

Research Report

Fishing industry and related views on no-take marine protected area proposals in SW England

August 2007

Citation

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SUMMARY

There are growing calls from some scientists and non-governmental/governmental organisations for no-take marine protected areas (NTMPAs). These calls are a response to concerns about the ‘health’ of marine fish stocks and ecosystems. At a UK level, Marine protected areas (MPAs) are a relatively recent aspect of conservation policies. The proposals for the forthcoming Marine Bill include provisions for designating NTMPAs and whilst many organisations are lobbying for such provisions, the prospects are currently uncertain. Against this background, some fishermen and their representatives are increasingly concerned that NTMPAs will be imposed on them, threatening their economic sustainability and their ‘way of life’.

Fishermen in the UK, as in most of the world, have enjoyed the rights to fish the total sea area, with the exception of safety/security exclusion zones, provided stocks are present and it is technically and economically feasible to exploit them. Conservation measures are imposed, such as quotas on certain species, partial/seasonal closures and various technical restrictions. However, **all these measures are aimed at fish stock conservation objectives** and other than these, the basic presumption has been that all areas can be fished, under the principle of ‘the freedom of the seas’. This presumption is now being undermined by increasing calls for NTMPAs, in which all fishing is banned, **primarily in order to achieve marine biodiversity conservation objectives**. These proposals raise many issues from the fishing industry’s perspective as they represent a fundamental challenge, through the introduction of marine biodiversity conservation objectives, to access rights decision-making processes.

In order to gain a rich understanding of fishing industry and related views, these issues are explored in this report, based on a completely independent research project involving a programme of 51 semi-structured interviews over May-October 2005 with 57 fishing industry representatives in south-west England (West Dorset, Devon & Cornwall). Whilst debates on NTMPAs are raging in policy and scientific circles, the views of the fishing industry are often neglected. This report is intended to provide a richer understanding of the different perspectives amongst the fishing industry on the issues raised by NTMPA proposals in SW England. It is hoped that this will help provide for a better understanding of fishermen’s views in such debates and help promote their fuller participation in such debates.

The findings of these interviews in relation to specific issues can be summarised as follows but the main report includes many more quotes that illustrate the findings. Please note that the reported percentages often refer to the total number of interviewees that discussed a given issue, rather than the total number of all interviewees. The figures in brackets after the percentages indicate how many interviewees stated this perspective.

Are NTMPAs the way forward? (p.8)

	No	Yes	Total
Inshore	73% (11)	27% (4)	15
Offshore	88% (14)	12% (2)	16
Representatives	57% (4)	43% (3)	7
FPOs	20% (1)	80% (4)	5
Enforcers	100% (8)	0% (0)	8
Overall	75% (38)	25% (13)	51

Overall, only 19% (6) of actual fishermen considered NTMPAs to be the way forward. There was a stark contrast between the views of the enforcers and the FPOs: none of the interviewees from enforcement institutions thought NTMPAs were the way forward, whilst 80% (4) of the interviewees from FPOs thought NTMPAs were the way forward. A relatively large proportion (43% (3)) of the fishing industry representatives also saw NTMPAs as the way forward. Perhaps the FPO and industry representatives are taking a more politically strategic perspective, whilst the enforcers are taking a perspective from the point-of-view of people who would have to enforce NTMPAs?

Quotes from interviews concluding that NTMPAs are not the way forward (75% - 38)

‘Where NTMPAs are concerned, I think it is the height of bloody arrogance!’

‘Both fish stocks and marine biodiversity are in a good condition’

‘Wider fisheries management approaches work well’

‘Complete NTMPAs are essentially nature reserves as most fish stocks are too migratory and variable to benefit from such area closures: fish have tails and they swim!’

‘The way forward is impact zoning to restrict the most damaging forms of fishing, alongside revisions to and stricter enforcement of wider fisheries management approaches’

‘NTMPAs are too draconian: a sledgehammer to crack a nut! We can protect habitats and particular fish stocks through partial, temporary closures of key areas and there is no justification for total & permanent NTMPAs’

‘Fish stocks are essentially there to be harvested, to provide livings and food, so it is wrong that we should close areas to fishing’

‘I see the way forward as a more regionalised, bottom-up approach, which would include seasonal/partial closures and a small proportion of NTMPAs in areas that are not accessible or suitable for fishing’

‘The grounds need to be fished to stop them going stagnant and the seas are for fishermen and fishing... NTMPAs are driven by greens and ill-informed people but we fear they may be imposed on us as the government doesn’t care about the fishing industry’

‘The sea is the fishermen’s heritage, that’s all we’ve got and you can’t take it away’

‘I don’t think the case for NTMPAs is strong enough to put people out of business’

Quotes from interviews concluding that NTMPAs are the way forward (25% - 13)

‘NTMPAs are the only option to improve things’

‘I see NTMPAs as having both fish stock and nature conservation benefits, as you are protecting the ecosystem that provides for both: very obvious!’

‘Environmentalists, fishermen & the public agree that we cannot continue to be allowed to fish everywhere all the time, as this damages marine life and fish stocks’

‘All we do is take from the sea, like raping it, without putting anything back, like farmers do. NTMPAs would be an opportunity to address this’

Objectives: balance between fisheries and biodiversity conservation? (p.10)

This theme explored what interviewees thought about the introduction of marine biodiversity conservation objectives onto the agenda. It was framed in terms of what fishermen thought the balance should be between fisheries and biodiversity conservation objectives in relation to NTMPA initiatives. The term ‘win-win’ refers to the argument that NTMPAs can deliver on both sets of objectives.

- 36% of interviewees regard both fisheries and biodiversity objectives as valid for NTMPAs (half with reservations): ‘win-win’;
- 36% consider that NTMPAs are not needed to fulfil either of these objectives;
- 20% consider that NTMPAs should be focused on biodiversity objectives as they will not deliver fisheries benefits and nature conservationists should be honest about their real aim;
- 7% consider that NTMPAs may be able to deliver fisheries objectives and that these are their focus, one arguing that nature conservationists should never be allowed to close sea areas to extractive uses, as they can on land.

Much of the sea not fished anyway? (p.13)

This theme explored arguments that NTMPAs are not needed, as a significant proportion of the sea area is not fished or is only fished for limited periods, so is essentially already NTMPA in effect.

Yes: much of the sea is not fished	71%	(17)
No: all areas of the sea are fished	25%	(6)
Yes: offshore, no: inshore	4%	(1)
(Total that discussed this)		(24)

Role of Advocates (p.14)

This theme explored the views of interviewees on the people that are campaigning for NTMPAs.

Critical of motivations and role of NTMPA advocates	76%	(32)
Respect and support for NTMPA advocates	14%	(6)
Qualified acceptance of NTMPA advocates	10%	(4)
		(42)

Uncertainty concerning the nature, magnitude and spread of fisheries spillover/export benefits from NTMPAs (p.17)

Discussions on this theme explored interviewees' views on arguments that there will be wider fisheries benefits from NTMPAs through the 'spillover' of eggs/larvae and the 'export' of adults.

Not sufficiently convinced such benefits will flow to justify NTMPAs	71%	(27)
Such benefits are likely to flow: trial NTMPAs	11%	(4)
Convinced such benefits will flow from NTMPAs	18%	(7)
		(38)

The arguments from the majority not sufficiently convinced revolved around the issues that:-

- fish stocks around SW England are **too diverse & migratory** for such benefits to flow from NTMPAs;
- benefits for seasonal spawning grounds can be achieved through temporary closures
- we do not have sufficient knowledge of fish stock dynamics to design NTMPAs to deliver such benefits, and these dynamics are variable and changing as a result of climate change;
- for such benefits to occur too large a proportion of the grounds would have to be closed;
- any such benefits will be outweighed by the displacement of effort to remaining grounds (see below);
- the claimed benefits of Lundy are exaggerated and are due to a generally very good year for crabs & lobsters;
- such benefits will not help fishermen whose grounds have been entirely closed or who have gone bust waiting for such benefits to flow;
- fish stocks and grounds need to be fished to stop them stagnating

37% (19) of the total number of interviewees, representing 50% of those who discussed spillover/export benefits, argued that the displacement of fishing effort from NTMPAs would:-

- outweigh the fisheries spillover/export benefits through intense 'fishing the edge' and the wider intensification of effort;
- increase gear conflicts;
- disrupt the customary allocation of grounds, particularly inshore grounds.

Contested claims that fishing stocks/grounds is necessary to avoid stagnation (p.20)

One argument against the wider fisheries benefits of NTMPAs is that fishing stocks and grounds is necessary to avoid their stagnation, therefore NTMPAs will have a negative impact on stocks. There is some overlap between the 2nd and 3rd perspectives so the % figures do not sum to 100.

Demersal trawling is necessary to avoid the stagnation of grounds	50%	(12)
Demersal trawling is not necessary	38%	(9)
Necessary to thin stocks but not to dredge grounds	16%	(4)
Unproven	4%	(1)

Balance between use of wider fisheries management approaches & NTMPAs (p.22)

Potential of improving wider fisheries management approaches rather than designating NTMPAs

48% (25) of the interviewees considered that the emphasis should be in improving wider fisheries management approaches (WFMA) rather than designating NTMPAs. The proposals to improve WFMA included the following measures:-

- improve the scientific basis of WFMA through the Fisheries Science Partnership (see p.25)
- better and more consistent enforcement of WFMA (see p.34)
- promote cooperation with WFMA (see p.22)
- restrict the more environmentally damaging forms of fishing, including static gear reserves
- extend SFC powers beyond 6nm
- extend satellite vessel monitoring systems (VMS) to smaller inshore vessels
- more minimum landing size restrictions
- wider use of V-notching, mutilated tail landing bans, maximum landing sizes, etc to conserve lobster/crab brood stock
- reduce wider effort, including decommissioning & tie-up schemes, sunset clauses, pot limits, banning pair trawls/multi-riggers, promoting smaller vessels using less gear, and reducing tow times & soak periods
- ban discards
- total economic value landing limits in return for discard bans and getting rid of quotas
- modify marketing chain and promote green labelling to improve profitability for fishermen to aid effort reduction
- more 'real time' measures
- increase mesh sizes and other technical measures to reduce bycatch/improve selectivity (but not pingers!)

It must be stressed that some of these measure may only have been raised by one or a very few interviewees, and certainly that not all these measures would be supported by the 26 fishermen who considered the improvement of WFMA to be the way forward rather than NTMPAs.

Potential of partial and temporary closures rather than NTMPAs

One specific fisheries management approach that was discussed by 67% (35) of the interviewees was the use of partial and temporary closures to protect spawning/nursery grounds. Of these 86% (30) supported such partial/seasonal closures as they achieve fisheries conservation objectives whilst allowing such areas to be harvested, with some also pointing out that some biodiversity conservation objectives were achieved by such designations. 14% (5) did not support the wider use of partial/temporary closures as they considered that NTMPAs should be used to protect spawning/nursery grounds as this is the only way to ensure such grounds are protected due to the rush to fish them when they are re-opened (4) and the only way to ensure the achievement of biodiversity conservation objectives (1).

Potential of streamlining wider fisheries management approaches in return for NTMPAs

Discussions on this theme explored interviewees' views on whether NTMPAs might be acceptable in return for some streamlining of WFMA, as a *quid pro quo* for NTMPAs.

There is no potential for streamlining WFMA in return for NTMPAs	47%	(20)
There is potential for streamlining WFMA in return for NTMPAs	53%	(23)
		(43)

There is no potential for streamlining WFMA in return for NTMPAs (47% - 20)

- WFMA and partial/temporary closures are relatively effective in conserving stocks
- Streamlining may not be effective due to effort displacement from NTMPAs
- Fishermen who lose their grounds will not benefit from WFMA streamlining
- Streamlining may be reversed in the future so we could end up with complex WFMA & NTMPAs
- Most stocks do not have the leeway to provide for streamlining
- CFP too inflexible to allow for streamlining
- Streamlining would be undertaken by bureaucrats with little knowledge
- Many fishermen have built up their businesses through investing in quota: they would lose out
- Politicians would never allow WFMA to be streamlined
- Streamlining measures would lead to bigger industrial fishers dominating the industry
- Total economic value landing limits would not work: some would still top-grade and proving this would be difficult

There is potential for streamlining WFMA in return for NTMPAs (53% - 23)

- The more NTMPAs you have the more you can streamline WFMA
- Get rid of quotas, ban discards and impose total economic value landing limits or other effort controls
- Reduce restrictions related to bycatch in recovery plans, some technical measures, days at sea, etc
- NTMPAs another nail in the coffin if WFMA are not streamlined
- Only for offshore fisheries (1)
- But unrealistic as regulators will not support proposals that put them out of a job
- Provided NTMPAs are rotational so they can be periodically harvested

It is worth noting that of the 23 interviewees who considered that there is potential for streamlining WFMA in return for NTMPAs, 61% (14) did not otherwise consider NTMPAs to be the way forward. This would indicate that there may be some potential to overcome industry objections to NTMPAs through the streamlining of WFMA.

Roles of expert & local knowledge: collective learning partnerships? (p.25)

Discussions on this theme explored the interviewees' views on issues related to the relative roles of 'expert' and fishermen's knowledge in informing decision-making processes. This included their views on the potential for 'collective learning partnerships', whereby fishermen and 'experts' could learn from each other as a means of improving the knowledge basis of decision-making processes. Of the 29 interviewees who discussed this, there was, unsurprisingly, unanimity that fishermen's knowledge should be used more, but there were several specific issues that were raised:-

- Fishermen are the real experts as they spend hundreds of days a year at sea;
- ‘Experts’ have a wider analytical view and knowledge needs to be pooled, *eg* through initiatives such as the Fisheries Science Partnership and RACs;
- Fishermen’s knowledge should be the primary basis of NTMPA design as they know the most and they will be most affected... but many fishermen *know* NTMPAs are not necessary;
- Trust in experts is undermined by the scientifically dogmatic but flawed nature of stock assessments: they look in the wrong place, at the wrong time using the wrong gear, in the quest for consistency;
- Difficult for fishermen to convince ‘experts’, that their knowledge is valid: mutual trust is a key issue;
- Fishermen could be strategic in the information they provide to minimise the impacts on them;
- Time availability is a limiting factor for fishermen when it comes to providing their knowledge.

The role of the ecosystem approach and precautionary principle (p.27)

Discussions on this theme were focused on interviewees’ views on the ecosystem approach and the precautionary principle, as these are key elements of the forthcoming Marine Bill and are often used to support arguments for NTMPAs. 47% (24) of the interviewees discussed these approaches, amongst whom the following perspectives were notable.

38% (9) were critical of the ecosystem approach on the grounds that marine ecosystems are too large/complex to manage and that nature was too powerful (6), and that this approach in combination with the precautionary principle would be the ‘last nail in the coffin’ for the fishing industry (3).

17% (4) argued that other factors, such as climate change, aggregate extraction and pollution, were having a far greater impact on marine ecosystems than fishing, and that these should be the focus of the ecosystem approach.

17% (4) were in favour of the ecosystem approach.

13% (3) argued that the ecosystem approach/precautionary principle should be focused on restricting the more damaging forms of fishing, such as scallop dredging, whilst 8% (2) argued that quotas should be abandoned and discards banned, so that better data could be gathered on total catches in order to inform the ecosystem approach.

21% (5) argued that if fish mortality from fishermen was being managed, then seal mortality should also be managed through culls, as part of the ecosystem approach. 13% (3) argued against this view.

8% (2) stated that they supported the precautionary principle: ‘give it the benefit of the doubt’, whilst 13% (3) argued that wider fisheries management approaches already are or could be made more precautionous, rather than designating NTMPAs.

21% (5) were critical of the precautionary principle as it would be used to justify too many draconian restrictions on the fishing industry. 25% (13) of all the interviewees discussed the need for a rational, objective approach to justify closures, as opposed to justifying them for subjective reasons, ‘in principle’ and as a basis for precaution.

Balance of decision-making powers between fishermen & relevant authorities (p.29)

Discussions on this theme were focused on interviewees' views on their actual and potential role in decision-making processes related to NTMPAs. 88% (45) interviewees discussed such issues and it was clear that many fishermen feel disempowered and therefore threatened by NTMPA proposals. Some are pragmatic, in that they consider that if NTMPAs were going to happen anyway, they would rather participate in discussions, in order to minimise the impacts on them. Some argued that fishermen's participation could be provided for through their representatives, whilst others argued that there were limitations to such representation, therefore there was a need to provide for the participation of actual fishermen. The need to develop trust between fishermen and relevant authorities was recognised by a few as an important issue, whilst others discussed how such trust had been undermined by some recent experiences, particularly relating to marine SACs. Some discussed the challenges related to fishermen's participation, with particular regard to the unlikelihood of fishermen reaching agreements due to the diverse nature of the industry. Considering these challenges, some considered that decisions may have to be taken at a higher level and imposed on fishermen.

Enforcement issues (p.34)

Discussions on this theme revolved around the question of whether NTMPAs were more easily enforced than WFMAAs &/or enforceable, especially if the potential for fishermen to voluntarily cooperate was limited, including the potential for mutual 'peer' enforcement amongst fishermen. Nearly half of the interviewees considered that NTMPAs are not more easily enforced than WFMAAs &/or are not enforceable, for reasons such as fishermen won't comply with NTMPAs if they don't agree with or respect them, the economic/cultural imperative to catch fish and the limited proof provided by VMS. On the other hand, an equal number of interviewees considered that NTMPAs are more easily enforced than WFMAAs &/or are enforceable, for reasons such as the effectiveness of VMS, the fact that the burden of proof is limited to simply proving that a vessel was fishing within a given NTMPA, with no loop holes, the eventual wider fisheries benefits that will flow from NTMPAs and the related potential for peer enforcement. Four interviewees argued that NTMPAs would be a backward step as static gear fishermen help enforce the exclusion of trawlers.

Issues related to wider stakeholder participation in decision-making (p.37)

Discussions on this theme focused on interviewees' views on arguments that the seas are a societal resource therefore representatives of wider society should be involved in decision-making to ensure that wider societal priorities are fulfilled.

Just over half of the interviewees who discussed this issue considered that societal representatives should not be involved in fisheries, as they do not have sufficient knowledge of fishing or the seas, they are too influenced by 'greens' and green motives, the seas are for fishermen and fishing, and DEFRA is democratically accountable and already has the last say in fisheries decisions. Just under half considered that societal representatives should be involved, but only three did not qualify this view with arguments such as the preceding. Only 6 of the 15 who supported such participation also considered NTMPAs to be the way forward.

Justice (p.39)

57% of the interviewees considered, on balance, that fishermen should not have to bear the costs of further restrictions through NTMPAs for wider societal conservation gains, whilst 29% considered that society should not have to bear the costs of the environmental damage of fishing for the gain of fishermen. However, 93% of the interviewees considered that fishermen displaced from NTMPAs should be compensated, recognising that this was both a question of justice and of managing the impacts of displacement. Only 7% (3) of the interviewees were against such compensation, and two of these were essentially arguing against NTMPAs, including the role of compensation to facilitate such designations. With regards to whether angling should be allowed in NTMPAs, 72% (13) argued that angling should not be allowed in NTMPAs as no-take means no-take for all if it is to be fair and because anglers take a lot of fish and would therefore undermine the wider objectives of NTMPAs. 22% (4) of the interviewees argued that angling should be allowed in NTMPAs, but this was essentially because they were against NTMPAs, rather than supportive of angling in NTMPAs, whilst only one interviewee (6%), who was in favour of NTMPAs as the way forward, considered that recreational angling should be allowed in such designations.

Particular vulnerability of inshore fishermen to NTMPAs (p.43)

Discussions on this theme were focused on whether inshore fishermen (inside 6nm) were particularly vulnerable to NTMPAs. 91% (32) of the interviewees considered that the relative vulnerability of inshore fishermen is an issue as they are dependent on their local grounds and forcing them to steam further away to alternative grounds could place them in danger, even though most inshore fishermen use relatively harmless fishing methods, some recognising that NTMPA advocates were likely to be particularly focused on designating inshore NTMPAs. It is worth noting that the 9% (3) of the interviewees that considered the relative vulnerability of inshore fishermen to NTMPAs not to be an issue represented the offshore sector. On the other hand, 13 of the interviewees that considered the relative vulnerability of inshore fishermen to be an issue also represented the offshore sector.

In a related sense, 51% (26) of the interviewees discussed how offshore NTMPAs (outside 6nm), if they were to be pursued, should be designated throughout the EU across all the CFP waters and enforced on all EU fishermen, otherwise the migratory nature of many stocks would mean that 'he who gets the pain may not get the gain' and it would otherwise generally be unfair. Several fishermen considered this to be unlikely given the politics of the CFP, the UK government's history of unilateral measure and the likelihood of derogations.

Opportunity for local protectionism for local fishermen? (p.46)

Discussions on this theme were focused on whether formally restricting access to specified grounds to local and recognised incoming fishermen might be considered a *quid pro quo* with regards to NTMPAs. Such an approach, sometimes referred to as territorial user rights for fisheries (TURFs), would help ensure that local fishermen who practice restraint through NTMPAs in their 'territory' would reap the export/spillover benefits, rather than incoming fishermen reaping much of them: 'he who gets the pain gets the gain'. The majority of interviewees (66%) did not consider such territorial approaches in return for NTMPAs to be a realistic way forward, as it would restrict the nomadic nature of fishermen, reduce their flexibility and be too complex & contentious to implement. 34% were interested in the potential of such approaches, but most of these had similar reservations.

Closing comment

This report was sent to all of the fishing industry and related interviewees prior to its release. The responses were very positive, with many stating that it is very rare for fishing industry views to be collected, analysed and reported on such an objective and open basis. It was considered that the findings are highly relevant to current debates about the potential role of NTMPAs in the framework emerging from the forthcoming Marine Bill and related issues. Though fishermen are highly likely to be critically affected by such proposals, it was felt that their voices are rarely listened to and seriously considered in these debates. I hope that this report helps address this problem by reporting the rich, diverse and fascinating range of views amongst fishermen and their representatives on the issues raised by NTMPA proposals.

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Introduction

There are growing calls from some scientists and non-governmental/governmental organisations for no-take marine protected areas (NTMPAs). These calls are a response to concerns about the 'health' of marine fish stocks and ecosystems. At an international policy level, there are a number of initiatives:-

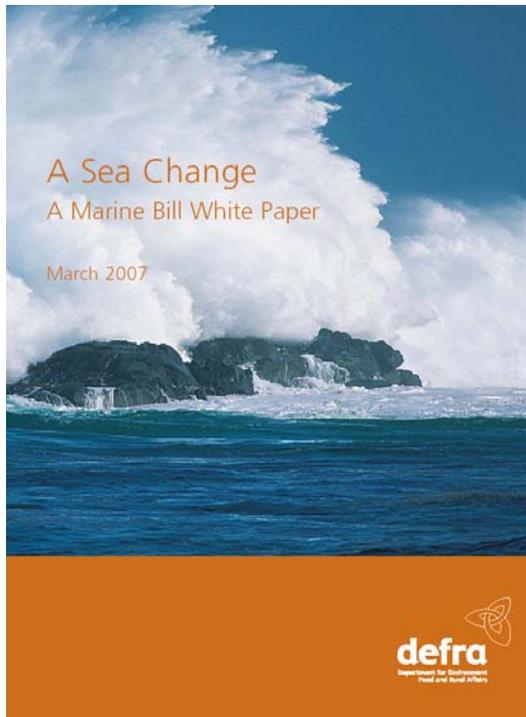
- Agreement under the *Convention on Biological Diversity* (1992) and at the *World Summit on Sustainable Development* (2002) to establish a global representative network of MPAs by 2012
- *OSPAR Convention* (1992: NE Atlantic) - Recommendation to establish by 2010 'an ecologically coherent network of well managed marine protected areas'
- IUCN World Parks Congress (2003) also called for the establishment by 2012 of a global network of MPAs, **including no-take MPAs covering 20-30% of each habitat**

It is important to recognise that the only call for no-take MPAs is from the IUCN, and that this organisation has no legally binding basis; the other agreements and recommendations are for general MPAs, which need not necessarily be no-take.

Globally, it has recently been estimated that only ~0.2% of the total marine area under national jurisdiction (<200nm) is 'no-take' MPA whilst ~1.5% is partially protected as 'multiple-use' MPA.

At a UK level, Marine protected areas (MPAs) are a relatively recent aspect of conservation policies. Prior to 1981 there were no statutory provisions for MPAs in the UK so there was a reliance on *voluntary* marine nature reserves. New legal provisions for statutory marine nature reserves in 1981 were weak and the government was less than enthusiastic in approving proposals for such designations; as a result only 3 statutory marine nature reserves were ever designated. The EC Habitats Directive (1992) and the UK Regulations (1994) to implement it were therefore enthusiastically welcomed by marine conservationists as they required the designation and protection of marine special areas of conservation (MSACs) to protect marine habitats & species. Over 80 marine SACs are in the process of being designated around the UK but these are multiple-use MPAs where activities that are compatible with the fulfilment of conservation objectives are provided for. There are growing concerns that fishing activities that are damaging marine conservation features, particularly demersal trawling on biogenic reefs, are being allowed.

The forthcoming Marine Bill is regarded by marine conservationists as a very important opportunity to provide for the recovery and conservation of marine biodiversity, this being a term that encompasses genetic diversity within species, species diversity, habitat diversity and ecosystem 'health'. The proposals for the Bill include provisions for **marine conservation zones**.



Proposed objectives of the Marine Bill

- **Create a strategic marine spatial planning system:** clarify objectives/priorities & guide decisions/users towards more efficient & sustainable use
- **Revise marine licensing system:** quicker, more consistent & efficient
- **Strengthen fisheries & environmental management arrangements:** conserve marine ecosystems & achieve a more sustainable/profitable fisheries sector
- **Set up a new Marine Management Organisation:** champion integrated management by combining and unifying the delivery of many marine functions
- **Introduce new tools to conserve marine wildlife:** flexible, objective-based marine conservation zones, new powers to control currently unregulated damaging activities & improved enforcement measures

<http://www.defra.gov.uk/environment/water/marine/uk/policy/marine-bill/index.htm>

<http://www.homepages.ucl.ac.uk/~ucfwpej/pdf/MarineBill-CornucopiaOrPandorasBox.pdf>

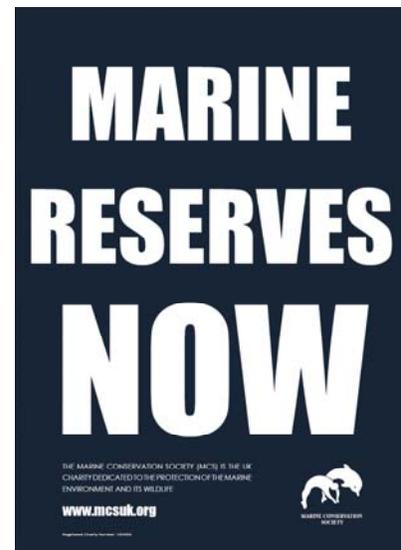
Environmental campaign groups are arguing that the Marine Bill will be a failure if it does not provide for the designation of an ecologically coherent network of no-take MPAs (NTMPAs), *ie* areas of the sea in which all extractive and disturbing activities are permanently prohibited, including fishing.

http://www.wcl.org.uk/marine_campaign.htm

<http://www.marinereservesnow.org.uk/>

Greenpeace are also campaigning for a network of NTMPAs in the North Sea, covering 40% of the total area.

<http://www.greenpeace.org.uk/oceans>



Calls for NTMPAs are not confined to campaigners: they are also coming from the UK scientific community. The Royal Commission on Environmental Pollution published the report *Turning the Tide* in 2004. The RCEP First considered fishing in 1872 when it recommended the abolition of all fishing controls as stocks were considered inexhaustible. By contrast, the 2004 report concluded that:-

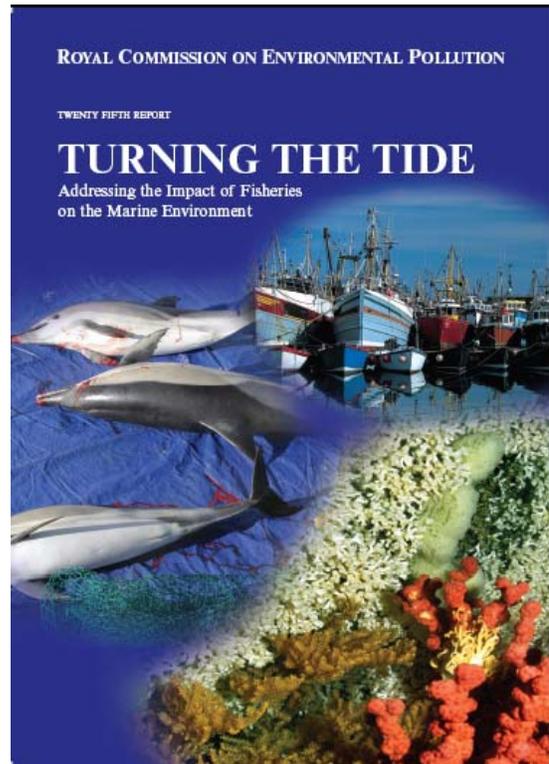
“It is clear that the complexity of marine ecosystems is being reduced [by fishing impacts], and with the change from complex food webs to simple food webs, resilience in the marine ecosystem is also being lost” (RCEP 5.36 2004).

Accordingly, it recommended that the UK Government should:-

Designate 30% of UK's fisheries zone as no-take MPAs, forming an ecologically coherent network, as part of a comprehensive system of marine spatial planning.

Reverse the burden of proof: fishing industry must prove that impacts of a particular fishing practice in a particular area will not harm the long-term sustainability of marine ecosystems

<http://www.rcep.org.uk/fishreport.htm>



In response to this report, Ben Bradshaw, the then Minister for Fisheries & Nature Conservation, commented that *“ in my view it [the RCEP ‘Turning the Tide’ report] highlights what is probably the second biggest environmental challenge the world faces after climate change”*

...but he concluded that it would be premature to implement the measures recommended: *“we need to give time for the radical measures that we have already taken to have an impact before moving to possibly more radical measures”* (<http://news.bbc.co.uk/1/hi/sci/tech/4072503.stm>). The official government response to this report further argued that whilst multiple-use marine protected areas (MPAs) have a role, including partial/seasonal fishing closures, it is uncertain about the scientific basis of the RCEP recommendation for NTMPAs in which all activities are permanently banned (www.defra.gov.uk/fish/sea/pdf/turningtide-govresponse.pdf, pp8-9). It is therefore highly debatable whether the government will heed the calls for NTMPAs in its forthcoming Marine Bill. It has stated that the marine conservation zones could be permanently closed to all activities where this can be objectively justified on a ‘fit for purpose’ basis, but it remains to be seen what the burden of proof will be for NTMPA proposers in this respect. Given that NTMPAs are often called for in keeping with the precautionary principle, including as an insurance against uncertainty, objectively justifying such proposals could be a major hurdle for marine conservationists.

Fishermen's views on no-take marine protected area proposals in South-West England

Suffice to say that this impromptu photo of Ben Bradshaw at the 2006 Marine Conservation Society Conference is not illustrative of the governmental stance on NTMPAs..... clearly a bit of a set-up!



© Photo courtesy of the MCS

<http://www.mcsuk.org/mcsaction/marinereserves/marine+reserves+now>

The former nature conservation agency was advising the UK Government that there was a need for NTMPAs. English Nature's Maritime Strategy (2005) included the objective of fully protecting 20-30% of each marine habitat type from all extractive and disturbing activities, as a key aspect of its proposals to restore marine ecosystems and promote the conservation of marine biodiversity.

http://www.english-nature.org.uk/science/coasts_and_seas/default.asp

However, whilst the new integrated agency, Natural England, has a marine campaign (<http://www.naturalengland.org.uk/campaigns/marine/default.htm>) and their 'Strategic Direction' for 2006-2009 includes the aim 'to conserve, recover and enhance the marine environment' and the target to establish a coherent network of MPAs under the Marine Act by 2012 (http://www.naturalengland.org.uk/pdf/about/Natural_England_Strategic_Direction.pdf), the extent to which these will be no-take is highly uncertain.



Our coasts and seas
Making space for people, industry and wildlife



Only one NTMPA is currently officially designated: Lundy, with an area of 3.2 km², which is equivalent to 0.002% of the area of the UK's territorial waters (inside 12nm).

There is also the *Finding Sanctuary* partnership project that aims to create a network of MPAs around SW England, including 'high protection zones'. However, this initiative has no statutory powers, though its partners include Natural England, who have and may be granted further MPA powers under the Marine Bill. At this stage, the aim is intended to be fulfilled primarily through consensus.



<http://www.finding-sanctuary.org/>

Against this background, it is hardly surprising that fishermen and their representatives are increasingly concerned that no-take MPAs (NTMPAs) will be imposed on them, threatening their economic sustainability and their 'way of life'.

Fishermen in the UK, as in most of the world, have enjoyed the rights to fish the total sea area, with the exception of safety/security exclusion zones, provided stocks are present and it is technically and economically feasible to exploit them. Conservation measures are imposed, such as quotas on certain species, partial/seasonal closures and various technical restrictions. However, **all these measures are aimed at fish stock conservation objectives** and other than these, the basic presumption has been that all areas can be fished, under the principle of 'the freedom of the seas'. This presumption is now being undermined by increasing calls for NTMPAs, in which all fishing is banned, **primarily in order to achieve marine biodiversity conservation objectives**. These proposals raise many issues from the fishing industry's perspective as they represent a fundamental challenge, through the introduction of marine biodiversity conservation objectives, to access rights decision-making processes.

In order to gain a rich understanding of fishing industry and related views, these issues are explored in this report, based on a completely independent research project involving a programme of 51 semi-structured interviews over May-October 2005 with 57 fishing industry representatives (some interviews involved 2 or, on one occasion, 4 fishermen) in south-west England (West Dorset, Devon & Cornwall). The interviews were taped and a report produced for each interview. The report was sent to each interviewee to ensure that their views had been captured correctly. **The quotes in the subsequent sections are from these reports, rather than being completely verbatim quotes.** The discussions in these interviews revolved around several inter-related themes:

Where did NTMPAs come from?

Objectives: balance between fisheries & biodiversity/wilderness (should angling be allowed?)

Much of sea not fished anyway?

Role of advocates in NTMPA debates and initiatives

Loss of way of life

Uncertainty concerning nature/magnitude/spread of effects

Contested claims that beam trawling necessary to turn grounds over to avoid them going stagnant

Potential of observed/reported benefits to overcome reservations

Balance between use of wider fisheries management approaches (WFMA) & NTMPAs: streamline WFMA in return for NTMPAs?

Role of 'expert'/local knowledge (including potential of collective learning partnerships)

Role of science: need for rational, objective approach to justify fishing closures

Issues related to the ecosystem approach and the precautionary principle

Balance of decision-making powers between local fishermen and relevant authorities (representativity, legitimacy, trust, reciprocity, confidence, partnerships and cooperation)

Enforceable, especially if cooperation of fishermen limited, or easier than WFMA? Potential of peer enforcement?

Transitional compensation/diversification assistance

Issues related to wider stakeholder participation in decision-making

Why should fishermen bear costs of further restrictions through NTMPAs for wider societal conservation gains? or Why should society bear costs of environmental damage through fishing for gain of fishermen?

Inshore/offshore NTMPA issues related to relative vulnerability of inshore fishers

Who benefits? Will NTMPA benefits largely be enjoyed by more distant 'freeriding' fishermen (CFP)?

Opportunity for local protectionism for local (and recognised incoming) fishermen?

Are NTMPAs the way forward?

Whilst debates on NTMPAs are raging in policy and scientific circles, the views of the fishing industry are often neglected. This report is intended to provide a richer understanding of the different perspectives amongst the fishing industry on the issues raised by NTMPA proposals in SW England. It is hoped that this will help provide for a better understanding of fishermen's views in such debates and help promote their fuller participation in such debates.

Interviewees

Inshore fishermen (static & dynamic, mainly working inside 6nm)	15
Offshore fishermen (static & dynamic, mainly working 6-200nm)	16
Representatives	7
Fish Producer Organisations	5
Enforcement Officers	8
Total	51

Fishermen: mostly based in Brixham (Devon) or Newlyn (Cornwall) but some fishermen were also interviewed from Plymouth and smaller ports such as Hayle, Looe, Lyme Regis, West Bay, Hope Cove, and from The Lizard

Representatives: people working with Brixham Trawler Agents, Invest in Fish South-West, Mevagissey Fishermen's Association, Rame Peninsular Fishermen's Association, Plymouth Trawler Agents, Seafood Cornwall and SW PESCA.

Fish Producer Organisations: chairmen, chief executives or employees of Cornwall FPO and South-West FPO.

Enforcement Officers: fishery officers or chairmen of Devon Sea Fisheries Committee and Cornwall Sea Fisheries Committee; enforcement officer for the Marine Fisheries Agency

These interviews are reported in such a manner as to ensure anonymity. A further 7 interviews were carried out with representatives of Cornwall County Council, Natural England, National Federation of Sea Anglers, Devon Wildlife Trust and Finding Sanctuary. The findings of these interviews will be reported in a subsequent paper comparing different perspectives on NTMPAs.

It is important to note that these categorisations are quite 'fuzzy' in that interviewees often had more than one affiliation, *eg* FPO chairs who were active inshore/offshore fishermen, fishermen who were members of a Sea Fisheries Committee and had official positions in a fishermen's association, etc. For this reason, these categorisations are only employed in relation to the firstly reported issue that follows. For subsequent issues, these categorisations will not routinely be employed, in order to avoid misleading conclusions.

Results

% are given in relation to the total number of interviewees (number given in brackets) that discussed a given issue, rather than necessarily as a % of the total number of interviewees. Due to % figures being rounded up or down, the sum of the % figures may be slightly below (99%) or above (101%) 100. The term NTMPA is employed in this report, including the interview quotes, but the term 'no-take zones' or 'NTZ' was generally employed during the interviews as many fishermen were familiar with this term. The term 'marine protected area' or 'MPA' was often used in relation to partial & seasonal closures.

Are NTMPAs the way forward? (51)

Though this was the last question asked in the interview, it is presented first in this report as it is key information and the issues raised in relation to it are explored further in subsequent sections. This question was introduced in the context of the title of the CFPO's 1999 video *No-take zones: the way forward* and gives an overall picture of the support for NTMPAs and the reasons behind these positions.

	No	Yes	Total
Inshore	73% (11)	27% (4)	15
Offshore	88% (14)	12% (2)	16
Representatives	57% (4)	43% (3)	7
FPOs	20% (1)	80% (4)	5
Enforcers	100% (8)	0% (0)	8
Overall	75% (38)	25% (13)	51

It is important to recognise that there were often caveats, reservations, provisos, codicils, etc attached to these views. These will be explored in subsequent sections. A particular inshore fisherman guessed that around 75% of fishermen would resist NTMPA proposals, and he was remarkably accurate in this respect. The following points are particularly notable:-

- Overall, 81% of actual fishermen considered NTMPAs to not be the way forward
- Whilst many subsequently argued that inshore fishermen were more vulnerable to NTMPAs (see p.43), there was more support for NTMPAs amongst inshore fishermen than amongst offshore fishermen
- There was a stark contrast between the views of the enforcers and the FPOs: none of the interviewees from enforcement institutions thought NTMPAs were the way forward, whilst 80% (4) of the interviewees from FPOs thought NTMPAs were the way forward. A relatively large proportion (43% (3)) of the fishing industry representatives also saw NTMPAs as the way forward. Perhaps the FPO and industry representatives are taking a more politically strategic perspective, whilst the enforcers are taking a perspective from the point-of-view of people who would have to enforce NTMPAs?

Quotes from interviews concluding that NTMPAs are not the way forward (75% - 38)

'Where NTMPAs are concerned, I think it is the height of bloody arrogance!'

Fishermen's views on no-take marine protected area proposals in South-West England

'Both fish stocks and marine biodiversity are in a good condition'

'Wider fisheries management approaches work well'

'Complete NTMPAs are essentially nature reserves as most fish stocks are too migratory and variable to benefit from such area closures: fish have tails and they swim!'

'The way forward is impact zoning to restrict the most damaging forms of fishing, alongside revisions to and stricter enforcement of wider fisheries management approaches'

'NTMPAs are too draconian: a sledgehammer to crack a nut! We can protect habitats and particular fish stocks through partial, temporary closures of key areas and there is no justification for total & permanent NTMPAs'

'Fish stocks are essentially there to be harvested, to provide livings and food, so it is wrong that we should close areas to fishing'

'I see the way forward as a more regionalised, bottom-up approach, which would include seasonal/partial closures and a small proportion of NTMPAs in areas that are not accessible or suitable for fishing'

'The grounds need to be fished to stop them going stagnant and the seas are for fishermen and fishing... NTMPAs are driven by greens and ill-informed people but we fear they may be imposed on us as the government doesn't care about the fishing industry'

'The sea is the fishermen's heritage, that's all we've got and you can't take it away'

'I don't think the case for NTMPAs is strong enough to put people out of business'

Quotes from interviews concluding that NTMPAs are the way forward (25% - 13)

'NTMPAs are the only option to improve things'

'I see NTMPAs as having both fish stock and nature conservation benefits, as you are protecting the ecosystem that provides for both: very obvious!'

'Environmentalists, fishermen & the public agree that we cannot continue to be allowed to fish everywhere all the time, as this damages marine life and fish stocks'

'All we do is take from the sea, like raping it, without putting anything back, like farmers do. NTMPAs would be an opportunity to address this'

Where did NTMPAs come from?

This question was framed in terms of 'how and when did NTMPAs first come to your attention?' The following sources were raised by the 41 people that discussed this (note some raised more than one source so % figures do not sum to 100%):-

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As a result of the CFPO initiative (eg 'NTZs – the way forward' video)	27%	(11)
From talks given by Bill Ballantine &/or Callum Roberts	20%	(8)
From knowledge of cases around the world, eg New Zealand	27%	(27)
As a result of the Cornwall County Council MPAs initiative	10%	(4)
From the Lundy NTMPA designation	7%	(3)
From the St Agnes voluntary NTMPA trial	5%	(2)
Other sources	20%	(8)

It is worth noting that the first two sources are linked, in that the CFPO NTZ initiative was instigated as a result of one of the CFPO board members hearing a radio 4 interview in 1998 with Callum Roberts, who is an internationally recognised expert on NTMPAs based at the University of York. Callum Roberts subsequently visited Newlyn and this led to the CFPO NTZ initiative. Bill Ballantine is also an internationally recognised expert on NTMPAs, based at the University of Auckland, New Zealand, so the 2nd and 3rd sources in the above list are also linked in some cases. The role of advocates, such as Callum Roberts and Bill Ballantine, is discussed subsequently (see p.14).

Objectives: balance between fisheries and biodiversity conservation?

This theme explored what interviewees thought about the introduction of marine biodiversity conservation objectives onto the agenda. It was framed in terms of what fishermen thought the balance should be between fisheries and biodiversity conservation objectives in relation to NTMPA initiatives. The term 'win-win' refers to the argument that NTMPAs can deliver on both sets of objectives.

We don't need NTMPAs to fulfil either of these objectives	36%	(16)
NTMPAs should be primarily focused on biodiversity objectives	20%	(9)
Both objectives are equally valid for NTMPAs	18%	(8)
Both objectives are valid for NTMPAs but with reservations	18%	(8)
NTMPAs should be primarily focused on fisheries objectives	7%	(3)
		(44)

We don't need NTMPAs to fulfil either of these objectives (36% - 16)

'As to the balance between nature conservation and fish stock objectives, I ask why?... on both counts. We can conserve fields for more wild flowers and insects, but at sea nobody is there to appreciate it and you can't validate it. Fish stocks are highly mobile and their patterns of movements vary, so an NTMPA might be an important area at one phase and then be empty'

'English Nature should talk to their own fisheries advisor who knows that zonation schemes like Start Point work all round, including for marine nature conservation. Due to our lack of understanding of fish stock movements, we don't really know what NTMPAs are trying to conserve and this is a problem'

'The idea that NTMPAs are win-win is utter rubbish due to effort displacement and the disruption of area agreements to manage conflicts between static and mobile gears in the remaining open areas. In the wider scheme of things, neither fish stocks, nature nor fishermen will win'

'The SW fisheries are very diverse, dynamic & migratory, and are prosecuted on different grounds at different times, so most fishermen are against hard and fast rules like NTMPAs, so I don't see them primarily as fisheries management tools. I see them primarily as a marine life conservation tool.'

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Fishermen can also see that society is becoming more focused on marine conservation, but we can't see for what: you get more, bigger flora and fauna, but the seas are so dynamic I don't see that this nature conservation approach is valid for the seas'

'NTMPAs might start off as experimental 'trials', but regardless of whether they have any fisheries benefits, they will not be re-opened and will lead to further NTMPAs: thin end of the wedge. The seas are for fishing and for fishermen to fish, so why have nature conservation objectives?'

'I see nature and fisheries conservation as being hand-in-hand so the objectives of marine conservation should be both... but I don't want these to be achieved by NTMPAs in SW England as this will just put people out of business'

NTMPAs should be primarily focused on biodiversity objectives (20% - 9)

'Having biodiversity objectives would get round arguments about the lack of benefits for migratory pelagic stocks, and I think that having primary biodiversity objectives would be the most practical, clear and honest approach. Whilst they might have coincidental fisheries benefits, they should not be sold on this basis as the potential benefits are too uncertain, as fishermen know well, so whilst win-win is a nice ideal, I do not think it is appropriate in reality'

'The problem is that nature conservationists were trying to achieve biodiversity objectives through NTMPAs but were trying to sell them on the basis of their fisheries benefits, the latter being very small and marginal in reality. I think they should have been very open from the outset and stuck to selling NTMPAs on the basis of their conservation benefits'

'I see small NTMPAs as primarily about nature conservation, as apart from for sedentary crustacea, there will be few fisheries benefits'

'If NTMPAs were pursued primarily for nature conservation objectives, fishermen would still rather have some input to this process, but it would be difficult as fishermen are focused on fishery objectives'

Both objectives are equally valid for NTMPAs (18% - 8)

'I see nature and fisheries conservation objectives as going hand-in-hand: you cannot have one without the other. I can see that we need to have NTMPAs to achieve these objectives and I am not worried about NTMPAs in principle but it depends where they are and how big they are'

'I see NTMPAs as for both fisheries and nature conservation objectives. Although I am primarily interested in fisheries conservation objectives I can see that NTMPAs will appease the green lobby. The fishing industry and nature conservationists have to find a way of working together through a balanced approach'

'I see NTMPAs as potentially a win-win for both nature and fisheries conservation, as I see the importance of both, as a member of the public and as a member of the fishing industry. I think NTMPAs should be sold to fishermen on the basis of their potential fish stock benefits, as well as on their wider benefits. I don't think these benefits have been over-sold in the past'

'I see NTMPAs as being mainly driven by fish stock conservation objectives, but appreciate that others see them mainly as driven by marine nature conservation objectives'

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'I will view NTMPAs as a fisherman and rate their success in terms of giving fishing a more sustainable future, but I also see that we have wider responsibilities. I think that it is important that even the lowliest starfish and jellyfish is not wiped out or made extinct just because it got in the way, because I owe it to the future to look after things. We need, therefore, not to fish everywhere all the time. We should not get too hung-up on painstakingly designing NTMPAs for specific purposes: take a crude, broad brush approach and both biodiversity and fisheries conservation objectives are likely to be met, as some of it will be in the right place for different purposes'

Both objectives are valid for NTMPAs but with reservations (18% - 8)

'I agree with NTMPAs if there will be benefits to marine ecosystems/habitats and fish stocks'

'I can see both sets of objectives of NTMPAs as I believe in conserving marine nature but at the same time fishermen are trying to make a living, so it is difficult to find the medium ground. I am not convinced that NTMPAs are necessary to fulfil either fisheries or nature conservation objectives. Wider fisheries management measures are better for fisheries management, including partial and seasonal closed areas'

'I can see the validity of both fish stock and nature conservation objectives, but my biggest fear is that NTMPAs will displace fishermen and put more effort on the remaining open areas'

'I think there is an imbalance between fish stock conservation and nature conservation, as politicians & scientists always err towards the environmental side and adopt a precautionary approach'

I see NTMPAs primarily as being about fisheries management as this is my organisation's remit, though I accept that there may also be rare seabed biodiversity that needs to be protected, but the case for this protection needs to be scientifically proven. However, NTMPAs generally come to the industry from people who are primarily interested in biodiversity conservation. The industry has always had non-fished areas for fish stock conservation objectives but fishermen would be very reluctant to stop a legitimate economic activity because of biodiversity conservation concerns: money talks and economics is what primarily drives fishermen

NTMPAs should be primarily focused on fisheries objectives (7% - 3)

'The argument that NTMPAs will provide a good breeding and nursery ground for fish is convincing, in principle, in keeping with the key objective that NTMPAs are for providing good stocks for the future. I am very resistant to the idea of nature conservation NTMPAs as I don't want to see what they can do on land to close areas, because a few grasshoppers and a worm are found on it, extended to the sea. I feel strongly that nature conservationists must definitely never be given the authority to close areas... but I fear that the Marine Bill will be a pathway for this'

'From my perspective the focus is primarily fish stocks as these are what our future is based on'

'I don't see NTMPAs as a direct fish stock conservation tool but I can see the ecological rationale of NTMPAs for mixed stocks as there would be wider benefits in the longer term. Campaigners may try and sell NTMPAs on their potential wider fisheries benefits, and logically such benefits should flow, but this depends on the species and the NTMPA habitat and I don't think such benefits will ever offset the losses caused by closed areas'

Key points:

- 36% of interviewees regard both fisheries and biodiversity objectives as valid for NTMPAs (half with reservations): 'win-win';
- 36% consider that NTMPAs are not needed to fulfil either of these objectives;
- 20% consider that NTMPAs should be focused on biodiversity objectives as they will not deliver fisheries benefits and nature conservationists should be honest about their real aim;
- 7% consider that NTMPAs may be able to deliver fisheries objectives and that these are their focus, one arguing that nature conservationists should never be allowed to close sea areas to extractive uses, as they can on land.

In a similar sense, four interviewees discussed their *resistance to the idea of extending the 'hands-off' wilderness preservation approach from the land to the sea:-*

'I do not agree with the nature conservation arguments that we should have unexploited and undisturbed areas of the sea: this is just gardening. I think the argument that we have such areas on the land therefore we should have them at sea is flawed: the seas are 3-D, variable, complex and very different to the land'

'NTMPA trials will establish and prove the principle, *ie* that we should have unexploited 'national parks' at sea, regardless of their lack of benefits to and impacts on the fishing industry'

'If NTMPA trials do not lead to significant fisheries benefits they should be regarded as failed trials but the environmental/conservation groups will consider them a success simply because they are areas closed to fishing. NTMPAs are a lot about 'flag flying' to NGOs which goes beyond biodiversity objectives. Biodiversity has become a romantic symbol of environmentalism, along with 'wilderness' (after Muir), which NTMPAs represent, and there is now a presumption that they are the way forward as they are very easy to sell to people. However, fishing only impacts a narrow part of ecosystems and I don't buy the idea of wilderness without people in it'

Much of the sea not fished anyway?

This theme explored arguments that NTMPAs are not needed, as a significant proportion of the sea area is not fished or is only fished for limited periods, so is essentially already NTMPA in effect.

Yes: much of the sea is not fished	71%	(17)
No: all areas of the sea are fished	25%	(6)
Yes: offshore, no: inshore	4%	(1)
		(24)

Yes: much of the sea is not fished (71% - 17)

'Some areas are unfished as the grounds are not suitable: the seas are already a complex patchwork, and most seas around Cornwall are not fished for at least half the time due to bad weather, so they are NTMPAs during these periods'

'Maybe we should be looking at areas which are not currently productive and therefore not fished much, to see if designating these as NTMPAs could produce overall benefits. We have quite a lot of NTMPAs

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already off Plymouth, with shipping lanes, NATO areas, etc, and we will have a lot more with wind farms, etc, so why don't we see if these make any difference and see if they can achieve nature conservationists objectives?'

'Many grounds are not suitable for fishing anyway (though these are becoming fewer with new technologies such as sprung scallop dredgers and rock hopper trawls), so are NTMPAs in effect, and most grounds are closed for much of the year by bad weather. For smaller inshore boats the weather closes areas for several months a year anyway, so that is a conservation measure'

'70% of the English Channel is never fished, as VMS monitoring reveals, so much is already a NTMPA in effect'

'They could close barren areas with little impact, but not important, productive fishing grounds, but I can see that whilst this might have little pain it would probably provide little gain'

'There are still quite a lot of unfished habitats, for various reasons, so these should be taken into account, but I can't see the point of designating such areas as NTMPAs as they are not able to be fished anyway'

No: all areas of the sea are fished (25% - 6)

'I think it would be good to have areas that are completely left alone, as at the moment there are none'

'Lundy is a good example of an area that is not heavily fished as it is relatively isolated but generally it is difficult to find a coastal area to designate an NTMPA that will not affect fishermen'

It is important to note that 7 of the 17 interviewees who argued that much of the sea is not fished were offshore fishermen, whilst none of the fishermen who argued that all areas are fished were offshore. This is a reflection of the fact that offshore areas are more extensive and are fished by a relatively low number of vessels, therefore it is more likely that certain areas will be unfished. This is reflected by one interviewee's response:

'There are offshore marine areas that you could designate as NTMPA that wouldn't affect fishermen too much, as they are not important grounds, so they would be relatively easily enforced, but inshore every inch of ground is fished and I think it would be very difficult to enforce inshore NTMPAs'.

The relative vulnerability of inshore fishermen to NTMPAs is subsequently discussed (see p.43).

Role of Advocates

This theme explored the views of interviewees on the people that are campaigning for NTMPAs.

Critical of motivations and role of NTMPA advocates	76%	(32)
Respect and support for NTMPA advocates	14%	(6)
Qualified acceptance of NTMPA advocates	10%	(4)
		(42)

Fishermen's views on no-take marine protected area proposals in South-West England

Critical of motivations and role of NTMPA advocates (76% - 32)

'I think they are being pushed out of political expediency, to be 'seen to be green'. NTMPA advocates also stand to personally gain through professional recognition and funding opportunities, and some are perhaps doing it as part of some guilt trip... and they don't understand what is going on in the seas in terms of fishing or ecosystems'

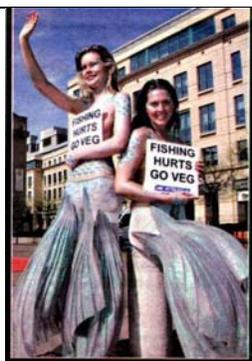
'NTMPA advocates probably have some preconceived ideas about the state of our seas and fisheries based on negative press coverage, such as about dolphin bycatch, and they think NTMPAs are a good idea to address these 'problems'. However, they are outside of fishing and don't really understand what fishing is about, and their proposals will not make them suffer. Nobody stops farmers killing field mice, etc, but as soon as fishermen kill a few dolphins, there are cries for fishing to be banned, even though there are millions of dolphins out there as the populations are very healthy. I do think we need to put up a more concerted PR image to counter the anglers and environmentalists arguments'



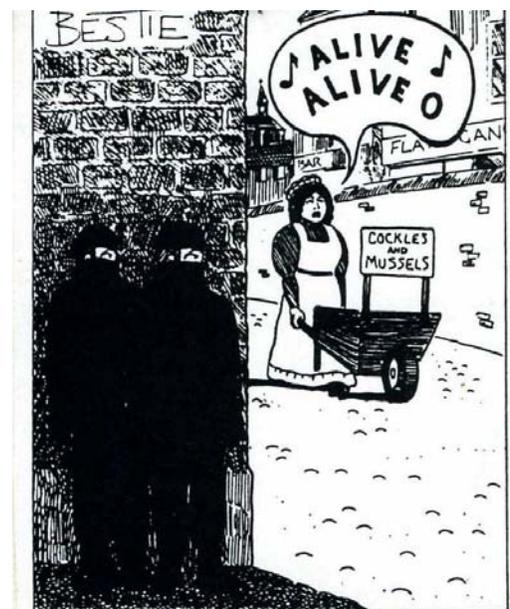
<http://www.sarconline.co.uk/lobsters/liberation/index.html>

'NTMPAs are being pushed for by the green lobby, who have been encouraged by the ban on hunting. They want NTMPAs for similar symbolic reasons, perhaps motivated by animal rights concerns, like the Lobster Liberation Front in Poole'

'I think lobbying pressure may have been moved from banning hunting to pushing for NTMPAs, though I don't know'



<http://www.fishinghurts.com/>



The Mollusc Rights activists lay in wait for Molly Malone

[Above cartoon first appeared in the early 1990's, when it was considered laughable that animal rights activists would target exploiters of marine finfish & shellfish!]

Fishermen's views on no-take marine protected area proposals in South-West England

'Fishermen are aware of the green lobby but this lobby is seen by fishermen as wanting to ban everything just for the sake of doing it and out of principle, when it won't affect the environmentalists but it will very much affect fishermen. We can see that this lobby is becoming more powerful and the fishermen do not have the proper representation to counter this lobby: they feel lacking in power'

'I am concerned that nature conservationists could impose their will on those whose living will be affected, as they tried to do with Whitsand Bay'

'People pushing for NTMPAs are doing this out of personal professional development motives and they do not understand the marine environment or the consequences of what they are campaigning for: lost fishermen's jobs, nor do they care'

'The recent Plymouth NTMPA meeting was dominated by sea urchin and dolphin huggers who have no respect for people who are trying to earn their living from the sea, about whom they do not care. At the moment the marine nature conservation agenda seems to be dominated by fanatics'

'The public perception of the fishing industry has shifted from quite a romantic view to one where by we are the 'bad boys'. In the face of this, it scares me that the environmentalists are getting more power where the seas are concerned'

'NTMPAs have become a 'badge' for NGOs, a bit like whaling did for Greenpeace, even though they may not actually have much to do with their campaign priorities. A lot of such ideas are just a current 'fashion' as to how to save the world'

'I attended a seminar given by Bill Ballantine and you could see all the marine biology trained youngsters in awe of him: it was sickening and upsetting as these young people are in or can influence people in positions of power. Advocates like him love the attention they get and the influence they have, but it is frightening really'

Respect and support for NTMPA advocates (14% - 6)

It is worth noting that 5 of these 6 interviewees also considered NTMPAs to be the way forward.

'I support advocates of NTMPAs as I advocated them years ago, but you need the right kind of diplomatic, sensitive person to be able to potentially win fishermen over to the potential benefits of NTMPAs'

'I've got no problem with people campaigning for NTMPAs'

'I respect those who are campaigning for NTMPAs'

Qualified acceptance of NTMPA advocates (10% - 4)

It is worth noting that none of these 4 interviewees considered NTMPAs to be the way forward.

'I find myself in total agreement with what they want...it's the way that they do it'

'I really don't know what the agenda is for advocates of NTMPAs. They are trying to do good and in principle I have no problems with them provided they know what they are doing'

'NTMPA advocates are largely motivated by environmental concerns and this is a valid argument but I think these arguments need to be balanced with the needs of the fishing industry, and we need good advocates from this perspective'

Loss of 'way of life'

27% (14) of the interviewees stressed that fishing was more than an economic activity: it is their 'way of life':-

'The sea is the fishermen's heritage, that's all we've got and you can't take it away'

'Fishing is our way of life and our way of earning a living: it's not just about money. What right do the public and environmentalists have to interfere?'

'Fishermen are talking about more than access to stocks, they are talking about their rights/culture and they feel isolated and low-down on the pecking order, not least of all as they have a very different way of life: it is considered an 'other' profession'

'Putting a few boats out of business with NTMPAs might not seem like a big deal, but fishing is more than just a business: there are important tourism attraction and cultural aspects of fishing'

Uncertainty concerning the nature, magnitude and spread of fisheries spillover/export benefits from NTMPAs

This theme explored interviewees' views on arguments that there will be wider fisheries benefits from NTMPAs through the 'spillover' of eggs/larvae and the 'export' of adults.

Not sufficiently convinced such benefits will flow to justify NTMPAs	71%	(27)
Such benefits are likely to flow: trial NTMPAs	11%	(4)
Convinced such benefits will flow from NTMPAs	18%	(7)
		(38)

Not sufficiently convinced such benefits will flow to justify NTMPAs (71% - 27)

These arguments revolved around the issues that:-

- fish stocks around SW England are **too diverse & migratory** for such benefits to flow from NTMPAs;
- benefits for seasonal spawning grounds can be achieved through temporary closures
- we do not have sufficient knowledge of fish stock dynamics to design NTMPAs to deliver such benefits, and these dynamics are variable and changing as a result of climate change;
- for such benefits to occur too large a proportion of the grounds would have to be closed;
- any such benefits will be outweighed by the displacement of effort to remaining grounds (see next discussion);
- the claimed benefits of Lundy are exaggerated and are due to a generally very good year for crabs & lobsters;

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- such benefits will not help fishermen whose grounds have been entirely closed or who have gone bust waiting for such benefits to flow;
- fish stocks and grounds need to be fished to stop them stagnating (see p.20).

'I don't think NTMPAs will help fisheries at all, as the fish stocks are seasonal and migratory'

'Most fish stocks are too migratory and variable to benefit from such area closures: fish have tails and they swim!'

'The SW fisheries are very diverse, dynamic & migratory, and are prosecuted on different grounds at different times, so I don't see them primarily as fisheries management tools. I think you would need very large NTMPAs to yield any export/spillover benefits for surrounding fish stocks, because of the migratory/drifted nature of the stocks. These would be very damaging to the industry and I think that flexible partial/seasonal closures can achieve a lot more for fisheries conservation'

'The spillover benefits will not compensate fishermen if their piece of ground is largely within a NTMPA: they will just go bust'

'Spillover/export benefits will not happen as unfished grounds just go stagnant and unproductive as they need turning over, so there won't be the fish to provide such benefits'

'Spillover/export is essentially based on some scientific model that does not equate to the reality in the seas'

'The stocks have big migratory patterns and these are being changed by global warming, so NTMPA areas for fisheries that are correct now could be in completely the wrong place in the near future'

'Their monitoring of Lundy misses the point that the area outside the NTMPA is potted on a concentrated basis because they can't go in the NTMPA, so the fact that there are 10X as many lobsters inside the NTMPA is a totally false comparison, but they are holding it up as a showcase for the benefits of NTMPAs. I don't think the evidence from Lundy that they are working is good enough'

Such benefits are likely to flow: trial NTMPAs (11% - 4)

'The only way to find out if spillover/export benefits will flow from NTMPAs is to try them out and see, but I believe that they have potential in this respect..... but the stocks I fish are increasing so I don't really see why we need NTMPAs'

'We really don't know if NTMPAs will work in the UK's mixed fisheries and it will take several years of NTMPA trials to find out. I can see the ecological rationale of NTMPAs for mixed stocks as there would be wider benefits in the longer term. Campaigners may try and sell NTMPAs on their potential wider fisheries benefits, and logically such benefits should flow, but this depends on the species and the habitat'

Convinced such benefits will flow from NTMPAs (18% - 7)

It is important to note that all 7 of the interviewees who adopted this perspective also stated that they considered NTMPAs to be the way forward:-

'Uncertainty about the fisheries benefits of NTMPAs should not be an issue, as it is obvious there will be some, and the steady decline of marine fish stocks means that we have to do something'

'There will be fisheries benefits from NTMPAs as anything that leaves fish alone to get on with it has got to make a difference. There are also wider benefits through wider ecosystem recovery. On the whole, I am not worried about the uncertainty of such benefits as I am confident that NTMPAs will deliver various benefits'

'I do think there is probably a case for permanent, complete NTMPAs, to be honest. I do think there will be spillover/export benefits but it's waiting for these to flow that is the challenge. The problem is that the gains would come in the longer term but what would fishermen do in the meantime?'

Two interviewees also argued that partial and rotational closures would provide the benefits of NTMPAs without having to wait for and rely on spillover/export.

Potential of observed/reported benefits to overcome reservations about the wider fisheries benefits of NTMPAs

It has been argued, particularly in relation to New Zealand, that fishermen who were initially opposed to NTMPAs became supporters of such designations as wider fisheries benefits began to flow, and that resistance to NTMPA proposals in, say, SW England might be overcome by learning from fishermen who have observed such benefits. This might be through reports, videos, etc or by bringing such fishermen to SW England, or SW England fishermen to New Zealand, to learn first-hand about such benefits.

This would not overcome reservations (83% - 19)

'Arguments about how fishermen in New Zealand have come to support NTMPAs don't really hold water as New Zealand is so different in many ways to SW England. They have a smaller population, less intense coastal uses, mainly offshore fisheries and ITQs have led to the industry being dominated by a few large companies'

'I've just come back from New Zealand and their fishing industry is in a worse state than ours so it is rubbish to suggest that UK fishermen might be convinced of the benefits of NTMPAs based on New Zealand experiences'

'In a large country with relatively low diversity fisheries and with a low population density, such as Australia and New Zealand, they may work.... but in Cornwall more than 30 species are commercially harvested and it is a very mixed fishery, with fishermen traditionally using different gears at different times'

'Whilst I have seen the benefits of NTMPAs in New Zealand, that country has 1/15 our population, doesn't have lots of small dependent fishing communities like we have, and has its own fisheries zone without the complication of the CFP: they can start from scratch'

There is some potential to such approaches to overcoming reservations (17% - (4)

'I could more than likely be convinced of the wider fisheries benefits of permanent NTMPA, perhaps by speaking to fishermen from countries, like New Zealand, where they have worked, but this depends on the getting the sensible size and location'

'I think it is a marvellous idea to get fishermen over from countries (or ours to there) where NTMPAs have delivered benefits as fishermen are best convinced by other fishermen'

The impacts of effort displacement will outweigh the benefits of NTMPAs

37% (19) of the total number of interviewees, representing 50% of those who discussed spillover/export benefits, argued that the displacement of fishing effort from NTMPAs would:-

- outweigh the fisheries spillover/export benefits through intense 'fishing the edge' and the wider intensification of effort;
- increase gear conflicts;
- disrupt the customary allocation of grounds, particularly inshore grounds.

'Closing grounds through NTMPAs will just disrupt the customary allocation of grounds, unless you compensate boats to tie-up or be decommissioned'

'I can understand the arguments about the potential of spillover/export benefits from NTMPAs for wider fisheries, but if the effort displaced from the NTMPAs is redirected into wider areas, this will do more harm and undermine these wider benefits'

One interviewee also stated that the overall reduction of effort to address effort displacement was not warranted:-

'I don't support a 20% reduction in effort if we had 20% NTMPAs, in order to address displacement, as the stocks can support the fleets at their current size, so we should keep it as it is'

:- whilst another stated that wider effort would have to be initially reduced but could be restored as spillover/export benefits increased:-

'If we had, say, 10% NTMPAs, I would reluctantly say that we would need a 10% reduction in effort, to avoid wider impacts through effort displacement that could more than cancel out the NTMPA gains, but this reduced effort could be restored as the wider fisheries benefits begin to flow'

Contested claims that fishing stocks and grounds is necessary to avoid stagnation

One argument against the wider fisheries benefits of NTMPAs is that fishing stocks and grounds is necessary to avoid their 'stagnation', therefore NTMPAs will have a negative impact on stocks. There is some overlap between the 2nd and 3rd perspectives so the % figures do not sum to 100.

Fishermen's views on no-take marine protected area proposals in South-West England

Demersal trawling is necessary to avoid the stagnation of grounds	50% (12)
Demersal trawling is not necessary	38% (9)
Necessary to thin stocks but not to dredge grounds	16% (4)
Unproven	4% (1)

Demersal trawling is necessary to avoid the stagnation of grounds (50% - 12)

‘There is an element of truth to the argument that areas need to be fished; fishermen are like the farmers of the sea in that they turn the ground over, thin the stocks and help maintain productivity, eg I have spoken to scallop divers who say that unfished scallop beds are dominated by large, senile, unhealthy scallops’

‘The seabed is like a farmer's field in that it needs to be ploughed and turned over to maintain its productivity: you go over a piece of ground a week after a scallopers been there and it's alive with fish. Beam trawlers have been using the same grounds for 30+ years, so such fishing must help in sustaining productivity’

‘As for arguments that trawling maintains fishing ground productivity I don't think this applies to scallop dredging as this has a severe impact but beam trawling has less of an impact (we are working on measures to reduce such impacts) and turns the ground over like a farmer's plough, releasing nutrients, etc, but I think it needs to be scientifically assessed whether this increases productivity in the long-term’

‘Fishing grounds need turning over by beam trawls to maintain their productivity, otherwise they go stagnant. We have seen this on grounds where, if they are not fished for a long time, they are useless for fish as you just get starfish, urchins, etc’

‘There is lots of evidence that demersal and pelagic fishing enhances the health and productivity of stocks, eg Helgoland plaice box now populated by vermin species other than fish, so NTMPAs actually deplete stocks rather than provide for their enhancement’

‘It terrifies me to think that regulators will stick with the assumption that we need to fish stocks less if the stocks are in decline: reduce effort and CPUE will rise. The reason stocks are in decline is because they are being fished less due to the regulations and the demise of the industry, but they dogmatically respond by restricting fishing still further, when we need to increase effort to stimulate the stocks. If this downward spiral continues, the stocks and the industry will be dead and this scenario gives me cold sweats of fear. The next time somebody says ‘too many boats chasing too few fish’ I will head-butt them!’

In a similar sense, another interviewee questioned marine nature conservationists' assumption that habitats impacted by fishing were necessarily of a lower quality than unimpacted habitats:-

‘A lot of work would need to be done address the questions of what are we protecting?... and why?... including why restore impacted habitats? Are they damaged or just modified? Mike Kaiser has argued with me that areas impacted by scallop dredgers simply support different communities and are modified rather than damaged. We accept semi-natural, ie modified, terrestrial habitats such as meadows, so why not accept the value of modified marine habitats?’

Demersal trawling is not necessary (38% - 9)

'I don't agree with arguments that beam trawling is needed to maintain the productivity of grounds. If that is the case, why are they constantly trying to edge into 'virgin' grounds that are normally only fished by static gears? I think they're just trying to muddy the waters with such arguments. Beam trawlers can get into rougher grounds now, with rock hoppers, and they often say they have cleaned such grounds up, but I argue to them that they have actually turned them into ecological deserts'

'I have never believed the argument that grounds, such as those for Dover sole, need to be trawled to maintain their productivity. I think this argument is a reflection of the increasing defensiveness of fishermen'

'I think that silly arguments from beam trawlers that their fishing is necessary to prevent grounds stagnating are just an attempt to justify what they do'

Necessary to thin stocks but not to dredge grounds (8% - 4)

'The English Channel cuttle fishery seems to thrive on being fished hard but if you trawl through the seabed you will change this environment, for good and bad depending on your perspective and timescale: many benefits will be short-term'

'I am convinced that it is good to thin stocks, like scallops, but I am not convinced about the argument that turning the seabed over is a good thing'

'Crab stocks are improved though fishing by weeding out the population. You tend to catch mucky, weak crabs from rarely fished grounds. Stocks in the NTMPAs would doubtless improve but they would become unhealthy through crowding'

'Fish stocks need to be fished to keep them healthy: I saw this with the Falkland finfish stocks which were closed during the war and the Polish fishermen initially had to throw many away when the fishery re-opened, as they were riddled with parasites and the stocks were senile/unhealthy'

Unproven (4% - 1)

'It is unproven whether NTMPAs will yield spillover/export benefits, as some scientists argue that the harder a stock is fished the better it will reproduce, whilst others say the opposite'

Balance between use of wider fisheries management approaches and NTMPAs

All 51 interviewees raised issues related to this and these discussions considered different views on the following inter-related aspects:-

Potential of improving wider fisheries management approaches rather than designating NTMPAs

Potential of partial seasonal closures rather than NTMPAs

Potential of streamlining wider fisheries management approaches in return for NTMPAs

Potential of improving wider fisheries management approaches rather than designating NTMPAs

48% (25) of the interviewees considered that the emphasis should be in improving wider fisheries management approaches (WFMA) rather than designating NTMPAs, though another one of the interviewees specifically discussed both improving WFMA and designating NTMPAs to be the way forward. The proposals to improve WFMA included the following measures:-

- improve the scientific basis of WFMA through the Fisheries Science Partnership (see p.25)
- better and more consistent enforcement of WFMA (see p.34)
- promote cooperation with WFMA (see p.22)
- restrict the more environmentally damaging forms of fishing, including static gear reserves
- extend SFC powers beyond 6nm
- extend satellite vessel monitoring systems (VMS) to smaller inshore vessels
- more minimum landing size restrictions
- wider use of V-notching, mutilated tail landing bans, maximum landing sizes, etc to conserve lobster/crab brood stock
- reduce wider effort, including decommissioning & tie-up schemes, sunset clauses, pot limits, banning pair trawls/multi-riggers, promoting smaller vessels using less gear, and reducing tow times & soak periods
- ban discards
- total economic value landing limits in return for discard bans and getting rid of quotas
- modify marketing chain and promote green labelling to improve profitability for fishermen to aid effort reduction
- more 'real time' measures
- increase mesh sizes and other technical measures to reduce bycatch/improve selectivity (but not pingers!)

It must be stressed that some of these measure may only have been raised by one or a very few interviewees, and certainly that not all these measures would be supported by the 26 fishermen who considered the improvement of WFMA to be the way forward rather than NTMPAs. Some of these measures were also identified by the *Invest in Fish South West* report *Imagining Change: a survey of South West fishermen* (http://www.investinfishsw.org.uk/documents/ImaginingChange_000.pdf), though not specifically as alternatives to NTMPAs.

Potential of partial and temporary closures rather than NTMPAs

One specific fisheries management approach that was discussed by 67% (35) of the interviewees was the use of partial and temporary closures to protect spawning/nursery grounds. Of these 86% (30) supported such partial/seasonal closures as they achieve fisheries conservation objectives whilst allowing such areas to be harvested, with some also pointing out that some biodiversity conservation objectives were achieved by such designations. 14% (5) did not support the wider use of partial/temporary closures as they considered that NTMPAs should be used to protect spawning/nursery grounds as this is the only way to ensure such grounds are protected due to the rush to fish them when they are re-opened (4) and the only way to ensure the achievement of biodiversity conservation objectives (1).

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Whilst 3 of the 30 fishermen who discussed such partial/seasonal closures mentioned Start Point as an example of how such closures are effective, nearly half of them (14) mentioned the Trevoise closure, 3 of them as an example of why they did not support such closures and 11 of them as an example of why they supported such closures as an alternative to NTMPAs.

Potential of streamlining wider fisheries management approaches in return for NTMPAs

Discussions on this theme explored interviewees' views on whether NTMPAs might be acceptable in return for some streamlining of WFMA, as a *quid pro quo* for NTMPAs.

There is no potential for streamlining WFMA in return for NTMPAs	47%	(20)
There is potential for streamlining WFMA in return for NTMPAs	53%	(23)
		(43)

There is no potential for streamlining WFMA in return for NTMPAs (47% - 20)

- WFMA and partial/temporary closures are relatively effective in conserving stocks
- Streamlining may not be effective due to effort displacement from NTMPAs
- Fishermen who lose their grounds will not benefit from WFMA streamlining
- Streamlining may be reversed in the future so we could end up with complex WFMA & NTMPAs
- Most stocks do not have the leeway to provide for streamlining
- CFP too inflexible to allow for streamlining
- Streamlining would be undertaken by bureaucrats with little knowledge
- Many fishermen have built up their businesses through investing in quota: they would lose out
- Politicians would never allow WFMA to be streamlined
- Streamlining measures would lead to bigger industrial fishers dominating the industry
- Total economic value landing limits would not work: some would still top-grade and proving this would be difficult

There is potential for streamlining WFMA in return for NTMPAs (53% - 23)

- The more NTMPAs you have the more you can streamline WFMA
- Get rid of quotas, ban discards and impose total economic value landing limits or other effort controls
- Reduce restrictions related to bycatch in recovery plans, some technical measures, days at sea, etc
- NTMPAs another nail in the coffin if WFMA are not streamlined
- Only for offshore fisheries (1)
- But unrealistic as regulators will not support proposals that put them out of a job: 'turkeys don't vote for Christmas!'
- Provided NTMPAs are rotational so they can be periodically harvested

It is worth noting that of the 23 interviewees who considered that there is potential for streamlining WFMA in return for NTMPAs, 61% (14) did not otherwise consider NTMPAs to be the way forward. This would indicate that there may be some potential to overcome industry objections to NTMPAs through the streamlining of WFMA.

Roles of expert & local knowledge: collective learning partnerships?

Discussions on this theme explored the interviewees' views on issues related to the relative roles of 'expert' and fishermen's knowledge in informing decision-making processes. This included their views on the potential for 'collective learning partnerships', whereby fishermen and 'experts' could learn from each other as a means of improving the knowledge basis of decision-making processes. Of the 29 interviewees who discussed this, there was, unsurprisingly, unanimity that fishermen's knowledge should be used more, but there were several specific issues that were raised:-

- Fishermen are the real experts as they spend hundreds of days a year at sea;
- 'Experts' have a wider analytical view and knowledge needs to be pooled, *eg* through initiatives such as the Fisheries Science Partnership² and RACs;
- Fishermen's knowledge should be the primary basis of NTMPA design as they know the most and they will be most affected... but many fishermen *know* NTMPAs are not necessary;
- Trust in experts is undermined by the scientifically dogmatic but flawed nature of stock assessments: they look in the wrong place, at the wrong time using the wrong gear, in the quest for consistency;
- Difficult for fishermen to convince 'experts', that their knowledge is valid: mutual trust is a key issue;
- Fishermen could be strategic in the information they provide to minimise the impacts on them;
- Time availability is a limiting factor for fishermen when it comes to providing their knowledge.

'I think that CEFAS are working better with the fishing industry now through the Fisheries Science Partnership though it can be very hard for a fishermen to convince people with letters after their name that you know what you are talking about'

'The fishermen should be the primary designers of NTMPAs for fisheries management, and the educated/intelligent fishermen will appreciate their potential benefits and be willing to support such initiatives'

'We need to involve fishermen in NTMPA network design to minimise the impacts on them, but fishing is so responsive to marine dynamics and fishermen could be strategic in the information that they provide, so I think it is very difficult to do this'

'Only the fishermen know about seasonal fish migration patterns and they are not inclined to give this information: 'a still tongue keeps a wise head'. If we sat down with them to give them the benefit of our knowledge in trying to argue against NTMPAs, they just wouldn't believe us'

'There would be a need for fishermen's knowledge to be pooled with scientific knowledge to improve fisheries management, where at the moment it is a little top-down in terms of both knowledge and power. We're the ones that see the dynamics and variations in fish stock movements. The RACs and Science Fisheries Partnership are an attempt to address this and explore collaborative learning. Most fishermen are sensible and knowledgeable and you could easily filter out the views of the hair-brained idiots!'

'If English Nature just came and talked with us and gained some real knowledge on which to base their proposals, I would be interested, but their current NTMPAs proposals are just the height of bloody arrogance'

² [http://www.cefas.co.uk/data/fisheries-science-partnership-\(fsp\).aspx](http://www.cefas.co.uk/data/fisheries-science-partnership-(fsp).aspx)

'Fishermen are the real experts as we are out there hundreds of days a year. So if you want to design seasonal closed areas, NTMPAs, etc, you need to sit down with fishermen and learn from their knowledge. I can also see that we have local information and scientists might have comparative knowledge about different areas. There is a limit to fishermen's participation as this takes time and fishermen are very busy and have little spare time'

'There have to be different sorts of expertise, like that of fishermen, accumulated though experience in their grounds and scientists who know how to design studies, collect data and analyse it. I think they should get together too pool their information and expertise'

DEFRA and their scientists don't listen to us and they don't understand how a variety of factors affect fish stocks and their distribution: they just stick to their scientific approach and then tell us the fish stocks are in a poor state, when we know that they just sampled in the wrong place at the wrong time using the wrong gear'

'A partnership approach is important but at the moment there is not enough trust between different parties, though this can be built. Fishermen will not trust decision-makers if they are making decisions on the basis of flimsy evidence so fishermen need to be more involved in working with scientists to strengthen the scientific basis of decisions'

'If fishermen feel that information collected from them about habitat/species distributions and their fishing patterns might contribute to a decision to designate their grounds as NTMPA, it is quite understandable for them to be reluctant to give such information: concern that they might be providing rope to hang themselves with. There must be ways through this problem: it is back to trust'

Role of science: need for rational, objective approach to justify closures

25% (13) of the interviewees discussed the need for a rational, objective approach to justify closures, as opposed to justifying them for subjective reasons, 'in principle' and as a basis for precaution (see next section):-

'The green lobby lobby, in campaigning for NTMPAs, has "abandoned science and logic in favour of emotion and sensationalism", in the words of Patrick Moore, one of the co-founders of Greenpeace who is now a critic of the environmental movement'

'If people can demonstrate valid specific objectives for NTMPAs, such as improving depleted stocks or protecting sea fans, I would be interested, but I still can't see why potting should be excluded'

'I think NTMPA targets are arbitrary and based on poor science, rather than being precautionary'

'I accept that there may also be rare seabed biodiversity that needs to be protected, but the case for this protection needs to be scientifically proven. We need analytical, science-based decisions, not precautionary ones'

'The driver for the NTMPA concept is still claims about the depleted state of fish stocks and the marine environment, and if we look at specific proposals for specific areas we need to start with demonstrating that there is a need for improved management and that NTMPAs can address this need. English Nature seem to take decisions on the basis of principles rather than examination of the facts and risks'

The role of the ecosystem approach and precautionary principle

Discussions on this theme were focused on interviewees' views on the ecosystem approach and the precautionary principle, as these are key elements of the forthcoming Marine Bill and are often used to support arguments for NTMPAs. 47% (24) of the interviewees discussed these approaches, amongst whom the following perspectives were notable.

38% (9) were critical of the ecosystem approach on the grounds that marine ecosystems are too large/complex to manage and that nature was too powerful (6), and that this approach in combination with the precautionary principle would be the 'last nail in the coffin' for the fishing industry (3):-

'The seas are too complex to understand so I don't see that we can take an ecosystem approach, as we cannot understand the consequences of our interventions'

'We don't have to manage marine ecosystems as they've never been managed before so I don't see the need for the ecosystem approach. Fishermen are part of the ecosystem. Nature is a far more powerful tool than all the fishing fleets and the changes caused by nature and climate change are not sufficiently taken into account'

'Ecosystem management and the precautionary principle could just be the means by which they finish off the UK fishing industry, which is in decline anyway as few young people, including the children of fishermen, want to enter the industry'

17% (4) argued that other factors, such as climate change, aggregate extraction and pollution, were having a far greater impact on marine ecosystems than fishing, and that these should be the focus of the ecosystem approach.

17% (4) were in favour of the ecosystem approach:-

'We do generally need to be more strategic and precautionary in the way we manage our impacts on marine ecosystems'

'I can see the need to look at the whole ecosystem rather than just the stocks, as stock assessments are just guess work based on some flawed assumptions but they see them as a basis for precaution. Catches go down for a variety of reasons but they just see this as a reflection of the status of the stocks'

13% (3) argued that the ecosystem approach/precautionary principle should be focused on restricting the more damaging forms of fishing, such as scallop dredging, whilst 8% (2) argued that quotas should be abandoned and discards banned, so that better data could be gathered on total catches in order to inform the ecosystem approach.

21% (5) argued that if fish mortality from fishermen was being managed, then seal mortality should also be managed through culls, as part of the ecosystem approach. 38% (9) similarly argued that fishermen should be considered as part of the ecosystem: top predators:-

'I agree with arguments that seal populations should be managed where their numbers are excessive, in the same way that fishermen's activities are managed, as both are essentially predators'



'If we are talking about ecosystem management, what about seals? If you close areas to fishing to reduce mortality, why not control predators otherwise seal predation mortalities will cancel out reductions in fishing mortalities? With respect to baseline, some in English Nature argue for a 1900 target based on historical fish stock data, but I pointed out that at that time the CSFC was killing 3,000 - 4,000 seals a year! A recent study on historical fishing practices indicates that the seals used to be a huge resource in Cornwall but these were the first major losses. As top predators this would have had a huge impact on ecosystem structure. Seals probably have as much of an impact on fish stocks as fishing so how do you assess what the natural balance should be? Seals will congregate in NTMPAs (more fish, less disturbance) so it doesn't make sense to exclude seals, which will affect fish stocks, from the ecosystem management rationale. Fishermen often feel that they are way down the importance order, even though they have their 'backs against the wall', in that anglers' and seals' interests seem to come before theirs, if they are allowed to take fish in NTMPAs. The Sea Mammal Research Unit studies indicate the seal populations may suffer mass mortalities when populations become too big, so why not manage seal populations to reduce the fishing mortality they cause and prevent such mass mortalities? Starvation, viruses, etc are bad for seals so you could also argue for seal culls on welfare grounds, like deer culling'

'I am in favour of the ecosystem approach but it does create problems when the ecosystem impacts of fishing are managed but any proposals to manage the impacts of seal populations are rejected straight away: this is a biased approach to ecosystem management. Fishermen would be prepared to give more if they could see the other side giving more as well, where it currently appears to be one-sided and unfair. Fishermen are part of the ecosystem, just like seals'

'I completely agree with arguments that fishermen are part of the ecosystem and that if fishermen are to be managed, so should seal stocks, otherwise it is discriminatory. DEFRA requires the management of terrestrial pest species like deer, rabbits and Canada geese, so why not similarly manage seals if their numbers increase to the point that they become a pest?'

13% (3) argued against this view:-

'Given the large numbers of fishermen and the effort they represent, compared with seals, I think it is ridiculous to argue that if we manage fishermen we should also manage seal populations'

'We don't need ecosystem management as nature has always looked after itself, so seal culls are not necessary'

'Nature takes care of itself and if there isn't enough food for seals they die off, but if there are loads of fish the seal populations expand and we are in competition with them, but I don't have a problem with this'

8% (2) stated that they supported the precautionary principle: 'give it the benefit of the doubt', whilst 13% (3) argued that wider fisheries management approaches already are or could be made more precautionous, rather than designating NTMPAs.

21% (5) were critical of the precautionary principle as it would be used to justify too many draconian restrictions on the fishing industry. This is a similar position to that reported in the previous section on the need for an objective approach rather than precaution (25% - 13):-

'We must balance the need for precaution with the consequences of taking precautionary measures'

'NTMPAs should be used with precaution and certainly not as a means of implementing the precautionary principle'

One fisherman raised an interesting point in relation to the ecosystem approach and precautionary principle on how ideas become translated into facts as they are passed along:-

'The problem is that very often we see in fisheries, as well as other walks of life, that somebody who is supposed to be an authority justifies a proposal based on some data and/or a good argument, and the next person comes along and sees this as a fact, not a theory or suggestion. The more it is passed on, the more factual it becomes, until somebody in government reads it and sees it as gospel, though it may possibly be based on spurious data'

Another fisherman gave a succinct general view on the ecosystem approach and precautionary principle:-

'Nice ideas in principle but not realistic'

Balance of decision-making powers between local fishermen & relevant authorities

Discussions on this theme were focused on interviewees' views on their actual and potential role in decision-making processes related to NTMPAs. 88% (45) interviewees discussed such issues and several key themes emerged.

40% (18) of interviewees expressed the view that the industry is increasingly disempowered in such decision-making processes and that NTMPAs may be imposed on the industry regardless of their merits or the consequences for fishermen:-

'I do fear that NTMPAs will be imposed on us as the fishermen have no power in these discussions'

'I do fear that NTMPAs might be introduced 'through the back door' without proper consultation, like a lot of fisheries management measures'

Fishermen's views on no-take marine protected area proposals in South-West England

'I can see NTMPAs coming and I worry that they may be imposed on us, but I don't see that they are going to do much good'

'They ask us what we think about such proposals and we try and be helpful, but they just go away and do what they were going to do anyway regardless of our views, and we do get a bit fed up with such tokenistic consultation exercises. Most fishermen around here are thinking about the future for fishing for their children but they treat us as if we are all like the minority of fishermen who are short-termists'

'If NTMPAs are to be pursued we need more meaningful consultation with fishermen about exactly where they will be, but there is a lot of scepticism amongst fishermen that they will be listened to, or that anything will actually happen if they are listened to'

'We do fear that NTMPAs will be imposed on us as the political will to appease the greens is greater than the political will to sustain the fishing industry, especially if the anglers can carry on fishing, as they have more political influence now'

'Fishermen have very little role in fishing decisions, in terms of participating in them or providing information for them, so I can see little potential for their input into NTMPAs. The UK government would be quite happy to see our fishing industry disappear, but other EU governments will fight to protect their industries'

'Fishermen are the 'lowest of the low' in the eyes of politicians and the public, as they just see us as stupid, greedy vandals, so they would not worry that NTMPAs might be the last nail in our coffin, so we fear that NTMPAs really might be imposed on us'

One interviewee had an interesting perspective on what academics refer to as the 'tragedy of the commons' in considering that whilst many people think that fishermen's greed is the cause of stock depletions, negatively influencing public support, they are actually trapped in a dilemma of competition:-

'I think lack of regulation has led to the fisheries being in their present state, as you will always get an irrational minority who will overexploit stocks, and this drives most of the other fishermen to fish more intensively to keep up with the 'market treadmill'. It is thus not individual greed that has led to the depletion of stocks, making fishermen the architects of their own destruction, as many consider them to be, but this group 'feeding frenzy' that you have to keep up with, coupled with poor regulation to address this'

24% (11) of the interviewees were quite pragmatic in arguing that even if they did not necessarily support NTMPAs, if they were going to be imposed on them they would rather be involved in discussions both out of principle and in order to minimise the impacts:-

'We would need to be at the table to ensure our important lanes are kept open and to provide ideas based on our experience and I think they might listen to us'

'We would welcome being involved in discussions on the location of NTMPAs, but this would be with a view to NTMPAs not being where we fish!.... but we would be willing to engage in discussions'

'The real involvement of fishermen in NTMPA selection processes would be painful and will take time, as the initial exercises will just identify that fishermen fish in all the areas and don't want any closures, but at least by going through this process there is real involvement'

'If English Nature are honest about the biodiversity objectives of NTMPAs and if they had a statutory target, they could go to fishermen and state that NTMPAs are going to happen but they want to discuss with fishermen where they are going to be. Discussions on specific NTMPA proposals to achieve habitat representativity whilst minimising pain to fishermen could then move forward'

'Nature conservation is increasingly coming to the forefront in the UK and if fishermen just keep on putting barriers up to related proposals they will just get left behind as these proposals are taken forward anyway, so they need to get constructively involved'

'[An NTMPA] target would also help the PO as they could make it clear to their members that their 'hands are tied', *ie* NTMPAs are coming but the PO and fishermen need to constructively engage with debate to influence where NTMPAs are going. However, the PO would initially oppose and try and negotiate on such a target'

'If there were a statutory target for NTMPAs in the forthcoming Marine Act this would deflect the flack from the SFC and EN, provided the latter play their cards right. We could then pursue the achievement of this requirement in the best way with the fishermen, with the blame being put on DEFRA if needs be, discussing with fishermen where the best places are for NTMPAs to go so that they maximise gains and minimise pains'

'If we were to have a statutory NTMPA target, say 15%, then you will have difficulty getting fishermen to embrace NTMPAs as they will lead to losses of their grounds... but if it were going to happen with or without them, they would want to be involved'

16% (7) of the interviewees discussed the need for the effective representation of fishermen in NTMPA discussions, as this was more realistic and appropriate than providing for the full participation of all fishermen, and the representative organisations could fulfil a mediation role:-

'Representatives of the fishing industry, *eg* PO and SFC board members who are fishermen, would need to be involved in discussions from the outset. Fishermen could be kept informed and their views gained through one-to-one discussions during boardings and local meetings. When the discussions are proceeding it would be important to have local, open workshops with fishermen, but need to avoid the rowdiness that can be generated by public meetings'

'If English Nature were to select NTMPAs on the basis of habitat representativity, I think this would best be done by involving a few sensible level-headed people from the PO and the SFC, as well as DEFRA, rather than by getting a large number of fishermen around a table. Wider views could be gained by sending a questionnaire to all fishermen asking them to identify where NTMPAs might best be. Some of them might not reply, but at least they have been given the opportunity to get involved. Then the smaller committee could have these collated and take the final decision'

'Failure to appreciate issues such as the complexity of the present regulations is why the PO's need to be more involved in discussions about options for fisheries management. Fishermen are usually just too busy and out of touch to keep up with it all so the emphasis should be on involving the POs who represent our concerns and interests'

20% (9) of the interviewees discussed the limitations of such representation and the need to involve more actual fishermen rather than relying on representatives:-

Fishermen's views on no-take marine protected area proposals in South-West England

'With regards to NTMPA design, I think you would have to involve individual licensed fishermen as not all fishermen are effectively represented by a given association: some are completely independent. They would all have to be involved and it would be a complicated procedure, but it could and should be done. It would not work if you just consulted fishermen on NTMPA proposals through associations'

'Most small-scale fishing interests are not PO members and are not adequately represented in fisheries management discussions and decision-making processes'

'NTMPA discussions should start with discussions with the actual fishermen from a given port, as it is very difficult to get true representatives of all fishermen from an area. As the process proceeds, there may need to be more representation, but in the early stages the involvement of all fishermen should be provided for'

'If you initially agree proposals with representatives and then they go to the fishermen with what is essentially a *fait accompli*, this will cause resentment and resistance'

'If you want a conservation area to achieve specific objectives, you should start by taking to the local fishermen that fish the area, not by having closed meeting with other 'representatives' and then embarking on flawed official consultation exercises, as was the case with Whitsand Bay'

'If there were more partnership between fishermen and other parties in fisheries management proposals, such as NTMPAs, trust could be developed provided the fishermen's participation is meaningful and from the grass-roots: actual, practising fishermen'

Four interviewees (9%) further discussed trust as an important issue when considering participation in NTMPA related decisions:-

'Not all people have integrity and you can't rely on trust, but without trust NTMPAs will not work. We need to address the huge distrust between fishermen and DEFRA'

'A partnership approach is important but at the moment there is not enough trust between different parties, though this can be built'

'Fishermen trust their representatives and I think the situation between fishermen's representatives and EN/DEFRA people is getting better in that trust is slowly developing'

'If there was more trust and confidence amongst fishermen I think their potential to reach agreements and cooperate could be increased, as the resistance is a reaction to increasing ill-founded restrictions that they do not respect (eg bass MLS increase proposed by anglers, unilateral pair-trawl ban) and their increasingly strict, draconian enforcement, rather than being inherent/ingrained. This is why fishermen must be on-side and involved in management processes from the outset'

Three interviewees discussed how recent experiences were undermining the potential for the participation and cooperation of fishermen:-

'The agencies can sometimes take a rather top-down approach, as they did recently over Manila clam mariculture in Poole Harbour, that can undermine the potential for participation & cooperation. They threatened us with a Ministerial Order (as they gained with the Solent) to close this fishery down throughout the harbour unless we complied with their proposed restriction to close a part of the harbour to

this activity. They are over-using their powers [under the Habitats Regulations] that I am not sure they even have! This is doing a lot of damage to the potential for fishermen to cooperate with and provide knowledge to government agencies, by undermining their trust'

'Closures in marine SACs, eg maerl beds in Fal, have caused resentment amongst fishermen, as we were categorically and repeatedly assured by very high level DEFRA (and English Nature) officials that all activities would be able to continue in marine SACs, provided these activities were not accelerated and the condition (baseline) at the time of designation did not deteriorate further. However, English Nature then decided that all fishing activities needed to be reviewed in keeping with the Wadden Sea test case, with the aim shifting from maintaining baseline condition to restoration, through a ban on demersal dredging. The way they did this was very wrong in principle and undermined the fishing industry's trust in EN, as they fear that marine conservation proposals from EN represent the thin end of the wedge'

'I think Cornwall County Council were too impositional/top-down with the Whitsand Bay proposal and this could undermine support for future such designations amongst fishermen. This proposal turned good will towards NTMPAs, based largely on the Looe Voluntary Marine Conservation Area, into bad will'

25% (11) discussed the challenges related to fishermen participating in decision making:-

'There is a limit to fishermen's participation as this takes time and fishermen are very busy and have little spare time'

'Some fishermen also need to learn to have a more constructive input to discussions and consultations'

'It's difficult to get fishermen to participate as they tend to say nothing at meetings and then go out and spread arguments. It's also difficult as you can't get four fishermen to agree on whether it's wet or not! If we were to have NTMPAs imposed on us it would be desirable to have fishermen involved in the design of the network but whether it would be feasible is very uncertain, as there are a lot of conflicts within the industry so you wouldn't get agreements and different proposals would impact different sectors. Also, any NTMPA proposals would represent the 'thin end of the wedge' so many would not want to be involved, or they would believe that the proposals will just fade away so they need not get involved'

'If [*Finding Sanctuary*] only puts NTMPAs where they get agreement I don't think they will end up with any NTMPAs!... there will always be some fishermen affected by an NTMPA in any location, so they will not agree'

'Fishermen do tend to take quite a short-term view and this influences their views on NTMPAs. Were there a statutory obligation to designate complete NTMPAs, I think that past NTMPA battles indicate that a programme of further NTMPA designations would lead to battles between different factions of the industry and between people in different areas as to exactly where they are going to be'

'We need decision-making powers to be shared, so that fishermen are involved but some official body has the final say, otherwise fishermen will just argue amongst themselves and rarely reach decisions'

Considering these challenges, 14% (6) argued that there would be a need for decisions to be taken at a higher level and imposed on the industry:-

'Working in partnership with fishermen to explore and develop the potential for NTMPAs, as *Finding Sanctuary* plans to do, will not work unless you initially impose them in order to convince fishermen and their leaders that NTMPAs have potential benefits'

'Given that NTMPAs will impact some fishermen and the arguments about how fishermen will never agree where NTMPAs should be, I think you would end up having to impose NTMPAs on them'

'You will never get agreement amongst a committee of fishermen, as some will always object to being affected, and I accept that somebody will have to take a decision, probably somebody from DEFRA. I have no problem with this, so long as it is done fairly and the displacement factor (p.20) is taken in to account and addressed'

'I think we need both a degree of imposition and the involvement of actual ordinary fishermen, right from the first step of the process'

'Under present regime it is difficult to get consensus amongst fishermen as to where inshore NTMPAs should be, therefore I think you need to go down the legislative route, whether NTMPAs are for fisheries or biodiversity conservation objectives'

'I think that decisions about issues as serious as NTMPAs should come from a higher authority, as vested interests could be a danger, even though they are not supposed to be there [on the SFC]. The danger with this is that SFCs are best placed to give impartial advice based on good knowledge, and there is a risk that higher government levels could lack this knowledge and take the wrong decision'

In summary, discussions concerning the balance of decision-making powers between fishermen and relevant authorities make it clear that many fishermen feel disempowered and therefore threatened by NTMPA proposals. Some are pragmatic, in that they consider that if NTMPAs were going to happen anyway, they would rather participate in discussions, in order to minimise the impacts on them. Some argued that fishermen's participation could be provided for through their representatives, whilst others argued that there were limitations to such representation, therefore there was a need to provide for the participation of actual fishermen. The need to develop trust between fishermen and relevant authorities was recognised by a few as an important issue, whilst others discussed how such trust had been undermined by some recent experiences, particularly relating to marine SACs. Some discussed the challenges related to fishermen's participation, with particular regard to the unlikelihood of fishermen reaching agreements due to the diverse nature of the industry. Considering these challenges, some considered that decisions may have to be taken at a higher level and imposed on fishermen.

There are clearly some tensions amongst these different perspectives and such participation issues are likely to be a critically important element of future NTMPA debates and initiatives.

Enforcement issues

Discussions on this theme revolved around the question of whether NTMPAs were more easily enforced than WFMA's &/or enforceable, especially if the potential for fishermen to voluntarily cooperate was limited, including the potential for mutual 'peer' enforcement amongst fishermen.

NTMPAs are not more easily enforced than WFMA's &/or are not enforceable 48% (19)

Fishermen's views on no-take marine protected area proposals in South-West England

NTMPAs are more easily enforced than WFMAAs &/or are enforceable	48% (19)
Question irrelevant as static fishing is harmless and helps enforce exclusion of trawlers	5% (2)
	(40)

NTMPA are not more easily enforced than WFMAAs &/or are not enforceable (48% - 19)

'If you can't enforce wider fisheries management approaches I don't see how you can enforce NTMPAs. The enforcement of wider fisheries management approaches is improving, and this should be the focus. I do not think the case for NTMPAs that they are easier to enforce is valid'

'I do not see how NTMPAs can work without all the people that they affect agreeing to them, as otherwise they cannot be enforced, with regards to both self and peer enforcement. All people must comply with the NTMPA, otherwise its gains will be lost through both fishing effects and a lack of respect for it amongst people who might otherwise comply, but they won't if they see others breaching it'

'If fishermen don't respect NTMPAs they will probably find some way of fishing in them'

'I would like to think that you could count on fishermen who had been involved in discussions about an NTMPA and approved of it to cooperate with it, but sadly I have had experience of fishermen agreeing to a proposal and then breaching it'

'I can see that there is some potential for cooperation with NTMPAs amongst fishermen as I respect the law and would not break the law by poaching on NTMPAs, even if they are imposed on us... but many will fish in them when they can get away with it as they are driven to catch fish, and though I would dob them in (why should they get away with it if I don't go in there?) I don't really see how you can enforce them completely'

'VMS can't prove that you were fishing so enforcing NTMPAs would still be a challenge. Economics would undermine any potential for peer enforcement as the crew are all on a share so the pressure is on the skipper to maximise the catch, even if that means breaching regulations'

'It's in fishermen's nature to catch as much as they can and if productive grounds are designated NTMPA there will be the tendency for fishermen to try and get in there and fish, if they can. If everyone was seen to be respecting the NTMPA, it might work, but if we thought a vessel was sneaking in there at night, I would think 'why shouldn't I go in there'. I think that if a 25% NTMPA target was pursued, rogues who poached on the area would not be reported or otherwise discouraged by their peers, especially for inshore areas, as everybody would appreciate why people were poaching on the NTMPAs'

'Fishermen can be very effective at peer enforcement, but only if they respect the measures they are enforcing, which is very unlikely to be the case for NTMPAs.... and peer enforcement will never guarantee enforcement as fishermen are not out there to peer enforce all the time'

'For wider fisheries benefits to flow you must have a 100% 'no-take' zone, which is extremely difficult for NTMPAs as it only takes one rogue!... and they will be drawn by the high catches to be had in NTMPAs. The only way to ensure compliance is by using big rocks, scaffolding, concrete jack dices, etc to physically prevent fishing'

'You can't fence off and secure marine areas so NTMPA proposals need mutual respect amongst affected users if they are to be effective, as you can't enforce imposed NTMPAs'

‘They can’t effectively police fisheries out at sea so I don’t see how they can police NTMPAs, though I agree that they are easier to enforce than many wider regulations as they are ‘black and white’: if you are fishing in there you are guilty. I would like to think it was that simple but people would get off on some technicality or a rogue minority would just fish NTMPAs in the middle of the night, I fear’

NTMPAs are more easily enforced than WFMPAs &/or are enforceable (48% - 19)

‘VMS provides the potential of addressing the enforcement hurdle in order to provide for initial imposition [until flow of wider benefits nurtures cooperation/support]. It’s like speeding: everybody intuitively knows you shouldn’t do it but most of us will do it if we think we won’t be caught: speed cameras are analogous to VMS in this respect. NTMPAs are also easier to enforce than partial closures and other measures’

‘I can see that NTMPAs would be more easily enforced than wider fisheries management measures, partly because they would be fairer in that no one sector would be discriminated against, but I think such NTMPAs would have to be seasonal, not permanent’

‘NTMPAs are clear in this respect [have no loop holes] and enforceable: if you’re in their fishing, you’re breaking the law. Fishermen are essentially extremely competitive and there are some who cannot stop fishing if the fishing is good, as they fear that somebody else might catch the fish and they go into a ‘catch frenzy’, regardless of the diminishing returns of putting more fish onto the market, but at least NTMPAs would protect certain areas from this greed’

‘NTMPAs would be enforceable even if they were imposed on the industry, through VMS’

‘Despite the lack of support/involvement from the fishing industry, I think that NTMPAs would be enforceable through VMS even if they were unfair’

‘I think there is a lot of potential for self-policing by fishermen taking measures against other fishermen who breach NTMPAs. In combination with satellite monitoring, NTMPAs could be fool-proof’

‘NTMPAs are definitely enforceable, employing VMS for offshore ones, for instance. Fishermen will try and get round them but technology is moving forward so fast that they will have the capacity to monitor the position of all vessels soon. I don’t think peer enforcement will be necessary as the technology will just take care of it’

‘Fishermen’s involvement in NTMPA design would increase the potential for fishermen’s cooperation with these NTMPAs, but you will always need some policing to enforce NTMPAs on the rogue minority. VMS will essentially provide for NTMPAs to be effectively enforced. I think there is potential for peer enforcement of management measures, including NTMPAs, provided fishermen respected the designations and were involved in them, as fishermen like restrictions to be fairly spread and don’t like to see fishermen gaining by breaking rules where they are complying with them – they would discourage them rather than report them’

‘If they can’t see the benefit of the pain they will resist restrictions and find a way round them. If they can see benefits and see that they will get them, they will be more cooperative. There is some potential for peer enforcement if you have reasonable consensus on the NTMPAs. Fishermen can both directly enforce by ‘having a word’ with non-compliant fishermen and indirectly enforce by reporting non-complying

fishermen to the relevant authorities, using latter as a back-up to former. Where you have got the buy-in of the majority, you will get peer enforcement, I am sure of it'

Clearly, issues related to imposed enforcement, the potential for peer enforcement and cooperation with NTMPAs are closely related to the participation issues discussed in the previous section.

Question irrelevant as static fishing is harmless and helps enforce exclusion of trawlers (5% - 2)

'I don't think arguments about how much easier NTMPAs are to enforce are relevant as we have static gear reserves and they already work. It wouldn't be right to impose NTMPAs on fishermen who will be driven out of business by them'

'NTMPAs are actually a retrograde step, as the presence of pots and potters is the best way of excluding trawlers. We lobby to have no-trawl zones and we help enforce them. If you designate NTMPAs and take the potters out, the trawlers will get in to the NTMPA (they can get round VMS and any other feasible enforcement measures, partly because of the burden of proof on DEFRA) and the area will end up in a worse conservation condition than it was when it was a potting area'

A further two interviewees put forward similar arguments to the latter above, both arguing that NTMPAs were not enforceable.

In summary, nearly half of the interviewees considered that NTMPAs are not more easily enforced than WFMAAs &/or are not enforceable, for reasons such as fishermen won't comply with NTMPAs if they don't agree with or respect them, the economic/cultural imperative to catch fish and the limited proof provided by VMS. On the other hand, an equal number of interviewees considered that NTMPAs are more easily enforced than WFMAAs &/or are enforceable, for reasons such as the effectiveness of VMS, the fact that the burden of proof is limited to simply proving that a vessel was fishing within a given NTMPA, with no loop holes, the eventual wider fisheries benefits that will flow from NTMPAs and the related potential for peer enforcement. Four interviewees argued that NTMPAs would be a backward step as static gear fishermen help enforce the exclusion of trawlers.

Issues related to wider stakeholder participation in decision-making

Discussions on this theme focused on interviewees' views on arguments that the seas are a societal resource therefore representatives of wider society should be involved in decision-making to ensure that wider societal priorities are fulfilled.

Societal representatives should not be involved in fisheries related decisions 52% (16)

Societal representatives should be involved in fisheries related decisions 48% (15)

... of whom only 6 also consider NTMPAs as the way forward (31)

but only 3 do not qualify their support for such participation

Societal representatives should not be involved in fisheries related decisions (52% - 16)

'I do not think wider citizens should become involved in marine management decisions as they are totally ignorant about the oceans and fishing; I wouldn't go to a nuclear power station and tell them how to run it! We don't want the fish stocks to crash and we don't need 'citizens' to influence us to avoid this'

Fishermen's views on no-take marine protected area proposals in South-West England

'If you involve wider citizens in marine decisions, people believe what they want to believe and if they don't really understand what is actually going on out there they shouldn't be involved'

'I do not agree with citizen representatives of wider society becoming involved in fisheries management, as the seas are primarily for fishermen to use'

'Wider societal involvement in marine decision-making is a problem as it will just be a means for ill-informed greens to dominate the discussions'

'DEFRA has the last say on decisions about marine resource exploitation and they are democratically elected, so they cover citizens' interests. If you have 'the public' involved you have just created another layer of administration. They probably wouldn't be sufficiently knowledgeable, either. The public's opinions should be sought and taken into account by decision makers, but they shouldn't be directly included otherwise it just becomes too complicated'

'It is very clever of the government to talk about bringing citizens and other groups (anglers, tree huggers) into marine decision-making processes, as this is another way of marginalising the fishing industry. Fishermen are generally perceived as pirates by the public but fishermen are more conservation minded now than we are given credit for. The stocks we target are healthy but a lot of people think all stocks are in terminal decline. The public need converting and this is work the fishing industry should be focused on'

'As they are our grounds, it should be *we* that invite them to *our* table for discussions about initiatives such as NTMPAs, not the other way round. We have the knowledge, experience and stake, not them. Fishing is *our* way of life, not theirs, so the public and environmentalists should keep out of it. They're not their grounds, they're ours! We are the society that uses the sea so it should be our decisions, not the wider public or environmentalists. We don't tell farmers how to farm so why should land-based people tell us about the seas and how to fish them?'

Societal representatives should be involved in fisheries related decisions (48% - 15)

'I also agree that representatives of wider societal interests should be involved in marine resource decisions as everybody has the right to use the sea'

'I agree with arguments that the seas belong to all members of society and that people in general have a say in how our seas should be managed. I think this is right but do worry that most of the public don't really understand what's going on at sea and all they know is what they read from so called experts in the press, which is not the full picture'

'I appreciate that society has a stake in the seas so citizens should be involved in marine decisions, but my concern is that it would be the radicals who would get involved, rather than 'middle ground' representatives of societal interests'

'I have no objection, in principle, to wider citizens becoming involved, but they need to develop an understanding of fishing and the seas, as most people really don't understand the complexities of what's going on out there'

'I can understand arguments that fishermen don't own the seas and that it's not ours to say what's right and what's wrong with it, but at the same time, to be involved people do need a knowledge of what's going on out there'

'I think representatives of wider societal interests, such as environmental NGOs, should be involved in marine decisions but that the fishing industry needs to take on board that such NGOs are very well financed and can be very polished and persuasive. If the industry does not match this and get on board with the environmentalists, recognising that the use of the seas must be shared, I worry that debates could become dominated by such groups. The fishing industry's public profile is appalling as it is generally reactive and defensive, often defending practices that should not be defended. The industry needs to get its act together in this respect and needs professionally independent and fairly hard-nosed leaders to push the industry forward and prevent it being picked off'

'Historically, fishermen have pretty much had the sea to themselves, and they are now learning, fairly quickly, that they have got to co-exist with other users, and that's conceptually quite hard for a lot of them. People from Birmingham who rarely go to the sea may have a view as to how it should be protected, but from a fishermen's point of view it's like 'they never come here and I don't tell them how to run their garden'. It is difficult for the industry to accept that other people want to get involved in the management of what they have considered in the past to be *their* grounds. It is extremely difficult to get the concept of shared societal ownership of seas to fishermen, as they only see other fishermen out there and their financial dependence on fishing'

In summary, just over half of the interviewees who discussed this issue consider that societal representatives should not be involved in fisheries, as they do not have sufficient knowledge of fishing or the seas, they are too influenced by 'greens' and green motives, the seas are for fishermen and fishing, and DEFRA is democratically accountable and already has the last say in fisheries decisions. Just under half considered that societal representatives should be involved, but only three did not qualify this view with arguments such as the preceding. Only 6 of the 15 who supported such participation also considered NTMPAs to be the way forward.

Justice

Discussions on the theme of justice revolved around which of the following arguments interviewees were more inclined towards:-

Why should fishermen bear the costs of further restrictions through NTMPAs for wider societal conservation gains? 57% (12) of the interviewees were inclined towards this argument.

Why should society bear the costs of environmental damage through fishing for the gain of fishermen? 29% (6) were inclined towards this argument

A further 3 interviewees could see both sides of the argument and did not state an inclination.

Why should fishermen bear the costs of further restrictions through NTMPAs for wider societal conservation gains? 57% - 12

'Fishermen will bear cultural and economic costs for an unnecessary wider gain for the greens and other vested interests'

Fishermen's views on no-take marine protected area proposals in South-West England

'The fishermen have always borne the cost of conservation restrictions, and we would probably have to bear the costs of NTMPAs, but I don't think this is fair'

'I don't think it is fair that fishermen should bear the costs through NTMPAs for a wider gain, as it is so unsure what the gains will be in the long term but the losses will be immediate'

'Compensation and assistance are important so that the impacts of community decisions are fairly spread amongst that community'

'There is a need to identify 'fishing areas' which can be set-aside for the industry, to balance the increasing claims that are being made on fishing areas, otherwise it is unfair on the industry. I think the costs to the industry are not being considered by those pushing for NTMPAs. It is a public right of fishery, but why should people who exercise that right be discriminated against by being displaced from NTMPAs?'

'If you close an area you are able to put a figure to the loss of affected fishermen, but you are not able to put a cost on damage to the environment, so in relation to the two 'justice' arguments the argument that fishermen shouldn't have to bear the costs of intangible societal gains is more pragmatic'

'Who is going to see these conserved habitats other than a few divers?'

'I don't think society is bearing the environmental costs of fishing as fishing is not diminishing the value the general public gains from the seas: they can still enjoy the beach, swimming, boating and the scenery so what impacts is fishing having on this?'

*Why should society bear the costs of environmental damage through fishing for the gain of fishermen?
(29% - 6)*

'I don't see why society should bear the costs of compensating fishermen for measures to address the environmental impacts of fishing'

'I can sympathise with arguments that society should not have to bear the environmental costs of fishing, but these are only caused by certain types of fishing, not potting'

'I err towards the argument that fishermen should bear the costs of reducing the impacts of fishing and that they should pay for the right to fish responsibly. However, the current problem is that the government has a duty to responsibly manage fisheries and because this has not happened, the industry is in such an economically precarious situation that it cannot afford to bear such costs'

'I think that commercial fishermen should pay for their licences to catch fish and pay a levy for what fish they catch as fish stocks are a societal resource and society pays to manage fishing, so society should expect some return. I do not think that society should bear the environmental costs of fishing, but as the fishing industry has legitimately developed within the law I think the industry should be transitionally compensated if they are restricted by technical measures, such as restricting the more damaging fishing techniques, or NTMPAs, in just the way that farmers are paid to adopt less intensive agricultural practices'

Fishermen's views on no-take marine protected area proposals in South-West England

Combined 14% (3)

'I can see both sides of the justice arguments: they are both valid arguments and your view just depends on where you are looking from'

'It could be argued by SFC board members that a duty of care on SFC to the marine environment through statutory NTMPA target and related objectives should be balanced by duty of care to the social and economic wellbeing of the fishing industry'

The closely related issue of whether fishermen displaced from NTMPAs should be compensated was also discussed, recognising that this is both a question of justice and of managing the impacts of effort displacement (see p.20).

Yes, displaced fishermen should be compensated	93%	(37)
No, displaced fishermen should not be compensated	7%	(3)
		(40)

Yes, displaced fishermen should be compensated (93% - 37)

'If we are going to have NTMPAs than fishermen should be compensated, like farmers are'

'If NTMPAs were to be pursued affected fishermen would have to be compensated and tied up to prevent displacement'

'The only fair way to do it would be to buy the affected fishermen out, perhaps on an opportunistic basis as they retire. If they are coercing fishermen out of their grounds through NTMPAs they should, to be anything like fair, buy them out and provide enough compensation for their year-on-year losses, but they won't do the latter, in reality, as DEFRA have made this clear'

'I am happy for them to trial NTMPAs to see if their spillover/export theory is correct but we would want compensation to cover our losses arising from such trials... but experiences with past restrictions indicate that we won't be offered compensation'

We should be compensated were NTMPAs to be imposed on us, but we won't be as the government doesn't care about the UK fishing industry'

'There must be proper compensation for fishermen on a transitional basis until the wider fisheries benefits of offshore NTMPAs are manifest'

'Fishermen are businessmen and would be more amenable to biodiversity conservation objectives if they did not affect them financially. The reason they are so protective of other people getting involved in marine decision-making is that it is them who will bear the financial costs of any restriction: it all comes out of the cod-end! If the market was better biodiversity objectives could be achieved without fishermen bearing a financial loss compared to their current status. Added value is a difficult thing to do but is a major consideration. At the moment local green labelling initiatives do not seem to add any actual value for the fishermen'

Fishermen's views on no-take marine protected area proposals in South-West England

'To close such a large proportion of the seas without compensation would be morally and economically wrong. However, the political reality is that DEFRA does not want to pay to reduce effort, so I don't think transitional compensation will be on the table, in reality'

'There has to be compensation. However, the industry has been foolish to itself by fishermen rushing in to claim compensation for developments that really don't affect them'

'In principle I think that fishermen in dependent communities (where there are few alternative sources of income) displaced by NTMPAs should be given transitional compensation, otherwise they will not be there if/when the benefits flow. In areas where there are alternatives, compensation would just be taken away by displaced fishermen as they left the industry, so I would not favour this approach'

'If NTMPAs had to happen, fishermen would have to be compensated for the actual losses arising from NTMPAs, but quantifying these would be very difficult as some years the stocks may be within the NTMPAs and in other years they may not, so the losses would be as variable and dynamic as the stocks'

'If displacement was addressed through compensation for reduced effort, that would be fair, as farmers receive such compensation, but I am not sure how this would work. Farmer's lease/own their land but identifying fishermen with customary use rights of an area would be more problematic, as many fishermen would claim use just to receive compensation'

'It would help with the acceptance of NTMPAs, particularly with the vulnerable inshore sector'

'If we are going to close, say 10% of commercial grounds, then displaced fishermen should be compensated, particularly static fishermen who use very specific grounds. I also think that diversification assistance should be provided'

'Compensation would not help the local economic interests that are partly or wholly dependent on fishing: for every fishermen there are 6 people ashore that supply/service the industry'

'Even if compensation were provided, a big problem is that it is only the trawler owners that will get this, whilst the crew, who are the majority of the people in the industry, will get no compensation'

'We are going to need some sort of compensation scheme for NTMPAs to work. I don't think decommissioning is the way forward'

'If we had to have NTMPAs we would obviously deserve compensation but I would rather fish'

No, displaced fishermen should not be compensated (7% - 3)

'I can appreciate that most fishermen are sailing close to the wind, economically, but I think transitional compensation amounts to subsidies, and I do not agree with this. If NTMPAs were designed and respected by fishermen with good enforcement, this would provide for most fishermen to be economically better off, even in the short-term, so they would not need compensating'

'I am very wary of compensation schemes as this brings out the greed in fishermen, as schemes with the oil industry have proved: best to keep away from this and focus on promoting sustainable fishing as fishermen can make a good living if this is provided for'

'I disagree with subsidies/compensation, such as that which farmers receive, as the price of the product should reflect the cost of growing or catching it; neither farmers nor fishermen have a right to be a drain on the public purse. Decommissioning generally only takes out the old boats which do little damage as they are low technology, and that need too much money spending on them, and these would probably have left the industry anyway. I don't think compensation should be used to take NTMPAs forward as it is a misuse of public money'

It is important to note that the 2nd and 3rd arguments above are more against NTMPAs as a way forward, including the role of compensation to facilitate this.

A third issue that was discussed as an aspect of justice was whether anglers should be allowed to fish in NTMPAs. 22% (4) of the interviewees argued that angling should be allowed in NTMPAs, but this was essentially because they were against NTMPAs, rather than supportive of angling in NTMPAs, whilst only one interviewee (6%), who was in favour of NTMPAs as the way forward, considered that recreational angling should be allowed in such designations. 72% (13) argued that angling should not be allowed in NTMPAs as no-take means no-take for all if it is to be fair and because anglers take a lot of fish and would therefore undermine the objectives of NTMPAs.

In summary on the theme of justice, 57% of the interviewees considered, on balance, that fishermen should not have to bear the costs of further restrictions through NTMPAs for wider societal conservation gains, whilst 29% considered that society should not have to bear the costs of the environmental damage of fishing for the gain of fishermen. However, 93% of the interviewees considered that fishermen displaced from NTMPAs should be compensated, recognising that this was both a question of justice and of managing the impacts of displacement. Only 7% (3) of the interviewees were against such compensation, and two of these were essentially arguing against NTMPAs, including the role of compensation to facilitate such designations. With regards to whether angling should be allowed in NTMPAs, 72% (13) argued that angling should not be allowed in NTMPAs as no-take means no-take for all if it is to be fair and because anglers take a lot of fish and would therefore undermine the wider objectives of NTMPAs. 22% (4) of the interviewees argued that angling should be allowed in NTMPAs, but this was essentially because they were against NTMPAs, rather than supportive of angling in NTMPAs, whilst only one interviewee (6%), who was in favour of NTMPAs as the way forward, considered that recreational angling should be allowed in such designations.

Particular vulnerability of inshore fishermen to NTMPAs

Discussions on this theme were focused on whether inshore fishermen (inside 6nm) were particularly vulnerable to NTMPAs.

Relative vulnerability of inshore fishermen is an issue (91% - 32)

'Lundy only got through because the main fishermen who used the grounds a lot retired and the area is quite small and remote.... but I am not happy with this NTMPA and I wouldn't want to see any more such inshore NTMPAs. Inshore fishermen are critically dependent on their local fishing grounds and there is no objective justification for putting them out of business through NTMPAs. Offshore fishermen are also dependent on specific grounds, so nor can I see any objective justification for offshore NTMPAs'

Fishermen's views on no-take marine protected area proposals in South-West England

'NTMPAs are most likely to be placed inside 6nm where they will damage the inshore sector that actually does least damage to the environment and are most vulnerable if the local grounds on which they rely are closed'

'The inshore sector is particularly vulnerable to NTMPAs as they can't wander to other areas and are dependent on their local, customary patch. So having NTMPAs just inside of 6 miles would be disastrous'

'Inshore potters and line fishermen are often not able to steam further afield to avoid NTMPAs as their vessels are too small'

'NTMPA advocates prefer inshore NTMPAs along the shore so that they can identify with these and people can see them, therefore inshore fishermen, who are most sensitive to such closures, are more likely to have to suffer them, whilst the big damaging vessels offshore will be able to carry on out there'

'The biggest battle is going to be fought with inshore NTMPAs and the biggest draw for a lot of the environmental groups will be inshore NTMPAs because they are more apparent/own-able, compared to offshore NTMPAs over the horizon, and therefore easier to sell to the public. There is a lot of romance attached to NTMPAs, particularly with restoring the habitats back to the way they used to be (what/whenever that was) and inshore NTMPAs are more attractive in this sense'

'Potters are also the most limited in where else they can go and we've been driven inshore by towed fishing gears further out, the price of fuel and, in many cases old age. If we had a target of 20% I can see that potters more vulnerable than me, with smaller boats, would have problems and I would not want them to be unsafe by being forced into dangerous waters, but NTMPAs would ultimately be to their benefit'

'Inshore NTMPAs will critically affect inshore fishermen when this is the very sector that is not doing any real environmental damage and should be the sector that conservationists are focusing on as good practice'

'I think the target should be less for inshore areas where small boats are vulnerable to the closure of their local grounds. Static gear reserves may be more appropriate for inshore areas, perhaps even no-netting reserves where fishing is restricted to lines and pots'

'For critically dependent inshore fishing communities, the emphasis should be on finding sustainable fishing methods, such as static gear and seasonal restrictions, eg Start Point zonation scheme, which achieves both fish stock and biodiversity conservation objectives (See Kaiser's work), rather than creating NTMPAs'

'I don't think we should have NTMPAs within 6 miles as it is pointless (relatively harmless fishing methods used) and they will cause severe hardship to vulnerable inshore fishermen and force them to fish in unsafe conditions by steaming to other grounds'

'NTMPAs might be feasible for a few very small inshore areas like Lundy that don't really affect anybody very much, but inshore fishermen are very vulnerable to the closure of their customary grounds as they cannot afford the steaming costs to more distant grounds and the size of their vessels means that steaming further away/out is dangerous'

'I can see that inshore fishermen with small boats will not want NTMPAs on their local grounds on which they depend, as this will put them out of business, but in general I think that fishermen will benefit from NTMPAs. The option is either to close relatively small areas or to decommission affected fishermen and

buy them out of the industry. The involvement of such fishermen in NTMPA proposals that affect them is particularly important to identify and minimise the impacts on them, otherwise resistance to such proposals will be hardened'

'The Cornwall County Council roadshow was focused on inshore NTMPAs which create a lot more conflicts, and the CFPO always felt the offshore NTMPAs were more fair as offshore vessels can steam to alternative grounds much more easily whereas inshore boats are critically dependent on their local grounds'

'Inside 6 miles, anywhere you try and put an NTMPA you will adversely affect at least one fisherman who is critically dependant on that ground, whereas offshore fishermen are less critically dependent on a given ground as they have the range to go to other grounds. Furthermore, for inshore shellfish stocks I think the current regulations such as MLSs are already effective so would question whether NTMPAs will benefit these stocks'

'We should not be wasting our time pursuing inshore NTMPAs at this stage: focus on offshore NTMPAs and let inshore NTMPAs be pursued from within the fishing industry once they are convinced, by observation, of the benefits of offshore NTMPAs. It's completely wrong-headed to initially pursue inshore NTMPAs as this is not where the problem is and fishermen will justly strongly object to and resist them. English Nature should get real and go where the main fishing and problems are: start by pursuing NTMPAs offshore on an EU wide basis, not messing around with inshore postage stamps like Lundy: too silly for words'

Relative vulnerability of inshore fishermen is not an issue (9% - 3)

'You need them both inshore and offshore as some offshore stocks breed inshore. A good starting point might be to completely close all the estuaries and bays, as the inshore boats could still fish beyond these closures, coupled with having some inshore areas just for potting. This would be relatively straight forward to do through SFCs and may put a few small cove punts out of business, but these tend to be part-timers'

'We need both inshore and offshore NTMPAs to protect the range of areas that are important for fish stocks'

'If NTMPAs are for nature conservation, we will need to have inshore NTMPAs as this is where the productive, diverse areas are. Offshore areas are less productive and more homogenous, so I think that [a certain PO representative] must accept that if we are going to have NTMPAs they will have to include inshore ones as this is the best place for them. If we are going to have NTMPAs *purely* as a fisheries management tool then offshore areas may be more appropriate, but you are going to have great difficulty making a case that will convince fishermen.... so inshore NTMPAs are probably more appropriate'

It is worth noting that all 3 of the interviewees that considered the relative vulnerability of inshore fishermen to NTMPAs not to be an issue represented the offshore sector. On the other hand, 13 of the interviewees that considered the relative vulnerability of inshore fishermen to be an issue also represented the offshore sector. Overall it is clear that a large majority of the interviewees (91%) considered that inshore NTMPAs are not appropriate due to the particular vulnerability of inshore fishermen and the relative harmlessness of their fishing methods, some recognising that NTMPA advocates were likely to be particularly focused on designating inshore NTMPAs.

In a related sense, 51% (26) of the interviewees discussed how offshore NTMPAs (outside 6nm), if they were to be pursued, should be designated throughout the EU across all the CFP waters and enforced on all EU fishermen, otherwise the migratory nature of many stocks would mean that 'he who gets the pain may not get the gain' and it would otherwise generally be unfair. Several fishermen considered this to be unlikely given the politics of the CFP, the UK government's history of unilateral measure and the likelihood of derogations.

Opportunity for local protectionism for local (and recognised incoming) fishermen?

Discussions on this theme were focused on whether formally restricting access to specified grounds to local and recognised incoming fishermen might be considered a *quid pro quo* with regards to NTMPAs. Such an approach, sometimes referred to as territorial user rights for fisheries (TURFs), would help ensure that local fishermen who practice restraint through NTMPAs in their 'territory' would reap the export/spillover benefits, rather than incoming fishermen reaping much of them: 'he who gets the pain gets the gain'.

No, not interested in such an approach	38%	(11)
No, not interested in reality, but interested in principle	28%	(8)
Yes, interested in such an approach	34%	(10)
		(29)

No, not interested in such an approach (38% - 11)

'We need the freedom to move to where the catches are good so I do not think restricting certain people to certain areas is a good idea. Some people could end up being allocated a bad ground, and that's not fair'

'I can see little potential for assigning local access rights to local fishermen as part of NTMPA packages, as all fishermen are essentially nomadic and need the freedom to move to different grounds'

'I can see no benefits in confining certain fishermen to certain areas so that they yield the benefits of their restraint through NTMPAs. We are already restricted through quota and days at sea to certain areas, and I would like to see more flexibility in this respect than less'

'The use of restrictive access rights by way of return for NTMPAs would be problematic: how would you define historical access? This wouldn't really have any benefits but just cause legal fights'

'We are currently moving towards a sustainable, access-rights based approach to wider fisheries management, so I could see little advantage in fishermen being offered an access-rights based approach in return for NTMPAs'

'If NTMPAs are done properly and fairly there should not be a need for such local protectionism to avoid jealousy as to who gets the benefits'

'I would question proposals for restrictive access rights in return for NTMPAs as the patterns of fish and fishermen's movements are very complicated, and fishermen need to be able to fish different grounds under different conditions, rather than being confined to a patch'

Fishermen's views on no-take marine protected area proposals in South-West England

No, not interested in reality, but interested in principle (28% - 8)

‘As for restrictive access rights in return for NTMPAs, this would be difficult to implement as everybody would claim historical access and a right to be in there, but I can see the benefit in principle. This would, however, reduce the flexibility that fishermen need to pursue different stocks and species in different areas at different times under different conditions, and undermine the ‘commons’ nature of our seas’

‘It would just open up a whole can of worms and I can’t see it going anywhere at all: far too complicated’

‘I think there are problems with such local rights-based approaches in general, though they can work at a more regional scale’

‘There must be a mechanism to ensure that those who suffer the pain reap the gains [for offshore NTMPAs under the CFP]. We need a licensing system that restricts certain fishermen to certain areas [regional: based on ICES grids]. However, this needs to be carefully thought through and undertaken as it is potentially very divisive.... I don’t want discussions to get bogged down in this area as it could torpedo the big idea [offshore NTMPAs]’

Yes, interested in such an approach (34% - 10)

‘I have got no problem with some local protectionism provided that the fishermen that have rights to a given area behave responsibly’

‘There might be some potential in such an approach but you don’t want to get too parochial about things though if you’re going to take the medicine it should be you that gets the reward. I do think this approach is worth looking at but I am not convinced that it would make NTMPAs acceptable as I don’t think the evidence from Lundy that they are working is good enough’

‘I can see that it might work as a way of ensuring that fishermen who customarily use certain areas get the gain from the pain of NTMPAs, rather than incomers. It would be complicated in practice but in principle it has potential and it might work’

‘I could see the benefits of some scheme which restricted entry to inshore areas to local fishermen and those with a strong customary track record, but it would be a challenge to make it work. Quota, MLS etc all get abused and I am not sure if a restrictive entry scheme would be practicable and implementable. If it could be done, this would be a good way of providing for NTMPAs through ensuring those that get the pain get the gain, and providing for self-monitoring’

‘I think there is marvellous potential for specified access rights to specific areas in return for, say, 20% NTMPAs: this would be the way to do it!... as part of a wider approach to impact zoning that I would welcome through the Marine Bill’

In summary, the majority of interviewees (66%) did not consider such territorial approaches in return for NTMPAs to be a realistic way forward, as it would restrict the nomadic nature of fishermen, reduce their flexibility and be too complex & contentious to implement. 34% were interested in the potential of such approaches, but most of these had similar reservations.

Closing comment

This report was sent to all of the fishing industry and related interviewees prior to its release. The responses were very positive, with many stating that it is very rare for fishing industry views to be collected, analysed and reported on such an objective and open basis. It was considered that the findings are highly relevant to current debates about the potential role of NTMPAs in the framework emerging from the forthcoming Marine Bill and related issues. Though fishermen are highly likely to be critically affected by such proposals, it was felt that their voices are rarely listened to and seriously considered in these debates. I hope that this report helps address this problem by reporting the rich, diverse and fascinating range of views amongst fishermen and their representatives on the issues raised by NTMPA proposals.