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EU Marine Strategy Framework Directive (MSFD) and Marine Spatial Planning (MSP): which is the more dominant and practicable contributor to maritime policy in the UK?

Abstract

This paper is a comparative analysis of the contribution to UK marine governance of two recent EU initiatives: the Marine Strategy Framework Directive (MSFD) and Marine Spatial Planning (MSP). MSFD imposed a duty on Member States to achieve Good Environmental Status (GES) in four regional seas, while MSP required Member States to replace their fragmented, sector-based system of maritime decision making with an integrated approach. The paper explains MSFD and MSP, examines their relationship, and compares their practicability, concluding that MSP is both the more dominant and the more practicable instrument, reflecting the UK's preference for sustainable development over conservationism in marine policy.

Keywords

Marine Strategy Framework Directive (MSFD); Marine Spatial Planning (MSP); Good Environmental Status (GES); UK marine policy

1. Introduction

Europe's marine environment is under increasing anthropogenic pressure [1]. Responding to concerns about the capacity of sector-specific policies to manage such pressures [2][3][4], the European Union (EU) adopted two initiatives: the Marine Strategy Framework Directive (MSFD) (2008) [5]; and the Integrated Maritime Policy (IMP) (2007) [5]. The aim of the MSFD is to place a legal requirement on

Member States to restore degraded ecosystems to maintain Good Environmental Status (GES) across the four European regional seas (North East Atlantic which includes the North Sea; Mediterranean Sea; Baltic Sea; and Black Sea) by 2020 [6][7]. MSFD has been transposed into UK national legislation through the Marine Strategy Regulations 2010 [7], placing new environmental requirements on all marine users. The aim of IMP is to encourage each coastal Member State to develop an integrated national maritime policy (INMP) and to establish a marine spatial plan (MSP). The purpose of INMP is to impose a state's national priorities on its waters, and the role of MSP is to coordinate the different uses of marine space in a coherent and integrated way to achieve those priorities. The UK introduced INMP and MSP as an outcome of the Marine and Coastal Access Act (MCCA) of 2009.

This paper is an examination of MSFD and MSP, their relationship, and their respective practicability, as seen through the eyes of marine users from two industries active in the UK marine environment (aggregate dredging and renewable energy), trade bodies, consultants, environmental non-governmental organisations (NGOs), governmental conservation agencies, and academics studying marine policy. The relationship between MSP and MSFD is far from straightforward. On the one hand, according to Douvere [8], MSP was envisaged by the EU as a means of implementing the environmentally-focused MSFD. Supporting this view is the fact that MSP, like IMP, does not have any legal force - EU Member States are not legally obliged to implement MSP [9] - whereas MSFD is a legally-binding EU Directive, so “the EU might find that the member states [only] fulfil their ‘environmental dimension’ obligations of the IMP” [10, p. 178]. On the other hand, MSP has been interpreted by many commentators as having a wider and more powerful role of balancing environmental and economic imperatives, including the evaluation of MSFD's environmental prescriptions against national socio-economic priorities. The EU explicitly recommends that “*Member States should develop their own national integrated maritime policies*”, asserting that “one size does not fit all: there are different, equally suitable ways to make an integrated approach to maritime affairs work” [11, p. 9 (italics in original)]. Moreover, unlike MSP, MSFD is a framework directive, and this

places the onus on Member States to formulate specific environmental targets and measures to achieve GES in their own territorial waters [12], allowing for interpretations via MSP that reflect their national contexts [13].

Two research questions arise from this study: first, is MSP the servant of MSFD (i.e. its implementer); or its master (i.e. customising or adjusting it to the UK context)? Second, which is the more practicable instrument of maritime policy in the UK – MSFD or MSP? The present paper explores these two questions through the eyes of UK respondents in two policy areas (aggregate dredging and renewable energy), together with responses from other marine stakeholders and contributors to the academic literature. In section 2, the methodology of the research is outlined; in sections 3 and 4, MSFD and MSP respectively, are explained and their relationship and practicability critiqued; and in the concluding section 5, the findings of the paper are summarised.

2. Methodology

2.1 Choice of maritime sectors

The aggregate dredging sector and the wind farm segment of the offshore renewable sector were chosen for study because of their major presence in the UK marine environment. The UK's political economy is inextricably linked with the marine environment [14]: the maritime industry employs over 620,000 people with a value added of ~€30,000 million in 2008 (the highest of any European country), and is expected to show consistent growth in the future with a projected annual revenue of >€70,000 million by 2030 [15]. The aggregate dredging industry is predicted to expand to meet the demands of coastal defence, beach nourishment and construction projects (including wind turbine foundations) [16]. Wind farm energy is forecast to increase from 1.5GW to 18GW by 2020 [16] when it is expected to provide the UK with its largest contribution of renewable electricity [17].

2.2 Key informant interviews

The primary data used in this report comes from 15 key informant interviewees, most of whom were senior staff directly or indirectly involved in the two industries (aggregate dredging and renewable energy), with the remainder from ENGOs, conservation agencies, consultancies and academia. Purposive sampling was adopted to ensure that interviewees had experience relevant to the research questions being explored [18]. Interviews followed a semi-structured format with a combination of open-ended, intermediate, and ending-type questions which were incorporated in an interview guide sent to informants one week before their arranged interview to allow for question familiarisation. The interviews were conducted in May and June 2012: four were carried out face-to-face; eleven by telephone. Interviews ranged in duration from 38 to 80 minutes (average ~55 minutes). Several informants made clear that their transcripts were a mixture of personal and professional viewpoints.

2.3 Data analysis

All interviews were recorded and transcribed - informants being identified only by broad stakeholder category to ensure anonymity. Transcripts were imported into QSR NVivo 9 qualitative data analysis software used to interpret their themes through a process of manual coding [19]. Coding was based on a mixed approach method in which some themes were known in advance, and some emerged from the data. Links between different codes were established, and published literature was used to provide context to the findings. After the data was coded, a matrix coding query was run in NVivo to establish relationships between each of the themes discussed.

3. Marine Strategy Framework Directive (MSFD)

The EU's MSFD requires Member States to achieve good environmental status (GES) by 2020 [30] using 11 qualitative descriptors applied to ecosystems identified by ecological rather than political

boundaries [4], and implemented in four marine regions (regional seas) divided into sub-regions to take account of the ecosystem characteristics of particular areas [2]. Informant 9 said of MSFD that *“I think it’s a very important directive, it’s the first directive that really deals with the whole of the marine environment, and I think that’s a massive leap forward, as far as protecting the marine environment is concerned”*. However, several questions arise about the practicability of MSFD. The first question is whether it is a purely environmental directive - as Informant 3 held: *“[although] one of the overarching aims is for sustainable use of marine resources, in fact...the descriptors and objectives...[were] purely for environmental targets, which...has the tendency to make people think, certainly industry sectors...it’s just another piece of environmental legislation rather than having potential benefits for sustainable development”* - or whether, as Bertram and Rehdanz [5] argue, MSFD requires not only ecological but also socio-economic cost-benefit analyses (CBA).

This question is linked to uncertainty about the meaning of MSFD’s concept of good environmental status (GES). There are three possible meanings: pristine; sustainable; and status quo. The first meaning is that GES entails restoring a pristine marine environment – i.e. one that is untouched by human intervention. The MSFD Task Group for descriptor 1 (biological diversity) discussed the concept of ‘unimpacted state’, which is a site that demonstrates environmental conditions in the absence of anthropogenic pressures [20]. In principle, the UK government favoured this option: *“The UK Government accepts that the most robust way to set baselines for these habitats is to use reference conditions equivalent to a time when there were negligible human impacts, or failing that, to set baselines using past data”* [21, p. 26]. However, there are few undisturbed coastal sites in the EU from which a representative baseline could be established [22]. Informant 12 commented that *“they haven’t got a clue, because it’s pristine, nobody goes there, it’s too far offshore or whatever”*. So this meaning of GES is not practicable. The second meaning, which is expressed by Rice et al [23], Defra [24] and in Article 3(5) of MSFD, involves maintaining an ecosystem where human impacts on it are sustainable. Defra [24, p. 12] stated that *“GES does not require the achievement of a pristine environmental state across the whole of the UK’s seas...Achieving GES involves protecting the*

marine environment, preventing its deterioration and restoring it where practical, whilst at the same time providing for sustainable use of marine resources”. However, definitions of ‘protecting’, ‘restoring’, and ‘sustainable use’ are highly contested, and capable of justifying a variety of different baselines. The third meaning requires preventing the present degraded ecosystem from deteriorating further. MSFD [21, p. 26] stated that “given current lack of data, the use of current baselines, based on best available data, may be the only practical option for many habitats at the present time”. But using current data as the baseline risks conferring good environmental status on degraded ecosystems.

How to determine baselines or reference conditions is therefore highly problematic. Part of the problem is lack of scientific data. As Informant 13 put it, “*unfortunately...baselines, reference areas, reference conditions, what you measure it against...that’s going to be wonky...until the monitoring becomes more methodical and consistent, I think we’ve still got a long way to go on that*”. But part of the problem is normative, since the definition of ‘good’ in GES is derived from societal values and judgements [6][4]. In other words, GES is a social construction rather than a biological ‘fact’, and its meaning will vary over time and circumstance: “It can be argued that ‘goodness’ is not a property that is intrinsic to nature but an extension of our human value system...Each generation tends to set its own reference state or ‘baseline’ employing the information from the period it felt to be ‘the best’” [6, pp. 190, 192).

Another problem is how to synchronise MSFD requirements with existing environmental requirements. The challenge here is to establish how far MSFD is already being implemented in the UK under other environmental legislation such as the Water Framework Directive (WFD) [12]. MSFD significantly overlaps with such standards [4], but it is unclear whether or not they are identical standards [13]. The government has made clear its intention to utilise existing mechanisms to achieve GES [25], but until management measures for implementing MSFD are known, there will be considerable uncertainty (Informant 14), leaving industry to make educated guesses. It is especially

difficult to see how MSFD links to the CFP. As Informant 3 says, *“fisheries don’t really see the relevance of MSFD...for them when they’ve got the CFP which is dealing with all their fisheries”*.

A further complication arises in relation to the application of the ecosystem-based approach (EBA) which is an integral element of MSFD. Borja et al. [7, p. 902] state that “the MSFD is the first of the European directives that aims to be based upon an EBA, which is related to the ecological integrity of an aquatic system” (see also [26][4][3]). But the directive fails to explain precisely what the EBA means and requires. For example, deciding when an anthropogenic impact threatens the ability of the ecosystem to function [27] is not made clear [23]. How will EBA guide policy-makers in striking a balance between such varied conservation objectives as maintaining biological diversity (Descriptor 1), ensuring that commercially exploited fish and shellfish are within safe biological limits (Descriptor 3), and minimising eutrophication (Descriptor 5)? EBA will require considerable understanding of the ecosystem, including knowledge of cause and effect (such as how pressures contribute to ecosystem change) [28][6] which is not yet available on a regional scale..

This leads us to the vexed question of stakeholder engagement, which is evidently the mechanism through which at least some of the above judgements are to be made. Informant 6 warned that: *“There’s no scientific ‘this is the best thing to do’ approach because it all depends on societal value judgement and I don’t see a process to gather those societal value judgements in any balanced way, it’s most likely going to be who shouts the loudest”*. In Article 18 of MSFD there is a requirement for Member States to provide “early and effective opportunities to participate” in the implementation of the Directive. However, van Hoof and van Tatenhove [29] assert that the manner in which MSFD was introduced was top-down and technocratic, ignoring stakeholder claims. According to Fletcher [2, p. 1885), MSFD does not specify which groups are legitimate ‘stakeholders’ or ‘interested parties’; it provides no guidance about what ‘early’ and ‘effective’ opportunities to participate mean; there is no procedure for evaluating whether stakeholder participation has been adequate; and “there is an imbalance between the significant emphasis placed on scientific inputs to the policy-making process

and the comparatively limited emphasis placed on stakeholder inputs, particularly with respect to the development of marine strategies”. This criticism is linked to the charge that MSFD lacks a level playing field among interested sectors. Some sectors have more influence and power than others, and this threatens to hijack decisions in favour of the strongest parties. Ounanian et al. [4] claimed that the shipping, oil, gas and wind farm industries were much more actively engaged in MSFD consultation exercises and working groups than were the fishing and tourism industries.

Another question arises from the opt-outs or exemptions that MSFD legitimizes. EU [30] states that a member state may claim that it cannot achieve GES because of (a) action for which it is not responsible; (b) natural causes; (c) force majeure; (d) overriding public interest; (e) insufficient time; (f) no significant risk to the marine environment; or (g) disproportionate costs (Article 14 (4), MSFD). However, as Informant 10 asked, what constitutes ‘overriding public interest’? And at what level do costs become ‘disproportionate’ and to whom? These opt-outs are open to various interpretations, adding to concern about inter-state harmonisation. As van Leeuwen et al. [13] point out, because MSFD is a framework directive, it allows scope to member states to interpret GES and its descriptor indicators in their own way. But the lack of common interpretations will foster confusion and conflict between member states, adversely affecting those industries with operations across the EU [28][3][4][13].

At the root of many of the above issues for MSFD lies the problem of data deficiency. There are many gaps in data across the range of descriptors [5], and current understanding of the complex marine environment, especially in relation to new industries such as renewable energy, is poor [31][32] because of the high financial costs of marine surveying [33]. Policy decisions are therefore often based on inadequate information [14][2]. Quantitative data are in particularly short supply, which means that, as Informant 3 pointed out, “*a lot of the targets and indicators being set are more qualitative than quantitative which is not ideal*”. The current lack of data on the marine environment caused alarm among some respondents (Informants 6 and 12). An ENGO respondent suggested that

industry should collect data: *“the people involved in X are very keen to do that. I think the bigger challenge is getting government to recognise that that is a potential role for industry”* (Informant 3). A similar plea came from a conservation agency respondent, Informant 9: *“I’ve...spent the last seven years trying to...get industry to make its data more readily available...we still struggle to get best access to the data...it is a bit like pulling teeth at times”*. Informant 13 (a regulator) emphasised the benefits to industry of collecting and sharing data: *“In the short term there’s commercial sensitivity, they don’t want to share the information, but in the long term the benefits they’d get from it would save them money”*. Another self-interested reason for industry to help reduce the deficiency of data would be to avoid the application of the precautionary principle. Informant 1 claimed that *“When there are unknown factors, there’s more of a call for the precautionary principle to be adopted. Obviously the more data, the more understanding we have of the marine environment, by definition, the less precautionary you have to be as you can predict more accurately what’s going to happen”*.

Nevertheless, there was considerable reluctance among some industry respondents to fill gaps in data: *“it’s not our job to research seafloor integrity or biodiversity, what we have to do to get our quarry permissions of our dredging licenses is carry out Environmental Assessments of the risks and impacts that might arise from what we want to do...If there are areas where understanding is poor...if it’s not covered by our Environmental Impact Assessment then it’s not our job to do it”* (Informant 8). Furthermore, a ‘hostage to fortune’ concern was raised by the wind farm industry – that the data they gave to government might be used against them: *“we’re generating hot spots of data rich areas...what we’re starting to see is potential for that to attract designation...make it look as if there are more environmental issues in those areas... we wouldn’t want...nature conservation bodies...to imply that the areas we’re showing up are those that should be protected because they’re the only ones that they have confidence in the data”* (Informant 10). Frustration from the wind industry was also expressed at the perceived imbalance in stakeholder data acquisition obligations. For example, fisheries were not required to provide evidence of the impact they had on the marine environment: Informant 14 complained that *“offshore wind has and the dredging industry as well...put a lot of information*

in...gathered from our monitoring...There's a lot of other industries that aren't giving that information, the likes of fisheries...there needs to be a push from government to make it more of an even playing field". However, Informant 15 argued that the need for more data was less important than our need to collate and analyse the data that we have already obtained.

One of the greatest obstacles to the implementation of MSFD, however, was the lack of political will in member states to implement it in full. The UK's proposed GES targets and indicators have been criticised by some stakeholders as unambitious - for example, favouring qualitative over quantitative targets (Informants 3 and 9), or having too loose targets (Informant 5). Seven reasons can be found for the UK's apparently lacklustre approach. First, the UK has a very extensive marine area to assess - the third largest Exclusive Economic Zone (EEZ) in the EU – and so faces a particularly costly assessment exercise (Informant 9). Second, the UK has the largest maritime economy by value-added criteria [15] in the EU, and therefore has the most to lose by stringent environmental restrictions. Third, the UK traditionally has an evidence-based approach rather than a precautionary approach to environmental policy [25], and this means it demands a high degree of scientific certainty from proposed environmental restrictions, but such certainty requires quantitative data which are not yet available (Informant 9). Fourth, the UK government is highly receptive to industry voices urging restraint by invoking the principle of proportionality to rule out environmental restrictions which would be inordinately costly. For example, in relation to Descriptor 11 involving underwater energy, several informants in the wind energy and aggregate sectors were keen for the government to invoke the directive's exemption procedure on grounds of disproportionate cost: *"we feel they should be exploring those further, not necessarily openly and publicly, but making sure they understand how to construct a good case for failure to achieve GES"* (Informant 10). MSFD [21] indicated that the UK would only do the minimum required by MSFD. Fifth, UK government ministers (especially Conservative Party ministers) have often expressed euro-sceptical views, and shown reluctance to fully implement EU environmental directives (*Guardian* 23.1.13). Sixth, implementation of MSFD is costly [34], and UK government departments have scarce financial and human resources [35], made

worse by current austerity measures and a recent surge in marine environmental policy (including the demands of MSFD) that have placed heavy pressures on the Department for Environment, Food and Rural Affairs (Defra) (Informants 6 and 10). Seventh, the UK government could legitimately argue that the timescale for the implementation of MSFD was unrealistically tight [2][1]. Informants 1, 3 and 5 said that achieving GES by 2020 would be challenging.

4. Marine Spatial Planning (MSP)¹

In 2008, Ehler [36, p. 840] claimed that “Marine spatial planning (MSP) is an evolving idea, and one whose time has come”. Five years later, he pointed out that MSP covers nearly 10% of the EEZs in the world, and he predicted that by 2025 it will cover over 30% [79]; see also [38]. The concept of MSP was defined by UNESCO [39] as “a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that usually have been specified through a political process”. This definition emphasises two important characteristics of MSP – its aim of sustainable development of marine resources, not just environmental protection; and the fact that its priorities are set by a political, not a scientific or technical decision-making process. However, there is another important characteristic of MSP that is not explicitly included in the UNESCO definition – its integrative role [40]. MSP was designed to replace the current fragmented system of sectoral decision making with a coordinated, coherent, and joined-up system of allocating space to marine users. “For too long policies on...maritime transport, fisheries, energy, surveillance and policing of the seas, tourism, the marine environment, and marine research have developed on separate tracks, at times leading to inefficiencies, incoherencies and conflicts of use” [41, p. 4]; see also [8][42][11]. Agardy et al. [43], Ardron et al. [44] and Farmer et al. [26] highlight the role of MSP in solving damaging turf disputes between different users. As

¹ The term ‘maritime spatial planning’ rather than ‘marine spatial planning’ is used by the EU [56] to emphasise the cross-sectoral nature of the process [78]; the term ‘marine planning’ is used in the UK’s Marine and Coastal Access Act (2009); and the term ‘coastal and marine spatial planning’ is used in the USA [57]. However, to all intents and purposes the four terms mean the same thing.

Informant 1 put it, “*There are...undoubtedly a whole range of user conflicts, and some of those can be addressed through spatial planning*”.

However, some narrower meanings have also been given to MSP. For instance, it has been deemed an instrument for the introduction of a network of MPAs [45][46][35][40]; a conduit to pave the way for offshore energy installations such as wind farms [47][48]; a method of delivering the ecosystem-based approach (EBA) to marine management [78][49][50][46][51]; and a means of implementing the MSFD. The last meaning raises an issue that is central to this paper – the relationship between MSFD and MSP. There are two opposing views of this relationship: (1) that MSP has a narrow and subordinate (servant) role of facilitating the environmental objectives of MSFD; and (2) that MSP has a wide-ranging and superordinate (master) role of adjudicating between the environmental objectives of MSFD and the developmental objectives of marine resource users.

The first interpretation (that MSP is the servant of MSFD) arose when MSFD was issued in 2008, and MSP was seen by many commentators and authorities (including the UK and the EU) as the obvious mechanism for implementing it [52][26][53]. EU [49, p. 7) stated that “MSP can...be an important tool for Member States to support certain aspects of MSFD implementation, including in the context of cross-border coordination of marine strategies”. EU [78, p. 7) noted that “Some Member States have declared that they will use MSP to implement the MSFD (e.g. UK)” (see also [54]. The UK government identified MSP as a key delivery mechanism for MSFD, holding that MSP, through the Marine and Coastal Access Act of 2009, the Marine (Scotland) Act of 2010, the development of Marine Plans, and a decision framework on licensing marine activities, would contribute significantly to the UK’s achievement of GES [55][21]. An academic respondent said “*I think marine spatial planning is really the best tool we’ve got to achieve Good Environmental Status*” (Informant 5. A similar view was expressed by Informants 3 and 11). According to other commentators, MSFD had MSP written into it, at least implicitly [58][47]. For Foley et al. [59] and Calado et al. [35], MSP’s principal duty was to deliver ecological objectives, while Schaefer and Barale [50] even suggested

that MSFD provided MSP with legitimacy. Koivurova [10] predicted that because MSFD was a legally binding directive, MSP would prioritise it over its other non-binding tasks. Douvere [8] claimed that MSP was an ideal way to implement the EBA, which is the key element of MSFD (see also [60]).

The second interpretation (that MSP is the master of MSFD) was held by many other observers. For example, in answer to the question “what in your opinion is the role of Marine Spatial Planning as a mechanism for achieving Good Environmental Status?” Informant 4 replied “*that’s not its job...Marine Planning is about looking at areas and identifying what should be acceptable and where...I don’t think there’s really much of a mechanism for Good Environmental Status being criteria for Marine Planning*”. Indeed, for some writers, MSFD was the means of implementing the (environmental) aims of MSP [34][61], not vice versa. According to Informant 13, MSP is about sustainable development (SD) as a whole, whereas MSFD is only about the environmental pillar of SD: “*marine planning does what it was set up to do...there’s social, economic and environmental, the three pillars of sustainable development, MSFD is for the environment, marine planning is for all three*” (see also [29][13][62][8][63][49][64][53]). For Schaefer and Barale [50], MSFD had a conservation mission, whereas MSP was neutral between competing conservation and development missions. A government respondent commended MSP for performing a wider role than GES (Informant 13). Informant 10 thought the role of MSP was not conservationism but to take the hard allocative decisions: “*I don’t think it’s going to itself be a means of achieving GES, other things will be, MCZs for example...what we would hope to see out of Marine Spatial Planning is...a way of setting a framework that prioritizes uses of the sea...we need mechanisms for resolving conflict...you are going to get situations where...one use should override the other, and, at the moment, there doesn’t seem to be any desire to build in that harder decision making*”.

One way to reconcile these two interpretations is to acknowledge a complementary and mutually interactive relationship between MSFD and MSP: EU [49, p. 3) stated that “elements of the MSFD

can contribute to the application of MSP and vice versa". A second way is to regard them as parallel political processes operating simultaneously at different scales: MSFD is confined to the politics of marine ecology weighing up different conceptions of ecological conservation; whereas MSP embraces the politics of the entire maritime system weighing up different priorities of national policy. A third way to reconcile them is to see them in geographical context: for instance, [45] suggested that MSP in Europe was driven largely by economic considerations (interpretation 2), whereas MSP in the USA was driven largely by ecological considerations (interpretation 1). A fourth way is to see interpretation (1) as 'hard sustainability', applying to states with small maritime industries; and interpretation (2) as 'soft sustainability', applying to states with large maritime industries [47]. A fifth way to reconcile them is to see a chronological progression from (1) to (2) and back to (1), as Douvere [8] argued.

Controversy over MSP was not, however, confined to its meaning and to its relationship to MSFD, but also arose over its practicability. Eight criticisms have been made of MSP's practicability. First, some critics argued that MSP was unnecessary, because developers already carried out spatial planning processes. For example, Informant 8 argued that dredgers routinely cooperated with other marine users: *"we recognise that they have their own priorities, just as we do, and we engage a lot. We talk to wind farm developers quite often in terms of their proposals, we let them know what we're doing, and we try and minimise any conflicts...we have a dialogue...and it's the same with fishermen...we have regular opportunities to meet with them...we recognise we need to be...good neighbours to other industries"*.

Second, critics claimed that there were limits to the room for manoeuvre that marine spatial planners had. The first limit is physical: as Informant 6 said, *"There's...some things cannot be marine spatially planned...if you've got an oil field you can't say 'right, we'll exploit that over there', it is where it is.. Aggregate dredging is very similar and indeed, at the moment, wind farms can only occur up to a certain depth...and fishing tends to occur where (a), there's fish and (b), you can use a particular gear. So I'm not quite sure how much extra marine planning will add"*. The second limit is historical:

as Informant 8 pointed out, *“to...take a map, a blank piece of paper, and carve it up into regions where certain activities are encouraged and certain ones aren’t, I think is unrealistic...the continental shelf around the UK has been developed and activities have taken place on it for decades, so...if you try and impose Marine Spatial Planning now you’re closing the door after the horse has bolted. Some of our dredging licenses have been in existence for forty years; fishing activity has been going on for decades...we’ve now got oil and gas since the 1960s, cables and pipelines associated with that, we have wind farms now springing up like mushrooms...Marine Spatial Planning would have been a great idea in 1925, before we had lots of development”*. The third limit is sectoral: Ehler [37, p. 6] argued that MSP could not entirely replace sectoral decision-making: “integrated MSP will never have enough authority, information, or expertise to replace single-sector management, nor should it try...*implementation* of integrated plans will need the authorities of single-sector agencies to ensure the carrying out of management measures consistent with the plan” [italics in original].

The third attack on MSP’s practicability was over its claim to value-neutrality. Although the UK government accepted the need for some prescription, and even identified “activities to which a degree of priority is expected to be given”, it specifically stated that this was not “intended to imply which activities should be prioritised over any others” [17, p. 7]. Flaguel [65, p. 2) suggested that MSP “is the referee in charge of overseeing fair play in a well-managed arena (the marine environment)”. However, critics argued that MSP should be a much more prescriptive process. For example, Informant 15 said that *“from an MSFD perspective, you need that sort of more prescriptive approach [adopted by the Dutch and the Belgians] to make the difficult decisions and make the judgements in order to deliver the benefits...what worries me [is that]...The Marine Policy Statement doesn’t provide any sort of guidance over prioritisation or importance of uses or activities, it just presents each of the various uses and resources and activities in isolation of one another, and it’s almost for the MMO to come up with the perfect mix which is a pretty tall ask...you need that more prescriptive approach...to make those difficult decisions. [Notwithstanding] A lot of the discussions and the presentations that you hear about win-win, and helping to realise added value, and all the other good buzz words, the*

reality is that nine times out of ten...someone's going to have to make a difficult decision. And one activity or use is going to find itself perhaps compromised against another activity or use". This criticism is a recognition that MSP is necessarily a political process, not an a-political process, and it needs to make clear what priorities between marine users the national interest demands.

By contrast, the fourth criticism complained that the UK government *had* established the MSP's priorities, but that they were biased towards the offshore wind energy industry. For example, Informant 12 from the aggregate industry claimed that *"the wind farm industry seem to have a bit of a free reign, they are expected to do certain things...they go through a process, but ultimately...they're going to get built...they have priority. The types of companies that are doing it are very aggressive...their lobbying capabilities are much stronger, they will come to the top of the pile...you'll probably find, for example, the Round 3 wind farm areas, that if anybody wants to go and start doing things in there...that's been ear-marked for wind farms"*. As Ehler [37, p. 6] points out, MSP is a zero sum game, not a win-win game, and the distributional outcome has to be seen to be fair: "Some advocates of MSP promise that it will result only in outcomes in which all interests win. However, MSP is about the *allocation* of marine spaces to specific uses...or goals...As marine space is allocated, some users will win; some will lose...It is important that MSP management measures are evaluated not only for their *effectiveness* in achieving management objectives and their *efficiency* (achieving management objectives at least cost), but also their *equity* (who benefits, who loses) before implementation" [italics in original]. Qiu and Jones [47] argue that weaker sectors such as inshore fishers could suffer injustice if MSP favours the more powerful sectors who wield political clout. On the other hand, MSP could be seen as an opportunity for such disadvantaged sectors to obtain publicity for previous injustices they had experienced [66].

The fifth criticism was that such a bias in favour of wind farms was not only unfair but counterproductive. Informant 15 explained that *"offshore wind farms have primacy over*

everything...But there's a risk...you ignore some of the knock-on implications...for the wind farms to be built...they're going to need port developments, big manufacturing places and support facilities...In order for those facilities to be built, you're going to need large volumes of construction aggregate, so if you constrain the construction aggregate...in favour of the wind farms, you may end up compromising your ability to deliver the wind farms".

The sixth criticism was that MSP had a democratic deficit. The nub of this criticism is that MSP failed to engage vulnerable stakeholders in its decision-making processes. Kidd and Ellis [67, pp. 58-59) pointed out that terrestrial spatial planning (TSP) had moved away from the modernist planning paradigm of the scientific and technical expert making value-free non-political decisions in the public interest, to the post-modernist planning paradigm of participative stakeholders making normative judgements about the way their environments are organised, but MSP had not yet followed suit: "To date, planning for the sea has developed from largely scientific roots and rationalist traditions, with many of the leading marine planning initiatives led by research institutes or government departments which have framed MSP within a epistemic scientific discourse" (see also [68]). Informant 6 said that *"the planning system of land has a democratic process, it's got its faults and you may not like what it comes out with but it is nevertheless a democratic process. We don't have that in the sea and we don't have the values being applied to marine spatial plans"*. It is true that the EU emphasised the importance of stakeholder engagement in the MSP process: "All stakeholders should be involved early in the MSP process" [49, p. 4]; "Stakeholders must be on board from the start. They need to understand each other's expectations and trust the process. Stakeholders themselves should take responsibility and participate actively" [69, p. 15]; "Stakeholder participation is also a source of knowledge that can significantly raise the quality of MSP" [78, p. 10). Many commentators argued that stakeholder participation was essential if societal choice was to determine the values which underpinned MSP's prioritisation. For example, Ehler [36, pp. 841, 842) stated that "People are at the heart of MSP and both the setting of objectives and the selection of management measures are ultimately a matter of societal choice. Stakeholder participation is not enough; stakeholders must be

empowered to participate effectively throughout the MSP process...Stakeholder involvement should be early and often in the MSP process". For similar remarks, see [8][70][71][40][50][72][73][53][74]. However, relatively little effective engagement of stakeholders has occurred in the UK's MSP. This is largely because the logistics of organizing effective stakeholder involvement in MSP decision making are daunting. As Foley et al. [59, p. 963) noted, "Given the comprehensive nature of ecosystem-based MSP, this goal will be challenging as the number of stakeholder groups could become very large" (see also [70].

Seventh, MSP was criticised for self-contradiction because it was declared to be both flexible and uniform. On flexibility, EU [69, p. 16) stated that MSP "as a process requires flexible management...it needs to be monitored and evaluated". Also, EU [11, p. 9) explained that MSP will vary across member states: "As was made clear in the Commission's proposal for an Integrated Maritime Policy for the EU, one size does not fit all: there are different, equally suitable ways to make an integrated approach to maritime affairs work. A number of Member States are developing their own new approaches, in accordance with their legal frameworks and with their economic, social, political, cultural and environmental context...Each government will have its own specific priorities for its maritime policy". Likewise, Halpern et al. [57, p. 203) claimed that "there is no single right way to do CMSP or EBM, and any given process will need to be adapted to the ecological, technological, social, and political context" (see also [8][75][50][72][36]). However, the EU [11, p. 9] also held that "different government entities should work towards shared goals". EU [49, p. 10) stated that "Development of MSP processes by Member States is taking place, but on an ad hoc basis, following different paths and time scales. A more coherent common approach would significantly enhance the potential value of MSP for the EU as a whole, as well as in a sea-basin context...In the light of these conclusions, the Commission sees a clear need for, and added value in, continued work towards a common approach to MSP".

This EU insistence on ‘shared goals’ and ‘a common approach’ could be seen as a response to complaints that MSP in the UK was too flexible. For example, Informant 14 said that: *“the whole approach to Marine Spatial Planning is different...within Germany they’ve been quite strict about...defined areas we can go...it’s more efficient, because they’re saying yes, no, yes, no, whereas in the UK it’s a bit more...pragmatic but sometimes that doesn’t help in decision making...that’s why Germany are further ahead than we are”*. Another complaint about flexibility came from Douvere and Ehler [75, p. 306] who said there was little explanation of how to implement an adaptive MSP or how to judge its success: “Without knowing what it is that existing maritime spatial plans are achieving (or not achieving), how will it be possible to improve them the second time around?”

The eighth criticism of MSP’s practicability was its lack of a legal foundation. One of the reasons why integrated coastal zone management (ICZM) did not have much success in the 1990s was because it was a voluntary initiative without a legal foundation [76], and critics of MSP feared the same would happen to it unless it was underpinned by legal enactment [36][50]. Informant 3 stated that *“we would quite like to see European legislation for Marine Spatial Planning”*. The EU [78, p. 10] agreed: “in the same way that terrestrial planning set up a legally binding framework for the management of land, MSP should be legally binding if it is to be effective” (see also [72], and the European Commission has recently launched a draft directive to make MSP legally binding on member states [77][47], *Fishing News* 22.3.13. However, this has raised anxieties among some member states and ENGOs that a stronger MSP could weaken the MSFD, and for this reason, Qiu and Jones [47] argued against the proposed new MSP directive:

5. Conclusion

The above analyses of the meaning and practicability of MSFD and MSP suggests that although MSFD has legal binding authority on MSs, whereas MSP (at present) does not, MSFD is a framework directive which allows for considerable variation in its application, and MSP has scope for

interpreting it to synchronise with national priorities for the sustainable use of the marine environment. Accordingly, MSP must be regarded as the dominant player in the relationship between the two EU initiatives. Moreover, MSP is a more practicable initiative than MSFD. Although both are flawed instruments, MSFD suffers from more weaknesses than does MSP. The deficiencies of MSFD include lack of clarity about the meaning of good environmental status (GES); tension between scientific and normative criteria for baselines/reference conditions; problems of consistency with other EU directives (e.g. WFD) and policies (e.g. CFP); opacity on how to implement the ecosystem-based approach (EBA); difficulties of engaging stakeholders in decision making; lack of a level playing field between different marine users; open-endedness of opt-out clauses; obstacles to inter-state harmonisation; data deficiency; and lack of political will. The deficiencies of MSP include the ambiguity of its role (especially whether it is the slave or master of MSFD); its alleged redundancy; its limited room for manoeuvre; its fraudulent claim to neutrality; the unfairness of its prioritisations; its democratic deficit; its self-contradiction between flexibility and uniformity; and its lack of a legal framework. It seems to us that the deficiencies of MSFD are more intractable than are the deficiencies of MSP, many of which (such as the lack of legal authority) are already being dealt with. Because the UK government has chosen to interpret MSP less as a means of implementing MSFD than as a means of adapting MSFD into the UK environmental culture of balancing environmental objectives against socio-economic objectives, MSFD is likely to have a minimal economic impact on either the aggregate dredging sector or the wind farm sector in the UK. The fact that the EU is set to introduce a new directive to give legal status to MSP reinforces the UK's strategy of prioritising sustainable development over conservationism in its application of MSFD.

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