go and plan the sea"?

We might say that the tools do indeed give us a more structured means of interacting with and tackling the marine problem. But it can also be said that the holistic approach of MSP also works to make the marine problem more complex. The integrated management of maritime activities for which we strive to meet a certain level of consensus on decisions made is not an easy task. Compromises have to be made. Although compromises are not new in marine management, these will potentially have to be made on a greater scale than before, and by more stakeholders. This is because MSP focuses more on the interactions between maritime sectors and more thought is given to how the management decisions made for one sector might affect other marine space users. In addition to this, members of the public need to be carefully informed of developments along the way, as these might look at maps of potential marine renewable energy sites, for example, and ask "so, this is another done deal?" (Smith, 2015: 141). Given the vast amounts of data and participants required to reach decisions through MSP, and the large numbers of people who are affected, it seems reasonable to suggest that while MSP does appear to increase the governability of marine environments, it also creates many new challenges to governability. One of the challenges lies in convincing all involved that the process is truly participatory and transparent.

To help us turn our attention to the topics of participation and transparency it is useful to consider the diagram in figure 11, which shows the component parts of MSP. The function of the diagram is to provoke debate about how MSP, the governance system and governmentality work together to help increase the governability of a complex environment.

It is designed to invite critical thought about the interactions between actors involved in MSP, and on mentalities, thinkable realities, vocabularies, the process of governing and on being governed, of being locked into place, and of obligatory passing points. From here it is possible to scrutinise who is participating in MSP, how are they permitted to do this, how are they persuaded to do this, and under what terms. More importantly we might ask, who *isn't* participating? In short, if we believe that MSP has indeed increased the governability of complex socio-ecological marine systems, then who is governing?

On one level the answer to who governs can be quite simple. In well defined areas there will most commonly be a clearly appointed body to lead MSP. This is the case for the PFOW area discussed in paper1. The Orkney Islands Council is well placed to take a leading role in governing MSP processes. So it seems that one way that MSP is used to increase the governability of marine environments is through the clear appointment of leaders and through clearly defining where statutory power lies. In this way MSP is used to structure marine management processes. But governance is multifaceted and can work in more subtle ways. The Leviathan isn't all knowing, as is demonstrated by the role of the Crown Estate. By asking "another kid, another block?" in paper 1 (Smith, 2015: 137) attention is drawn to some of the actions of the Crown Estate that run parallel to MSP and even overlap in some instances, this is despite it having no statutory planning powers. The Crown Estate also busies itself with creating spaces and mobilising technologies of power, such as through its online GIS platform MARs, to which access is strictly regulated. With the Crown Estate so closely involved in both seabed lease negotiations questions can arise over its proximity to planning and, consequently, about the location of power in MSP. Without statutory powers the influence of the Crown Estate over planning is less direct. By identifying opportunities for development in marine areas it simply contributes to the MSP workload, and helps define planning needs. One thing we learn from this case is that the governability of marine environments is fluid and can be continuously re-designed by a range of actors. We are also reminded that the governed subject is not a rational, self-governing agent but something that is recreated as a set of beliefs and desires. It is useful to scrutinise how these beliefs and desires are created. How do objectives and priorities in MSP become important? At what point were blue growth targets deemed important? These questions can be asked of other MSP systems. But it is also important to consider the role played by stakeholders, which leads us on to the second research question.

9.2. Do MSP processes bring stakeholders to the table early?

Question two helped to expose some structural barriers to participation in Scotland, such as exist in other MSP systems in Europe (Jones et al., 2016; Flannery et al., 2018). The apparent exclusivity of the Marine Planning Partnership arrangement is one example. These allow stakeholders to come to the table early, but these stakeholders are chosen on the oversimplified terms, something that Pomeroy and Douvere (2008) warned of. The participatory practices in Scotland's new MSP system are modelled strongly around the definitive stakeholder, and it is these who shape the guiding images, values and principles, i.e. the meta-order of governing according to Kooiman (2003). The result is that well-established power relations between stakeholders are allowed to spill over into the new management regime, and priorities that were set for Scotland's marine environment before MSP was introduced have been allowed to remain in place, such as with meeting blue growth targets. One view on this arrangement is that MSP has done little to level the playing field and acts more as a vehicle for realising the aspirations of government and of achieving growth in certain sectors: a form of 'business as usual' with a new name. Seen in this way, the question of how MSP affects the governability of the marine environment takes another twist. It might be said that increased order and governability can calm discontent about changes to the use of marine space. Governors can now point to a structured process through which decisions were made without drawing too much attention to flaws in the way the process was governed, thus continuously recreating the subject as someone who believes in and desires organised marine planning processes. Any limits set on stakeholder engagement might be explained as an attempt to avoid 'getting bogged down'. But as we become more experienced with MSP more questions are likely to be asked about how not wishing to get bogged down might equate to sidestepping democratic responsibilities. The rigidly scheduled public consultation process in Scotland too easily determines not only what is debated, and when, but also by whom. This leaves plenty of scope for step zero debates to be held early on behind closed doors. In Scotland this is a two-tiered problem with the institutionalisation of MSP practices. Firstly, in the retention of decisive powers by central government and, secondly, in the late public consultations at regional level.

An implementation gap does seem to persist in MSP (Koehn et al., 2013), possibly because of the tension between the need for strong leadership (Ehler & Douvere, 2009) – or top-down guidance – and the need to provide opportunities for genuine participation and bottom up processes. The inherent value of allowing bottom-up input to MSP provides quite a

convincing argument on the grounds of improved (democratic) credibility. But the functional benefits are also clear to see in reducing the danger of failure in a command and control approach in ecosystem based management (Katsanevakis et al., 2011). Limiting stakeholder input into planning decisions at an early stage does help to streamline the process but this benefit would be lost later on through the potential transaction cost of resistance to decision outcomes. If stakeholder engagement processes are perceived to be failing consistently then people might feel alienated from future engagement attempts (Fletcher et al., 2014). So yes, as I argue in paper 2, stakeholders are brought to the table early in MSP in Scotland, but more research is needed to help us understand who these stakeholders are and what their intentions are for planning. This seems to apply to other countries engaged in MSP as outlined in section 3.3 above. All have struggled to some extent strike a balance between top-down and bottom-up approaches. So further analysis of these issues in any country is useful in helping us understand the factors that affect participation and transparency in MSP. With a better understanding it may be possible to improve procedures.

9.3 What opportunities exist for public participation in MSP processes?

In Scotland consultations are the main form input into MSP available to the public. The results of this study cast doubt onto how meaningful this input is because of the questionable timing and extent of consultations. As the governance theory-based analysis illustrates in paper 2, institutional arrangements of MSP in Scotland seem designed to inform members of the public of planning priorities and outcomes, rather than to invite the public to help formulate these (Smith & Jentoft, 2017). Once again the modus operandi of the Marine Planning Partnerships is partly to blame here, creating opportunities for step zero negotiations in planning to occur behind closed doors. The timing and content of public consultations can then be carefully orchestrated. They might be orchestrated in the interest of clarity or of providing guidance to the public, or because of a will to limit discussions on options for the use of marine space, but either way step zero remains out of reach to all but a narrowly defined group of stakeholders. As discussed in the paper, the Crown Estate – with its mandate to maximise financial return on Scotland's seabed – could be seen to benefit from limiting how public MSP processes are. There is plenty of support for reviewing this situation (Smith, 2018: 6) and remembering that MSP is about more than just securing seabed leases for marine energy developments (Hull, 2013).

The long term success of MSP in Scotland will depend on maintaining public support in it. It follows that the planning processes need to be scrutinised and the system continually

improved. For an example of what might happen if this does not occur I turn in the paper to the perceived injustices in how decisions on the use and non-use of terrestrial space in Scotland. The growing interest in both the Development Trusts and community land buyouts can be indicative of resistance to a natural resource governance regime. Both of these movements are driven by the desire to regain some control over decision making and ensure that land use patterns address the needs and views of communities. They employ a local governance infrastructure to support decision making and both help to ensure that these decisions can enjoy a "majority local backing and be based on a vision agreed upon through local decision making institutions. As a result they are less likely to run into public opposition and can more closely reflect the will of the people" (Smith, 2018: 7). It can be said of these governance arrangements that they demonstrate the capacity of modern, informal governance entities, based on civic engagement, to challenge a formal governance framework. Development Trusts and community land buyouts are essentially examples of emerging forms, mechanisms, locations, styles and capacities of governance (Kersbergen & Waarden, 2004). They are also good examples of groups self-defining in response to a political issue (Dewey, 2012) and of the re-politicisation of society (Van Tatenhove, 2011).

In MSP's 'terrestrial cousin' (Kidd & Ellis, 2012) Scottish communities constantly fight for greater involvement. Communities have been at the centre of debates in Scotland's most recent land use planning reforms. One example comes from the Planning (Scotland) Bill that was introduced to the Scottish Parliament on 4th December 2017 (Parliament, 2017). At the time of writing it is difficult to say just how far reaching the eventual changes will be, but the rights of communities to affect planning outcomes are ever present. Among several proposals that might benefit communities, the Bill suggests, for example, that these be encouraged to prepare 'Local Place Plans' and submit them to the relevant planning authority. The Local Place Plans can be used to propose developments or changes to land use. Although these will have to conform to Local Development Plans, they have the potential to offer greater input by local residents. Local Place Plans provide an opportunity for communities to engage with assigning the use of space, which further embeds the act of planning in the social. It seems that there is an opportunity to copy this new role for communities in MSP too. MSP also has social outcomes and impacts, and so it seems deserving of society's input. It is true that the land use and marine planning systems differ from one another in most countries but it is possible to acknowledge the differences between them, and still recognise that they are both essentially about deciding on what people are allowed to do with space. MSP cannot

afford to neglect the cultural aspect of a socio-ecological system and can learn a lot from the problems faced in other public policy areas where the "new political culture no longer places much faith in solutions imposed from above" (Van Driesche & Lane, 2002: 283).

Thus we are reminded of the suggestion by Gilliland and Laffoley (2008) that MSP must follow the lead of land use planning systems in evolving and improving participatory procedures. Although MSP in Scotland is relatively young, and it is being used to avoid a potential 'land grab' at sea in the wake of blue growth, it can draw from the experiences of the way terrestrial planning is governed. At this early stage there might still be an expectation that marine plans will provide direct 'blueprints' that can simply be implemented in inshore marine areas, as was the case for land use plans before they began to incorporate broader socio-political factors. Healey's (2003) description of plans as serving a more flexible role as a series of principles and norms that set the tone for complex negotiations may be a stage at which marine planning practitioners have not yet arrived. MSP in Scotland does not yet resemble negotiative, collaborative planning.

It might prove beneficial to diversify the negotiations and incorporate a broader range of voices. At the very least this might help deepen our understanding of the social impact of marine developments. The PFOW Pilot Plan process, for example, will only support developments where it can be demonstrated that "significant adverse effects on the well-being, quality of life and amenity of local communities have been avoided" (MS(c), 2016: 57). On the very same page of the plan there is a call for research to help "better understand the factors that contribute towards the well-being, quality of life and amenity of coastal communities" (Ibid.). Allowing these communities to provide more input into the various stages of plan development might be an alternative to researching the topic.

So what about the future? The Scottish MSP system can be used to demonstrate how greater community input might be achieved in the future. It involves inviting more open questions such as "what vision do we have, as a nation or a region, of the future of our seas and coasts?" (Smith, 2018: 39). It also involves making the governance system less exclusive and more porous to the flow of ideas and views, taking influences from theories of modern governance.

9.4. A porous governance system

The governance of marine environments in Scotland might be improved by maintaining and adapting the important role played by the Local Coastal Partnerships. Having been in place

for more than 20 years these forums bring important institutional capital to marine management issues, and are familiar to people who have engaged in these issues in the past. Figure 12 shows how this arrangement might complement the current governance system.

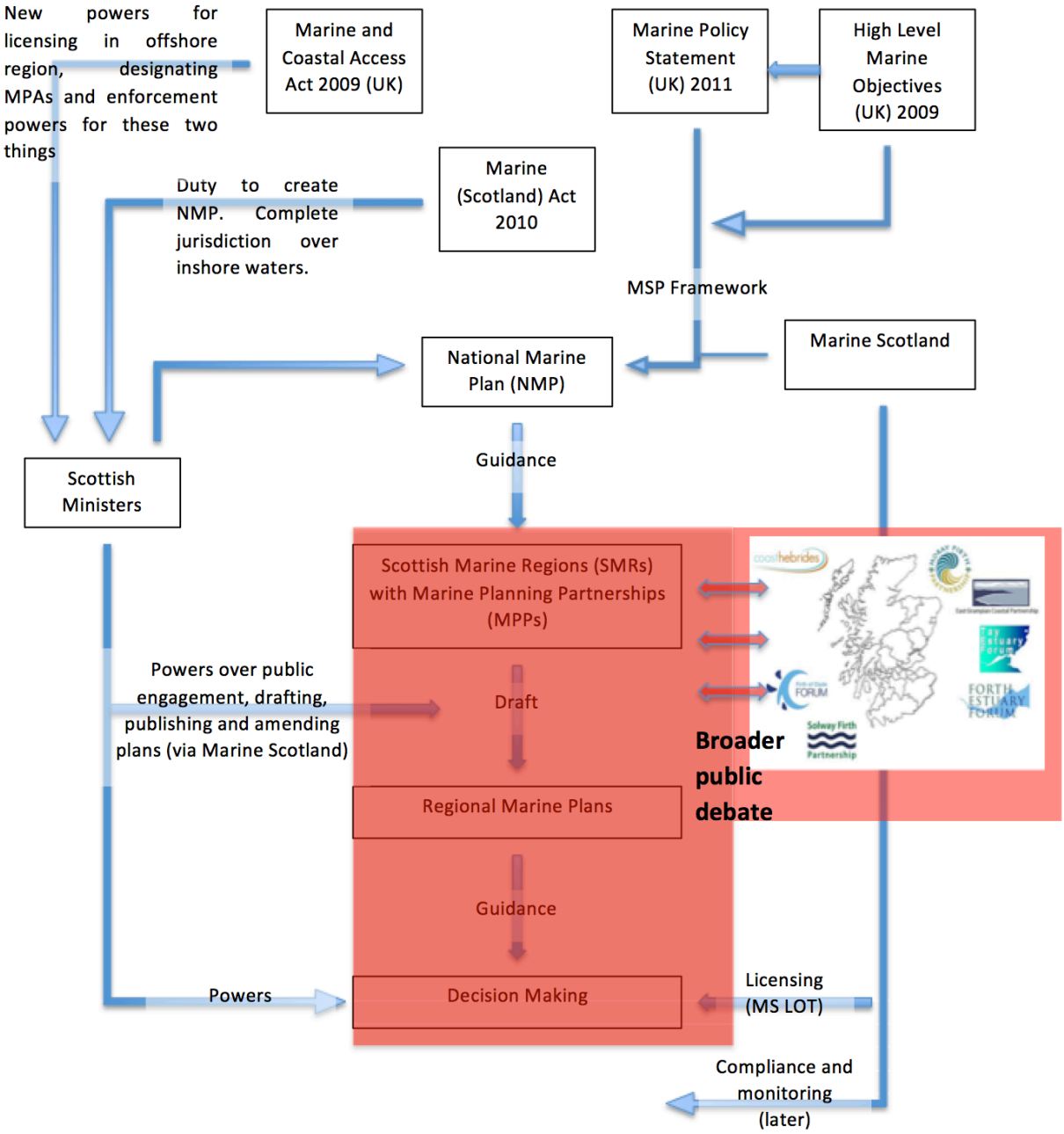

Figure 12. Adapted version of the governance system for MSP in Scotland to include a forum for broader public debate of marine planning issues.

The new Marine Planning Partnerships are different to Local Coastal Partnerships and, being comprised of experts in marine and coastal issues, it seems unlikely that they will focus much on the broader questions relating to Scottish society, culture and politics. With greater

input into MSP through active and engaging Local Coastal Partnership the public may raise issues that lie on the periphery of marine planning processes but are still important to them. Examples include the impact that regional development in specific maritime industries might have on, for example, local sustainable development, education, skills training, community wellbeing, public administration, and market trends. What could these changes mean for the long-term preservation of vulnerable marine resources? It is not possible to provide an exhaustive list here of issues that might be raised through more public debate, but it is also not necessary as that would be the function of the debates. Citizens could also be asked to share their views on participatory practices and transparency in marine planning, or even share their views on these topics in land use planning, from which valuable lessons might still be learned. This is where a governance system including MSP might benefit from Marine Planning Partnerships maintaining a degree of informality and openness, perhaps by keeping an element modelled on the more voluntary Local Coastal Partnerships. Some of the Marine Planning Partnerships have been created directly from the Local Coastal Partnerships but in this institutionalising process appear to have lost some of their openness (Smith, 2018).

The modified governance system depicted in figure 12 could encourage increased public debate on MSP issues that the Marine Planning Partnerships with their regulated memberships do not facilitate. It is worth noting that the Local Coastal Partnerships, represented with their logos in the diagram, are shown to be separate from the Marine Planning Partnerships in the Scottish Marine Regions. The aim of this was to depict a component that remains involved in, but also on the periphery of, MSP processes, and open to public debate, thus making the system more porous. Local residents could set the agenda for these debates, prompted by their own questions with guidance where required, allowing citizens to define their role and position in MSP through issue-based political engagement (Dewey, 2012). The ability of Scottish communities to do this has been evidenced through the Our Islands – Our Future campaign (Smith, 2015) and the Development Trusts and community land buyouts. Further research might explore ways for outputs from these Local Coastal Partnerships to be integrated into MSP.

Interestingly, this arrangement would meet a key recommendation of the original 2007 Advisory Group on Marine and Coastal Strategy (AGMACS) report, which suggested that Scotland should introduce a system of MSP with a statutory basis, but that this should have "the flexibility to incorporate a non-statutory framework of local stakeholder engagement and planning" (Scottish-Government, 2007). Research has already demonstrated that informal,

multi-stakeholder, participatory platforms can find spaces to operate even in a rigid and highly structured administrative environment (Moellenkamp et al., 2010). Increased flexibility might also help ease the problem of people being unable to attend consultations because of travel times and costs (Pomeroy & Douvere, 2008), perhaps allowing more individual and small group contributions. There would have to be some degree of flexibility in how these groups are set up given the differences between the eleven Scottish Marine Regions. These regions differ in terms of planning needs and challenges, and the existing governance infrastructure.

Returning once more to the creation of space, online tools could be used to support public engagement in MSP. As described in the theoretical basis for this thesis, the flow of information has an important function in modern governance. In Scotland the National Marine Plan interactive (NMPi) is a fundamental part of MSP. Part of its appeal is that it can be updated and, therefore, remains adaptive. The data contained within it are continuously updated (Smith & Jentoft, 2017) so the platform suits the task of planning in a complex socio-ecological system. The fact that participation through the NMPi does not require actors to meet in one physical place can also be seen to stabilise MSP activities because the data can reach a much broader audience. Platforms such as the NMPi represent continuous and non-place-bound planning spaces, and they work to make MSP more compatible with alternative governance constellations, as diverse and nested centres of governance can exist and participate in negotiations, both formally and informally, in a variety of locations and at different levels. Among most groups and individuals these negotiations and exercises in planning will not result in real planning decisions because they lack the necessary authority, but partaking in these is enough to ensure that people are at least reflecting on their role and their level of understanding of MSP. Through self-reflection the citizen can become empowered with the ability to raise issues and to question decisions, even if they don't take these further, and if they do take issues further then they might be able to do so through the informal Local Coastal Partnerships.

It may not be necessary to maintain a strong distinction between 'stakeholder' and 'public' in a porous governance system. In our on-going analyses of MSP systems it might be useful to question the moments in which we define stakeholders, thus defining others as non-stakeholders. A planning system that hopes to keep up with a complex and fluid socio-ecological system in which needs, parameters, and possible solutions are constantly in flux might not be able to label 'stakeholders' and 'non-stakeholders' a priori, or exclude the

public. MSP is a 'public process' that has significant impacts on the future of a country's or region's marine conservation efforts and socio-economic developments. 'The public' is a flexible concept. Unfortunately, rigid planning traditions depend upon the identification of stakeholders quite early in the process. A modern approach that acknowledges modern forms of network governance might allow marine space and stakeholders to co-evolve during the process, and as mentioned above, the process is all-important in MSP. It might allow groups to define themselves through issue-based political engagement and make stronger claims to represent a voice (Sørensen, 2002).

In light of this recommendation we are encouraged to re-think the notion that those in the 'space of flows' govern the "flows of money, capital, and information, at the expense of the vast majority of ordinary people living their lives in the 'space of place'" (Mol, 2006: 499). Should we update the concept of 'ordinary people' here? It is 'ordinary people' who put constant pressure on land use planning procedures to be modernised and reformed, thereby achieving extraordinary things. It will be ordinary people who call for changes to MSP and help bring it closer to a system of planning though debate, i.e. of collaborative planning (Healey, 1992), and introduce stronger elements of co-decision making. It seems unnecessary to repeat the difficult lessons learned in the 1980s about how important the socio-cultural context of planning is.

10. Conclusion

Some of the more general points of contention in MSP exist in the Scottish system. At a time when efforts are being stepped up to evaluate the performance of MSP (e.g. Carneiro, 2013; Collie et al., 2013; Scarff et al., 2015; Smith, 2015; Jones et al., 2016; Flannery et al., 2018) case studies can provide details on how it might be improved. There appears to be some value in reflecting on what MSP *does* as a governance mechanism. It seems that it can do two opposing things. On the one hand it involves an unprecedented number of actors in marine management, including stakeholders, scientists, planners, politicians, NGOs, maritime industries, local councils, etc. Often new collaborations and even institutions are formed at various governance levels. This occurs in the way described by the theory of multi level governance, whereby modern governing is made possible through continuous negotiation involving nested governments at different territorial tiers. Research in the region of New England, USA suggests that "regional ocean planning is succeeding in building a network that spans agencies, sectors, and states" (Smythe, 2017: 20). In that study there is a core collaboration network for planning but also a broader network that is "low-density,

decentralized, large and diverse" (Ibid). Similar patterns are emerging in Scotland, albeit on a smaller scale, and a host of new governing actors are emerging at various territorial tiers. This is because decisions need to be informed by a detailed understanding of regional and local needs and circumstances. The mushrooming demands (Rosenau, 2004) of MSP are increasingly being met through dynamic research partnerships involving stakeholders (e.g. Kafas et al., 2017).

However, on the other hand, MSP is being used to maintain a tight grip on these processes in many places through centralised control. Whilst a larger and more diverse group of actors is now involved in marine management, and MSP is opening up new spaces for this to happen, it ultimately occurs in a very rigid decision-making, and decision-informing framework. In many instances MSP is still something that is done by experts operating within the field of marine management (Jay, 2010). All countries and regions should consider the extent to which – under the illusion of greater inclusion – MSP has succeeded in institutionalising – and thus legitimising – existing power structures as it seems to have done in Scotland (Smith & Jentoft, 2017).

This is a crucial point. MSP is politicising marine management issues on a larger scale than was previously the case. And with it comes a pressing need to analyse MSP from the perspective of democracy and good governance principles. Studies that focus on the danger of exclusion from MSP processes are very important (e.g. Flannery et al., 2018). Nearly a decade has passed since MSP was announced as "an idea whose time has come" (Ehler & Douvere, 2009: 7) so assessing the performance of supporting governance systems should be well under way. But this is an assessment that marine experts *cannot* make alone. Emphasising this fact might make marine topics more widely accessible, and facilitate more public debates about how MSP is performing in terms of democracy and its social outcomes. This is partly about finding common topics with other academic disciplines. Citizen science is one example, which is relevant for understanding and enhancing marine management and planning (Jarvis et al., 2015). And it is also about critiquing the balance between top-down and bottom-up governance, and the notion of subsidiarity. Without this scrutiny and without structural changes in governance systems where necessary – in order to create reliable channel for communities to express their views – MSP could lose credibility. Or community-led, informal, localised bodies might begin to challenge it. These bodies can emerge "wherever people and their organisations interact in order to solve societal problems and create new opportunities" (Kooiman, 2003: 7). Even within a rhetoric of broad participation,

the channels might simply not exist to allow it to happen. There is little dispute about the importance of participatory processes to MSP but there is still a way to go before it becomes a means to truly democratise the management of the seas.

References

Anzul, M., Downing, M., Ely, M., & Vinz, R. (2003). *On writing qualitative research: Living by words*: Routledge.

Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Institute of planners, 35*(4), 216-224.

Berkes, F. (2010). Shifting perspectives on resource management: resilience and the reconceptualization of 'natural resources' and 'management'. *MAST, 9*(1), 13-40.

Bevir, M. (1999). Foucault, power, and institutions. *Political studies, 47*(2), 345-359.

Birnbaum, S. (2016). Environmental Co-governance, Legitimacy, and the Quest for Compliance: When and Why Is Stakeholder Participation Desirable? *Journal of Environmental Policy & Planning*.

Blaikie, N. (2009). *Designing social research*: Polity.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative research journal, 9*(2), 27-40.

Brand, R., & Gaffikin, F. (2007). Collaborative planning in an uncollaborative world. *Planning theory, 6*(3), 282-313.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

Brinkmann, S. (2014). Interview. In T. Teo (Ed.), *Encyclopedia of Critical Psychology* (pp. 1008-1010). New York, NY: Springer New York.

Carneiro, G. (2013). Evaluation of marine spatial planning. *Marine Policy, 37*, 214-229. doi:10.1016/j.marpol.2012.05.003

Christie, N., Smyth, K., Barnes, R., & Elliott, M. (2014). Co-location of activities and designations: A means of solving or creating problems in marine spatial planning? *Marine Policy, 43*, 254-261.

Chuenpagdee, R., & Jentoft, S. (2007). Step zero for fisheries co-management: What precedes implementation. *Marine Policy, 31*(6), 657-668. doi:http://dx.doi.org/10.1016/j.marpol.2007.03.013

Clark, A., Holland, C., Katz, J., & Peace, S. (2009). Learning to see: lessons from a participatory observation research project in public spaces. *International journal of social research methodology, 12*(4), 345-360.

Clifford, N., & Valentine, G. (2003). *Key Methods in Geography*: SAGE Publications Ltd.

Collie, J. S., Beck, M. W., Craig, B., Essington, T. E., Fluharty, D., Rice, J., & Sanchirico, J. N. (2013). Marine spatial planning in practice. *Estuarine, Coastal and Shelf Science, 117*, 1-11.

COM-574-final. (2007). COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. An Integrated Maritime Policy for the European Union. http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52007DC0575&from=EN *Last accessed 22/09/2017.*

Commons, H. o. (2012). The House of Commons Scottish Affairs Committee. https://publications.parliament.uk/pa/cm201012/cmselect/cmscotaf/1117/111702.htm *Last accessed 13/10/2017.*

Creswell, J. W. (2007). Qualitative enquiry and research design: Choosing among five approaches: SAGE Publications Ltd.

Curtin, R., & Prellezo, R. (2010). Understanding marine ecosystem based management: A literature review. *Marine Policy, 34*(5), 821-830. doi:http://dx.doi.org/10.1016/j.marpol.2010.01.003

D'Anna, G., Fernández, T. V., Pipitone, C., Garofalo, G., & Badalamenti, F. (2016). Governance analysis in the Egadi islands marine protected area: a Mediterranean case study. *Marine Policy, 71*, 301-309.

Dahl, R. A. (1989). *Democracy and its Critics*: Yale University Press.

Day, J. (2008). The need and practice of monitoring, evaluating and adapting marine planning and management—lessons from the Great Barrier Reef. *Marine Policy, 32*(5), 823-831.

de Gialdino, I. V. (2009). *Ontological and epistemological foundations of qualitative research.* Paper presented at the Forum Qualitative Sozialforschung/Forum: Qualitative Social Research.

Dean, M. (2010). *Governmentality: Power and rule in modern society*: SAGE Publications Ltd.

Decrop, A. (1999). Triangulation in qualitative tourism research. *Tourism Management, 20*(1), 157-161. doi:https://doi.org/10.1016/S0261-5177(98)00102-2

Dewey, J. (2012). The Public and Its Problems: An Essay in Political Inquiry, ed. *Melvin L. Rogers (University Park, Penn., 2012)*, 117.

Douvere, F. (2008). The importance of marine spatial planning in advancing ecosystem-based sea use management. *Marine Policy, 32*(5), 762-771. doi:10.1016/j.marpol.2008.03.021
EC. (2020). European Commission - Blue Growth. https://ec.europa.eu/maritimeaffairs/policy/blue_growth_en *Last accessed 10/01/2018.*
Ehler, C., & Douvere, F. (2009). *Marine spatial planning: a step-by-step approach toward ecosystem-based-management*: Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO.
Flannery, W., Healy, N., & Luna, M. (2018). Exclusion and non-participation in Marine Spatial Planning. *Marine Policy, 88*, 32-40.
Fleming, D., & Jones, P. (2012). Challenges to achieving greater and fairer stakeholder involvement in marine spatial planning as illustrated by the Lyme Bay scallop dredging closure. *Marine Policy, 36*(2), 370-377.
Fletcher, S., Jefferson, R., Glegg, G., Rodwell, L., & Dodds, W. (2014). England's evolving marine and coastal governance framework. *Marine Policy, 45*, 261-268. doi:https://doi.org/10.1016/j.marpol.2013.09.007
Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative inquiry, 12*(2), 219-245.
Foucault, M., Bertani, M., Fontana, A., Ewald, F., & Macey, D. (2003). *" Society Must Be Defended": Lectures at the Collège de France, 1975-1976* (Vol. 1): Macmillan.
Friedmann, J. (1973). *Retracking America; A Theory of transactive planning.*: Anchor Press.
Friedmann, J. (2003). Why do planning theory? *Planning theory, 2*(1), 7-10.
Gilliland, P. M., & Laffoley, D. (2008). Key elements and steps in the process of developing ecosystem-based marine spatial planning. *Marine Policy, 32*(5), 787-796. doi:http://dx.doi.org/10.1016/j.marpol.2008.03.022
Golden-Biddle, K., & Locke, K. (2007). *Composing qualitative research*: SAGE Publications Ltd.
Gopnik, M., Fieseler, C., Cantral, L., McClellan, K., Pendleton, L., & Crowder, L. (2012). Coming to the table: Early stakeholder engagement in marine spatial planning. *Marine Policy, 36*(5), 1139-1149. doi:http://dx.doi.org/10.1016/j.marpol.2012.02.012
Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research, 2*(163-194), 105.
Halpern, B. S., Diamond, J., Gaines, S., Gelcich, S., Gleason, M., Jennings, S., . . . McLeod, K. (2012). Near-term priorities for the science, policy and practice of Coastal and Marine Spatial Planning (CMSP). *Marine Policy, 36*(1), 198-205.
Halpern, B. S., McLeod, K. L., Rosenberg, A. A., & Crowder, L. B. (2008). Managing for cumulative impacts in ecosystem-based management through ocean zoning. *Ocean & Coastal Management, 51*(3), 203-211. doi:http://dx.doi.org/10.1016/j.ocecoaman.2007.08.002
Haughton, G., Allmendinger, P., Counsell, D., & Vigar, G. (2010). *The new spatial planning: Territorial management with soft spaces and fuzzy boundaries*: Routledge.
Healey, P. (1992). Planning through debate: the communicative turn in planning theory. *Town Planning Review, 63*(2), 143.
Healey, P. (2003). Collaborative planning in perspective. *Planning theory, 2*(2), 101-123.
Healey, P. (2004). The treatment of space and place in the new strategic spatial planning in Europe. *International journal of urban and regional research, 28*(1), 45-67.
HM-Government. (2009). Our seas –a shared resource. High level marine objectives. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/182486/ourseas-2009update.pdf. *Last accessed 22/10/2017.*
HM-Government. (2011). UK Marine Policy Statement. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/182486/ourseas-2009update.pdf. *Last accessed 08/02/2017.*
Hobbes, T. (2006). *Leviathan*: A&C Black.
Holm, P. (1996). Fisheries management and the domestication of nature. *Sociologia Ruralis, 36*(2), 177-188.
Howarth, L. M., Wood, H. L., Turner, A. P., & Beukers-Stewart, B. D. (2011). Complex habitat boosts scallop recruitment in a fully protected marine reserve. *Marine Biology, 158*(8), 1767-1780.
Hull, A. D. (2013). Managing Competition for Marine Space Using the Tools of Planning in the UK. *Planning Practice and Research, 28*(5), 503-526. doi:10.1080/02697459.2013.812375
Innes, J. E., & Booher, D. E. (1999). Consensus building and complex adaptive systems: A framework for evaluating collaborative planning. *Journal of the American planning association, 65*(4), 412-423.

Jarvis, R. M., Bollard Breen, B., Krägeloh, C. U., & Billington, D. R. (2015). Citizen science and the power of public participation in marine spatial planning. *Marine Policy, 57*, 21-26. doi:https://doi.org/10.1016/j.marpol.2015.03.011
Jay, S. (2010). Built at sea: Marine management and the construction of marine spatial planning. *Town Planning Review, 81*(2), 173-192.
Jay, S. (2010-b). Planners to the rescue: Spatial planning facilitating the development of offshore wind energy. *Marine pollution bulletin, 60*(4), 493-499.
Jay, S., Flannery, W., Vince, J., & Liu, W.-H. (2013). International progress in marine spatial planning. *Ocean YB, 27*, 171.
Jentoft, S., & Chuenpagdee, R. (2009). Fisheries and coastal governance as a wicked problem. *Marine Policy, 33*(4), 553-560.
Johnsen, J. P. (2014). Is fisheries governance possible? *Fish and fisheries, 15*(3), 428-444.
Johnsen, J. P., & Hersoug, B. (2014). Local empowerment through the creation of coastal space? *Ecology and Society 19(2): 60.*
Johnson, K. R., Kerr, S. A., & Side, J. C. (2016). The Pentland Firth and Orkney Waters and Scotland–Planning Europe's Atlantic gateway. *Marine Policy, 71, 285-292.*
Jones, P. J., Lieberknecht, L., & Qiu, W. (2016). Marine spatial planning in reality: Introduction to case studies and discussion of findings. *Marine Policy, 71, 256-264.*
Jones, P. J. S. (2009). Equity, justice and power issues raised by no-take marine protected area proposals. *Marine Policy, 33*(5), 759-765. doi:https://doi.org/10.1016/j.marpol.2009.02.009
Kafas, A., McLay, A., Chimienti, M., Scott, B. E., Davies, I., & Gubbins, M. (2017). ScotMap: Participatory mapping of inshore fishing activity to inform marine spatial planning in Scotland. *Marine Policy, 79*, 8-18.
Katsanevakis, S., Stelzenmüller, V., South, A., Sørensen, T. K., Jones, P. J., Kerr, S., . . . Chust, G. (2011). Ecosystem-based marine spatial management: review of concepts, policies, tools, and critical issues. *Ocean & Coastal Management, 54*(11), 807-820.
Kerr, S., Johnson, K., & Side, J. (2014). Planning at the edge: Integrating across the land sea divide. *Marine Policy, 47*, 118-125.
Kersbergen, K. v., & Waarden, F. v. (2004). 'Governance' as a bridge between disciplines: Cross‐disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy. *European journal of political research, 43*(2), 143-171.
Kidd, S., & Ellis, G. (2012). From the land to sea and back again? Using terrestrial planning to understand the process of marine spatial planning. *Journal of Environmental Policy & Planning, 14*(1), 49-66.
Kidd, S., & Shaw, D. (2014). The social and political realities of marine spatial planning: some land-based reflections. *ICES Journal of Marine Science: Journal du Conseil, 71*(7), 1535-1541.
King, N., Cassell, C., & Symon, G. (1994). *Qualitative methods in organizational research: A practical guide*: SAGE Publications Ltd.
Kjaer, A. M. (2004). Governance: key concepts. *Cambridge, UK*.
Koehn, J. Z., Reineman, D. R., & Kittinger, J. N. (2013). Progress and promise in spatial human dimensions research for ecosystem-based ocean planning. *Marine Policy, 42*, 31-38.
Kooiman, J. (2003). *Governing as governance*: SAGE Publications Ltd.
Lefèvre, C. (1998). Metropolitan government and governance in western countries: a critical review. *International journal of urban and regional research, 22*(1), 9-25.
Lieberknecht, L. M., & Jones, P. J. (2016). From stormy seas to the doldrums: The challenges of navigating towards an ecologically coherent marine protected area network through England's Marine Conservation Zone process. *Marine Policy, 71*, 275-284.
Link, J. S., & Browman, H. I. (2014). Integrating what? Levels of marine ecosystem-based assessment and management: Oxford University Press.
LRRG. (2014). Land Reform Review Group. http://www.gov.scot/Publications/2014/05/2852 *Last accessed 13/10/2017.*
Marine-Scotland. (2013). Pilot Pentland Firth and Orkney Waters Marine Spatial Plan - Planning Issues and Options Consultation Paper. http://www.gov.scot/Resource/0042/00425039.pdf.
Mayer, I., Zhou, Q., Lo, J., Abspoel, L., Keijser, X., Olsen, E., . . . Kannen, A. (2013). Integrated, ecosystem-based Marine Spatial Planning: Design and results of a game-based, quasi-experiment. *Ocean & Coastal Management, 82*, 7-26.
McKinlay, A., & McVittie, C. (2007). Locals, incomers and intra-national migration: Place-identities and a Scottish island. *British Journal of Social Psychology, 46*(1), 171-190.
Meyer, C. B. (2001). A case in case study methodology. *Field methods, 13*(4), 329-352.
Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review, 22*(4), 853-886.

Moellenkamp, S., Lamers, M., Huesmann, C., Rotter, S., Pahl-Wostl, C., Speil, K., & Pohl, W. (2010). Informal participatory platforms for adaptive management. Insights into niche-finding, collaborative design and outcomes from a participatory process in the Rhine basin. *Ecology and society, 15*(4), 41.

Moisio, S., & Luukkonen, J. (2015). European spatial planning as governmentality: an inquiry into rationalities, techniques, and manifestations. *Environment and Planning C: Government and Policy, 33*(4), 828-845.

Mol, A. P. (2006). Environmental governance in the Information Age: the emergence of informational governance. *Environment and Planning C: Government and Policy, 24*(4), 497-514.

MS. (2015). Marine Scotland: Scottish Marine Regions Order. http://www.legislation.gov.uk/ssi/2015/193/contents/made *Last accessed 13/10/2017.*

MS(a). (2012). Marine Scotland: Pilot Pentland Firth and Orkney Waters Marine Spatial Plan - The Plan Scheme. *Avaialable at:* http://www.gov.scot/Resource/0040/00408910.pdf *Last accessed 26/01/2018.*

MS(b). (2016). Marine Scotland: Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Regional Locational Guidance. *Available at:* http://www.gov.scot/Resource/0049/00497507.pdf *Last accessed 26/01/2018.*

MS(c). (2016). Marine Scotland: Pilot Pentland Firth and Orkney Waters Marine Spatial Plan. *Available at:* http://www.gov.scot/Resource/0049/00497299.pdf *Last accessed 25/01/2018.*

Mulhall, A. (2003). In the field: notes on observation in qualitative research. *Journal of advanced nursing, 41*(3), 306-313.

Nutters, H. M., & da Silva, P. P. (2012). Fishery stakeholder engagement and marine spatial planning: Lessons from the Rhode Island Ocean SAMP and the Massachusetts Ocean Management Plan. *Ocean & Coastal Management, 67*, 9-18.

OIC. (2013). Orkney Islands Council: The Orkney Economic Review. http://www.orkney.gov.uk/Files/Business-and-Trade/Economic_Review/Orkney_Economic_Review_2012-13.pdf *Last accessed 22/10/2017.*

Olsen, E., Fluharty, D., Hoel, A. H., Hostens, K., Maes, F., & Pecceu, E. (2014). Integration at the round table: marine spatial planning in multi-stakeholder settings. *PloS one, 9*(10), e109964.

Olsen, E., Holen, S., Hoel, A. H., Buhl-Mortensen, L., & Røttingen, I. (2016). How Integrated Ocean governance in the Barents Sea was created by a drive for increased oil production. *Marine Policy, 71*, 293-300.

Olsson, P., Folke, C., & Berkes, F. (2004). Adaptive comanagement for building resilience in social-ecological systems. *Environmental Management, 34*(1), 75-90.

Pacione, M. (2013). The power of public participation in local planning in Scotland: the case of conflict over residential development in the metropolitan green belt. *GeoJournal, 79*(1), 31-57. doi:10.1007/s10708-013-9477-y

Parliament. (2017). The Scottish Parliament: Planning (Scotland) Bill. *Available at:* http://www.parliament.scot/parliamentarybusiness/Bills/106768.aspx *Last accessed 25/01/2018.*

Pecceu, E., Hostens, K., & Maes, F. (2016). Governance analysis of MPAs in the Belgian part of the North Sea. *Marine Policy, 71*, 265-274.

Peel, D., & Lloyd, M. (2008). Governance and planning policy in the marine environment: regulating aquaculture in Scotland. *The Geographical Journal, 174*(4), 361-373.

Peel, D., & Lloyd, M. G. (2004). The social reconstruction of the marine environment: towards marine spatial planning? *Town Planning Review, 75*(3), 359-378.

Peters, B. G., & Pierre, J. (2001). Developments in intergovernmental relations: towards multi-level governance. *Policy and Politics, 29*(2), 131-136.

Pettigrew, A. M. (1990). Longitudinal field research on change: Theory and practice. *Organization science, 1*(3), 267-292.

Pomeroy, R., & Douvere, F. (2008). The engagement of stakeholders in the marine spatial planning process. *Marine Policy, 32*(5), 816-822.

Potts, T., Burdon, D., Jackson, E., Atkins, J., Saunders, J., Hastings, E., & Langmead, O. (2014). Do marine protected areas deliver flows of ecosystem services to support human welfare? *Marine Policy, 44*, 139-148.

Prell, C., Reed, M., Racin, L., & Hubacek, K. (2010). Competing structure, competing views: the role of formal and informal social structures in shaping stakeholder perceptions. *Ecology and society, 15*(4), 34.

Rhodes, R. A. W. (1996). The new governance: governing without government. *Political studies, 44*(4), 652-667.

Rhodes, R. A. W. (1997). *Understanding governance: Policy networks, governance, reflexivity and accountability*: Open University Press.

Ritchie, H., & Ellis, G. (2010). 'A system that works for the sea'? Exploring Stakeholder Engagement in Marine Spatial Planning. *Journal of Environmental Planning and Management, 53*(6), 701-723. doi:10.1080/09640568.2010.488100
Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2013). *Qualitative research practice: A guide for social science students and researchers*: Sage.
Rosenau, J. N. (2004). Governance in the Twenty-first Century. *Global governance, 1*, 179-209.
Rowley, J. (2002). Using case studies in research. *Management research news, 25*(1), 16-27.
Scarff, G., Fitzsimmons, C., & Gray, T. (2015). The new mode of marine planning in the UK: Aspirations and challenges. *Marine Policy, 51*, 96-102.
Scottish-Government. (2007). The Scottish Government , 2007. AGMACS Report: summary of recommendations. http://www.gov.scot/Publications/2007/03/08103826/8. *Last accessed July 2014.*
Seidman, I., Rubin, H. J., Rubin, I. S., & Dilley, P. (2004). Interviews and the philosophy of qualitative research. *The Journal of Higher Education, 75*(1), 127-132.
Shucksmith, R., Gray, L., Kelly, C., & Tweddle, J. F. (2014). Regional marine spatial planning–The data collection and mapping process. *Marine Policy, 50*, 1-9.
Smith, G. (2015). Creating the spaces, filling them up. Marine spatial planning in the Pentland Firth and Orkney Waters. *Ocean & Coastal Management, 116*, 132-142. doi:10.1016/j.ocecoaman.2015.07.003
Smith, G. (2018). Good governance and the role of the public in Scotland's marine spatial planning system. *Marine Policy, 94*, 1-9.
Smith, G., & Brennan, R. E. (2012). Losing our way with mapping: thinking critically about marine spatial planning in Scotland. *Ocean & Coastal Management, 69*, 210-216.
Smith, G., & Jentoft, S. (2017). Marine spatial planning in Scotland. Levelling the playing field? *Marine Policy, 84*, 33-41.
Smith, H. D., Maes, F., Stojanovic, T. A., & Ballinger, R. C. (2010). The integration of land and marine spatial planning. *Journal of Coastal Conservation, 15*(2), 291-303. doi:10.1007/s11852-010-0098-z
Smythe, T. C. (2017). Marine spatial planning as a tool for regional ocean governance?: An analysis of the New England ocean planning network. *Ocean & Coastal Management, 135*, 11-24.
Soffer, A., & Minghi, J. V. (1986). Israel's Security landscapes: the impact of military considerations on Land uses. *The Professional Geographer, 38*(1), 28-41.
Sørensen, E. (2002). Democratic theory and network governance. *Administrative Theory & Praxis, 24*(4), 693-720.
Spradley, J. P. (1980). *Participant observation*: Waveland Press.
Stead, S. M., & McGlashan, D. J. (2006). A coastal and marine national park for Scotland in partnership with integrated coastal zone management. *Ocean & Coastal Management, 49*(1), 22-41.
Stelzenmüller, V., Lee, J., South, A., Foden, J., & Rogers, S. I. (2013). Practical tools to support marine spatial planning: a review and some prototype tools. *Marine Policy, 38*, 214-227.
Stemler, S. (2001). An overview of content analysis. *Practical assessment, research & evaluation, 7*(17), 137-146.
Swyngedouw, E., Moulaert, F., & Rodriguez, A. (2002). Neoliberal urbanization in Europe: large–scale urban development projects and the new urban policy. *Antipode, 34*(3), 542-577.
Tlusty, M. (2012). A proactive GIS assessment of suitable offshore aquaculture sites in the Gulf of Maine integrating social, biological, and economic factors. http://www.marinegis.org/aquaculture.html *Last accessed 10/01/2018.*
Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & health sciences, 15*(3), 398-405.
Van Driesche, J., & Lane, M. (2002). Conservation through conversation: Collaborative planning for reuse of a former military property in Sauk County, Wisconsin, USA. *Planning theory & practice, 3*(2), 133-153.
Van Tatenhove, J. (2011). Integrated marine governance: Questions of legitimacy. *MAST, 10*(1), 87-113.
Voyer, M., Gladstone, W., & Goodall, H. (2015). Obtaining a social licence for MPAs – influences on social acceptability. *Marine Policy, 51*, 260-266. doi:https://doi.org/10.1016/j.marpol.2014.09.004
Working-Group. (2013). Pilot Pentland Firth and Orkney Waters Marine Spatial Plan – Workshop Information Pack. http://www.gov.scot/Publications/2013/12/6618/12.
Yin, R. K. (2003). Case study research: design and methods, Applied social research methods series. *Thousand Oaks, CA: Sage Publications, Inc. Afacan, Y., & Erbug, C.(2009). An*

interdisciplinary heuristic evaluation method for universal building design. Journal of Applied Ergonomics, *40*, 731-744.
Yin, R. K. (2009). *Case Study Research: Design and Methods*: SAGE Publications Ltd.

Web references

[i] Status of MSP. Online at: http://msp.ioc-unesco.org/world-applications/status_of_msp/ Last accessed 25/01/2018.
[ii] The Scottish Government online: http://www.gov.scot/Topics/marine/marine-environment/coast Last accesses 01/02/1018
[iii] The Scottish Government online: http://www.gov.scot/Topics/marine/seamanagement/regional/Scottish-Coastal-Forum Last accesses 01/02/1018
[iv] The Scottish Government online: http://www.gov.scot/Topics/marine/marine-environment/coast Last accessed 16/08/2018
[v] Marine Scotland Information at: http://marine.gov.scot Last accessed 02/01/2018.
[vi] Clyde MPP: Consultations and events. Available at: http://www.clydemarineplan.scot/marine-planning/consultations-and-event/ Last accessed 04/01/2018.
[vii] The Crown Estate website: https://www.thecrownestate.co.uk/en-gb/our-business/ Last accessed 16/08/2018.

Appendix 1

Sample interview questions

PFOW Pilot Plan Working Group member

25/04/2013

How did you come to be involved in the PFOW Pilot Plan?

What were the biggest challenges in drafting the plan?

How did you prepare for stakeholder engagement?

What do you think is the public perception of marine renewables in the area?

What are some of the other main marine management issues?

Who would be in the marine planning partnership in the PFOW region?

How do you see the role of councils in marine planning?

What is the progress on setting up the Scottish Marine Regions?

Introduction to the papers

This section provides a brief introduction to the papers and describes how they relate to one another. Paper 1 provides a description and overview of MSP in Scotland. Drawing on the concept of governmentality the co-evolution of MSP, the governance system and governmentality is discussed. Furthermore, there is an examination of who governs in the case of the Pentland Firth and Orkney Waters Marine Spatial Plan. The Orkney Islands Council and Marine Scotland are shown to be capable governors of MSP activities, with the necessary institutional capital. However, the Crown Estate is also shown to play a significant governance role, as its activities appear to run alongside MSP. Finally, the paper considers the creation of various types of spaces to help anchor MSP in society.

In paper 2 the focus turns to the role of specific stakeholders, with the suggestion being that their relative power and influence remains in tact after the introduction of MSP to Scotland. That is to say that MSP does not 'level the playing field'. This paper draws on the good governance principles of participation and transparency and considers how and when stakeholders have opportunities to contribute to decision making. A select few stakeholders set many of the images, values and principles that guide MSP, whilst others were brought in too late to greatly affect these. In addition to this, the relative exclusivity of Marine Planning Partnerships is an example of how MSP can institutionalise and thus legitimise existing power relations.

Paper 3 (*Good governance and the role of the public in Scotland's marine spatial planning system* – under review in Marine Policy) considers the role of the public in this situation. With MSP being described as a 'public process', Scotland's citizens are considered as stakeholders in the decisions taken about the use and non-use of marine resources. The role of the Crown Estate is scrutinised further, with questions raised over the transparency of its operations. It is in this paper that I also draw comparisons with Scotland's terrestrial – or land use – planning system, reflecting on two specific aspects of this. Firstly, communities appear to be resisting the system through informal governance mechanisms when they feel unrepresented by it, and secondly, the system constantly adapts through reform process to

address its perceived flaws. The MSP system will have to reform along similar lines in order to avoid the same type of resistance.

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Creating the spaces, filling them up. Marine spatial planning in the Pentland Firth and Orkney Waters

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ABSTRACT

Marine spatial planning (MSP) is a leading management tool worldwide for organising the way we interact with the marine environment. MSP utilises the latest and most accurate data available on the marine and coastal space and socio-economic factors in order to inform policy. But what does governance under MSP look like? In the Pentland Firth and Orkney Waters strategic planning area in north-eastern Scotland MSP is 'the new kid on the block'. This paper draws on the concept of governmentality to better understand how a new governance system (the block) is emerging to support MSP by making people and the seas more governable. It suggests that the local authorities – The Orkney Islands Council and The highland council – are strong contenders to be leaders in this new system, in collaboration with other key actors such as Marine Scotland. These actors are vying for influence over the new system. For this they need to legitimise their positions and legitimise MSP itself. One way that they do this is by nurturing a 'mentality of space' among stakeholders and the general public. Teaching other actors to think and communicate in spatial terms eases the transition to MSP. Certain technologies are used to aid the learning process, such as maps, models and diagrams. However, the system is still in the making and uncertainties and resistance remain.

On a theoretical level these findings demonstrate how closely related the governance system, governmentality, and MSP are, and how they co-evolve. Appreciating these links can help inform current and future experiences with MSP, and help us to understand the role of power in processes of social organisation.

1. Introduction

Marine ecosystems are complex and are influenced by a huge range of both internal and external factors. By interacting with and using marine resources through fishing, oil and gas extraction, aquaculture, recreation etc., humans become part of these ecosystems. Thus in our attempts to manage marine resources it is important that we take into account the social-ecological system as a whole (Olsson et al., 2004). To this end there has been a shift from sector-based and species-based natural resource management towards an ecosystem-based approach (EBA). The EBA "seeks to broaden the scope of traditional resource management so that it considers a wider range of ecological, environmental and human factors in the exploitation of resources" (Curtin and Prellezo, 2010). New management challenges arise from the sheer complexity of this system. Innovative and dynamic tools must reflect and deal with this complexity.

Marine spatial planning (MSP) is a processual framework that contains a range of management tools for coasts and seas. MSP allows for more informed and co-ordinated decision-making between stakeholders, scientists, planners, non-governmental organisations (NGOs), private companies and governing bodies. It is a move away from the management of individual marine sectors and towards the holism described above (Gilliland and Laffoley, 2008; Douvere, 2008; Halpern et al., 2008; White et al., 2012), acknowledging marine resource use as a complex web of socio-natural interactions. MSP is an attempt to deal with this complexity by using detailed ecological, economic and social analyses of how various marine industries and activities interact and affect one another and the natural environment. This data is then used to make decisions on the spatial arrangement of human uses of marine and coastal areas. Research has already shown that this approach can lead to management measures that avoid or mitigate potential conflicts

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early in the process of developing in these areas (Shucksmith et al., 2014).

Definitions of MSP vary but it can perhaps best be understood as "a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives" (Ehler and Douvere, 2009: 18). This statement also summarises an important ideological foundation of MSP, namely social inclusion and democratic principles. Three key features of MSP are that it is future-oriented in that it seeks to achieve agreed goals, it is primarily a public sector activity, and it is concerned with both shaping and protecting the built and natural environments (Jay, 2010: 495-6).

The transition to MSP in the United Kingdom (UK) has been fairly rapid and some of the milestones are detailed in Section 4 below. This paper focuses on the emergence of MSP in the Pentland Firth and Orkney Waters (PFOW) strategic planning area in the northeast of Scotland. The Marine (Scotland) Act 2010 granted the Scottish Government planning powers over its seas and this is the first plan being drafted under these. The plan is seen as necessary in the area due to a number of new developments in the inshore area. Marine spatial planning in the PFOW has been described by those involved as "the new kid on the block": it is a newcomer entering from the outside. The description invites analysis of how this new kid establishes itself. It also invites us to ask how the governance system (the block) for MSP will be constructed: what will the new block for this kid look like? This paper explores the power struggles that occur when such a new system is introduced. It aims at a qualitative understanding of the process, ideology and organisation of MSP. MSP allows new processes, such as broad stakeholder engagement, guided by an ideology, for example EBA and democratic principles, and these mean that society is organised in a new way. By applying the theories of governance and governmentality (the mentality of governing and being governed – see Section 2 below) more can be said about these elements. The central, two part research question is: how does MSP contribute to making the strategic planning area of the Pentland Firth and Orkney Waters governable, and who will govern it?

Sections 2 and 3 outline the theoretical framework and methods of this study, respectively. The development of MSP in the UK and in the PFOW, and a description of how the plan is being constructed are outlined in Sections 4–5. Section 6 then analyses the role of The Orkney Islands Council (OIC), and in Section 7 the Crown Estate's role is considered. There follows a discussion of how these key bodies recruit actors to MSP in Section 8. Section 9 presents a model of how MSP, governmentality and the governance system co-evolve before concluding remarks are made in Section 10.

2. Theoretical framework – governance and governmentality

The theoretical basis for this paper is located in the governance of natural resource management systems. Marine *management* is realised through a series of instruments and regulations that affect human interaction with natural ecosystems such as fishing catch quotas and environmental impact assessments (EIAs), to imposed no-go zones and financial incentives or penalties. The *governance* system on the other hand pertains to the institutional and organisational framework that governs these processes and manages the rules of the game (Kjær, 2004). It is comprised of a wide range of actors from scientific bodies to local authorities, political institutions, private companies, NGOs, and complex combinations of these. The transition to MSP will likely require changes to the local and national frameworks that govern marine and coastal management in Scotland. Various actors are strengthening their positions and defining their roles within the context of MSP. The Orkney Islands Council, which is the form of local government, for example, is aiming to take a central role, and The Crown Estate – the proprietor of inshore sea beds – will also need to adapt its role as the plan evolves. These key actors will be central to the discussion presented here about the emerging governance system under MSP.

In this paper marine governance is understood as being beyond government (Rhodes, 1997; Lefèvre, 1998). This is due to the increased influence of non-governmental organisations and the globalised economy, and the resulting decision-making constellations typified today by public-private partnerships and the involvement of civil society. With broader consensus from stakeholders required under MSP, and the scale of investments in marine industries in Orkney, the emerging governance system will likely match this description. Additionally, the governance system is not distinct from the natural system upon which it acts. This paper follows more recent understandings of these two as a socio-natural whole defined by tight feedback loops and (sometimes dramatic) consequences brought about by change (Kooiman et al., 2005; Jentoft, 2007; Berkes, 2010). This is important to acknowledge in an MSP context when new decision making frameworks are used under relatively unknown circumstances (planning at sea as opposed to on land often has no legal precedent, for example, and researching the potential impacts of new wave and tidal energy technologies is a relatively new field).

It is not enough to say that an actor is in a new governance position. To understand how actors actually manoeuvre themselves into this position we can draw on the theory of governmentality, which "*conceptualizes* the citizens' willingness to be governed" (Johnsen, 2014: 14, emphasis added). This can be understood on two main levels. On one level "the term *governmentality* seeks to distinguish the particular mentalities, arts and regimes of government and administration" (Dean, 2006: 2, emphasis in the original). Here we refer to the mentality of governing, taking into account the "thousand and one different modalities and possible ways" of doing this (Foucault, 1979). The mentalities, arts and regimes of governing for marine spatial planning are still evolving in Scotland and institutions are learning to master them.

The other level of governmentality is also key to grasping this evolution, namely the forms of thinking by the individual citizen (and collectively by communities) and the resulting shared understandings of what the natural resource space represents (in this case inshore waters and the coastal zone). This demands that we consider how we govern our own behaviour in relation to these understandings. As such this paper will consider the factors that influence "the way in which an individual questions his or her own conduct (or problematizes it)" (Dean, 2006: 11). It is argued here that in the context of marine spatial planning this is influenced by certain 'mechanisms, techniques, and technologies of power' (Foucault, 2003: 241). In this paper the term 'technologies of power' refers to forms of defining and communicating marine space. Examples include maps, diagrams and other visual aids. These play a significant role in attempts to spatially plan the seas and coasts, where space is created, communicated, and options for filling it are discussed. And they get people interested in doing this. They affect the processes, ideologies and organisation of MSP. Emerging strategies to govern and be governed in this new planning system suggest that governmentality is strengthened by MSP.

3. Methods

The marine spatial plan for the PFOW area is the first being

written by The Scottish Government since it assumed responsibility for national marine planning under the Marine (Scotland) Act of2010.[1] As an unprecedented process that will form a blueprint for other regions, this lends itself well as a case study. A case study is appropriate when "a "how" or "why" question is being asked about a contemporary set of events over which the investigator has little or no control" (Yin, 2009: 13). This paper seeks to understand how the PFOW strategic area is being made governable. The case also has clearly identifiable geographical boundaries, which helps to define the case study. Whilst there is a limit to what generalisations can be made from one case (Creswell, 2007:74), and marine spatial planning is a flexible technique that can take on different forms depending on the local situation and needs (Stelzenmüller et al., 2013), some of the existing governance structures in the PFOW area are common to other parts of Scotland, such as a legitimate form of local government. As such it is possible to comment on how other regions could follow suit in governing marine areas through MSP.

This paper is informed by extensive reviews of official documents, articles, research literature, local and national media publications, online tools and photographic evidence, and the author receives regular newsletter updates of planning and marine issues for Scotland and Orkney. It provides a qualitative, localised understanding of MSP. These documents were supported by a round of formal, semi-structured interviews conducted with planners and government officials in April 2013, and participatory observation in MSP consultation events in Orkney and Caithness in July 2013. A further round of formal, semi-structured interviews was held with planners in April 2014 to discuss the consultation feedback and progress towards the marine spatial plan. In total 14 interviews were conducted with individuals from key organisations including Marine Scotland, The Orkney Islands Council, The Highland Council, The Scottish Parliament, The Crown Estate, and from two academic institutions: The University of Edinburgh and the Orkney campus of Heriot Watt University.

The initial, exploratory round of interviews held in April 2013 were conducted with those drafting the plan and focused on the preparations for MSP. It soon became clear that unfamiliarity with MSP in Scotland was a recurring theme and that it would be interesting to focus on how the plan would emerge under these circumstances. Other rounds of interviews then allowed for deeper probing into the politically sensitive topics of who would govern MSP and which actors were vying for more control. Participatory observation at the local stakeholder and public engagement events in July 2013 provided and insight into how people were being made familiar with MSP. Particular attention was paid to which questions the attendants were asking, what their concerns were, what their level of interest was, and how they incorporated technical language into their dialogue. Participatory observation is a useful way to experience a process from a member's perspective but the researcher is also likely to influence what is being observed (Flick, 2009: 226). Participation began tentatively so as to observe how other participants introduced technical language into discussions and referred to maps and diagrams etc. The level of engagement then grew as discussions evolved. The other practical reason for proceeding tentatively is that the researcher is not a local stakeholder and was conscious of influencing decisions on a draft plan that will not affect his daily interaction with local coasts and inshore waters. I made my role as a researcher clear from the beginning and was made very welcome in both sessions. Numerous informal, unstructured interviews arose from these sessions during breaks and at the close of proceedings.

[1] A marine spatial plan already exists for the Sheltand Islands and was made statutory in 2014 (see Kelly et al., 2014). However, this is a unique case due to the autonomy enjoyed by Sheltand over marine planning.

4. MSP in Scotland

Scotland has adopted marine spatial planning as a key marine management tool. Table 1 below outlines the main steps in arriving at this stage in relation to developments in the UK and Europe.

Whilst the UK Government and the devolved Scottish administration have committed to MSP, the required institutional framework is still very much in the making. Questions remain over who will govern the new system and who will 'do' marine spatial planning. A steep learning curve awaits planners (whose experience is often restricted to terrestrial planning), and the newly recruited stakeholders and scientists. For an overview of the key actors referred to in this paper please see Table 2.

4.1. The Pentland Firth and Orkney Waters

The Pentland Firth and Orkney Waters (PFOW) strategic planning area is located in the north-east of Scotland (see Fig. 1). The area has seen a significant increase in human activities in inshore waters (defined in the UK as the area up to 12 nm from the MHWS) resulting from the potential to harness an estimated 1.6 Gigawatts (GW) of energy from waves and tidal streams (UK Parliament, 2012). The site lies between the tidal systems of the North Atlantic Ocean and the North Sea and experiences some of the fastest tidal currents in the world. Companies such as Kawasaki Heavy Industries, Scotrenewables and Atlantis Resources Corporation have responded to this opportunity, investing considerable of time and money in developing the necessary technologies. The total expected investment in the renewables industry and supporting infrastructures in the PFOW could exceed £6bn ($9.8bn) by the end of the decade (The Crown Estate 2011). It is hoped that these developments can contribute significantly to Scotland's ambitious greenhouse gas emissions reduction targets of 42% of 1990 levels by 2020, and 80% by 2050 (Climate Change (Scotland) Act, 2009).

Other important marine industries based in Orkney include pelagic and demersal fisheries (5280 tonnes live weight landings in 2012), shellfish fisheries (3440 tonnes in 2012) salmon farming (11 694 tonnes in 2012), and crude oil infrastructure, including the natural harbour of Scapa Flow for ship-to-ship oil transfers. The mainland population affected by the plan is difficult to estimate but there are 21 530 inhabitants to Orkney in 2012 (all figures taken from the Orkney Economic Review 2012–2013). The Orkney Islands are also very reliant on internal ferry routes, visiting vessels and tourism. The marine spatial plan will aim to reconcile the growth of the renewable energy sector and its supporting infrastructure, with the continuation of existing activities.

5. Constructing a marine spatial plan

Work to develop a marine spatial plan for the PFOW began in 2009. The process consists of three stages. The first two were led by Marine Scotland. Stage 1 set out the high level framework for the plan, identified categories for required data and knowledge, summarised what was already known in each category and made recommendations for how to fill knowledge and data gaps. In stage 2 research projects were established to fill these gaps. Direct feedback Stage 3 was about reaching out the stakeholders and the general public about the plan. A Plan Scheme was published and constantly updated to communicate progress made in the plan, and a Planning Issues and Options consultation paper was created to offer stakeholders the chance to contribute to the content of the

Table 1
Milestones in the turn to marine spatial planning in Europe, the UK and Scotland.

Year	Action	Contribution
2002	Safeguarding our Seas publication. Department for Environment, Food and Rural Affairs (Defra)	Shared vision of 'clean, healthy, safe, productive and biologically diverse oceans and seas' set out by the UK Government and the devolved administrations of Scotland, Wales and Northern Ireland (Defra, 2002).
2007	European Integrated Maritime Policy (IMP)	MSP listed as one of its five cross-cutting policies and the European Union (EU). Member states urged to create road maps to MSP. Not legally binding.
2007	Advisory Group on Marine and Coastal Strategy (AGMACS) reports for Scotland.	This ministerially-chaired group concludes that "[t]here should be a system of Marine Spatial Planning … [with] … a statutory basis, though potentially with a variable control (e.g. the flexibility to incorporate a non-statutory framework of local stakeholder engagement and planning)" (The Scottish Government, 2007: 14).
2008	Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU	The document aims to help develop MSP by member states and encourage its implementation at EU and national level (The European Commission 2008)
2009	Marine and Coastal Access Act	Preparations for introducing an MSP system. Established Marine Management Organisation (MMO) to oversee marine planning in England. Division of English inshore waters into 11 marine plan areas. Devolution of further planning powers to Scotland for its offshore area (12–200 nautical miles (nm) from the Mean High Water Springs (MHWS)).
2010	Marine (Scotland) Act	Granted the nation further statutory rights in the planning of its seas (to 200 nautical miles)[a], and contained a duty for Ministers to prepare and adopt a National Marine Plan (NMP), as well as powers to prepare regional marine plans.
2014	Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 - establishing a framework for maritime spatial planning	A set of 'minimum common requirements' set out in shared seas of member states. First step towards legally-binding MSP framework for the EU.
2015	Scottish National Marine Plan published.	Sets out a single overarching planning framework for all marine activities in Scottish waters.

[a] Some of these powers are in combination with the UK Marine and Coastal Access Act (2009).

Table 2
Overview of the key actors referred to in this paper.

Name	Role
Marine Scotland	Marine Scotland is a Directorate of the Scottish Government and responsible for managing Scotland's seas for prosperity and environmental sustainability. It takes an overall lead on planning and policy, and is drafting the NMP. Its five cross-cutting project teams are 1) Aquaculture, Freshwater Fisheries and Licensing Policy, 2) Performance, 3) Science, 4) Compliance and 5) Fisheries Policy. Directly involved in drafting the PFOW marine spatial plan.
The Orkney Islands Council (OIC)	The local administration for the Orkney Islands. Manages areas such as housing, education, leisure and culture, and rubbish and recycling. Responsible for town planning and aspects of marine developments e.g. ports and harbours and aquaculture (the latter in collaboration with the Scottish Environmental Protection Agency and The Crown Estate). Directly involved in drafting the PFOW marine spatial plan.
Highland Council	Same roles as the OIC but on the mainland and covering a much larger area including some western isles. Directly involved in drafting the PFOW marine spatial plan.
Marine Scotland Licensing and Operations Team (MS-LOT)	"[P]rovides a 'one-stop-shop' for all marine licence applications in Scottish waters" (Marine Scotland online). Licenses required for deposit/removal of substances or objects onto the sea bed, construction, dredging etc.
Scottish Natural Heritage (SNH)	A public body charged with promoting and preserving Scotland's natural heritage. Expressed strong support for an MSP system in Scotland in 2010 (ABP Marine Environmental Research 2010). A key contributor to the MSP design process and will be a main user of the final plan.
Scottish Environmental Protection Agency (SEPA)	A non-departmental public body and Scotland's environmental regulator. Helps businesses and industry understand and preserve the environments in which they operate. Will be another key user of the plan.
European Marine Energy Centre (EMEC)	Based in Stromness, Orkney. Only centre of its kind worldwide to provide companies developing wave and tidal converters with purpose-built, accredited open sea testing facilities. Close collaboration with The Crown Estate. Funders include The Scottish Government, OIC and the Highlands and Islands Enterprise
The Crown Estate	A unique and complex organisation. The Crown Estate refers to the portfolio of state property that is administered by a private company headed by the Crown Estate Commissioners (CEC). Nevertheless all profits made from developments on these sites go to the UK Treasury for public spending. Property includes 50% of the foreshore and almost the entire inshore seabed. For purposes of simplification, the organisation will be referred to throughout this paper as 'the Crown Estate'. In November 2014 *The Smith Commission* announced that responsibility for the Crown Estate's assets in Scotland would be devolved first to The Scottish Government, and later to local level (The Smith Commission, 2014). In addition to devolution, there is pressure to reform the CEC, as discussed below.
Highlands and Islands Enterprise (HIE)	This organisation aims to integrate community and economic development in an area covering more than half of Scotland's land mass. Works to attract investment in the marine renewables sector, among many others. Official aims are to support businesses, strengthen communities, develop growth sectors and create a competitive region.

plan and consider the planning options (Marine Scotland, 2012).

Drafting of the plan is done by a core Working Group. This group is comprised of three representatives, one each from Marine Scotland, The Highland Council and The Orkney Islands Council. The Working Group is supported by an Advisory Group that is "drawn from organisations with knowledge of the protection and enhancement of the Pentland Firth and Orkney Waters and from those whose members use the area for commercial and recreational purposes" (Marine Scotland, 2013: 13). This close collaboration is a new institutional arrangement that demonstrates the capacity of MSP to organise. The plan's primary purpose is to guide consenting decisions with the objective of "supporting the sustainable development of key sectors including, but not limited to, offshore renewables, aquaculture, inshore fisheries, tourism and recreation" (Marine Scotland, 2013: 22). For this it will rely on the collection and analysis of relevant, robust and reliable information on the local marine environment and socio-economic characteristics. These are processes that will be streamlined by MSP. By offering this guidance the plan will also contribute to visions for the sustainable development of the area, such as set out in the Orkney

Local Development Plan (Orkney Islands Council, 2014), where the ideological side of MSP becomes apparent.

The intended users of the final plan include:

- Marine Scotland Licensing and Operations Team (MS LOT) will use the plan to inform marine licensing, consents under Section 36 of the Electricity Act and other appropriate licensing decisions;
- Orkney Islands Council (Orkney Harbour Authority) will use the plan to inform decisions on Works Licence applications;
- Statutory agencies such as Scottish Natural Heritage and the Scottish Environment Protection Agency could use the plan to inform the consultation responses they make to relevant licences and applications;
- Highland Council and Orkney Islands Council could potentially use the plan to inform decisions on relevant planning applications i.e. developments in the coastal zone;
- Businesses and individuals that wish to deliver new development in the marine area e.g. renewable energy companies, port infrastructure developers and aquaculture businesses;
- A variety of existing marine users including those involved in fishing, diving, recreational activities, transportation, shipping and navigation; and
- Local communities

Once completed, the pilot marine spatial plan will initially be non-statutory. As such planning decisions will not have to be made in accordance with the plan and it will function more as a key guiding document. The early ideology of marine spatial planning is clearly tentative at this stage. It is a novel, ambitious idea but there is uncertainty over how it will work in reality. The PFOW strategic area makes up one of the eleven Scottish Marine Regions (SMRs) that are being created to allow local administration of inshore marine planning.[2] The plan – and lessons learned through its design – will also serve as a blueprint for local authorities in the other ten planned SMRs. At the time of writing this paper the working group had prepared consultation drafts of the Marine Spatial Plan, the Sustainability Appraisal, the Regional Locational Guidance (to assist inform the process of locating wave and tidal energy devices), and the Socio-Economic Baseline Review. These documents are sent to the OIC and Highland Council where they will be considered by the Orkney: Development and Infrastructure Committee, the General Meeting of the Council, and the Highland: Caithness and Sutherland Area Committee. Following consideration by the council committees the working group makes any necessary changes to the documents before they are prepared for public consultation.

6. The Orkney Islands Council – a capable facilitator

Marine Scotland presided over the initial stages of preparing the plan, but a key informant involved with the plan's development stated that "the Orkney Islands Council is trying to manoeuvre itself into a central position in MSP" (30/04/2013).[3] It enjoys high levels of legitimacy as it is comprised of elected local residents, appears to have many of the necessary attributes to play a strong role in local marine planning. The council's capabilities lie in it familiarity with some processes that are important to MSP. It oversees local terrestrial planning applications, marine works licenses, and although all other marine planning applications are processed through the MS LOT in Aberdeen – a practice that will continue under MSP – local council knowledge, resources, and actions are invaluable in processing these. Cooperation will likely need to be strengthened here, or the capacities moved to the PFOW completely. This will streamline the planning process and reduce costs in, for example, EIAs for marine developments.

There is often considerable overlap between marine and terrestrial activities. This is most evident in instances where marine developments interact directly with the coast or inter-tidal zone, such as with marine renewable devices, which require land-based infrastructure for deployment, maintenance and grid connection. And there are other, less structural reasons, such as when locals voice concerns over the aesthetic impact of industrial constructions. As a result many propose that terrestrial and marine planning systems should overlap to account for this (Gilliland and Laffoley, 2008; Smith et al., 2011). Gilliland and Laffoley support the suggestion that in the UK the MSP system be extended shoreward, resulting in the "integration between terrestrial and marine planning activities and institutions" (Gilliland and Laffoley, 2008: 790). The benefits of this would be practical in terms of dealing with interlinked planning procedures, and also institutional, with the potential to streamline planning procedures under the direction of fewer governing bodies. In practice for the PFOW area this would probably mean more marine planning responsibility for the OIC and Highland Council. These links are already being acknowledged by the OIC, for example in Section 2.9 of their Orkney Local Development Plan. The section points to the difficult balance of protecting sensitive landscapes from development on the one hand, but also avoiding "frustrating" necessary coastal developments to support marine industries on the other (The Orkney Islands Council, 2014: 6). Such references show that the OIC understands the importance of integrating marine and terrestrial planning, and that it is integrating the developments in marine industries into its strategic visions and planning mentality: all the time strengthening its claim to be a leading governing institution for MSP. The limits to linking marine and terrestrial planning must also be acknowledged and some have suggested that full integration of the two systems does not appear possible on account of the significant differences in governance, rights and resource use (Kerr et al., 2014). Nevertheless, this does not necessarily exclude the OIC from a central role in both.

The OIC has long term experience in coordinating local consultations on planning issues. This includes overseeing their announcement in local media and the feedback procedure whereby residents are given 28 days to respond to development proposals. In most cases staff will be familiar with the recent planning history of an area where a new proposal is made. The council is also very familiar with organising public information events and has already done this for marine spatial planning. Marine Scotland conducts presentations at such events and provides the overview for where the PFOW fits into national plans, but is seen by some locals as out of touch with local needs. Two local informants criticised Marine Scotland's methodology, such as its unwillingness to adopt more dynamic public engagement techniques like role plays. Such initiatives could help clarify what MSP is and what the actors' roles might be and could help to organise society around marine management. This is important when introducing a new planning system. The OIC appears suitably placed and willing to explore these more progressive techniques.

The OIC understands the importance of including local stakeholders in decision making processes, which is essential to marine

[2] Initially the strategic area did not match the boundaries of the SMR as these constituted two distinct administrative processes. However, the majority of consultation responses supported the alignment of the two and the draft plan will be amended accordingly. An overview of the responses is available at: http://www.gov.scot/Publications/2014/04/5576/10.

[3] Where governance in marine spatial planning by the OIC is mentioned here it entails close collaboration with The highland council, which represents mainland communities.

spatial planning (Gilliland and Lafoley, 2008; Ehler and Douvere, 2009, Fletcher et al., 2013). Often it is reported that "government planners need to engage outsiders earlier, more often, more meaningfully, and through an open and transparent process" (Gopnik et al., 2012: 1139). This feeling is shared in the OIC where it has been expressed that the planning process should be 'front loaded', that is to say that stakeholders should be involved from an early stage (James Green, OIC, 30/04/2013). Engagement is long term and continues through to the evaluation of plans that are already in use (Caneiro, 2013). At consultation events held to discuss the PFOW *Planning Issues and Options* paper several stakeholders pointed out that local communities appeared last on the list of intended plan users given above in section 5. The working group was urged to place the communities higher up the list, if not at the top. This is an important observation for a marine spatial plan that is supposed to represent a public process of planning. It also demands a central role, in planning, of a strong, local, representative institution such as the OIC. By mirroring the stance of the wider (academic) literature on the importance of stakeholder and public engagement in MSP, the council is highlighting its understanding of what is required (and its understanding of MSP's ideological foundations) and its capacity to conduct the necessary actions. It is adopting the mentalities, arts and regimes of government and administration relevant to planning at sea.

Many aspects of MSP involve fairly routine procedures such as coordinating meetings, organising consultations, and gauging public and stakeholder opinions. MSP appears a daunting undertaking because of the level and scope of scientific research required to support decision making. Primarily, however, MSP is about organising people. It is only our actions that we can affect through management, our actions that impact marine and coastal space. It is this fact that the OIC must focus on. The OIC has local legitimacy, local knowledge, and already manages many aspects of public life on Orkney, such as housing, education, leisure and culture, and rubbish and recycling. This experience at the local level will be essential to successful marine planning in the PFOW. These capacities make up what has been called 'institutional capital' (Haughton et al., 2010: 119). Shifts in governance systems often require institutional capital to be established at new scales to perform new tasks. The OIC – in collaboration with The highland council representing the communities on the mainland of the strategic planning area – already operates at an appropriate scale for regional marine planning. In a coordinating and facilitating role it could continue to allow the scientific research to be carried out by other bodies such as Marine Scotland Science and The Crown Estate.

6.1. The OIC and the (slightly) larger picture: Our Islands–Our Future

As mentioned, introducing MSP to the PFOW area has come about largely because of the potential to harness the abundant wave and tidal energy. Marine renewable energy research and design projects in the PFOW are among the most advanced in the world. The speed at which the industry is evolving has rejuvenated concerns regarding the status of Scotland's island communities. The fear expressed by some is that the communities will be underrepresented in decision making processes involving such strong interests, and that any benefits of development will not be felt locally. The debate is not new. In April 1985 the Secretary of State for Scotland submitted a report to the UK Parliament entitled Report of the Committee of Inquiry into the Functions and Powers of the Islands Council of Scotland (The Montgomery Committee 1985). The report recommended that all opportunities should be taken to consolidate, develop and extend the powers of Island Councils. Based on these foundations and the European Union's (EU) subsidiarity principle – that decisions should be taken as closely as possible to the citizen – there is a new programme of positive engagement in this topic by Scotland's three island councils – Shetland, Orkney and Comhairle nan Eilean Siar representing the Western Isles. The *Our Islands – Our Future* campaign aims to ensure that the position and needs of the Island areas are taken seriously (The Island Councils 2013).

A joint position statement made by the councils deals with the issue of managing local natural resources, referring especially to the role of The Crown Estate, of marine spatial planning and the marine renewable energy potential. It recommends that Island Authorities assume control of revenues generated from inshore seabed leases with "genuine community participation and benefits" in the energy sector and it also calls for a greater local role in spatial planning (The Island Councils 2013: 2). This is a strong ideological message that marries the aspirations of unique and remote communities to the ideologies of planning in an informed and inclusive way. There is hope that the combined efforts of the councils can safeguard a greater influence locally over what happens in Orkney and the Pentland Firth. Day two of the Our Islands – Our Future conference in September 2013 closed with Steven Heddle of the OIC stating "[g]ive us the tools to do it ourselves - and we will" (Heddle, 2013). This would affect the seabed leasing process currently overseen by The Crown Estate. It could also affect the composition of the planned Scottish Marine Regions. Within each of these regions there will be a Marine Planning Partnership (MPP) comprised of regional planners, industry representatives and other experts. Big questions remain as to who will form these partnerships and assume control over planning. This would be organised differently in different regions, but for the PFOW region the eventual outcome of the Our Islands Our Future campaign will prove telling. The campaign also brings a strong sense of belonging and togetherness: a sense of place to the defined PFOW space. This could improve local public acceptance of a new, council-lead, marine governance system.

7. Another kid, another block? the role of The Crown Estate

MSP is designed to guide marine planning decisions. Nevertheless, development in the wave and tidal sector is well underway in the PFOW. That is not to say that it goes ahead unregulated: licensing still follows strict procedures and companies must complete the necessary Environmental Impact Assessments. From a governance perspective, however, and in terms of real actions, the most prominent actor at present is not the OIC but the Crown Estate Commission. As proprietor of the inshore seabed, the Crown Estate has so far overseen the leasing of areas for renewable device testing, as it has the various leasing rounds for offshore wind farm sites in other parts of the UK (for an overview of these see Jay, 2010). In the initial leasing round for the PFOW area in 2010 the stakeholder engagement was minimal to non-existent. Fishers, for example, were not informed before the official announcement. Marine spatial planning is a tool intended to manage increased pressures on marine space but speaking of the relationship between MSP and the renewables sector in PFOW one planner commented that "the cart had bolted before the horse" (Shona Turnbull 25/04/2013). The OIC might have taken the lead on the MSP but energy sector activities continue to be coordinated largely by The Crown Estate in collaboration with industry and the European Marine Energy Centre (EMEC), and under licensing regulations dealt with by MS LOT. This has left some actors in (the Crown Estate, EMEC, energy companies), and others out (OIC, The Highland Council and, to some extent, Marine Scotland).

Strengthening the marine renewable energy industry remains a top priority. The Crown Estate has committed £5.7 m (up from an

initial £4.0 m) to an Enabling Actions Fund, which "supports work that accelerates and de-risks the development of the wave and tidal projects in the Pentland Firth and Orkney Waters, to facilitate successful and timely construction and operation" (The Crown Estate, 2013). The project is wide-ranging and reports commissioned under this fund examine for the renewables sector the socio-economic impacts, environmental impacts, cumulative impacts, investment opportunities, supporting terrestrial infrastructure, and interactions with other marine users. Although more sector-based than MSP, many of these actions – including the stakeholder engagement – overlap with the intended purpose of the PFOW marine spatial plan.

Options for marine development are supported by The Crown Estate's own web-based Marine Resource System (MaRS), which provides "a wide range of data, maps and analysis facilities to aid in the planning of the marine environment" (MaRS Members Portal). An attempt by the author to create a MaRS account was unsuccessful as it is only available to "selected partners". It seems that if The Crown Estate continues to 'enable actions' in the marine renewables sector in the PFOW, a lot of the planning may be done by it and its selected partners before marine spatial planning gains a statutory basis. Indeed, it is worth noting that The Crown Estate does not appear on the MSP Working Group's list of primary users shown above. An archived presentation given by The Crown Estate sets out the benefits of MSP and points to the MaRs system as the organisation's own MSP tool (The Crown Estate 2009). How The Crown Estate relates to the official marine spatial plan when it nears completion will be interesting to see, especially following its devolution to Scotland. Certainly, the OIC will not be able to assume control over MSP as "a public process of analysing and allocating the spatial and temporal distribution of human activities" (Ehler and Douvere, 2009: 18) whilst The Crown Estate continues to exist and operate in its current form. Putting Scotland at the forefront of marine renewables development is a strong ideological statement. Marine planning must remain rational enough to support this only if it does not contradict the responsibilities it has to support other users of marine and coastal spaces.

One course of action under the reform of The Crown Estate could be to increase its presence and activities at local level and with more local control. The knowledge and expertise of The Crown Estate would be a valuable asset to authorities charged with marine spatial planning in the SMRs. Locally based teams comprised of – and trained by – Crown Estate staff could continue to help develop certain marine industries, but from a position where they would be more closely guided by marine plans. Collaborations with Marine Scotland Science and the Highlands and Islands Enterprise would continue as a feature of this role. The Crown Estate's role in attracting investment in the marine renewable sector and overseeing the leasing of sea bed space to bidding companies should continue, but could be restructured to follow local needs and ensure local benefits of investments. The scale of these operations would have to be carefully balanced between local/regional and national levels, however, because the UK as a whole needs to remain an attractive investment location for marine developments, especially in the renewables sector. So a national marketing strategy should remain.

At two further processes would need to be carefully managed when reforming the Crown Estate along these lines. Firstly, the widely criticised deficiencies of the Crown Estate Commission need to be addressed, such as "the lack of accountability, the lack of communication and consultation with local communities, the inappropriateness of the CEC's statutory remit for its responsibilities in the marine environment, the cash leakage from local economies and other adverse impacts arising from the way the CEC operates" (Scottish Affairs Committee, 2012). Secondly, whilst the Crown Estate's activities are brought down to local level, where they can more closely follow local plans, the organisation must not be too closely involved with the planning processes. This would be problematic as one single body cannot be responsible for attracting investment and for making marine plans. This would create a temptation for corruption and attract criticism over how transparent the new governance system is. What is certain is that reform of the Crown Estate would involve a change in relations between actors and a substantial redistribution of power. Whilst this has been considered for a while, it can be argued that these are direct effects of introducing marine spatial planning.

The governing system for MSP in PFOW is still in the making and challenges and uncertainties lie ahead. However, construction of the system is dependent on other actors being recruited to it: dependent on reorganising. I now turn my attention to how this is done in the PFOW.

8. Affecting governmentality, recruiting actors

A key method for engaging actors in MSP is by affecting the way marine space is imagined. Imagination plays an important role in decision making in natural resource management (Fesmire, 2010). This is perhaps more true of marine spaces than most terrestrial spaces as they are not as easily accessible or visible. Visual aids are a very effective tool addressing this limitation and are commonly used in MSP engagement events organised by the OIC, Marine Scotland, and The Crown Estate. They can be used to communicate a range of relevant details including planning challenges, strategies, and scenarios, current uses of marine space, how the local MSP fits into national planning, technical details about wave and tide energy generators, etc. They might include maps, graphs, technical diagrams, and even physical models that people can interact with. Scientific research to support MSP is extensive in its scope and depth and these graphics give stakeholders and residents the chance to see local coasts and inshore waters as never before.

The displays and tables set up by OIC and Marine Scotland at these events are adorned with posters and leaflets presenting information relevant to the MSP process. The map circled at centre of the image shown in Fig. 2, for example, is produced with geographical information systems (GIS) software and presents findings from the Scotmap project. This project uses data gathered from interviews with owners of fishing vessels less than 15 m in length to accurately record and map inshore fishing activities. As of July 2013 over 1114 interviews had been conducted in Scotland[4] (although the map shown portrays only the relevant PFOW area). This map gives a clear indication of how the activities of fishers in the area might interact or conflict with other marine resource users, such as the renewable energy sector. This event resembles others organised by councils in collaboration with Marine Scotland where "we had big maps […] laid out on the table" (Shona Turnbull, Highland Council, 25/04/2013) (Fig. 3)

The act of communicating with visual aids in marine spatial planning is a good example of technologies of power in action (for another account of the power of maps and mapping on Scotland's west coast see Smith and Brennan, 2012). Several spaces are being created. Firstly, the inshore waters of Orkney and the Pentland Firth are being defined as a space of opportunities and challenges. There is great opportunity in industries such as aquaculture and marine renewables, but at the same time there are large problems in how these opportunities can be seized without impacting too negatively on the natural environment or the livelihoods of locals. Attendees

[4] http://www.scotland.gov.uk/Topics/marine/science/MSInteractive/Themes/ScotMap/scotmap-description.

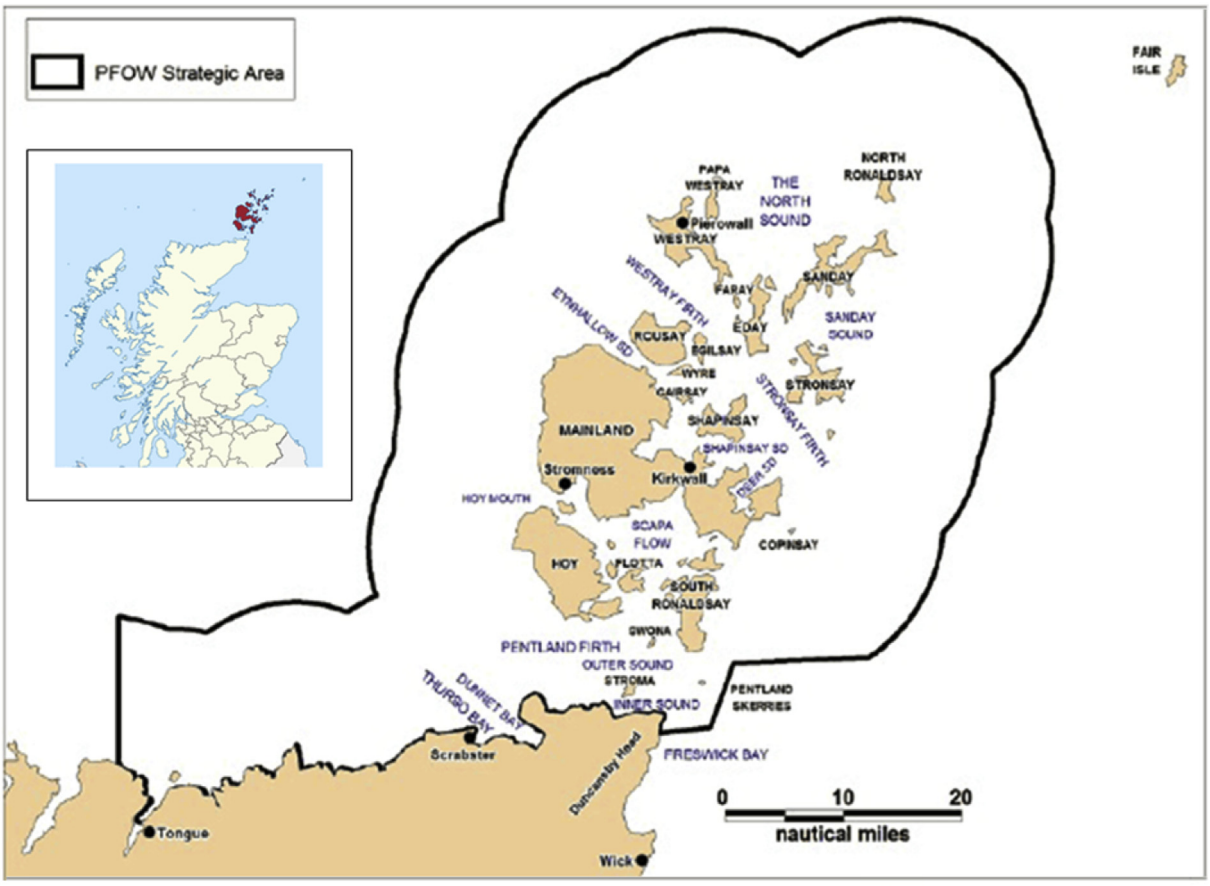

Fig. 1. Map showing the location of Orkney and the PFOW Strategic Area. Adapted from Wikepedia and Marine Scotland.

Fig. 2. A scene at an MSP public engagement event in Kirkwall, Orkney on July 1st 2013.

at the MSP consultation events in Kirkwall and Thurso in July 2013 began to think about this space and how it should be filled (in this analytical approach conservation is also considered as filling a space: it is filled with non-use, and it is filled with sensitive or endangered species). Answers to this question tended to vary depending on vested interests or levels of understanding. One sceptical comment made of the renewables industry was that "it's about putting manmade things into the natural environment" (Local Resident). The tone pitched invasive technology against the pristine natural environment. Another attendee, a stakeholder representing sailors, asked of the impact of renewables on recreational tourism. Other comments focused on interactions with fishing, whether MSP would lead to exclusion zones, and how the "complexities that cannot be taken into account" would be

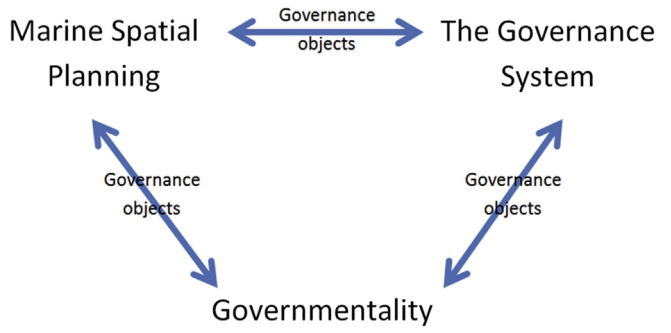

Fig. 3. The co-evolution of Marine Spatial Planning, the governance system and governmentality as facilitated by governance objects.

handled. Residents and stakeholders discussed a broad range of topics and had maps and images to refer to whilst doing so.

The PFOW area is a potential energy source; it's a provider of jobs; it's important to Scotland's economic growth; it's a rich fishing ground; it's a recreational haven; it's a part of Orkney's cultural heritage. Differences of opinion on how to manage these activities will persist under a system of MSP. But MSP can cope with these differences of opinion. In fact, it needs them. It provides an arena within which controversies can play out and solutions to difficult management problems sought. This is the second space that MSP creates. It creates physical meeting spaces where discussions and consultations are held. This is filled with citizens, representatives of stakeholder groups, scientists, academics, marine renewable and aquaculture industry representatives and planners. What happens in this space is the objectification of marine space, which becomes a governable object (Johnsen, 2014). The democratic principles underpinning MSP have allowed broader consultation on marine management than ever before. This is in keeping with Ehler and Douvere's earlier description of MSP as 'a public process'. Visual aids facilitate this communication. By pitching them at an accessible scientific level they can be used to prompt laypersons to think of marine management challenges in spatial terms. They nurture a 'mentality of space' that will ease the transition to marine spatial planning. In this context maps and images can be described as the "[a]gents, texts, devices, architectures [that] are all generated in, form part of, and are essential to, the networks of the social" (Law, 1992 p. 379). They help to anchor MSP in society.

This mentality is bolstered through visual representations of marine space and options for its use that are accessible online. The organisations, institutions and companies present or mentioned in public events provide relevant graphics on their websites. Much of the data on MSP in the PFOW, for example, is summarised in Marine Scotland's own geographical information systems based National Marine Plan interactive (NMPi). The platform allows registered users (registration is free and open) to access and explore interactive maps that present information on the main NMP topic areas: clean and safe; healthy and biologically diverse; and productive, with additional sections covering the physical characteristics; administrative areas; and base layers (bathymetry). The system allows users to add various data layers and in doing so the challenge of planning in Scotland's seas becomes apparent. Effectively the citizen is allowed to try their hand at spatial planning, and witness the competition for space. The recruiting of actors to the mentality necessary for introducing MSP does not stop at the exit of an engagement event. It continues as individuals explore their curiosity through the technologies put at their disposal, and in accordance with the data that the key actors choose to provide. This is sometimes provided on USB memory sticks given to people at engagement events. These provide "really interesting" maps and graphics that show "how limited the space is" around Orkney (Deryck Brown, Thurso resident).

Inspired by visual aids, discussions over marine planning between stakeholders, members of the general public, planners and scientists are conducted using a 'spatial vocabulary', such as is already well established in terrestrial planning in the UK (Healey, 2004: 534). The most common examples noted through participatory observation at engagement events included 'twelve nautical miles', 'local development plan', 'consent', 'exclusion zone', 'national marine plan', 'marine protected areas', 'tidal stream turbines', 'gigawatts of energy', 'strategic vision', and 'licensing'. All of these terms are closely linked to marine spaces and are provided by key actors: Marine Scotland, Orkney Islands Council, The highland council, The Crown Estate, and large energy companies. The strong position of these actors at present, coupled with the newness of MSP, means that they are able to determine the vocabulary used and are thus able to recruit other actors into marine spatial planning largely on their terms. These actors are regarded as the experts, and through the spatial vocabulary that they provide they help define the governing system that manages the rules of the game. This is not to say that the process is smooth. It does meet resistance. And as the governmentality develops on the level of the citizen – as individuals begin to question their own conduct in a changing governance landscape – more voices will be heard. These might ask "so, this is another done deal?". Or question why local communities do not appear nearer the top of the list of intended users for the plan as given in section 5 above. These were just two concerns raised at engagement events and suggest there is still a long way to go before the governors secure their positions. But as more actors talk and think about space, at least the position of the new kid, MSP, looks increasingly secure.

Indeed it appears that these processes reflect what is happening on a European level and justify governmentality as an approach to understanding marine spatial planning, "for the concept stimulates one to explicate the means, mechanisms, procedures, instruments, techniques, and vocabularies by which authority is constituted and rule accomplished" (Moisio and Luukkonen, 2014: 4). Moisio and Luukkonen explain how spatial representation is a powerful from of political control and how marine spatial planning conceptualises the problems that society is facing. In that sense it "renders reality thinkable" (ibid. 6). Although MSP is relatively new to Scotland, it is borrowing from more familiar forms of power politics and is tightly linked to more established policies, such as energy politics.

9. MSP, the governance system, and governmentaility–a process of co-evolution

This analysis of the transition to marine spatial planning in the PFOW presented here shows how it emerges in conjunction with the new governance system and a new form of governmentality. These three elements appear to be co-evolving. MSP creates a governance system that facilitates wider stakeholder engagement, upholds democratic principles and responds to feedback from stakeholders and the general public (ideology). Parts of this framework are built on existing institutional capital, such as the capacity of the OIC to organise consultation (process). The role of some actors within this system will be re-evaluated, such as The Crown Estate (organisation). MSP is responsible for a significant shift in power, relations and roles. In order for this to happen a specific mentality of governing and being governed must be established, which is aided by a 'mentality of space'.

This co-evolution is facilitated by governance objects, which are symbolic representations of governance processes (Johnsen and Hersoug, 2014). These objects can be anything from a stretch of

coastline, to a marine protected area, a marine current turbine, an environmental impact assessment, a total allowable fishing catch, or even the physical space where negotiations take place. All of these objects are referred to or used by stakeholders. The objects are the focus of attention within MSP and provide access points to deliberations and decision making. Technologies of power allow these objects to be communicated and disseminated throughout the network. These technologies include visual aids such as maps, technical diagrams, and scientific data. They can be understood as tools through which governance objects are defined and referred to: how they are objectified. The arena in which these technologies operate are the physical spaces for engagement, negotiation, and decision making. These spaces are extended through online platforms and websites.

This diagram is a simplification of complex processes. But the governance objects should be thought of as those mentioned above: physical characteristics of the sea and things put into it (or not). The blue lines in the diagram represent the vehicles for these governance objects i.e. forms of communication, technologies of power. This diagram can help our understanding of how MSP emerges. It redefines how actors view one another and explains processes of exclusion and inclusion. Scrutinising these processes in real situations allows us to question the role of power in shaping governance systems.

10. Concluding remarks

This research has shown that MSP is making the marine and coastal environment more governable. Coming back to the first part of the original research question (how does MSP contribute to making the strategic planning area of the Pentland Firth and Orkney Waters governable?) it can be said that it is by putting marine space on the table; by discussing it; by opening a dialogue. It permits discussion of these spaces by stakeholders, scientists and planners, and allows these actors to grasp what they are referring to, often physically by pointing at maps and diagrams. They make use of the technologies of power to become governed, just as institutions use them to govern. Furthermore, MSP provides the vocabulary to talk about these spaces and to put certain actors within them. The spaces are being filled with various forms of use and non-use. MSP attracts participants by being democratic, by having an attractive ideology. As more governments adopt MSP it is worth considering how spaces are created, deliberated and filled and how technologies of power are mobilised. Scrutinising these is important because there is potential to (mis)use them to guide stakeholders and the general public towards a decision that suits more powerful actors. This undermines the democratic principles underpinning MSP. Rather than a process of deliberation it becomes a process of persuasion. There is great value in asking the question "so, this is another done deal?"

As for who will govern under MSP in the PFOW? Marine spatial planning is still very much in the making in the Pentland Firth and Orkney Waters. Who will eventually take a commanding position in planning the area's seas and coasts is still unsure as power relations are changing. But the OIC is emerging as a strong candidate. This will have to happen in collaboration with partners who can provide a strong scientific basis for planning, with the OIC playing a facilitating role and contributing to stakeholder engagement and public consultation. Probable partners include Marine Scotland, the Highlands and Islands Enterprise, the European Marine Energy Centre and academic institutions such as Heriot Watt University, which has a campus on Orkney. With the decision already taken to devolve the management of The Crown Estate—including profits made on its Scottish portfolios - to The Scottish Government, the nature of this organisation is likely to change considerably. Further research is required to explore how reform of this unique organisation can be carried out and how promises to bring more powers to the local level are fulfilled.

An additional finding of this paper is the way in which MSP, the governance system and governmentality co-evolve through a complex power struggle. Appreciating this co-evolution can further our understanding of how society is organised in other realms beyond marine resource management.

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References

ABP Marine Environmental Research, 2010. Achieving natural heritage objectives in Scotland through a system of marine spatial planning. Scottish Natural Heritage Commissioned Report No. 340.

Berkes, F., 2010. Shifting perspectives on resource management: resilience and the reconceptualization of 'natural resources' and 'management'. Marit. Stud. (MAST) 9, 13–40.

Caneiro, G., 2013. Evaluation of marine spatial planning. Mar. Policy 37, 214–229.

Climate Change (Scotland) Act, 2009. Available at: http://www.legislation.gov.uk/asp/2009/12/contents.

Island Councils, The, 2013. Our Islands Our Future. Constitutional Change in Scotland – Opportunities for Island Areas. Available at: http://www.orkney.gov.uk/Council/C/our-islands-our-future.htm.

Creswell, J.W., 2007. Qualitative Inquiry and Research Design: Choosing Among Five Approaches. Sage.

Crown Estate, The, 2011. http://www.thecrownestate.co.uk/news-and-media/news/2011/crown-estate-report-highlights-pentland-firth-supply-chain-opportunities/.

Crown Estate, The, 2009. Presentation. Available at: http://www.ths.org.uk/documents/ths.org.uk/downloads/11_-_jamie_moore_-_the_crown_estate_mars.pdf.

Crown Estate, The, 2013. Pentland Firth and Orkney Waters Wave and Tidal Projects Enabling Actions Investment Programme Look-ahead February 2013. http://www.thecrownestate.co.uk/media/5421/pfow-ea-look-ahead-document.pdf.

Curtin, R., Prellezo, R., 2010. Understanding marine ecosystem based management: a literature review. Mar. Policy 34 (5), 821–830.

Dean, M., 2006. Governmentality: Power and Rule in Modern Society. SAGE Publications.

Defra, 2002. Safeguarding Our Seas - a Strategy for the Conservation and Sustainable Development of Our Marine Environment. Department for Environment, Food and Rural Affairs.

Douvere, F., 2008. The importance of marine spatial planning in advancing ecosystem-based sea use management. Mar. Policy 32, 762–771.

Ehler, C., Douvere, F., 2009. Marine Spatial Planning: a step-by-step approach toward ecosystem-based management. In: Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. UNESCO (english), Paris. IOC Manual and Guides No. 53, ICAM Dossier No. 6.

Crown Estate, The, website:.http://www.thecrownestate.co.uk/about-us/.

European Commission, The, 2008. Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU.

Fesmire, S., 2010. Ecological imagination. Environ. Ethics 32 (2), 183–203.

Fletcher, S., McKinley, E., Buchan, K.C., Smith, N., McHugh, K., 2013. Effective practice in marine spatial planning: a participatory evaluation of experience in Southern England. Mar. Policy 39, 341–348.

Flick, U., 2009. An Introduction to Qualitative Research, fourth ed. Sage.

Foucault, M., 1979. In: Senellart, M. (Ed.), 'The Birth of Biopolitics': Lectures at the Collège de France 1978–1979, p. 1.

Foucault, M., 2003. 'Society Must Be Defended': Lectures at the Collège de France, 1975–1976. Picador, New York.

Gilliland, P.M., Laffoley, D., 2008. Key elements and steps in the process of developing ecosystem-based marine spatial planning. Mar. Policy 32, 787–796.

Gopnik, M., Fieseler, C., Cantral, L., McClellan, K., Pendleton, L., Crowder, L., 2012. Coming to the table: early stakeholder engagement in marine spatial planning. Mar. Policy 36, 1139–1149.

Halpern, B.S., McLeod, K.L., Rosenburg, A.A., Crowder, L.B., 2008. Managing for cumulative impacts in ecosystem-based management through ocean zoning. Ocean Coast. Manag. 51, 203–211.

Haughton, G., et al., 2010. The New Spatial Planning. Territorial Management with Soft Spaces and Fuzzy Boundaries. Routledge.
Healey, P., 2004. The treatment of space and place in the new strategic spatial planning in europe. Int. J. Urban Regional Res. 28 (1), 45–67.
Heddle, S., 2013. Comments from the *Our Islands – Our Future* Campaign Conference are Available on the Blog at. Orkney Island Council. http://www.orkney.gov.uk/Council/C/our-islands-our-future-conference-blog.htm (last accessed 10.07.2014).
Highland and Islands Enterprise: http://www.hie.co.uk/default.html.
Jay, S., 2010. Planners to the rescue: spatial planning facilitating the development of offshore wind energy. Mar. Pollut. Bull. 60, 493–499.
Jentoft, S., 2007. Limits of governability: institutional implications for fisheries and coastal governance. Mar. Policy 31, 360–370.
Johnsen, J.P., 2014. Is fisheries governance possible? Fish Fish. 15, 428–444.
Johnsen, J.P., Hersoug, B., 2014. Local empowerment through the creation of coastal space? Ecol. Soc. 19 (2), 60.
Kelly, C., Gray, L., Shucksmith, R., Tweddle, J.F., 2014. Review and evaluation of marine spatial planning in the Shetland Islands. Mar. Policy 46, 152–160.
Kerr, S., Johnson, K., Side, J.C., 2014. Planning at the edge: integrating across the land sea divide. Mar. Policy 47, 118–125.
Kjær, A.,M., 2004. Governance. Polity Press, Cambridge.
Kooiman, J., Bavinck, M., Jentoft, S., Pullin, R., 2005. Fish for life: interactive governance for fisheries. In: Jentoft, S., Bavinck, M. (Eds.), MARE Publication Series: No. 3Amsterdam University Press, Amsterdam.
Law, J., 1992. Notes on the theory of the actor-network: ordering, strategy, and heterogeneity. Syst. Pract. 5 (4), 379–393.
Lefèvre, C., 1998. Metropolitan government and governance in western countries: a critical review. Int. J. Urban Regional Res. 22 (1), 9–25.
Marine Resource System (MaRS) Members Portal: http://www.marsmapping.co.uk/Login.aspx?ReturnUrl=%2fDefault.aspx.
Marine Scotland, 2012. Pilot Pentland Firth and Orkney Waters Marine Spatial Plan: the Plan Scheme 2012. Available at: http://www.gov.scot/Resource/0040/00408910.pdf.
Marine Scotland, 2013. Pilot Pentland Firth and Orkney Waters Marine Spatial Plan Planning Issues and Options Consultation Paper.
Marine Scotland online: http://www.gov.scot/Topics/marine/Licensing/marine.
Moisio, S., Luukkonen, J., 2014. European spatial planning as governmentality: an inquiry into rationalities, techniques, and manifestations. Environ. Plan. C Gov. Policy 32.
Montgomery Committee The, 1985. Report of the Committee of Inquiry into the Functions and Powers of the Islands Council of Scotland: Statement by the Secretary of State for Scotland.
National Marine Plan Interactive (NMPi): http://www.scotland.gov.uk/Topics/marine/seamanagement/nmpihome/nmpi.
Olsson, P., Folke, C., Berkes, F., 2004. Adaptive co-management for building social-ecological resilience. Environ. Manag. 34, 75–90.
Orkney Economic Review 2012–2013. Available at:: http://www.orkney.gov.uk/Files/Business-and-Trade/Economic_Review/Orkney_Economic_Review_2012-13.pdf.
Orkney Islands Council, 2014. The Orkney Local Development Plan. Available at: http://www.orkney.gov.uk/Service-Directory/O/Orkney-Local-Development-Plan.htm.
Rhodes, R.A.W., 1997. Understanding Governance: Policy Networks, Governance, Reflexivity and Accountability. Open University Press, Maidenhead, GB, Philadelphia, US, p. 252 (Public Policy & Management).
Scottish Affairs Committee – Seventh Report: The Crown Estate in Scotland, 2012. Quote in the Summary. Entire report Available at: http://www.publications.parliament.uk/pa/cm201012/cmselect/cmscotaf/1117/111702.htm.
Scottish Government, The, 2007. AGMACS Report. Available at: http://www.scotland.gov.uk/Topics/marine/seamanagement/marineact/16440.
Shucksmith, R., Gray, L., Kelly, C., Tweddle, J.F., 2014. Regional marine spatial planning – the data collection and mapping process. Mar. Policy 50, 1–9.
Smith, G., Brennan, R., 2012. Finding our way with Mapping: thinking critically about marine spatial planning in Scotland. Ocean Coast. Manag. 69, 210–216.
Smith Commission, The 2014. Report available at:: https://www.smith-commission.scot/wp-content/uploads/2014/11/The_Smith_Commission_Report-1.pdf.
Smith, H.D., Maes, F., Stojanovic, T.A., Ballinger, R.C., 2011. The integration of land and marine spatial planning. J. Coast. Conservation 15, 291–303.
Stelzenmüller, V., Lee, J., South, A., Foden, J., Rogers, S.I., 2013. Practical tools to support marine spatial planning: a review and some prototype tools. Mar. Policy 38, 214–227.
UK Marine and Coastal Access Act, 2009. Available in full at: http://www.legislation.gov.uk/ukpga/2009/23/pdfs/ukpga_20090023_en.pdf.
UK Parliament, 2012. Statement. Available at: http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenergy/1624/1624we13.htm.
White, C., Halpern, B.S., Kappel, C.V., 2012. Ecosystem service trade off analysis reveals the value of marine spatial planning for multiple ocean uses. PNAS 109 (12), 4696–4701.
Yin, Robert, K., 2009. Case Study Research – Design and Methods, fourth ed. SAGE Publications.

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Marine spatial planning in Scotland. Levelling the playing field?

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ABSTRACT

Marine spatial planning (MSP) is the leading tool for managing human activities at sea. It is designed to assist in decision making for marine resource access and use by considering the actions of those using the resources, interactions between these groups, and their cumulative impact on the natural environment. Being informed by ecosystem based management, MSP recognises that socio-natural systems are complex and that stakeholder and public input are key components of well-informed decision making. Therefore, MSP is rooted in the principles of good governance, including those of participation and transparency. This paper considers MSP processes in Scotland's inshore waters in the context of these good governance principles. The focus is on the institutional arrangements that allow stakeholders and the public to contribute to planning Scotland's seas and coasts. Whilst acknowledging the significant challenges faced by planners, and the work conducted so far, this research suggests that improvements could be made in how – and when – engagement takes place. It appears that at an early stage of introducing MSP in Scotland powerful stakeholders shaped the images, values and principles that guide it, and that including a broader range of actors early on might positively affect the legitimacy and acceptance of MSP in its later stages. The current institutional arrangements do not appear to allow for this. Ultimately, MSP in Scotland is in danger of institutionalising – and thus legitimising – existing power relations between marine resource users, and it does little to level the playing field.

1. Introduction

Marine spatial planning (MSP) is a relatively new tool for supporting decisions on the use and non-use of marine space. It considers interactions and conflicts between marine space user groups, socio-economic factors, and the status and vulnerability of the natural environment. MSP has emerged from ecosystem based management (EBM), which "seeks to broaden the scope of traditional resource management so that it considers a wider range of ecological, environmental and human factors in the exploitation of resources" [1: 821]. The early MSP literature made clear that these human factors should include the views of stakeholders [2–6]. This was also a prominent theme in the step-by-step guidelines developed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) [5]. Ideally, stakeholders should come to the table early [7] when the guiding principles, goals and objectives are set (known as 'front loading' the process), and be involved regularly along the way to creating, implementing, and monitoring a marine plan [5]. In short, stakeholder engagement should be considered as intrinsic to MSP [2].

These early publications explain how stakeholders can be engaged through the dissemination of information, through workshops, training sessions, and even making financial resources available for hiring professional negotiators for groups and individuals who might not know how to fully represent their own interests [5]. It was also argued that in accordance with good governance practice the process should be "transparent, open, and inclusive" [2: 789]. Whilst addressing the issue of deciding who stakeholders are, Pomeroy and Douvere (2008) observed that:

> "Although stakeholders must be defined broadly in order to capture a wide range of groups and individuals, it is important to note they are also often dangerously simplified, suggesting that interests, experiences, needs and expectations are homogenous among a given group of people. The reality is far more complex, and methods used in stakeholder identification and analysis must accept and reveal this complexity…" [6: 819].

Addressing these differences is key to ensuring that MSP has widely desired outcomes. Stakeholders are often painted with a broad brush and this ignores not only their level of interest in the marine environment at stake, but also their diversity and differential capacities. In reality they might be individuals, businesses, communities, organisations, or take a variety of other forms. The role of the state is also

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important, both as a stakeholder and – in most cases – the ultimate governing authority in MSP. All of these actors "have different ways of knowing the world, different ways of accessing the world and different ways of reasoning and valuing" [8: 207]. Consequently, the task of involving this diverse group is much more difficult than simply enabling stakeholders to participate; they also need to be empowered so that their contribution is meaningful [6].

However, as the theoretical foundation of MSP was being laid, the issue of power was arguably not sufficiently problematized [9]. The power struggles between stakeholders – and those between stakeholders and planning authorities – need to be explicitly addressed before marine space use can be effectively and justly planned. Recent assessments of MSP processes suggest that there is a disparity between these ideals and the reality. A report on case studies from twelve European countries analysed 'MSP-ing' (the act of 'doing' MSP) and found that the process differs substantially from its underlying theory [10]. For instance, "MSP-ing is often focused on achieving specific sectoral objectives, related to nationally important strategic priorities", rather than protecting stakeholder interests (Ibid: 256).

With MSP now widely used as a tool for managing human interactions with the marine environment, it is time to re-visit its ideals, and critically assess the way it deals with the heterogeneity of stakeholders and their relative influence in concrete situations, like in the case of Scotland, which is the focus of this paper. A case study like this one is useful for asking 'how' or 'why' questions about a "contemporary set of events over which the researcher has little or no control" [11: 13]. Case studies carried out in real contexts are also well suited for theory development and learning, as, in addition to providing empirical description, they also provide insights into what the case under investigation is "a case of" [12].

This paper poses two important questions. Firstly, to what extent is the diversity of stakeholders considered in Scottish MSP? And secondly, what is done to address existing power struggles between stakeholders? In doing so the aim is to generate discussion of stakeholder engagement processes in the Scottish MSP system. The paper begins, in Section 2, by outlining the theoretical basis of stakeholder participation in natural resource governance, including the main issues and challenges and how they relate to MSP. The methodology is presented in Section 3 before the MSP system for Scotland is introduced in Section 4. Section 5 then turns to the main issues with stakeholder participation in MSP in Scotland. The paper ends with a discussion of these issues and a conclusion in Sections 6 and 7, respectively.

2. Stakeholder engagement: how, why and when?

MSP comes with a broad set of concerns and goals founded on multiple principles related to ecosystem-based management (EBM) and good governance, which suggests a holistic, transdisciplinary approach to planning and decision making [13,14]. MSP also appreciates the complexity of planning and decision-making challenges in the face of inherent risks, such as that marine ecosystem-integrity and functioning are vulnerable to human intervention and resource use. MSP is intended as a deliberative approach to decision making in accordance with principles of "good governance", including those of participation and transparency [2].

MSP should, therefore, not be seen as a technical fix for "tame" problems, but an interactive governance process aimed at problems that are intractable, or "wicked" [15,16]. Problems have been described as wicked "when they are difficult to define and delineate from other and bigger problems and when they are not solved once and for all but tend to reappear" [16: 553]. Additionally, it might not be clear when a wicked problem has been solved and it might have no right or wrong solutions [Ibid.]. The term has been used frequently to describe natural resource management scenarios [17–20]. In keeping with this perspective, and with its roots in EBM, MSP recognises the complexity of socio-natural systems and that there are many different stakeholders, with values and interests that might contradict one another. For example, capture fisheries and fish farming may be at odds with each other. Likewise, offshore wind farms may limit the use of both, and might hamper boat transport, and all of these activities might individually or collectively affect the natural environment. Such resource management problems fit the description of being wicked due to their complexity, and also the difficulty in determining whether it is indeed the human intervention, such as through MSP, that has caused any noted improvement in the situation (i.e. the cause and effect relationship, or 'attribution problem' [21]).

As a "good governance" principle, stakeholder participation adds a normative prescription to MSP in line with classical ideas of democracy. The prescription is that people have a right to be heard when the decisions being made concern them [22]. As well as allocating marine space for certain uses, MSP works from the assumption that planning can help alleviate stakeholder conflicts, thus turning an otherwise zero-sum game into one that can mutually benefit all groups. Involving stakeholders in the planning and the decision-making process should, therefore, be facilitated and institutionalised, and should not necessarily be subjected to a cost-benefit analysis. Participation may be time consuming, but may also reduce transaction costs at some later stage in the process, as when the plan is being implemented [16,23]. For instance, it is expected that stakeholders would be inclined to respect the spatial boundaries set aside for them. It also broadens the knowledge-base: stakeholders have relevant experiences and contextual insights that may inform the planning process. Therefore, stakeholder participation has both functional and inherent value: it may produce better outcomes, but is also a matter of principle.

This paper considers stakeholder interaction from the perspective of Kooiman's three "orders of governance" [24]. "Meta-order" governance relates to the images, values and principles that guide MSP. One cannot assume that stakeholders are in agreement about what these images, values and principles are and should be, even within one stakeholder group. The "second order" regards institutional arrangements that allow MSP to take place. These are rules, rights, laws, roles, procedures and organisations that govern the planning process by providing the settings for interactions that occur between stakeholders at the "first order". The first order refers to "wherever people and their organisations interact in order to solve societal problems and create new opportunities" (Ibid: 7). First order governance denotes the daily decisions and actions of planning.

Notably, stakeholder participation in MSP is relevant at all three governance orders, but in different ways. Most crucially, stakeholders should engage in the deliberation of principles, problem definitions, and the setting of goals at the meta-order. Stakeholders also have a role at the second order, i.e. in decisions regarding the formation of MSP institutions and the determination of mandates. Finally, they may be involved in the daily decision making that is carried out by planning agencies, but perhaps more in a monitoring role. Stakeholders thus find themselves both at the giving and receiving end of the MSP process. At the meta-order, MSP frames problems and establishes guiding principles to start with, and lead by. The next question at the second order, is what institutions are best suited to facilitate a planning process where stakeholder participation is effective, representative and socially just? Who are the stakeholders and how should they be represented? Should participation be direct or indirect? And who decides on these matters? Ultimately, who plans the planning?

Power is activated at all three orders. Power counts when images and values frame problems and principles, and when stakeholders argue about them. For example, Smith (2015) [25] posits that power relations and processes affect the acceptance of MSP. Power is also involved when institutions are created. Foucault argued that institutions are both the outcome and instrument of power [26]. Power operates at the first order when people interact strategically and pragmatically, i.e. when rules are implemented. Importantly, power is both within and outside MSP; it is present and active prior, during and after

the planning. It is to be expected that stakeholders may already be engaged in power games when MSP is introduced, and those games may continue within the MSP process. Whether and how MSP may alter such power-relations and games is an interesting research question.

Mitchell, Agle and Wood [27] categorise stakeholders according to their 'salience' as judged by the power they have, the urgency of their needs, and the legitimacy of their concerns. The salience of a "definitive" stakeholder is high as all three attributes are deemed to be present, two are present in a moderately salient, or "expectant", stakeholder, whereas in a "latent" stakeholder exhibits only one of the attributes. This categorisation provides guidance to the planning of representation and participation; in the example used this is for management in business. Following the logic, one would expect the definitive stakeholder to be fully represented and active, the expectant to be an observer, whereas the latent would be outside and perhaps knocking on the door. However, the key attribute in affecting decision-making processes is power. In fact, Mitchell, Agle and Wood [27] describe stakeholders with power and urgent needs as "dangerous" (p. 874). Powerful actors can also lie dormant, becoming actively involved in management when it suits them or their needs increase. Such situations will have a bearing on MSP proceedings, where it is likely that some stakeholders have more resources with which to secure their stakes. Without a nuanced stakeholder concept, like that of Mitchell et al., MSP risks entrenching power imbalances to begin with, and therefore create a stakeholder "tyranny" by supressing minority voices and interests, which Cooke and Kothari [28] warned against [see also 29]. What it would actually take to minimise power imbalances in concrete contexts is also a matter to be explored, from the first step onwards, as a bad start may be hard to correct, both at later stages and at lower governing orders.

3. Methodology

This paper, which considers stakeholder interaction within MSP in Scotland, is based on research conducted between 2013 and 2016. It is informed by extensive literature research into MSP theory, design and practice, and aims to contribute to our understanding of MSP and ways to improve it in terms of good governance, using Scottish MSP as a case in point. The theoretical basis was supplemented by extensive reviews of official marine policy and planning documents for the UK and Scotland, including consultation responses, draft plans and press releases from key organisations, such as Marine Scotland and the Crown Estate. The research also included extensive interviews with representatives from the organisations listed below, and site visits, which occurred in three clusters in 2013, 2014 and 2015. The first of these was aimed at becoming familiar with the situation 'on the ground' by focusing specifically on the case of the Pentland Firth and Orkney Waters non-statutory pilot plan (further details on this follow below in Section 4). During the research phase this plan was still being compiled and two public consultation events on the plan in Kirkwall and Thurso in July 2014 helped inform the plan making process. Participatory and non-participatory observation at these events gave a detailed impression of how the public is engaged during the formation of marine spatial plans in Scotland. The level of researcher participation varied from from passive, to moderate and active [30], depending on the subject matter. This is because a researcher must remain aware of his or her influence over proceedings. There was ample opportunity at these events to conduct impromptu, informal interviews with attendees.

In addition, a total of twenty-one formal, semi-structured interviews were conducted with a broad range of organisations including The Crown Estate, The Highland Council, The Orkney Islands Council, the Orkney Fishermen's Society, the European Marine Energy Centre, Marine Scotland, the Marine Scotland Licensing and Operations Team, the Moray Firth Coastal Partnership, Community Land Scotland, The Development Trust Association, The University of Edinburgh, Heriot Watt University, The Cairngorms National Park Authority, The East Neuk Estates, the Community of Arran Seabed Trust, the Knoydart Foundation, and the Scottish Parliament. All interviews were recorded and some sections transcribed.

4. Marine spatial planning in Scotland

As outlined above, MSP is designed to guide decision making on the use and non-use of marine resources in areas where competition for these is high, available space is limited, and marine ecosystems are vulnerable. Scotland serves as a good example of this conundrum. This paper focuses on MSP for Scotland's inshore waters, defined as the area up to 12 nautical miles from the Mean Spring High Waters (MSHW). A large range of actors access and use this area. Uses include, but are not limited to, fishing, aquaculture, shipping, tourism, and, more recently, marine renewable energy generation, especially from waves and tides.

In order to cope with the increased pressure on inshore marine ecosystems and resources, and also in accordance with the EU Directive 2014/89/EU, the Scottish Government is implementing MSP. This process began a decade ago when the Advisory Group on Marine and Coastal Strategy (AGMACS – now disbanded) concluded in a report that "[t]here should be a system of Marine Spatial Planning … [with] … a statutory basis, though potentially with a variable control" [31]. Similar conclusions were made across the UK, and marine planning featured in the High Level Marine Objectives released jointly in 2009 by the UK Government, the Northern Ireland Executive, the Scottish Government, and the Welsh Assembly. In 2011 the UK Marine Policy Statement established a specific framework for preparing marine plans and taking decisions that affect the marine environment [32].

The Marine (Scotland) Act 2010 gave the Scottish Government unprecedented powers to plan its seas, except for some reserved functions, such as defence, which are legislated by the UK Government.[2] The same Act stipulates that Scottish Ministers must prepare a National Marine Plan (NMP). Such a plan was finalised in March 2015, and sets the national objectives for managing Scotland's seas. The plan follows the high level policy context and common vision of the UK Administrations as set out in the UK Marine Policy Statement and sets the broad aim of having "clean, healthy, safe, productive, and biologically diverse oceans and seas" [33: 4].

The NMP shall be implemented at a regional level through twelve Scottish Marine Regions (SMRs). Within each SMR Scottish Ministers have the right – but not the duty – under the Marine (Scotland) Act 2010 to appoint a 'delegate' made up of members who bring in relevant expertise, skills and knowledge of marine planning in the region [34]. These delegated groups shall be responsible for drafting local marine plans based on the needs, pressures and opportunities in the region. They are commonly referred to as Marine Planning Partnerships (MPPs). Aside from the initial process of creating the NMP, to which we return below in Section 5.1, the MPPs are the principal mechanism for stakeholder engagement in Scottish MSP. At the time of writing the only complete MPP is that for the Clyde area in the south west of Scotland, known as the Clyde MPP, or CMPP. More details on the creation of MPPs follow below in Section 5.2.

The first regional marine plan to test procedures under the Marine (Scotland) Act 2010 was completed in March 2016 for the Pentland Firth and Orkney Waters (PFOW). This is Scotland's third marine spatial plan overall, having been preceded by the Shetland Marine Spatial Plan (now in its fourth edition: the Shetland Islands Marine Spatial Plan 2015) and the Clyde Marine Spatial Plan 2010. The PFOW region is in the northeast of Scotland and includes the islands of Orkney and part of the mainland coast (see Fig. 1 below). However, the plan will eventually be divided to cover the two regions of Orkney and the North Coast. There is potential to harness an estimated 1.6 GW of marine

[2] Offshore waters from 12 to 200 miles are legislated under both the Marine (Scotland) Act 2010 and the Marine and Coastal Access Act 2009.

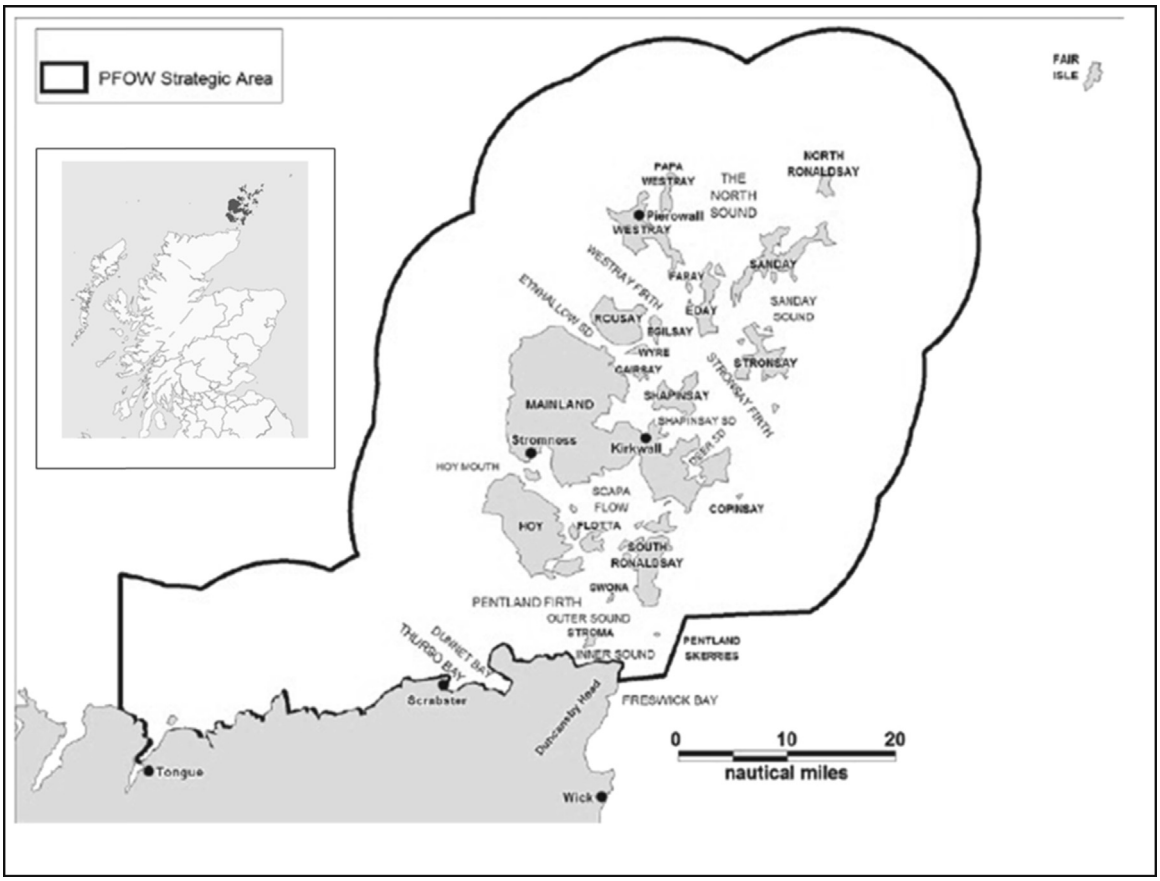

Fig. 1. Map showing the location of Orkney and the PFOW strategic planning area to 12 nautical miles. Adapted from Smith (2015) [19].

renewable energy in the area from waves and tidal flows [35]. These developments will impact upon current maritime activities and – most likely – the natural environment, and so it was seen as necessary to plan. At this stage the PFOW is a pilot plan and categorised as non-statuary supplementary guidance for marine planning and decision making. All of the regions will initially have this status, and at present only the Shetland Islands Marine Spatial Plan 2015 has been made statutory.

5. Stakeholder engagement in Scottish MSP

Under these institutional arrangements for MSP in Scotland, the first stakeholder engagement occurred between 2010 and 2014, and focused on the development of the national marine plan itself (meta – and second orders). The next round, which has not happened yet, shall involve the MPPs creating regional plans (second – and first orders). The third stakeholder engagement opportunity will be through the use of plans to guide the decision-making process and consultations on individual development plans (first order). Now in 2017, almost two years since the NMP was published, most of the MPPs have not been formed yet. Research conducted here highlighted some possible reasons for this delay, and found that there were problems with the consultation processes for creating the NMP and the MPPs. We begin here by considering the former of these two.

5.1. Preparing the national marine plan

There were several occasions for stakeholder engagement during the preparation of the NMP: an initial 'joint workshop' to establish the plan's scope, content and objectives; pre-consultation on the draft; and consultation on the draft. The whole process was overseen by Marine Scotland, which is a Directorate of the Scottish Government and is responsible for the integrated management of Scotland's seas. During such consultations the Marine (Scotland) Act 2010 mandates Marine Scotland to release a Statement of Public Participation (SPP), outlining how stakeholder and public engagement and cross-boundary working are ensured. According to the SPP "Marine Scotland, and the Scottish Government as a whole, is committed to:

- "involving all relevant stakeholders and members of the public in the development of policies that will impact upon them.
- arrangements for participation are inclusive, clear and transparent
- communication is provided through a range of formats and jargon free
- all representations are fully considered."

[36: 1]

These commitments are reminiscent of the guidelines set out in early MSP literature. A couple of noteworthy points stand out in this mandated list. The first is the issue of providing 'jargon free' communication through a range of formats. Marine spatial planning deals with complex issues, especially at the national level. The range of maritime industries, conservation priorities and natural elements of the marine environment is huge, as are the data sets that accompany them. The general dissemination of information to the public – and the way it is presented – by Marine Scotland is commendable related to this ambition. For example, in 2011 Marine Scotland published their Marine Atlas, which is "an assessment of the condition of Scotland's seas, based on scientific evidence from data and analysis, supported by expert judgment" and "provides baseline information from which the national marine plan will be developed." [37] The data is now accessible through the National Marine Plan interactive (NMPi) where it is continuously updated. In addition, a hard copy of the atlas was sent to all schools in the country and additional educational resources were made

available to teachers. In 2014 the atlas won the "Ebook Flowable – Reference/Academic" category at the annual Digital Book Awards [38]. This atlas has given a huge number of people fresh insights into Scotland's seas and inspired discussions at all levels. It is still a significant step up from here to conducting informed debates on marine policy and a national marine plan, but generating interest is a crucial platform for meaningful engagement.

The fact that 'all relevant stakeholders' and 'all representations' should be involved is also important. However, the timing of this is involvement is key. The stakeholder engagement for the NMP began with a single 'joint workshop', which was held on 29 April 2010, and had two purposes. The first was to consult with stakeholders from all sectors in Scotland on whether the UK Marine Policy Statement met their requirements. The second was to obtain their suggestions for key objectives for the NMP. Representatives from the following sectors were present: Aquaculture Fish, Aquaculture Shellfish, Ports and Harbours, Renewables, Conservation, Oil & Gas, Ministry of Defence, Leisure and Recreation, Local Authorities, Historical Assets, Commercial Sea Fisheries, Tourism, Shipping.

This set-up resembles a cross-sectoral approach, and not a 'public process' that it was originally intended to be [5], given that local communities were absent. The sectors listed above have been staking their claims to marine resources for decades (for centuries in the case of sea fisheries), and power relations between them have been established, tried, tested and re-established countless times. The images and values that framed the objectives for Scottish MSP were largely set before this workshop in the UK High Level Marine Objectives, which formed the basis of the UK Marine Policy Statement. These high level marine objectives are primarily concerned with encouraging growth in maritime industries. They begin with ensuring that: "[i]nfrastructure is in place to support and promote safe, profitable and efficient marine businesses", and "[t]he marine environment and its resources are used to maximise sustainable activity, prosperity and opportunities for all, now and in the future" [32: 11]. The majority of attendees at the NMP workshop have economic interests in decisions on the use of marine space and an interest in keeping these objectives high on the list. These interests are not necessarily in harmony with those of coastal communities, which did not partake.

The absence of public debate at this stage of NMP formation is reflected in early versions of the plan. The pre-consultation draft, for example, states that the NMP must set out policies for the sustainable development of Scotland's seas; policies on nature conservation and marine protected areas (MPAs); economic, social and ecosystem objectives, and how to mitigate and adapt to climate change; assessments of the condition of Scotland's seas; and information on other appropriate policies. The document also states "the sustainable economic development aspects of the plan focus primarily on the vision for individual sectors and are a necessary first step towards developing an integrated plan" [39: 10]. Aside from the mention of 'social objectives' these statements seem to lack the public dimension that is so central to the legitimacy and acceptance of MSP. In closely following the High Level Marine Objectives the final version of the NMP also links a 'just society' mostly to the public appreciation of a diverse marine environment, equitable access to the coasts and seas, and the benefits of a strong maritime economy [33: 128]. The importance to MSP of public input was absent in this interpretation of a just society.

The plan was not subjected to wider scrutiny until a national consultation held between 25th July and 13th November 2013, three years after the initial workshop outlined above. Marine Scotland embarked on a 16-week tour of the country to gather input from people in about thirty locations. In each location 'drop-in' sessions and presentations by Marine Scotland took place. The consultation also invited written responses, and a total of 124 were received: 16 from individuals and 108 from organisations. There were notable concerns that the NMP focused too heavily "on economic uses of the environment and not enough on the marine environment, climate change or biodiversity" [40: 2]. This might be as a result of the strong industrial representation whilst setting NMP objectives. Some respondents also addressed directly the issue of engagement under marine spatial planning. Points of contention included how "effective consultation" will be judged; the importance of user-friendly, relevant, and engaging consultation; stakeholders being unable to contribute due to a lack of resources and capacity; and how "all interested stakeholders" will be defined [Ibid: 47,48].

The commitment in the SPP to "inclusive, clear and transparent" arrangements for participation is also worthy of scrutiny. Public consultation processes in Scotland have been criticised in the past for not being truly engaging, amounting to little more than mere "talking shops" [41: 256] and causing "consultation fatigue" [35: 290]. The presentations held by Marine Scotland during the national consultation are quite typical of the techniques that this organisation uses. In an informal interview held with a resident of Inverness who was involved with the Moray Firth Partnership, the modus operandi of Marine Scotland at these consultations was described as "bear pit tactics" whereby participants are in an enclosed situation with high walls and limited freedom of movement. Apparently, Marine Scotland "needs to have its ten minutes on stage" so as to remain in its "comfort zone". Such sentiments were not uncommon among attendees at consultation events attended during this research.

5.2. Creating marine planning partnerships (MPPs)

As mentioned above, Scotland's National Marine Plan will be implemented at regional level through marine planning partnerships (MPPs). This is the second main forum for stakeholder engagement where local stakeholders and planners, with scientific support, develop plans tailored to their coastal and inshore region. Each MPP sets its own membership criteria and decides on the selection process. For the example of the Clyde MPP mentioned previously membership shall be open to "any corporate body which is a Public Body with coastal and marine duties in the Firth of Clyde or an organisation with relevant statutory duties or where the corporate body represents a national body, including non-governmental organisations, with relevant marine and coastal interests where 'corporate body' is defined as a person, association, or group of persons legally incorporated" [42: clause 7b]. Other potential members are any corporate body or person which or who, in the view of members, can provide significant additional relevant skills or expertise in delivering the objectives of the association at a Clyde-wide level and which cannot be secured by the association by other means." [42: clause 7c]. In accordance with the Marine (Scotland) Act 2010, MPPs will receive only limited powers, with Scottish Ministers deciding whether to a) publish a statement of public participation, b) revise a statement of public participation, c) publish a consultation draft [of a plan], and d) publish a regional marine plan or any amendment of such a plan [43: 7]. Licensing and consenting powers – without which no developments can go ahead – will also remain central with the Marine Scotland Licencing and Operations Team.

In addition to the retention of centralised powers, there has been some confusion over the make-up and role of MPPs since they were announced in the Marine (Scotland) Act 2010.[3] When asked to elaborate on MPPs in an interview that was conducted in April 2013, by which time the decision to create MPPs was three years old, one planner working with the Scottish Government on a regional plan emphasised the massive challenges in setting up the partnerships, with the main one being a lack of human and financial resources. There had been no real development in deciding how the MPPs would operate and who would be permitted to participate. The complexity of MSP demands the attention of highly trained and well-funded teams, and it was unclear where these resources would come from. It should also be noted that a possible contributing factor to the delay in creating MPPs in some areas

[3] These are named 'delegates' in the Act but are now consistently referred to as MPPs.

is a lack of enthusiasm from local councils, especially where the pressures on marine space and resources is deemed not to be as great and MSP, therefore, not a priority. This appears valid given the challenge of finding sufficient human and financial resources necessary to plan marine spaces, but it does not go far in explaining the confusion over MPPs.

The written responses to the consultation on the National Marine Plan referred to above suggest that this confusion is fairly widespread. Question 3 of the consultation asked: "Does the NMP appropriately guide development of regional marine planning? What, if any, further guidance is required for regional marine planners in terms of implementation and how to interpret the NMP?" Many respondents pointed to a lack of clarity on MPPs when answering this question. Common concerns included "gaps" in how the NMP describes the implementation of regional marine planning, including the "make-up" of MPPs. Some claimed it was "not sufficiently apparent" how the MPPs will be organised and "what remit and responsibilities will be involved". Further concerns related to how MPPs will be "resourced or timescales within which they will be forwarded". There was also an insistence that local communities and NGOs must have a "real say and a vote" within MPPs (selection of responses taken from The Scottish Government website). [44]

It is also worth noting that the PFOW pilot marine spatial plan was not drafted by an official MPP, which at the time of writing still had not been set up in this region, but instead by a 'Working Group' comprised of three members from Marine Scotland, the Orkney Islands Council and the Highlands Council, with support from an 'Advisory Group'. Creating the pilot plan is an impressive achievement by the Working Group, as is reflected in their receiving the award for Excellence in Plan Making 2017 [45], and the model will help inform the creation of MPPs in other Scottish Marine Regions. However, there is a notable difference between this group supported by public consultations, and a full MPP with broad stakeholder representation as defined, for example, by the membership criteria for the Clyde MPP described above. As such, the PFOW case only provides limited insights into how MPPs will be constituted and how they will operate.

5.3. Planning the planning

A further concern is that while the MSP system is being designed, developments can continue to go ahead in coastal and inshore areas. This was true for the harnessing of tidal flow and wave energy in the Pentland Firth and Orkney Waters (PFOW) area. One respondent claimed in an interview "the cart had bolted before the horse" (25/04/2013). This refers to the decision by the Crown Estate in 2010 to begin leasing areas of the inshore seabed for energy companies to anchor and test their devices.[4] Local fishers were not informed of this decision until after the fact [25,35] and were understandably aggravated by it. MSP is intended to help prevent and/or resolve such conflicts by facilitating the involvement of stakeholders in decision-making. In this case it appears, however, that existing development priorities in one of Europe's most promising sites for marine renewable energy development were not prepared to wait to be planned.

The first step in producing this pilot plan was to prepare a 'Planning Issues and Options' paper. This paper sets out the known local issues and what options exist for tackling them. One planner said of preparing this paper that a concern was "how to approach businesses without getting bogged down in conflict or choosing between them" and that it was decided that "this was not the forum for it" (30/04/2013). These businesses, which are local stakeholders, would be consulted at a later stage. Such statements expose common value judgements that precede the engagement with stakeholders. The conflicts between businesses were omitted from early drafting processes. However, it can be argued that stakeholders, including local businesses, are best placed to draft the list of issues and options for a region, not only comment upon a completed draft.

So far, in this paper, we have considered the stakeholder engagement processes for the creation of the NMP and setting up the MPPs. In creating the NMP relevant and accessible information was made widely available. The main points of contention were that the most powerful maritime industries seemed to dominate proceedings and that NMP objectives can be traced directly to the High Level Marine Objectives for the UK Marine Policy Statement. Some of the consultation responses expressed concerns that resulting objectives were primarily concerned with economic outcomes. There is little to suggest that MSP will alleviate conflicts between users of marine space if the same sectoral priorities are allowed to take priority. As for the MPPs, there is still some confusion as to their role and make-up, and progress towards setting them up has been slow. Decision-making powers remain in the hands of Scottish Minsters and there is some concern that the voices of local communities might be excluded. These problems lead us to consider the very early phases of planning: essentially who plans the planning? Value judgements made at an early stage and imposed on stakeholders can have a significant bearing on the rest of the planning process.

6. Discussion

The very process of thorough stakeholder participation and deliberation, while often time consuming and costly, could result in outcomes that more accurately reflect the complexity of the local situation. Therefore, "the subjectivity that stakeholders bring to the process needs to be valued for its enrichment of debate" [46: 711]. These authors would probably argue that "getting bogged down" in the details and working through time-consuming deliberations with many stakeholders is precisely what is required at this early stage, thus disagreeing with the notion that is a necessarily a negative thing. If MPPs are indeed going to develop into a truly representative and meaningful mechanism for local input into plan development, then Marine Scotland – and the Scottish Government more generally – need to take seriously the concepts of enriching the debate, and 'front loading' the engagement process.

The membership criteria set by the Clyde MPP allows a broad range of stakeholders to join the partnership. Maritime industries are well represented, as are nature and historical asset conservation bodies, and local authorities. A few of points worth noticing are that firstly; the wording for MPP membership criteria makes it clear that new members must bring skills and expertise that cannot be *secured by the association by other means,* as quoted above. This is an open-ended caveat that could be used to exclude a variety of types of bodies or individuals who are legitimate but not necessarily the 'definitive' stakeholders that Mitchell et al. (1997) refer to [27]. Secondly, as with the process of creating the NMP, membership is restricted to those with specific marine and coastal interests. Whether this is broad enough to include interested community groups is an open question. However, the emphasis on relevant skills and expertise makes this a doubtful prospect. The authority to determine who is a relevant stakeholder is a powerful one.

What would enrich the debate in MPPs? What if the drafting of regional plans by MPPs were a more public process, inclusive of local community interests? The consultations on the 'Planning Issues and Options' paper give us a good indication. Although the paper had already been drafted, local residents were given the opportunity in two consultations to speak openly, and the resulting debate was as varied and fruitful as Ritchie and Ellis [46] might have hoped. As is perhaps to be expected, the role and interests of local communities were a concern among attendees, with some demanding to know "how are communities supposed to use the marine spatial plan?" and claiming, "with more autonomy we can control the situation better". One participant

[4] The Crown Estate administers the inshore seabed on behalf of the UK Government.

had brought along a large book of coastal photography to demonstrate the natural beauty that stood to be affected by putting renewable energy devices in the sea. There was a suggestion that "bureaucracy creates an exclusive world and smokescreens", and another that "streamlining the planning process [an intended goal of MSP] helps the Crown Estate increase revenue more quickly". A particularly poignant observation made about MSP was that "a lot is missed by sticking to measurables." (Observations made at the public consultation events in Kirkwall and Thurso).

The story and sentiment in both consultation events centred on local culture and heritage. The technical and scientific language upon which MSP is based was only beginning to emerge and was lifted largely from the document itself, and from the press releases of key actors such as Marine Scotland, municipal government and the Crown Estate. Whilst this vocabulary is important for the acceptance and development of a MSP mentality [25], the local priorities focused on community and preserving well-being, traditions and livelihoods. Were the attendees given the opportunity to set the 'Planning Issues and Options' themselves, then the tone of the document might have reflected the sentiments expressed in the meetings. The priorities might not have been to streamline the planning process and speed up the deployment of marine renewable devices (one planner admitted, "the plan initially set out to deal with renewable energy" – 30/04/2017). A marine plan developed through a true public process would have taken longer, and might have looked very different. The pilot plan for the Pentland Firth and Orkney Waters has now been published, and of its 216 pages, only three deal specifically with "the well-being, quality of life and amenity of coastal communities" [47: 55–57]. This section might have received more attention. The finding of Jones et al. (2016), referred to initially in this paper – that MSP tends prioritise sectoral interests at the expense of participatory processes – thus finds support in the Scottish case.

MSP aims to solve problems that are 'wicked' because they are complex, persistent, politically charged and hard to define in a way that stakeholders would necessarily agree on. In attempting to solve these problems, it draws on input from stakeholders. The added bonus of doing so is improved legitimacy and – most likely – increased compliance with the decisions made [23]. Stakeholder engagement is essential but not without challenges. Given the diversity and power-differentials among stakeholders, how does MSP level the playing field? The observations of this research suggest that more could have been done to achieve this in the Scottish case.

Crucially, as argued above, stakeholder engagement has functional and inherent value. The inherent value is acknowledged in the Scottish system, such as with the legal requirement for Marine Scotland to release a Statement of Public Participation. Such a statement demonstrates the country's commitment to democratic principles in MSP. What is questionable, however, is to what extent the process maximises the functional value of engaging stakeholders. This is largely a question of timing: of who is engaged when. The first opportunity for stakeholder engagement occurred through consultation on the National Marine Plan. The fact that it was done in a single joint workshop whilst completing the UK Marine Policy Statement demonstrates an efficient use of time, but suggests that there is no significant change in approach to stakeholder engagement under MSP relative to the way the High Level Marine Objectives and the Marine Policy Statement for the whole of the UK were devised. The stakeholders involved in the workshop would rank as 'definitive stakeholders' according to the categorisation by Mitchell, Agle and Wood [27]. These actors have urgent needs, legitimate concerns and, crucially, power.

There is little here to suggest that MSP is a new approach to managing Scotland's seas and deciding who governs. In fact, these power imbalances between key stakeholders appear more determined by current maritime industry objectives, which are dominated by growth in the marine renewable energy industry. The main concern is that there are stakeholders in Scotland's inshore waters with urgent needs and legitimate concerns, but with little power. Fishers are a good example here, especially in the afore-mentioned prioritisation of locating marine renewable energy infrastructures in the PFOW case. These have no existing statutory powers to effect marine planning (or indeed fisheries management) and the new system of MSP does very little to rectify this. Therefore, power dynamics between stakeholders remain either unaffected, or tip in the balance of industries targeted by blue growth priorities.

In addition to this, further research might help understand where members of the public fit into this categorisation for marine planning. This might include considering the social and cultural impacts of large-scale marine renewable energy development in relatively small communities, and/or concerns about the marine environment. If these concerns are left marginalised, there might be an impact on the level of confidence in institutional arrangements for MSP. As expressed in the NMP consultation feedback, communities and NGOs are likely to demand that their concerns are viewed as legitimate and urgent, but by the time the system has been designed, they will only be regarded as expectant or latent stakeholders at best. If these differences are not accounted for, MSP is likely to suffer from lack of support, and then incur transactions cost at a later stage. MSP is fundamentally about affecting the behaviour of people relative to each other and to the environment. It will, however, be most effective in doing this if it is perceived to be an inclusive and just process.

This also indicates that when analysing the impact of MSP one must consider the question of a "step zero" [48]. It is particularly in this very initial step that the meta-order governing occurs, i.e. where the images, values and principles for MSP are decided. There is a strong case for this design stage to be subjected to wider public participation because there is a sizeable difference between asking, for example, "these are the current and emerging sectors accessing and using marine resources, how do we manage their activities?" and "what vision do we have, as a region or community, of the future of our seas and coasts?" Greater public involvement at step zero would quite likely have slowed the process down, but would have perhaps yielded a broader debate and more widely accepted outcomes, thus saving time and effort at a later stage.

This point was indeed acknowledged in the 'lessons learned' report following the creation of the PFOW pilot plan [49]. There was an expressed desire to reach beyond the "usual suspects" during the engagement process (such as developers, Non-Governmental Organisations, government agencies etc.) and perhaps conduct polls on the streets to establish a fuller range of key issues [Ibid: 49]. However, as is often the case with these activities, time and resources were restricting factors. Marine Scotland has a difficult task to carry out when consulting on wicked problems, however, it would do well to take on board suggestions for how to improve its conduct so as not to risk alienating certain actors. Openness to criticism can only lead improvement in its consultation techniques.

The 'orders' of governing for MSP in Scotland are closely related. In a top-down system where central government retains the real decision-making powers, the meta-order can go a long way to determining the institutional design (second-order) and consequently the day-to-day governing actions (first order). In such a scenario the three orders evolve hierarchically. This means that enriching the debate though public participation is not likely to be possible at later stages, at least not in a way that will greatly affect the final plan. The Marine Planning Partnerships (MPP) make up the institutional framework for the implementation of the NMP in the eleven Scottish Marine Regions. However, confusion still remains as to the exact make-up and role of these MPPs. It is still unclear, for example, which existing institutions will be amalgamated with the MPPs. This leaves some actors uncertain of their future role, such as with the Moray Firth Partnership. Judging by some NMP consultation responses, the general public were equally confused about the details of the MPPs. The reason is that at this stage MPPs appear to be primarily a government instrument for top-down marine planning implementation, rather than for a bottom-up

investigation of marine management challenges and possible solutions, or for public and stakeholder engagement and knowledge integration.

Power is involved when institutions like MPPs are created and, and the power of institutions is likely to reproduce and even increase the imbalances that exist at the initial stage. The MPPs facilitate, formalise, and by implication legitimise stakeholder involvement. But they also facilitate, formalise, and by implication legitimise the influence of the most powerful stakeholders. Pre-existing power relations and struggles have thus been built into the institutional design. A good example of this is that prior to the formation of the marine plan, space was designated to the marine renewable energy sector in the Pentland Firth and Orkney Waters. When the MPP for the region is created with the energy sector as a member, the sector will be further legitimised and empowered. In a way this case undermines the worth of the new second order of governing institution, and possibly of the marine spatial planning system itself.

7. Conclusion

This paper suggests that more consideration be given to the apparent strong link between the three orders of governing, and the role of power. This is especially important in light of claims made that MSP tends to be top-down and driven by opportunities for blue growth. Top-down governance is not just about who is making the decisions and how they are implemented, but also about how the system is designed and works, and who this benefits. In this situation, levelling the playing field becomes both in itself an urgent and legitimate concern, not just from the perspective of the individual stakeholder, but the system of MSP as a whole, which aspires to principles of good governance, including social justice. Ideally, for instance, meta-order decisions would be deliberated inclusively among definitive, expectant and latent stakeholders alike, and then implemented at a lower order. Meta-values, norms and principles should be reasoned and not be rushed.

Even in regards to the more easily identifiable stakeholders, MSP should work to address existing power relations between stakeholders, more so than is attempted in the Scottish case. If not, MSP might work to entrench and exacerbate certain power-relationships and hierarchies. MSP is a new management framework being introduced at the highest level by the European Union and by member states, including the UK. Therefore, decisions made within it will carry significant authority, especially when the system becomes statutory in these states. MSP is more than a technical management fix. Rather, it is a complex process, which must live up to standard criteria of good governance. It must also engage with power-relations and struggles in a way that secures social justice. This paper suggests that although Scotland appears to be moving in the right direction with MSP, it has a way to go within MSP before this idea is realised. But experiences in Shetland, Clyde and the PFOW areas should contribute to this learning process. From these examples we might learn how the playing field could be levelled in a way that allows also expectant and latent stakeholders to make meaningful contributions to decision making.

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References

[1] R. Curtin, R. Prellezo, Understanding marine ecosystem based management: a literature review, Mar. Policy 34 (5) (2010) 821–830.
[2] P.M. Gilliland, D. Laffoley, Key elements and steps in the process of developing ecosystem-based marine spatial planning, Mar. Policy 32 (5) (2008) 787–796.
[3] F. Douvere, The importance of marine spatial planning in advancing ecosystem-based sea use management, Mar. Policy 32 (5) (2008) 762–771.
[4] F. Douvere, C.N. Ehler, New perspectives on sea use management: initial findings from European experience with marine spatial planning, J. Environ. Manag. 90 (1) (2009) 77–88.
[5] C. Ehler, F. Douvere, I.O. Commission, Marine spatial planning: a step-by-step approach toward ecosystem-based-management, UNESCO (2009).
[6] R. Pomeroy, F. Douvere, The engagement of stakeholders in the marine spatial planning process, Mar. Policy 32 (5) (2008) 816–822.
[7] M. Gopnik, C. Fieseler, L. Cantral, K. McClellan, L. Pendleton, L. Crowder, Coming to the table: early stakeholder engagement in marine spatial planning, Mar. Policy 36 (5) (2012) 1139–1149.
[8] A. Kumar, R. Paddison, Trust and collaborative planning theory: the case of the Scottish planning system, Int. Plan. Stud. 5 (2) (2000) 205–223.
[9] S. Jentoft, Small-scale fisheries within maritime spatial planning: knowledge integration and power, J. Environ. Policy Plan. (2017) 1–13.
[10] P.J. Jones, L. Lieberknecht, W. Qiu, Marine spatial planning in reality: introduction to case studies and discussion of findings, Mar. Policy (2016).
[11] R.K. Yin, Case Study Research: Design and Methods, SAGE Publications, 2009.
[12] B. Flyvbjerg, Five misunderstandings about case-study research, Qual. Inq. 12 (2) (2006) 219–245.
[13] G. Scarff, C. Fitzsimmons, T. Gray, The new mode of marine planning in the UK: aspirations and challenges, Mar. Policy 51 (2015) 96–102.
[14] W. Flannery, M.Ó. Cinnéide, Marine spatial planning from the perspective of a small seaside community in Ireland, Mar. Policy 32 (6) (2008) 980–987.
[15] H.W. Rittel, M.M. Webber, Dilemmas in a general theory of planning, Policy Sci. 4 (2) (1973) 155–169.
[16] S. Jentoft, R. Chuenpagdee, Fisheries and coastal governance as a wicked problem, Mar. Policy 33 (4) (2009) 553–560.
[17] L. Mee, Between the devil and the deep blue sea: the coastal zone in an Era of globalisation, Estuar., Coast. Shelf Sci. 96 (2012) 1–8.
[18] F. Berkes, Implementing ecosystem-based management: evolution or revolution? Fish. Fish. 13 (4) (2012) 465–476.
[19] R. DeFries, H. Nagendra, Ecosystem management as a wicked problem, Science 356 (6335) (2017) 265–270.
[20] K.K. Davies, K.T. Fisher, M.E. Dickson, S.F. Thrush, R. Le Heron, Improving ecosystem service frameworks to address wicked problems, Ecol. Soc. 20 (2) (2015) 37.
[21] G. Carneiro, Evaluation of marine spatial planning, Mar. Policy 37 (2013) 214–229.
[22] R.A. Dahl, Democracy and its Critics, Yale University Press, 1989.
[23] S. Birnbaum, Environmental Co-governance, Legitimacy, and the quest for compliance: when and why Is Stakeholder participation desirable? J. Environ. Policy Plan. (2016).
[24] J. Kooiman, Governing as governance, Sage, 2003.
[25] G. Smith, Creating the spaces, filling them up. marine spatial planning in the Pentland Firth and Orkney waters, Ocean Coast. Manag. 116 (2015) 132–142.
[26] M. Bevir, Foucault, power, and institutions, Political Stud. 47 (2) (1999) 345–359.
[27] R.K. Mitchell, B.R. Agle, D.J. Wood, Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts, Acad. Manag. Rev. 22 (4) (1997) 853–886.
[28] B. Cooke, U. Kothari, The Case for Participation as Tyranny, Zed Books, 2001.
[29] R.S. Gregory, The troubling logic of inclusivity in environmental consultations, Sci., Technol., Human. Values 42 (1) (2017) 144–165.
[30] J.P. Spradley, Participant Observation, Waveland Press, 1980.
[31] The Scottish Government, AGMACS Rep.: Summ. Recomm. (2007), 〈http://www.gov.scot/Publications/2007/03/08103826/8〉 (Last)(Accessed July 2014).
[32] H.M. Government, UK Marine Policy Statement, 〈https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/182486/ourseas-2009update.pdf〉. Last (Accessed 8 February 2017), 2011.
[33] Marine Scotland. Scotland's National Marine Plan., 〈http://www.gov.scot/Resource/0046/00465865.pdf〉. Last (Accessed 10 February 2017).
[34] A.D. Hull, Managing Competition for Marine Space Using the Tools of Planning in the UK, Plan. Pract. Res. 28 (5) (2013) 503–526.
[35] K.R. Johnson, S.A. Kerr, J.C. Side, The Pentland Firth and Orkney waters and Scotland–planning Europe's Atlantic gateway, Mar. Policy (2015).
[36] Marine Scotland, Statement of Public Participation for consultation on Scotland's National Marine Plan, 2014a.〈http://www.gov.scot/Topics/marine/seamanagement/national/spp〉.(Accessed 9 February 2017).
[37] Scotland's Marine Atlas - Information for the National Marine Plan., 〈http://www.gov.scot/Topics/marine/science/atlas〉 Last (Accessed 10 February 2017).
[38] Marine Atlas wins in New York: 〈https://blogs.gov.scot/marine-scotland/2014/01/21/marine-atlas-wins-in-new-york/〉 Last (Accessed 10 February 2017).
[39] Marine Scotland 2011. Scotland's National Marine Plan Pre-consultation Draft, 2011.〈http://www.gov.scot/resource/doc/346796/0115349.pdf〉. (Accessed 10 February 2017).
[40] Marine Scotland 2014b. Planning Scotland's Seas: Scotland's National Marine Plan. Consultation Response Analysis Report.〈http://www.gov.scot/Publications/2014/04/7284/downloads-res448880〉 (Accessed 8 February 2017).
[41] M. Laffin, J. Liddle, M. Carley, Partnership and statutory local governance in a devolved Scotland, Int. J. Public Sect. Manag. 19 (3) (2006) 250–260.
[42] Clyde Marine Planning Partnership Constitution 2016, 〈http://www.gov.scot/Topics/marine/seamanagement/regional/partnerships/Clyde〉 (Accessed 8 February2017).
[43] Marine (Scotland) Act., 〈http://www.legislation.gov.uk/asp/2010/5/pdfs/asp_20100005_en.pdf〉 Last (accessed 9 February 2017).
[44] Planning Scotland's Seas – Scotland's National Marine Plan Consultation Draft - Responses, 〈http://www.gov.scot/Publications/2013/12/2681/downloads〉 Last

(accessed 13 May 2017).
[45] Royal Town Planning Institute (RTPI) Awards for Planning Excellence 2017. ⟨http://www.rtpi.org.uk/media/2397976/rtpi_awards_for_planning_excellence_2017_digital_brochure_darya.compressed.pdf⟩.(Accessed 22 June 2017.
[46] H. Ritchie, G. Ellis, A system that works for the sea'? Exploring Stakeholder Engagement in Marine Spatial Planning, J. Environ. Plan. Manag. 53 (6) (2010) 701–723.
[47] Marine Scotland, Pilot Pentland Firth and Orkney Waters Marine Spatial Plan, 2016.⟨http://www.gov.scot/Resource/0049/00497299.pdf⟩.(Accessed 10 February 2017).
[48] R. Chuenpagdee, S. Jentoft, Step zero for fisheries co-management: what precedes implementation, Mar. Policy 31 (6) (2007) 657–668.
[49] Marine Scotland, Pilot Pentland Firth and Orkney Waters Marine Spatial Plan. Lessons Learned, 2016b.⟨http://www.gov.scot/Publications/2016/03/8213⟩. (Accessed 13 May 2017).

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Good governance and the role of the public in Scotland's marine spatial planning system

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Consultation

ABSTRACT

Marine spatial planning (MSP) is designed partly to implement the ecosystem-based approach to the management of marine resources worldwide. This article focuses on the principles of good governance to which MSP is tied: principles of transparency and participation. With increasing efforts to analyse the impact of MSP, it is timely to explore its commitment to these principles of good governance. Guided by governance theory this paper explores the opportunities that exist in Scotland's MSP system for communities to voice their opinions in decision-making processes. Whilst authorities in Scotland are doing a good job of transferring the National Marine Plan to local planning regions, there are some issues relating to planning partnerships in these regions and the activities of the Crown Estate. Further analysis is offered by considering terrestrial planning in Scotland, where communities often feel excluded and are challenging the status quo in planning processes through alternative, informal governance arrangements. The roles and rights of communities have taken centre stage in land reform debates, which has not been the case in MSP. By looking outward (and inland) it might be possible to design a more adaptable and inclusive MSP system.

1. Introduction

Marine ecosystems are highly complex and humans are a part of them. By pursuing activities such as oil and gas extraction, fishing, marine renewable energy development, aquaculture, recreation, transport, etc. we become part of an intricate socio-ecological system. When attempting to manage marine resource access and use we have to take this into account [1]. Consequently there has been a shift from sector-based and species-based natural resource management towards ecosystem-based management (EBM) [2]. EBM "seeks to broaden the scope of traditional resource management so that it considers a wider range of ecological, environmental and human factors in the exploitation of resources" [3:821].

One relatively new tool developed as part of the EBM is marine spatial planning (MSP). MSP is intended as a move beyond the disjointed, sectoral planning approaches to marine resource management that struggle to fully take into account the interactions, synergies, and conflicts between resource users, as well as their cumulative impacts on the natural environment [4–7]. In its simplest form MSP is a map-based effort to collate wide-ranging data on marine and coastal socio-ecological systems with the aim of better informing the distribution of human activities. It is also intended to provide a more streamlined approach to licensing for marine developments [8,9]. This is occurring in an era of dramatic change for many coastal and marine environments as they face 'blue growth' pressures. In Europe blue growth refers to the maritime contribution to the Europe 2020 strategy, which is aimed at achieving smart, sustainable and inclusive growth [10]. The targeted maritime industries are aquaculture, coastal tourism, marine biotechnology, ocean energy, and seabed mining. One challenge faced by MSP practitioners is to reconcile these emerging pressures with existing uses of marine space and resources, and with the preservation of vulnerable ecosystems. What is emerging is an increasingly complex marine management scenario.

MSP is, in theory, a participatory process: being based on the strong foundations of stakeholder and public engagement [11]. It has be described as "a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process" [12: 18]. If MSP is a 'public process' then it follows that the supporting governance system would allow ample opportunity for a wide range of actors to contribute in some way to the planning process. This ties MSP to principles of good governance, in particular those of participation and transparency [13]. These principles are rooted in classical ideas of democracy, most fundamental among which is that people have the right to be heard when the decisions being made concern them [14]. Nevertheless, some reports suggest that MSP does not always follow these principles in practice. For example, Jones, Lieberknecht and Qiu [15] have suggested that in

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many European MSP systems "[t]op-down processes tend to dominate, [with] more participative platforms tending to be 'disconnected by design' from executive decision-making" (p. 256). This raises questions over the roles played by the actors making the decisions (or those operating in close proximity to the decision-making process), the transparency of their activities, and where this arrangement leaves actors who hold no executive powers. In short, it raises questions over how 'public' MSP processes really are.

It seems that the act of planning marine and coastal areas – and indeed of planning more generally – often presents a dichotomy between democratic, broad participation – including the benefits of this for planning legitimacy [13,16] – on the one hand, and, on the other hand, the need to arrive quickly and efficiently at planning solutions and allow capable actors to seize, or facilitate, (sustainable) development opportunities. MSP promotes open debate but, as Ehler and Douvere (2009) point out, it also relies on strong leadership and clarity over which actors will carry decision-making authority [12]. This a fine balance to strike. By asking what opportunities members of the public have for making some form of contribution to the decision-making process, and what the barriers are to this, this paper focuses on the way MSP systems are governed; as it is through governing systems that that these opportunities and barriers will have been institutionalised. Discussions around this question can further attempts to analyse the performance of MSP systems in practice, or 'MSP-ing' [15].

A useful case for exploring these issues is that of MSP in Scotland's inshore waters: an area defined as extending to 12 nautical miles from the Mean High Water Springs (MHWS). This area is under considerable blue growth pressures, such as from the aquaculture industry, but most notably from marine renewable energy generation. It is hoped that generating energy from wind, tidal and wave devices can help contribute to the Scottish Government's pioneering ambition to supply the equivalent of 50% of Scotland's heat, transport and electricity consumption from renewable sources by 2030 [17]. These uses compete for space with a range of other marine activities, including fishing, recreational pursuits, oil and gas infrastructures, tourism, shipping, etc. Blue growth pressures must be reconciled with these existing industries and also with efforts to conserve inshore marine habitats and achieve 'Good Environmental Status' under the EU Marine Framework Strategy Directive.

Given the momentum building behind MSP in Scotland it is important to scrutinise the supporting governance system and the way it facilitates public participation in decision making. This paper examines the channels through which the public is invited to participate in marine planning activities in Scotland. It considers factors such as when this participation takes place and which barriers exist. Participatory processes are viewed in the context of the role played by key players in a centralised marine planning system in Scotland, such as the Crown Estate, which is described in more detail below. The paper mobilises theories on modern forms of governance and the re-politicisation of society, which both demand greater public input into decision making, as well as a description of the levels of citizen participation. The central question is, with MSP processes in Scotland purporting to encourage public participation, what are the practical barriers or limits to this? The analysis is extended by re-visiting the relationship between marine and terrestrial planning. Despite being a well-established practice, land use planning in Scotland often faces criticism for excluding the public in key decision-making processes. Consequently, there are pressures to reform the system and the role of communities within it is regularly scrutinised. The paper concludes with a suggestion for how more public debate on marine management issues might be integrated in Scotland's MSP system.

2. Methods

This research is based on a combination of document analysis, interviews, and participant observation and builds on previous work [13,18,19]. The first task was to gain a good understanding of stakeholder engagement in MSP from the existing literature [for example: 4, 6, 7, 9, 11, 12, 15]. It became clear from the reading that stakeholder engagement is a vital element of MSP but that in practice it is being conducted to varying degrees. This observation formed the basis of this research but the aim was not to prove or disprove a general theory or hypothesis of stakeholder engagement in MSP, but instead to conduct an inductive study whereby this practice would be observed, interpreted and re-interpreted [20] to uncover "the meaning for several individuals of their lived experiences of a concept or phenomenon" [21:58].

A case study approach was chosen to make the observations. A case study is appropriate for asking 'how' or 'why' questions about a "contemporary set of events over which the researcher has little or no control" [22:13]. It enables the study of a phenomenon "within its real-life context and addresses a situation in which the boundaries between phenomenon and context are not clearly evident." [23:59]. Key policy documents for MSP in Scotland were analysed but not subjected to a full content analysis, which involves a compression of the text based on explicit rules of coding [24]. Instead main themes were identified to build up a greater understanding of if and how the governance system for MSP in Scotland is tailored to include the views of stakeholders and the public when making decisions on the use and non-use of marine and coastal space through MSP. Document analysis was a cost-effective and efficient way to further develop the case study [25].

The research was supplemented by extensive fieldwork in Scotland. This provided a thicker narrative and more nuanced view of reality [26]. The fieldwork was conducted in three clusters in 2013, 2014 and 2015, and comprised 21 formal, semi-structured interviews. A limited number of questions were prepared for each interview [27]. Some of these questions sought to uncover how and when stakeholders would be engaged in MSP, and others were more general and intended to provide further understanding of the roles of various actors in MSP, and how the governance system was structured. On occasions not all of the pre-prepared questions were posed as they were either anticipated or more relevant lines of investigation emerged in situ. This is a strength of the semi-structured interview method [28]. All interviews were recorded and followed up where necessary via phone or email to clarify any outstanding points. Interviewees came from a broad range of organisations and bodies including The Crown Estate, The Highland Council, The Orkney Islands Council, the Orkney Fishermen's Society, the European Marine Energy Centre, Marine Scotland, the Marine Scotland Licensing and Operations Team, the Moray Firth Coastal Partnership, Community Land Scotland, The Development Trust Association, The University of Edinburgh, Heriot Watt University, The Cairngorms National Park Authority, The East Neuk Estates, the Community of Arran Seabed Trust, the Knoydart Foundation, and the Scottish Parliament. One interviewee extended an invitation to two consultation events for on the *Planning Issues and Options* for the Pentland Firth and Orkney Waters (PFOW) 'Pilot Plan'. These were held in Kirkwall, Orkney and in Thurso in July 2014 and provided an excellent opportunity to witness stakeholder and public engagement at first hand. As a non-stakeholder the care was taken to vary the level of participation between passive, to moderate, or active depending on the topic and context, so as not to influence proceedings too strongly [29]. Mostly the events were an opportunity for passive observation and to conduct impromptu, informal interviews with participants during the coffee breaks and at the end of formal proceedings.

3. Theoretical basis

Public participation requires a redistribution of power in a governance system [30]. Without this redistribution of power citizens cannot help mould decision outcomes, and participatory practices can amount to little more than 'therapy' or even 'manipulation' [30]. Arnstein conceptualises levels of citizen participation – and the powers

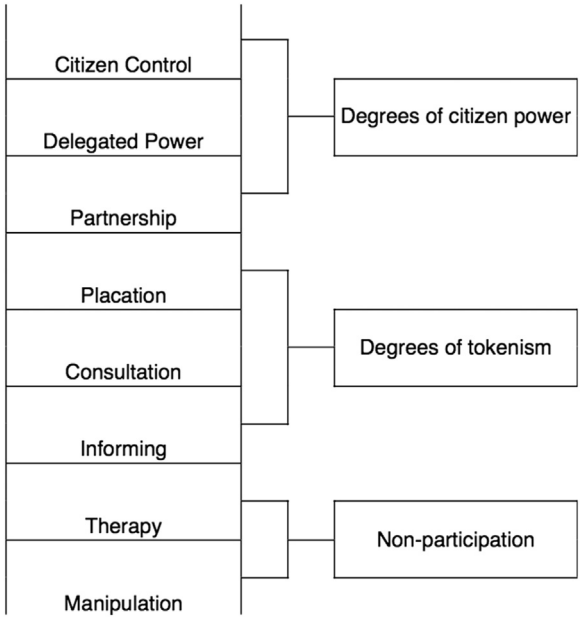

Fig. 1. The levels of citizen participation according to Arnstein [30:217].

these receive – as a spectrum ranging from manipulation of citizens in a process, to control by citizens of that process. This is presented in the model in Fig. 1. In the model the levels of public participation increase as you move up the spectrum – or ladder – and these are grouped into degrees of non-participation, degrees of tokenism, and degrees of citizen power. The model is admittedly simplistic and does not consider, for example, the timing and the context of public participation. In terms of the timing, for example, Painter [in [31]] notes that there is also an assumption that policy or planning decisions are made in one single, pre-determined moment, perhaps at the end of deliberations, which would seem logical. However, "decisive events and contributions might come at any point" [31:24], even in the early stages whilst agendas or planning priorities are being set (i.e. at step zero). As for the context, there is a danger that power is often oversimplified, and to view public participation as no more than tokenistic is to prioritise the *actual* power of decision-making authorities and undermine the *potential* power of participatory processes [31].

Whilst acknowledging these criticisms, the view taken in this paper is that Arnstein's model still holds value for generating discussion on the levels and forms of public participation in MSP processes. It is interesting to note that consultations appear in the bottom half of Arnstein's scale, as a form of tokenism. It is of course possible to refute this claim and point to examples of consultations that are well organised, occur early, and allow for broad participation. But the objective here is not to disregard consultations as an engagement technique. Instead, the low ranking of consultations encourages us to ask the question of how tokenistic they are in their current form for MSP in Scotland. Furthermore, we are encouraged to consider the potential to introduce some of the higher levels of public participation through which citizens gain some genuine power. In MSP this power should not be final decision-making authority as marine management addresses issues with large-scale, often international dimensions. But the increased power might include influence over aspects – or stages – of the process that leads towards a final decision, as is inherent in the more highly ranked concepts of 'partnership' and 'delegated power'. In democratic terms, partnership and delegated power might be regarded as indicators of good governance for MSP. However, the nature of these partnerships and delegated powers must also be examined because they do not necessarily translate directly to fair and open public participation. The devil is in the detail here: which powers are delegated? When are they delegated? Are partnerships equal? Who can join the partnerships?

Levels of public participation are also influenced by modern governance structures. As noted by Van Driesche and Lane [32], the "new political culture no longer places much faith in solutions imposed from above, increasingly relying instead on a network of decision-making relationships that link government and civil society across many scales" (p. 283). Consequently, "changes have taken place in the forms and mechanisms of governance, the location of governance, governing capacities and styles of governance" [33:143]. Governance levels that were once regarded as 'lower' have emerged as arenas for innovative forms of organising society, often involving informal governance institutions, which include conventional practice, beliefs, social networks and cultures that rest alongside, challenge, or reinforce more formal structures such as laws, written contracts, and codified artefacts [34]. Contributing factors in this change include the re-politicisation of society [35], a move towards participatory practices, the idea that the public is not a pre-defined group but one that emerges in situ through issue-based political engagement [36], and the notion that "competition about the right to represent the people is no longer restricted to parliamentary elections…[but instead] takes place every time an actor—public or private—claims that s/he represents someone" [37:699]. It seems that acknowledging these changes might help us better understand how MSP is governed.

3.1. Participation in planning

Stakeholder engagement is a key component of MSP [4,12,38]. It is recommended that stakeholders are brought to the table early [11] and that they are continuously engaged throughout the process of design, implementation and evaluation of marine plans [39]. Stakeholder engagement is seen to have both functional and inherent value [13]. The functional value lies in the simple logic that people who are familiar with a particular topic, area, species, industry, ecosystem, etc., will likely have the necessary experience and expertise to inform the decisions being made about these things. Even if early stakeholder engagement appears time consuming, it is often seen to reduce so-called 'transaction costs' that might appear at a later stage, such as in plan implementation [16,40]. The inherent value of stakeholder engagement stems from the democratic principle of granting people a voice in the decision-making process, even if they do not have ultimate authority. "As a "good governance" principle, stakeholder participation adds a normative prescription to MSP in line with classical ideas of democracy" [13: 34]. Benefits of stakeholder engagement can include improved accuracy of data through the incorporation of local ecological and traditional knowledge, improved legitimacy of the planning process, and, in some cases, community empowerment in decision making [41].

In this paper members of the public are regarded as stakeholders to be included at some stage in MSP processes by virtue of it being a 'public process', and by virtue of their inclusion in the socio-ecological system in question. Public participation is understood as "the practice of consulting and involving members of the public in the agenda-setting, decision-making, and policy-forming activities of organisations or institutions responsible for policy development" [42:512]. In the case of planning marine protected areas in the U.S., for example, including the public is said to "produce decisions that are more likely to be supported by stakeholders, meet management objectives, and fulfil conservation goals" [43:1392]. These factors can also contribute greatly to the legitimacy and acceptance of MSP [13]. There are various methods for including stakeholders in MSP processes, such as through participatory geographic information systems (GIS) activities [41,44]. This can be done as a joint research venture whereby data is collected with the help of stakeholders – often with more direct users of the marine space, such as fishers – or as a means of verifying the validity of pre-collected data. Stakeholder or public consultations are the most common technique, whereby meetings are held and attendees are given information about a given agenda-setting, decision-making, or policy-forming task. Their

views are sought on the matter, often through informed debates. Consultations are widely used by the Scottish Government on a range of issues. It states: "The Scottish Government wants to make it as easy as possible for those who wish to express their opinions on a proposed area of work to do so in ways which will inform and enhance that work." [45].

Despite the apparent benefits, facilitating fair and meaningful public participation is by no means straightforward, or without its pitfalls [46]. Criticisms of participatory processes and how much they actually affect decision making certainly pre-date MSP [47,48]. Obvious problems include the means by which stakeholders are identified, with definitions often appearing to favour those with vested interests in maintaining direct access to a space and/or resource [49]. Such narrow definitions only serve to sharpen the debates around the role of the public, and also other actors such as environmental organisations, municipal authorities and consumer advocacy groups (Ibid.) Another concern is that of engagement timing. Stakeholders are sometimes seen to be involved at a relatively late stage in the decision-making or planning process. As a result, participatory practices are sometimes seen to amount to an "unrepresentative, reactive one-way flow of information" [50:708], prompting the question of when 'step-zero' occurs, i.e. who is involved in conceiving a plan or framing a problem [51]? The manner in which these questions were addressed during previous engagements might affect perceptions of upcoming participatory practices. Process efficiency is another factor that can result in 'consultation fatigue' [52].

Although well established in many countries, land use planning systems also face regular criticisms regarding the level of public participation in decision making. There is often strong suspicion that land use planning systems serve the interests of powerful actors and do little to enhance public trust in processes [53]. Similar problems occur around stakeholders' representativeness and transparency [54]. The difficulties plague many land use planning systems and can even occur in areas with a strong history of public participation [46]. The persistence of these problems continue to motivate civil society pressure for reform, and researchers are exploring innovative means of improving participatory processes in planning [55].

4. Marine spatial planning in Scotland

The new planning system for Scotland's inshore waters is intended to help manage the increase in marine and coastal activities. This has been referred to in the UK context as the 'marine problem' [50]. The system is also linked to a number of European Directives on marine planning. The stages towards marine spatial planning in Scotland have been described in more detail elsewhere [see for example 18], but it is important here to introduce the framework through which the system will be implemented.

The Marine (Scotland) Act 2010 paved the way for a statutory marine planning system in the country. The resulting National Marine Plan (NMP), published in March 2015, gives overall guidance to managing the country's coastal and marine environments. The NMP will be implemented by creating tailored marine plans in each of the eleven Scottish Marine Regions (SMRs), which were chosen based on physical characteristics [56]. The selected areas were Argyll, Clyde, Forth and Tay, Moray Firth, North Coast, North East, Outer Hebrides, Orkney Islands, Shetland Islands, Solway, and West Highlands (see Fig. 2 below). At the time of writing, only two regional plans have been prepared, namely for Shetland and the Clyde. These are at different stages of their development but both originated from a 2006 initiative in five regions (including the Berwickshire Coast and Sound of Mull) to "test and trial different approaches to marine management and to share any data and stakeholder engagement concerns" [57: 518], known as the Scottish Sustainable Marine Environment Imitative (SSMEI). Arguably the most advanced of the projects, the Shetland Marine Spatial Plan is now in its fourth edition (the 'Shetland Islands Marine Spatial Plan 2015 - SIMSP') and is the only one to have been made statutory, meaning that it must be consulted as 'Supplementary Guidance' to the Shetland Local Development Plan, which "sets out the policies and criteria against which planning applications and works licences submitted in Shetland will be considered." [58]. This is the target status for all regional marine plans in Scotland. The Firth of Clyde Marine Spatial Plan (2010) was a pilot project used to recommend a series of further actions and projects aimed at producing a more comprehensive plan for the region, with a stronger spatial element. This voluntary pilot project was produced in close collaboration with key stakeholder groups, and included a public consultation in 2009. In March 2017 powers were delegated to the newly formed Clyde Marine Planning Partnership for developing the full Regional Marine Plan (more details on marine planning partnerships follow below).

A 'Pilot Plan' for the Pentland Firth and Orkney Waters (PFOW) region was published in March 2016. This plan was prepared partly as a result of the rapid development of marine renewable energy sites in that region. The exercise was intended to inform future statutory marine planning there. As a non-statutory pilot, "it will complement and support existing ambitions and responsibilities rather than replace them" [59:V]. It is worth noting that marine planning is a continuous process and when a plan reaches 'completion' it is still subject to monitoring, review and amendments [39].

Within each SMR, Scottish Ministers (members of the Scottish Government) have the right – but not the duty – under the Marine (Scotland) Act 2010 to appoint a 'delegate' to oversee the drafting of regional marine plans [57]. These delegates are now commonly referred to as marine planning partnerships (MPPs). MPPs are comprised of people who provide the relevant expertise, skills and knowledge to tailor the plans to the needs and challenges of their region. The Marine (Scotland) Act 2010 stipulates that they must be comprised of a person nominated by Scottish Ministers, and either a public authority or "a person nominated by a public authority with an interest in the Scottish marine region to which the regional marine plan applies as the Scottish Ministers consider appropriate" [60:6]. When Scottish Ministers designate delegable functions to a group or persons these must ("so far as reasonably practicable") represent all interests in the area including its protection, its use for recreational purposes, and its use for commercial purposes [60].

The functions that Scottish Ministers may delegate to MPPs (delegable functions) relate to preparing regional plans, amending these plans, and keeping relevant matters under review. Importantly, there are key powers that cannot be delegated to MPPs ('excepted functions'). These include: (a) deciding under paragraph 4 of schedule 1 whether to prepare and publish a statement of public participation, (b) deciding under paragraph 6 of that schedule whether to revise a statement of public participation, (c) deciding under paragraph 9 of that schedule whether to publish a consultation draft, (d) deciding under paragraph 14 of that schedule whether to publish a regional marine plan or any amendment of such a plan. So it can be said that the governance system for MSP in Scotland is strongly top-down and centralised, with government maintaining executive control over when and how to engage stakeholders, and over the drafting and publishing of regional plans. For example, although it is the responsibility of the delegate to prepare and publish the statement of public participation (the first step in preparing for consultation), the decision to do so comes from Scottish Ministers, and their approval of the statement is required.

5. The role of the Crown Estate

Despite the governmental control over MSP in Scotland, the Crown Estate also plays a significant role in influencing the use and non-use of inshore and coastal areas of the U.K.[1] The Crown Estate is a statutory

[1] Technically, the Crown Estate refers to the portfolio of properties owned by the

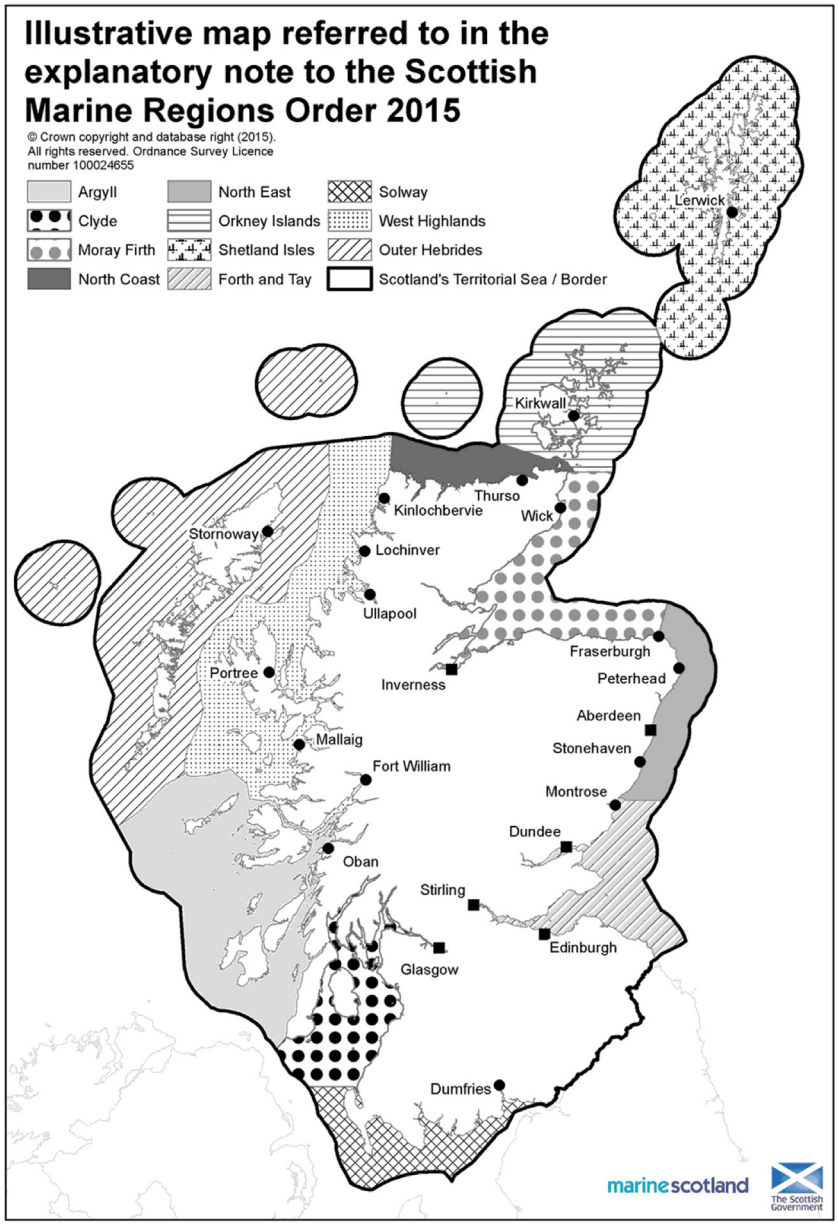

Fig. 2. Map of the Scottish Marine Regions. Adapted from the Scottish Marine Regions Order (2015) [56:23].

body that is run under the provisions of The Crown Estate Act (1961). It manages a property portfolio (the estate) across the UK worth £12.4 billion [61], and it is mandated by the Act to generate a profit on this portfolio. The reported profit stood at £328.8 million in 2016/17 [61] and these (along with any debts) accrue to the UK Treasury where they are made available for public spending. The distribution of this spending has been a contentious issue for a number of decades, with many in Scotland arguing for the management of Crown Estate assets in the country – including profits generated on these – to be devolved from HM Government. Following the Smith Commission Report in late 2014 these calls have now been heeded. The Scotland Act 2016 enabled HM Government to make a statutory Transfer Scheme, which came into force in April 2017, and marked the official transfer of powers over the revenue and management of Crown Estate resources in Scotland. The newly founded Crown Estate Scotland (Interim Management) body has been working in conjunction with the existing Crown Estate Commissioners and key stakeholder groups on the transition process.

Importantly, the Crown Estate also administers almost the entire inshore seabed in Scotland, along with 50% of the foreshore (the intertidal zone). Through the devolution process outlined above the Scottish Government has already "committed to providing the net revenue from marine activities out to 12 nautical miles to coastal and island councils." [62] This is a significant breakthrough in Crown Estate reform. However, it remains to be seen how it will respond to doubts over its commitment to environmental protection, the transparency of its operations, its questionable proximity to planning, and the level of decision making input by local communities. One of the main functions of the Crown Estate in administering inshore waters is to negotiate the sale of seabed leases to developers for large marine projects. The lease sites are identified through scoping exercises conducted by a range of actors including Marine Scotland, research institutions, the Crown Estate itself, and collaborations between these. Comprehensive Strategic Environmental Assessments (SEAs) precede the designation of sites for

(*footnote continued*)
organisation, whilst the Crown Estate Commissioners exercise the powers of this ownership. In keeping with common practice, however, 'The Crown Estate' is used here to refer to the business as a whole.

lease. When lease sites are announced developers can bid for an Agreement for Lease from the Crown Estate. This grants the successful bidder an 'option' over an area of seabed. With the option over the area the developer is also permitted to undertake minimal activities, such as surveys and deployment of anemometry (i.e. wind force measurement) equipment, and can initiate the statutory consenting process, which is processed by the Marine Scotland Licensing and Operations Team (MS-LOT). During the statutory consenting process any existing marine spatial plan is consulted as supplementary guidance and further Environmental Impact Assessments (EIAs) are conducted. If statutory consent is granted a lease is obtained for the Construction and Operation phase (The Crown Estate, 2016).

The route to construction and operation in inshore waters is strictly regulated and the leasing process is separate to the licensing process. It is important that the leases sold by a commercially operating body do not guarantee that a license for development will be granted. Nevertheless, the governance role played by the Crown Estate in Scotland's MSP system cannot be underestimated [18], and it can be argued that it helps set the tone for the development of inshore waters. In the past the Crown Estate has made clear commitments to marine industries such as renewables in line with the ambitions of HM Government and the Scottish Government. This is evident, for example, in £ 5.7 m Enabling Actions Fund, which "supports work that accelerates and de-risks the development of the wave and tidal projects in the Pentland Firth and Orkney Waters, to facilitate successful and timely construction and operation" [in 18: 138]. The terms 'accelerate, and 'de-risk' reflect a commitment to facilitating growth in this sector. The rate of marine energy project development in the PFOW region caused some public consternation. This was one of the main reasons to begin planning. Some of the concerns were raised at the public consultation events for the PFOW Pilot Plan. One local resident pointed out that there was little public say over "putting manmade things into the natural environment" (Kirkwall 01/07/2014) and another complained that "streamlining the planning process though MSP helps the Crown Estate to increase revenue more quickly" [18]. This occurs in a situation where "Marine Scotland had been too preoccupied with reacting to the steady release of renewable energy leases and licences by the Crown Estate and that the licensing system had been shaped by developers' needs" [57:519–520].

Although these criticisms apply to the specific case of the PFOW region where marine renewable projects were sanctioned before the creation of the Pilot Plan, criticisms of Crown Estate operations do exist more widely. One Member of Scottish Parliament suggested in an interview that when it came to the Crown Estate's involvement in marine resource management in Scotland, consultation was a "bolt-on" (25/10/2014), explaining that it was a bureaucratic check box that comes too late in the process to affect decisions in a meaningful way. This appears to be at odds with the recommendation, from MSP theory, that stakeholders be engaged early and often [11,39]. Interviewees from all sides also stressed that a problem with the Crown Estate is that the public does not have a very good understanding of it and what it does. It is indeed a unique organisation. A Crown Estate employee claimed that they were sometimes tasked to travel to conferences to clarify how it operates, and a professor in politics at The University of Edinburgh said of the Crown Estate that we "need to get it talked about" (29/10/2014). Expanding on this comment, they said that there was a need to improve public understanding of the Crown Estate, and to ensure that pressure remains to make its operations more transparent. It will be interesting to observe how the current Crown Estate reform will target these aspects of its role in marine resource management. There is also every reason to hope that the more comprehensive, collaborative and informed planning processes in areas such as the Clyde will address these issues. They will take a lot from their own previous experiences, and those in the PFOW case (the release of a Lessons Learned report from the PFOW will be of great value here). However, in order to achieve this, planners must remain aware of how the governance of MSP – and the role of the Crown Estate – might affect public perceptions of MSP processes. As representatives of local interests and planning needs, it is important that MPPs gain and maintain public trust, and that their actions do not become too exclusive.

6. Early public engagement

In the interest of upholding the promise of making marine planning participatory, and of honouring the description of MSP as a 'public process', practitioners should scrutinise how marine plans in Scotland's regions are conceived. This includes the timing of stakeholder engagement by the marine planning partnerships. The Clyde MPP (CMPP) is a case in point here. The CMPP released a Statement of Public Participation on 9th January 2018 [63] in accordance with the requirements set out in the Marine (Scotland) Act 2010. The statement sets out the commitment to engaging with all stakeholders and members of the public (identified through their registered home address). Whilst adhering to MSP theory by allowing opportunities for broad debate on marine planning issues, it must be noted that the process has become highly institutionalised. By setting out clear opportunities for stakeholder and public engagement in MSP, the CMPP allocates plenty of time for closed meetings. These occurred at early planning stages, in March, May and June 2017, and helped set the framework for planning in the region. Previous research has found that planning priorities are commonly set at an early stage by a select group of stakeholder groups, and that public input in consultations seemingly had little impact on these when they were finally conducted [13]. The MPPs look set to adopt this pattern. Unfortunately, this makes it all too easy to level the criticism of 'tokenism' at the purpose of consultations and distinguishes the system quite clearly from a co-decision making one [52]. Whilst it is true that strong leadership is required in marine planning, thought must be given how this is balanced with democratic principles, as mentioned at the beginning of this paper. The institutionalisation of MSP processes renders this task both more important and more challenging.

With the institutionalisation of marine planning it might prove important to ensure that less formal channels of community engagement on marine and coastal issues remain open. The Scottish Coastal Forum was a good example of this. The Scottish Coastal Forum was established in 1996 to encourage national debate on coastal issues. It was comprised of seven Local Coastal Partnerships that were voluntary partnership groups of localised interests, mostly registered as charity organisations. These partnerships invited anybody in the region to debate marine and coastal management issues and also shared management ideas with the partnerships in other regions. The forum as a whole also took on the responsibility of delivering the Integrated Coastal Zone Management approach being implemented across Europe, and which was a precursor to MSP. Many of the Local Coastal Partnerships have formed the basis of the new MPPs. This appears to be a well-informed decision as the Local Coastal Partnerships have adapted well to change and new challenges in the past. However, the onus must be on maintaining an informal component that allows bottom-up action and awareness raising. MPPs must not fall into the trap of directing action too strongly and restricting engagement only to pre-scheduled consultations events on their terms and schedules. Communities cannot take full responsibility for marine planning, but they are likely to appreciate access to an open, informal mechanism for generating public debate. Experiences from from terrestrial planning processes in Scotland indicate that the public might come to demand greater inclusion.

7. Resistance

For most people in Scotland their understanding of the word 'planning' is likely to come from the well-established terrestrial – or 'land use' planning system. Although a comparative analysis of public participation in Scotland's land use and marine spatial planning systems

is beyond the scope of this paper (and such an analysis would have to account for the significant differences in the access, ownership and use rights between the two environments), the emergence of MSP has been heavily influenced by existing planning traditions, and scholars frequently explore the relationship between the two [64–66]. Land use planning in Scotland is decentralised, with municipal government (in the form of 32 democratically elected local councils), and the two the National Parks (the Cairngorms National Park and the Loch Lomond and the Trossachs National Park), assuming main responsibility as planning authorities. The public has an opportunity to contribute to development plans, which set out the vision for how the area should develop with regards to the use of land. And there is a requirement for public consultation on development proposals on a case-by-case basis, during which any member of the public can file objections to a plan within 21 days of the planning notice being publicised. The decentralised nature of land use planning in Scotland means that central authorities intervene in planning processes only as a last resort.

There are two main points worth mentioning about land use planning in Scotland. Firstly, where the land use planning system is perceived to be unfair, or to be excluding public opinions, spaces are opening up for local civic action. In some cases this has been quite radical, such as with community land buyouts. Hereby a locally formed community body – most commonly a company limited by guarantee with charitable status – is set up to oversee the purchase and management of land so as to use it in communally agreed ways, most commonly through locally-constituted committees. Whilst these local governance entities face tough challenges that they sometimes succumb to, they have been shown to incorporate more participatory practices and lead to more sustainable resource management outcomes [67]. Development Trusts are another example. With support from the Development Trust Association Scotland (DTAS) these trusts put together community-led projects to help Scotland's neighbourhoods flourish and tackle localised problems or seize opportunities. Development Trusts and community land buyouts have emerged partly due to dissatisfaction with the level of input that communities have in the land use planning system where “much of what happens is decided by the free market” (Ian Cooke, Director of DTAS 11/08/2015).

A review of the benefits and drawbacks of these initiatives is beyond the scope of this paper, and the suggestion here is not that land owned by communities is always more effectively of fairly managed. It is also important to emphasise that they do not replace the planning process. Any proposals that communities might put forward to construct or modify buildings, or to alter land use patterns still need to satisfy all requirements under the planning process. The difference is that they will have a majority local backing and be based on a vision agreed upon through local decision making institutions. As a result they are less likely to run into public opposition and can more closely reflect the will of the people. These arrangements have a lot in common with theories of modern governance systems. They represent a network of decision-making relationships and form new links between governance entities at different scales. Fuelled by the re-politicisation of society, the emergence of informal groups that affect a formal governance system – and bring to light flaws within that system – are examples of new governance mechanisms, locations, capacities and styles.

Further to this, an impressive feature of the (admittedly imperfect) land use system is that it is continuously changing and adapting to meet modern development pressures, public demands, and criticisms. An independent review of the Scottish planning system published in May 2016 found: “[t]he evidence shows that the planning system is not yet effective in engaging, let alone empowering, communities”; “the evidence overwhelmingly suggests that public trust in the system has declined rather than grown”; and “…communities are reporting consultation fatigue and have very limited resources for getting actively involved in the process.” [68:36]. Attempts to improve the land use planning system on the basis of such criticisms are normally included in ‘land reform’ processes. Land reform is about “how land is owned, occupied, taxed, inherited, and used – from the centre of Glasgow to the island of Rockall in the north Atlantic” (speech by Andy Wightman 25/06/2015). In the most recent round of reforms Scottish communities took centre stage. Two key bits of legislation emerged from this round, namely the Community Empowerment (Scotland) Act 2015 and the Land Reform (Scotland) Act 2016. The Community Empowerment (Scotland) Act “will help to empower community bodies through the ownership of land and buildings, and by strengthening their voices in the decisions that matter to them” [69], and the Land Reform (Scotland) Act 2016 is partly a response to the notion that “[c]ommunities most affected by decisions about land must be fully engaged in those decisions” [70]. These changes are evidence of a planning system undergoing constant learning and adaptation due to changing land use patterns but also, crucially, unrest from Scotland's communities. The rhetoric of empowering communities and strengthening their voice is not as prominent in Scotland's approach to MSP.

8. Discussion - a new democratic space within MSP?

The regionalisation of Scotland's National Marine Plan is a difficult process, and attempts to achieve this have been innovative and are supported by a robust governance infrastructure. The government's commitment to public and stakeholder engagement is being met through the statements of public participation prepared by MPPs. However, one barrier to public participation might lie in the rigidity of the system, and the absence of public input into step zero of planning. Another might lie in the lack of transparency surrounding the actions of the Crown Estate, although the on-going reform process might effectively address this. Nevertheless, at this relatively early stage it seems beneficial to consider what consequences building a rigid, top-down governance system for MSP might have. There is every chance that “affected communities could rebel against a centrally driven process which allows national objectives to override local ones” [52:291].

The ability of Scotland's communities to rebel is being demonstrated in land use planning. By doing so they reveal several things that are in keeping with modern governance theory. For example, the ‘public’ can define itself through issue-based political engagement, and in modern governance systems competition about the right to represent people takes place every time a claim of representation is made. Bolstered by the re-politicisation of society, we are witnessing a host of new governance mechanisms, locations, capacities and styles that impact land use planning processes, and possibly threaten the integrity of the system itself. There is every chance that these might emerge in response to marine planning in the future. What is interesting about this form of community action is that it is driven by the will to expose instances where participatory practices do not result in a satisfactory level of power redistribution – as rated on Arnstein's scale – but it also incorporates Painter's more nuanced view of where power exists. This is firstly because community action in planning allows for the possibility of decisive events and contributions to occur at any point during policy or planning decision making, rather than just at the end of deliberations. This creates the *moments* for community groups to act and to intervene, including the possibility of a community-led step zero. Secondly, the system, as it is constituted at present, prioritises the actual power of decision-making authorities and undermines the potential power of more informally constituted participatory processes. This creates the *space* for community groups to act and to intervene. So a rigid governance system for MSP might motivate Scotland's communities to seize upon (through their own means) the moments and spaces to improve their say in marine management decisions.

But what if the governance system could be adapted pre-emptively to absorb this political energy? Smith (2015) suggests that MSP in Scotland creates a range of new spaces [18]. These include the map spaces that are used to define a planning scenario in spatial terms; images and visions of what these areas can be used for (imagined spaces) e.g. diagrams of seabed mounted tidal energy turbines; and

physical planning spaces (such as MPPs) where people convene to actually plan. Upon further analysis the spaces that MSP does *not* create appear equally important. It does not create a space for publically initiated and publically lead debate on marine planning issues: debate that exists independently of (and might even prompt) official consultations. One way to create this space might be to maintain an element of the Local Coastal Partnerships that is not amalgamated into the bureaucratic MSP machine. Research has already demonstrated that informal, multi-stakeholder, participatory platforms can find spaces to operate even in a rigid and highly structured administrative environment [71]. In this space broader questions about the value of Scotland's seas could be asked. Alternative questions about marine planning might emerge from this space as people are encouraged to talk openly. The debate could be prompted by changing the question from “these are the current and emerging sectors accessing and using marine resources, how do we manage their activities?” to “what vision do we have, as a nation or a region, of the future of our seas and coasts?” Under marine planning legislations there could be a statutory requirement for MPPs to consider and respond to summaries of these events. Further research could gauge support for this idea and how these spaces might be created.

9. Conclusion

There appears to be great value in scrutinising MSP from a governance perspective. This approach can prompt debate about the distribution of power and public perceptions of MSP, which are important topics. MSP is often viewed as a highly technical set of processes that is best left to marine experts. Essentially, though, it is about managing (the expectations of) people. Plenty of experience exists on how this is best done, and the pitfalls to avoid. It might be time to look outward (and inland) for guidance on how to build an adaptable, inclusive governance infrastructure.

The actual power of decision-making authorities in MSP in Scotland has yet to be fully tested. Also, the Crown Estate has only been held to account in a few individual instances [see [72]], and its role in the decision-making infrastructure has yet to be adequately scrutinised. In the land use planning system the actual power of decision-making authorities has been tested, and the actions of the Crown Estate are continuously scrutinised. The benefits of system adaptability were not lost on scholars working on the early development of MSP, who noted that “[m]any land use planning systems have evolved and improved over time, including the steps in the planning process and procedures for consultation and participation, and this should be expected of MSP” [4:788]. The evidence from Scotland suggests that this expectation has not been met.

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References

[1] P. Olsson, C. Folke, F. Berkes, Adaptive comanagement for building resilience in social-ecological systems, Environ. Manag. 34 (1) (2004) 75–90.
[2] J.S. Link, H.I. Browman, Integrating What? Levels of Marine Ecosystem-Based Assessment And Management, Oxford University Press, 2014.
[3] R. Curtin, R. Prellezo, Understanding marine ecosystem based management: a literature review, Mar. Policy 34 (5) (2010) 821–830.
[4] P.M. Gilliland, D. Laffoley, Key elements and steps in the process of developing ecosystem-based marine spatial planning, Mar. Policy 32 (5) (2008) 787–796.
[5] C. White, B.S. Halpern, C.V. Kappel, Ecosystem service tradeoff analysis reveals the value of marine spatial planning for multiple ocean uses, Proc. Natl. Acad. Sci. 109 (12) (2012) 4696–4701.
[6] F. Douvere, The importance of marine spatial planning in advancing ecosystem-based sea use management, Mar. Policy 32 (5) (2008) 762–771.
[7] B.S. Halpern, K.L. McLeod, A.A. Rosenberg, L.B. Crowder, Managing for cumulative impacts in ecosystem-based management through ocean zoning, Ocean Coast. Manag. 51 (3) (2008) 203–211.
[8] C. Kelly, L. Gray, R. Shucksmith, J.F. Tweddle, Review and evaluation of marine spatial planning in the Shetland Islands, Mar. Policy 46 (2014) 152–160.
[9] G. Scarff, C. Fitzsimmons, T. Gray, The new mode of marine planning in the UK: aspirations and challenges, Mar. Policy 51 (2015) 96–102.
[10] Europe 2020, ⟨http://eur-lex.europa.eu/legal-content/en/TXT/?Uri=celex:52010DC2020⟩. (Accessed 13 October 2017), 2010.
[11] M. Gopnik, C. Fieseler, L. Cantral, K. McClellan, L. Pendleton, L. Crowder, Coming to the table: early stakeholder engagement in marine spatial planning, Mar. Policy 36 (5) (2012) 1139–1149.
[12] C. Ehler, F. Douvere, Marine Spatial Planning: A Step-by-step Approach Toward Ecosystem-Based-Management, Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53 (ICAM Dossier No. 6), UNESCO, Paris, 2009.
[13] G. Smith, S. Jentoft, Marine spatial planning in Scotland. Levelling the playing field? Mar. Policy 84 (2017) 33–41.
[14] R.A. Dahl, Democracy and Its Critics, Yale University Press, 1989.
[15] P.J. Jones, L. Lieberknecht, W. Qiu, Marine spatial planning in reality: introduction to case studies and discussion of findings, Mar. Policy 71 (2016) 256–264.
[16] S. Birnbaum, Environmental co-governance, legitimacy, and the quest for compliance: when and why is stakeholder participation desirable? J. Environ. Policy Plan. (2016).
[17] The Scottish Government Scottish Energy Strategy, 2050 Consultation, 2017.
[18] G. Smith, Creating the spaces, filling them up. marine spatial planning in the Pentland Firth and Orkney waters, Ocean Coast. Manag. 116 (2015) 132–142.
[19] G. Smith, R.E. Brennan, Losing our way with mapping: thinking critically about marine spatial planning in Scotland, Ocean Coast. Manag. 69 (2012) 210–216.
[20] N. Blaikie, Designing Social Research, Polity, 2009.
[21] J.W. Creswell, Qualitative Enquiry and Research Design: Choosing Among Five Approaches, SAGE Publications Ltd, 2007.
[22] R.K. Yin, Case Study Research: Design and Methods (Applied Social Research Methods Series), SAGE Publications Ltd., Thousand Oaks, CA, 2009.
[23] Y. Afacan, C. Erbug, An interdisciplinary heuristic evaluation method for universal building design, J. Appl. Ergon. 40 (2003) 731–744.
[24] S. Stemler, An overview of content analysis, Pract. Assess. Res. Eval. 7 (17) (2001) 137–146.
[25] G.A. Bowen, Document analysis as a qualitative research method, Qual. Res. J. 9 (2) (2009) 27–40.
[26] B. Flyvbjerg, Five misunderstandings about case-study research, Qual. Inq. 12 (2) (2006) 219–245.
[27] I. Seidman, H.J. Rubin, I.S. Rubin, P. Dilley, Interviews and the philosophy of qualitative research, J. High. Educ. 75 (1) (2004) 127–132.
[28] C.B. Meyer, A case in case study methodology, Field Methods 13 (4) (2001) 329–352.
[29] J.P. Spradley, Participant Observation, Waveland Press, 1980.
[30] S.R. Arnstein, A ladder of citizen participation, J. Am. Inst. Plan. 35 (4) (1969) 216–224.
[31] M. Munro-Clark, Citizen Participation in Government, Hale & Iremonger, 1992.
[32] J. Van Driesche, M. Lane, Conservation Through Conversation: Collaborative Planning for Reuse of a Former Military Property in Sauk County 3 Planning Theory & Practice, Wisconsin, USA, 2002, pp. 133–153.
[33] Kv Kersbergen, Fv Waarden, ‘Governance’as a bridge between disciplines: cross--disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy, Eur. J. Polit. Res. 43 (2) (2004) 143–171.
[34] C. Prell, M. Reed, L. Racin, K. Hubacek, Competing structure, competing views: the role of formal and informal social structures in shaping stakeholder perceptions, Ecol. Soc. 15 (4) (2010) 34.
[35] J. Van Tatenhove, Integrated marine governance: questions of legitimacy, MAST 10 (1) (2011) 87–113.
[36] J. Dewey, Melvin L. Rogers (Ed.), The Public and Its Problems: An Essay in Political Inquiry, 2012 University Park, PA, 2012, p. 117.
[37] E. Sørensen, Democratic theory and network governance, Adm. Theory Prax. 24 (4) (2002) 693–720.
[38] S. Fletcher, E. McKinley, K.C. Buchan, N. Smith, K. McHugh, Effective practice in marine spatial planning: a participatory evaluation of experience in Southern England, Mar. Policy 39 (2013) 341–348.
[39] G. Carneiro, Evaluation of marine spatial planning, Mar. Policy 37 (2013) 214–229.
[40] S. Jentoft, R. Chuenpagdee, Fisheries and coastal governance as a wicked problem, Mar. Policy 33 (4) (2009) 553–560.
[41] M.K. McCall, Seeking good governance in participatory-GIS: a review of processes and governance dimensions in applying GIS to participatory spatial planning, Habitat Int. 27 (4) (2003) 549–573.
[42] G. Rowe, L.J. Frewer, Evaluating public-participation exercises: a research agenda, Sci. Technol. Hum. Values 29 (4) (2004) 512–556.
[43] T.M. Dalton, Beyond Biogeography: a Framework for Involving the Public in Planning of U.S. Marine Protected Areas, Conserv. Biol. 19 (5) (2005) 1392–1401.
[44] R. Shucksmith, L. Gray, C. Kelly, J.F. Tweddle, Regional marine spatial planning–The data collection and mapping process, Mar. Policy 50 (2014) 1–9.
[45] Scottish Government Consultation Hub, ⟨https://consult.gov.scot⟩, (Accessed 20 December 2017).
[46] M. Hibbard, S. Lurie, Saving land but losing ground: challenges to community planning in the era of participation, J. Plan. Educ. Res. 20 (2) (2000) 187–195.
[47] S. Martin, A. Boaz, Public participation and citizen-centred local government: Lessons from the best value and better government for older people pilot programmes, Public Money Manag. 20 (2) (2000) 47–54.

[48] K. Bickerstaff, G. Walker, Participatory local governance and transport planning, Environ. Plan. A 33 (3) (2001) 431–451.
[49] S. Jentoft, K.H. Mikalsen, Do national resources have to be centrally managed? Vested interests and institutional reform in Norwegian fisheries governance, Maritime Studies 13 (1) (2014) 1–16.
[50] H. Ritchie, G. Ellis, 'A system that works for the sea'? Exploring Stakeholder Engagement in Marine Spatial Planning, J. Environ. Plan. Manag. 53 (6) (2010) 701–723.
[51] R. Chuenpagdee, S. Jentoft, Step zero for fisheries co-management: what precedes implementation, Mar. Policy 31 (6) (2007) 657–668.
[52] K.R. Johnson, S.A. Kerr, J.C. Side, The Pentland Firth and Orkney Waters and Scotland–Planning Europe's Atlantic gateway, Mar. Policy 71 (2016) 285–292.
[53] T. Bedford, J. Clark, C. Harrison, Limits to new public participation practices in local land use planning, Town Plan. Rev. 73 (3) (2002) 311–331.
[54] M. Buchy, S. Hoverman, Understanding public participation in forest planning: a review, For. Policy Econ. 1 (1) (2000) 15–25.
[55] G. Brown, Engaging the wisdom of crowds and public judgement for land use planning using public participation geographic information systems, Aust. Plan. 52 (3) (2015) 199–209.
[56] MS, Marine Scotland: Scottish Marine Regions Order, ⟨http://www.legislation.gov.uk/ssi/2015/193/contents/made⟩ Last (Accessed 13 October 2017).
[57] A.D. Hull, Managing competition for marine space using the tools of planning in the UK, Plan. Pract. Res. 28 (5) (2013) 503–526.
[58] Shetland Local Development Plan 2012. ⟨http://www.shetland.gov.uk/planning/documents/SICWLPolicy6thSept2012.pdf⟩ (Accessed 20 December 2017).
[59] Marine Scotland. Pilot Pentland Firth and Orkney Waters Marine Spatial Plan., ⟨http://www.gov.scot/Resource/0049/00497299.pdf⟩, (Accessed 10 February 2017).
[60] Marine (Scotland) Act, ⟨http://www.legislation.gov.uk/asp/2010/5/pdfs/asp_20100005_en.pdf⟩, (Accessed 9 February 2017) (Accessed 20 December 2017).
[61] The Crown Estate - How we work, ⟨https://www.thecrownestate.co.uk/who-we-are/how-we-work/⟩, (Accessed 20 December 2017).
[62] The Scottish Government - The Crown Estate, ⟨http://www.gov.scot/Topics/marine/seamanagement/TCE⟩, (Accessed 20 December 2017).
[63] CMPP, Statement of Public Participation, ⟨http://www.clydemarineplan.scot/statement-public-participation-published/⟩, (Accessed 12 March 2018), 2018.
[64] S. Kerr, K. Johnson, J. Side, Planning at the edge: integrating across the land sea divide, Mar. Policy 47 (2014) 118–125.
[65] S. Kidd, D. Shaw, The social and political realities of marine spatial planning: some land-based reflections, ICES J. Mar. Sci.: J. du Cons. 71 (7) (2014) 1535–1541.
[66] S. Jay, Built at sea: marine management and the construction of marine spatial planning, Town Plan. Rev. 81 (2) (2010) 173–192.
[67] R. Mc Morran, A.J. Scott, M.F. Price, Reconstructing sustainability; participant experiences of community land tenure in North West Scotland, J. Rural Stud. 33 (2014) 20–31.
[68] C. Beveridge, P. Biberbach, J. Hamilton, Empowering Planning To Deliver Great Places, 2017. Available at: ⟨http://www.gov.scot/Resource/0050/00500946.pdf⟩, (Accessed 12 September 2017).
[69] The Scottish Government - Community Empowerment (Scotland) Act, ⟨http://www.gov.scot/Topics/People/engage/CommEmpowerBill⟩, (Accessed 20 December 2017).
[70] The Scottish Government - Programme for Government, ⟨http://www.gov.scot/Publications/2015/09/7685/2⟩, (Accessed 20 December 2017).
[71] S. Moellenkamp, M. Lamers, C. Huesmann, S. Rotter, C. Pahl-Wostl, K. Speil, W. Pohl, Informal participatory platforms for adaptive management. Insights into niche-finding, collaborative design and outcomes from a participatory process in the Rhine basin, Ecol. Soc. 15 (4) (2010) 41.
[72] K. Johnson, S. Kerr, J. Side, Accommodating wave and tidal energy – control and decision in Scotland, Ocean Coast. Manag. 65 (2012) 26–33.