

Title: A new English Scallop Order IA No: DEFRA1415 Lead department or agency: Department for Environment, Food and Rural Affairs (Defra) Other departments or agencies: Marine Management Organisation (MMO) Inshore Fisheries Conservation Authorities (IFCAs)	Impact Assessment (IA)		
	Date: 22/12/2011		
	Stage: Final		
	Source of intervention: Domestic		
	Type of measure: Secondary legislation		
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Summary: Intervention and Options			RPC Opinion: GREEN

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, Measure qualifies as One-Out?
£1.0million	£-0.20million	£0.20million	Yes IN

What is the problem under consideration? Why is government intervention necessary?
The King Scallop is important to the UK fishing industry, consistently being the third most valuable fish species in terms of first sales. Government intervention in fisheries management is required due to the open access nature of the seas, which results in a 'race to fish'. Fishermen acting on an individual basis can fail to take account of the effect of their activity on the ability of others to catch fish and the overall sustainability of the stock they are catching. The vessels prosecuting this fishery range from large vessels fishing all around the UK coast, seeking out high concentrations of scallops, to smaller vessels only able to fish in the locality in which they are based. The larger vessels are capable of reducing levels of scallops to commercially unviable levels on a regional basis, leaving the local vessels with nothing to fish. This can force smaller vessels out of business, reducing the viability of the infrastructure which serves the fleet as a whole.

What are the policy objectives and the intended effects?
The objective is to create a sustainable fishery, on both a local and national level, with access to healthy stocks all year round, for both the small scale fleet and larger 'nomadic' vessels. This can be achieved by providing protection for the smaller scale fleet; better safeguarding scallop stocks by reducing catching capacity in certain areas; improving the enforceability of existing fishery management measures; and putting English waters on a similar footing to devolved waters, reducing the impact of displacement of scalloping activity between areas. A parallel objective, achievable through the same means, is to reduce gear conflict between different sized scalloping vessels, and conflict between non scalloper (primarily static gear fishermen) and scalloping vessels.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)
Baseline Option 1) Do nothing - continue with the existing situation in which scalloping activity remains largely unregulated in English waters outside the 6nm limit, resulting in effort of larger-scale UK scallop vessels being focussed more intensely on English waters due to more restrictive measures in devolved waters. This risks scallop stocks being depleted to commercially unviable levels on a regional basis, forcing the small scale scallop fleet out of business. Gear conflict will continue between scallopers and other fishermen, causing disruption and damage to equipment.
Option 2) our preferred option is to replace the existing English Scallop Order 2004 with a package of measures designed to manage the intensity of scallop dredging within 12nm of the shore and to ensure compliance with other fisheries management measures such as minimum landing size (MLS). This will help ensure there are scallops for the small scale fleet to fish and also help safeguard the scallop stock and the economic benefits the fishery yields, while having minimal impact on the larger vessels prosecuting the same fishery. In addition this option will relax regulation on use of dredge attachments to allow for use of new technology which can deliver to greater safety for fishermen.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 04/2017					
Does implementation go beyond minimum EU requirements?				N/A	
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.		Micro Yes	< 20 Yes	Small Yes	Medium Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)				Traded: 0	Non-traded: 0

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible Minister: _____ Date: _____

Summary: Analysis & Evidence

Policy Option 2

Description: A New Scallop Order

FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Base Year 2012	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: -4.43	High: 2.80	Best Estimate: +0.99

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0	0.03	0.22
High	0	0.73	6.24
Best Estimate	0	0.20	1.72

Description and scale of key monetised costs by 'main affected groups'

- The main cost is to vessels currently using more than 8 dredges per side in the 6-12nm limit.
- The high cost assumes that vessels adapt by reducing the number of dredges they use inside 12nm. The high cost reflects the full loss of revenue to scallopers so is likely to overestimate the economic cost. The low cost assumes that vessels adapt by spending more time outside 12nm to make up for the scallops they are not catching inside 12nm. The best estimate assumes that large vessels adapt primarily by spending more time outside of 12nm (on average 75% of time currently spent inside 12nm), as this will cost them less.
- There will also be a smaller cost for vessels catching scallops in both ICES area VIII d and VIII e on the same trip.
- Total present value of monetised costs discounted over 10 years is estimated to be £1.72m.

Other key non-monetised costs by 'main affected groups'

- The increase in time and fuel required by larger vessels to fish outside 12nm. As these vessels are currently spending a clear majority of their time outside the 12nm limit, an informed assumption is that any potential additional fuel cost will be low.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	0	0.21	1.81
High	0	0.35	3.01
Best Estimate	0	0.32	2.71

Description and scale of key monetised benefits by 'main affected groups'

- A key monetised benefit will be to smaller vessels that will now have increased and prolonged access to scallops in the 6-12nm limit.
- The high benefits are associated with the low cost scenario where vessels now spend more time outside of 12nm, meaning more scallops in this region which had previously been harvested by the large nomadic vessels will now be available to smaller vessels (i.e. increasing the overall level of catch). The low benefits are associated with the high cost scenario. The best estimate assumes that vessels adapt primarily by fishing outside of 12nm.
- Total present value of monetised benefits discounted over 10 years is estimated to be £2.71m.

Other key non-monetised benefits by 'main affected groups'

- The likely decline of the inshore fleet, with its associated non-monetised socioeconomic costs, is avoided. Disruption caused by conflict between scallopers and static gear fishermen will also be reduced.
- Increased safety of fishermen which results from relaxing the rules relating to 'attachments' to the dredge.
- Better enforcement of the two different English Channel minimum landing sizes as it should, in the long term, have a positive impact on the stock.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

- There are sufficient scallop stocks outside of 12nm to accommodate the extra effort from the larger vessels. Current scientific assessment suggests that this is the case, but additional work is being carried out and will produce results by 2013.
- Existing capacity exists in the small scale fleet to make use of the additional available scallop stock – in each scenario it is assumed that capacity exists to take advantage of 60% of the increased available stock.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OIOO?	Measure qualifies as
Costs: 0.20	Benefits: 0	Net: 0.20	Yes	IN

EVIDENCE BASE FOR THE NEW ENGLISH SCALLOP ORDER IMPACT ASSESSMENT

INTRODUCTION

1. This relates to the Impact Assessment for the proposed English Scallop Order 2012. This Order will replace the existing English Scallop Order 2004 and introduce measures which:
 - Provide protection for the smaller scale fleet which make an important contribution to regional economies in line with the UK Government localism agenda and commitment to sustainable coastal communities
 - Reduce gear conflict between scalloping vessels and non scalloping vessels
 - Improve the enforceability of existing fishery management measures,
 - Puts English waters¹ on a similar footing to devolved waters, reducing the impact of displacement of scalloping activity between areas
 - Allow attachments used solely for the purpose of emptying dredges safely.
2. The proposed measures are purely technical in nature, i.e. relating to gear permitted to be used and minimum landing sizes.

Problem under consideration

3. Commercial scallop dredging has taken place in the waters surrounding England for over 30 years and has developed into one of the country's most valuable fisheries. Scallops have become an important national resource, creating wealth and employment in some of the nation's poorest areas. The importance of scallops to the fishing industry has increased, and is likely to increase further, as European quotas and access to species affected by quotas, has reduced. Increased pressure on quota species, has already led to fishermen in certain areas increasing effort on non-quota alternatives such as scallops, bass, crabs and lobsters.
4. In comparison to other commercial species, relatively little is currently known about the state of scallop stocks. There are signs of decline in some parts of the UK, but scientific interpretations of landings data suggest the majority of stocks in English waters is currently relatively healthy. This is especially true in the English Channel, an important scalloping area, where landings per unit effort have increased significantly in recent years.

¹ British fishery limits other than the Scottish zone, the Northern Irish zone, the Welsh zone and the territorial sea adjacent to the Isle of Man, Jersey and Guernsey (referred to as 'English waters' for the purposes of this document).

5. The makeup of the vessels taking part in the English scallop fishery varies significantly. At one extreme there are the large (up to 37metres in length) full time scallop dredgers, capable of pulling up to 36 scallop dredges in any weather and fishing continuously for days at a time. These vessels are often described as 'nomadic' due to the wide geographical areas they will fish - traditionally anywhere around the UK coast they believe there are significant quantities of scallops. These vessels tend to fish intensely in an area until harvesting scallops becomes unprofitable. They will then move on to new areas but will return a number of years later when the scallop stocks have returned to a level where dredging for them has once again become viable. Due to this fishing pattern a large scallop dredger may operate in 4 or 5, or even more, areas and rotate around them over a period of several years. These nomadic vessels are exclusively English or Scottish, are predominantly over 15 metres in length and in 2009 took 78% of the 34,411 tonnes of scallops landed into the UK (MMO data). There are also large vessels prosecuting the fishery who will beam trawl² for part of the year but switch to scalloping on an occasional seasonal basis, particularly if access to sole (a key target species) is limited. Recently there have been signs that this seasonality is breaking down and many of these vessels now target scallops all year round.
6. At the other end of the spectrum are the smaller, inshore vessels, including some who will only fish for scallops on a part time basis, and others who rely on scallops for the majority of their income. These vessels are restricted, primarily by their size, in the areas and weather that they can fish meaning that they are likely to dredge for scallops only in their local area. The catching capacity of these vessels is significantly lower than the large vessels due to the lower number of dredges they can tow.
7. Maintaining a viable small scale scallop fleet requires a sustainable crop of scallops for harvesting over a full season. In most instances this will be unachievable without some measure of protection from large vessels capable of fishing long trips, intensively in conditions which keep smaller vessels in harbour. The large vessels can quickly deplete local grounds leaving local vessels with no fishable stock for the remainder of the season. This has been addressed successfully in the English 0-6 nautical mile (nm) zone where Inshore Fisheries and Conservation Authorities (IFCAs) have introduced byelaws (Annex 1) restricting the activities of larger vessels or prohibiting their access to the fishery completely. Outside of 6nm, IFCAs have no powers to introduce byelaws and there are currently no English national measures in place to restrict how and by whom these scallop grounds may be harvested.
8. In England, this effect on the small scale fleet has intensified over the past decade as a number of different scallop orders have been introduced elsewhere in the UK, each affecting a different region and introducing slightly different measures. This has had the effect of displacing effort; particularly larger sized scallopers who have been effectively prohibited or restricted in many areas of the

² A method of bottom trawling whereby the mouth of the net is held open by a solid metal beam, attached to two "shoes", which are solid metal plate welded to the ends of the beam, which slide over and disturb the seabed. This method of fishing is used mainly to catch flatfish such as sole and plaice.

UK. When the Scottish Order³ was introduced in 2003 it banned the use of more than 14 dredges per side anywhere in her waters, displacing the larger vessels, which use greater numbers of dredges, elsewhere. This was followed by Northern Irish and Welsh measures and, most recently, by the Isle of Man. We are now in the position where the largest scallopers are allowed to fish to full capacity only in the waters around England, where the fewest restrictions apply.

9. This displacement has had consequences. As well as the likely environmental impact of intensifying scallop dredging onto reduced areas, it can also have a detrimental economic effect on the inshore fleet and coastal communities. As the larger nomadic scallopers have had the area in which they can work reduced, they have had to spend more time in the areas which are still open to them, including areas which were previously predominately fished by the small scale fleet, and it is assumed are considered less productive. This has heightened gear conflict⁴ issues between the local scallop fleets and the larger nomadic vessels.
10. There is also the issue of gear conflict between large nomadic scallopers and local non-scalloping fishermen. The potentially destructive nature of dredging has led to bitter disputes with local fishermen, particularly static gear fishermen in areas where scallopers are not a frequent presence. Local fishermen perceive scallopers as causing disruption before moving on to a new area. This disruption may take the form of loss of static gear (e.g. pots or nets) or damage to local fishing and nursery grounds and can be increased due to the larger vessel's lack of manoeuvrability and knowledge of local fisheries.
11. The increasing levels of conflict have resulted in parts of the industry calling for action to ensure there are scallops for the small-scale fleet to fish. These calls have been echoed by IFCA's. The main concern being that the larger vessels can empty scallop grounds, which would keep a number of small scale boats viable for a whole season, in a matter of days.
12. Whilst a viable fishing industry makes a valuable contribution to regional economies, of which the existence of the small scale fleet is a key element, it is important that the continued viability of the larger vessels is not threatened. The size of these vessels means they are capable of fishing in areas and conditions which would be inaccessible to the smaller fleet. If they can be encouraged to fish more extensively in these areas, permitting the small scale fleet to fish the inshore grounds, both fleets can thrive. A sustainable fishery, on both a local and national level, with access to healthy stocks all year round, for both the smaller inshore vessels and larger 'nomadic' vessels, is the desired outcome. If this is achieved it will moderate the 'boom and bust' economics which has historically affected scallop grounds, both around the UK and globally, and will allow this valuable national resource to provide wealth for years to come.

³ The Prohibition of Fishing for Scallops (Scotland) Order 2003

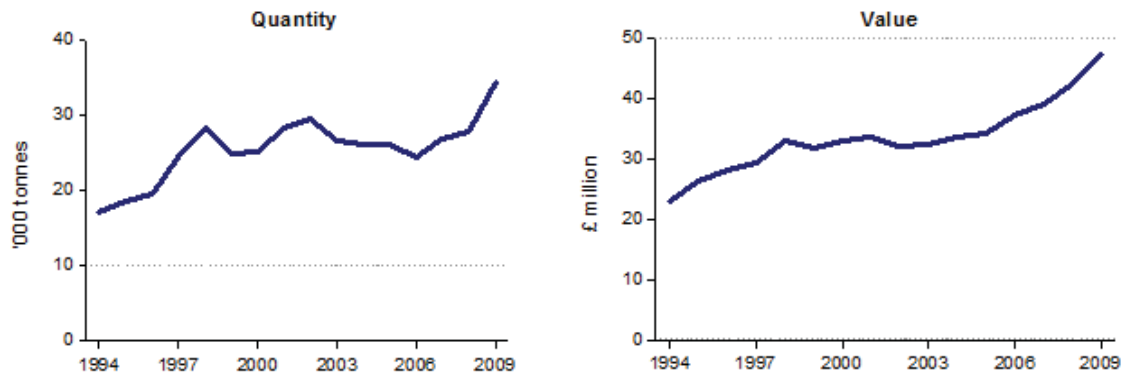
⁴ Conflict between different sized vessels of same gear type or vessels using different gear types (e.g. pots/fixed nets and trawlers/dredgers)

13. A separate issue is that the current order prohibits the use of any attachments to the dredge. This was introduced to prevent anything being used which may reduce the selectivity of the dredge, increase the weight of the dredge or increase the proportion of flat fish caught. This blanket ban on attachments now presents a problem due to new technology which can increase the safety of emptying the dredge. It is considered necessary to change this provision so these new techniques can be used legally.
14. Finally, there is the issue of the sustainability of the stock. The current limited data available does not raise concerns over the state of the stock, but nor can it give any certainty that the current level of exploitation is sustainable. It is important that existing stock preservation measures, such as minimum landing sizes, are adhered to whilst work is underway to improve stock assessments.

RATIONALE FOR INTERVENTION

15. Government involvement in fisheries management is often required due to the open access nature of fisheries. Without some form of management, open access can result in overfishing on both a local and national level. Fishermen acting on an individual basis can often fail to take account of the effect of their activity on the ability of others to catch fish. The resultant 'race to fish' therefore can have a detrimental effect on stocks, other vessels and the long term viability of certain sectors of the fishing industry.
16. A viable fishing industry makes a valuable contribution to regional economies; the UK catching sector currently employs nearly 13,000 people, processing over 17,000 people and aquaculture more than 3,000 people. King scallops (*Pecten maximus*) are a species which provide a large portion of this economic activity, consistently being the third most valuable species to the UK fleet. The value of first sales⁵ of King scallops has grown year on year and reached £47 million in 2009 (Graph 1). With this rise in value there has been a corresponding rise in the quantity of scallops landed. Over 95% of these scallops are caught with dredges with hand diving making up the remainder.

⁵ Never been sold before



Graph 1: Landings and value of scallops into the UK and abroad by UK vessels: 1994-2009 (MMO data)

17. Along with providing employment (around 65% of the full time employment within the industry) and supporting local economies, the small scale fishing industry provides a range of social and environmental benefits. Fishermen are seen locally as being emblems of, and major contributors, to the distinctiveness of the local community, although the social benefits of the small scale fleet vary across the country depending on the inherent infrastructure.⁶
18. Small scale fishing contributes particularly to tourism, adding character and activity to the harbour side and acting as an 'icon' of the traditions of the area. The loss of small scale fishing vessels can also threaten the viability of small 'upstream' businesses, such as providers of gear, boats, fuel and ice. The loss of these businesses in turn affects the viability locally of the small scale fleet.
19. Small scale scallopers are an important component of the local fishing industry in many parts of England, particularly along the south coast. Such vessels are unable to travel long distances to find scallop grounds to fish, due to their size and the fact that they are seriously restricted by weather. It is therefore important that there are local, inshore grounds in order for these vessels to remain viable and continue contributing to the local economy. Without some form of management to lessen the inshore impact of the large scale 'nomadic' scallopers some fishermen may be forced to leave the fishing industry, with knock-on effects on the viability of the supporting infrastructure for those that remain.
20. Scalloping can also have a serious impact on other, non-scalloping, small scale operators. The main example of this is inshore static gear fishermen targeting crabs, lobsters or whelks. Large scale scallopers operating in an area unused to the activity for even a short period of time can cause serious upset, heightened by the perception that these are vessels from elsewhere 'invading' local grounds. Smaller vessels are less likely to cause such intense conflict as they are more manoeuvrable so can avoid static gear, due to their size, and if local are more likely to be aware of static gear locations, and may even have arrangements in place with other fishermen to avoid gear being damaged.

⁶ *The Social Impacts of England's Inshore Fishing Industry* – Countryside and Community Research Institute & Centre for Rural Economy, Newcastle University (publication pending)

21. The scallop industry is developing a series of ambitious voluntary projects to address some of the issues in the sector. Most prominent of these are the industry 'best practice guide' and a long term goal of obtaining Marine Stewardship Council certification for the English Channel scallop fishery. The 'best practice guide' work focuses on working closely with conservation projects and ensuring full engagement from the sector. These are commendable aims which will require major changes in the industry, but will not address the problems of displacement and conflict in the sector.
22. Voluntary arrangements, which have worked successfully on a local level, are not a realistic option on a national scale. This is particularly true in this fishery, where the vessels catching the majority of scallops are 'nomadic' and competing with the small scale vessels. Industry engagement suggests that many of the larger vessels would not agree to a voluntary approach at the level required- if they are legally able to target an area with scallops they would so. Government intervention is required to fill the gaps where a voluntary approach is not possible.
23. Scallop fishing in English waters is relatively unregulated. One of the restrictions in place are minimum landing sizes (MLS) which scallops must reach before being removed from the stock. These aim to permit sufficient numbers of individuals to survive to maturity, giving them a chance to breed and safeguarding the production of future generations. In the absence of other management measures to protect stock levels, it is vitally important that the industry complies with MLSs.

AN ANGLO-SCOTTISH APPROACH

24. It is worth recognising that one of the main issues in the sector, that of displacement of effort, has partly been caused by previous Government intervention in the form of different approaches by UK Fisheries Administrations. This issue is only likely to be resolved by taking action to 'level the playing field' and taking a more coordinated approach to management.
25. Due to the cross border fishing patterns of the larger scallop vessels there is a strong case to pursue a UK approach to scallop management. Whilst Wales and Northern Ireland have indicated that due to the unique nature of scalloping in their waters and the location of the fisheries themselves, they see no reason to change the stringent inshore measures already in place in their waters at this time, the situation in Scotland is different. Marine Scotland and Defra have recently committed to working together on scallop management now and in future – a move that will see the majority of the UK scallop fleet (c. 95%) being managed by the same technical measures, with consistency between the English and Scottish scallop orders. There may be scope to work with Wales and Northern Ireland in the future however to agree measures in the offshore area (outside 12nm limit).
26. Assuming that final agreement on this Anglo-Scottish approach is reached, Marine Scotland will be following their own separate regulatory process to amend

their scallop order to mirror the English order as much as is practicable so this Impact Assessment deals with measures applicable in English waters only.

BASELINE INFORMATION AND BACKGROUND

Existing Regulation

27. The scallop fishery is relatively unrestricted, especially at European level. Whilst European technical restrictions do exist in the form of minimum landing sizes (MLS) and the Western Waters effort regime⁷, the majority of legislation is domestic.
28. To fish for scallops commercially a UK vessel must be in possession of a fishing licence appropriate to its size, engine power and the type of fishing that is being carried out. Additionally, there are entitlements attached to licences for specific rights to fish in specific areas or using particular gears. An over 10 metre vessel requires one of these entitlements to fish for scallops by mechanical dredge, known as a “scallop entitlement”. There is no equivalent entitlement for vessels with an overall length of 10 metres or under which means that any of these vessels may target scallops.
29. In England, the English Scallop Order 2004 currently applies. This Order introduced technical measures to regulate the fishery including:
- Technical specifications on the types of dredges which may be used
 - A dredge per side limit of 8 within the 0-6nm region
 - A ban on attachments to dredges
 - Carriage restrictions⁸ on undersized scallops in ICES area VIId (please see Annex 2 for ICES areas around the UK)

Other UK fisheries administrations currently all have different management arrangements in place, as shown in table 1 and 2.

⁷ Council Regulation 1954/2003

⁸ Restrictions applicable to the carrying of scallops onboard a fishing vessel

	<u>England</u>	<u>Scotland</u>	<u>Wales</u>	<u>Northern Ireland</u>	<u>Isle of Man</u>
Engine power limit within 12nm	nil	Nil	221kW	Nil	221kW
Closed Season	Irish Sea Closures	Irish Sea Closures	May to October	Irish Sea Closures	June to October
Curfew	nil	Nil	Nil	0600 to 2000, no weekend	0600 to 2000 only
Closed Areas	Lyme Bay	Nil	Yes	Nil	Yes
Restrictions on no. of dredges per side (see table 2)	Yes	Yes	Yes	Yes	Yes

Table 1: National Scallop dredging restrictions by Fisheries Administrations

	England	Scotland	Wales	Northern Ireland
0-1nm	8 per side	8 per side	Scalloping banned	6 per side
1-3nm	8 per side	8 per side	3 per side	6 per side
3-6nm	8 per side	8 per side	4 per side	6 per side
6-12nm	Nil	10 per side	7 per side	6 per side
12nm+	Nil	14 per side	Nil	Nil

Table 2: Restrictions on number of scallop dredges permitted by Fisheries Administration

30. The EU Western Waters effort regime establishes the framework for an effort regime applicable to vessels over 15 metres in length in Western Waters (all waters around the UK except the North Sea). There are effort limits for three fisheries, demersal, scallops and crabs, broken down by ICES sea area (Areas V, VI and VII). The limits, expressed in kilowatt (kW) days per fishery per Member State, are set out in Commission Regulation 1415/2004.

31. UK effort uptake is not currently actively managed by fisheries administrations, that is to say that there are no limits set at vessel, producer organisation (PO) or any other level. At present the Marine Management Organisation (MMO) simply monitors overall uptake and reports back to the Commission as appropriate.

32. MLSs⁹ have been introduced at a European level to ensure that scallops reach maturity before being caught. There are two MLSs affecting UK waters, set at 100mm and 110mm. The higher MLS applies in the Eastern English Channel

⁹ Any scallops caught which do not meet the specified MLS may not be retained on board or landed and must be returned to the sea.

(ICES division VIId) and the Irish Sea (ICES division VIIa north of 52°30'N). The lower MLS applies in all other areas.

Demographics

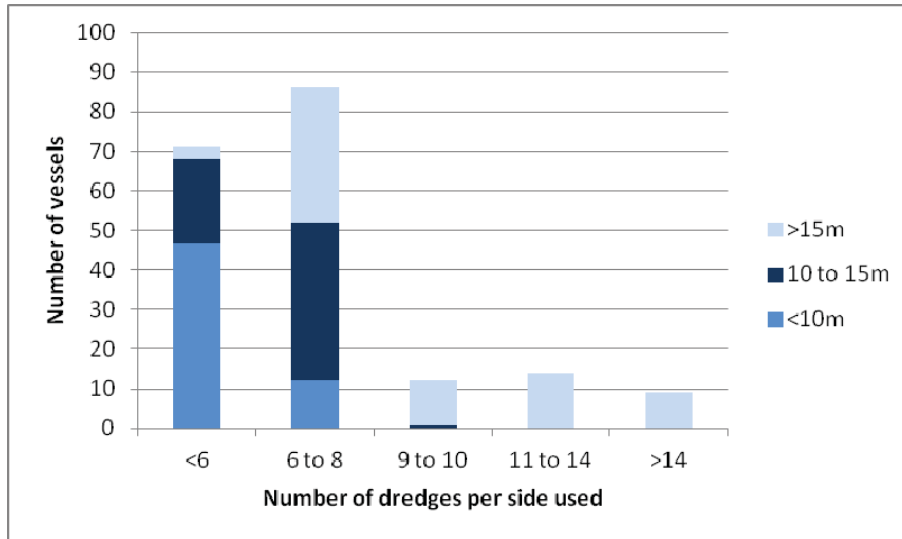
33. There are 318 UK vessels (see table 3) which are actively fishing for scallops in the UK (caught more than 1 tonne of scallops in UK waters in 2009). Of these we estimate that from all fisheries administrations there are approximately 239 (estimated from logbook data obtained from the MMO) which spend a proportion of their time in English waters.

	Defra	Marine Scotland	Wales	Northern Ireland	Isle of Man	Total
Under 10m	59	38	11	9	0	117
10 to 15m	40	33	4	7	2	86
Over 15m	37	61	3	7	7	115
Total	136	132	18	23	9	318

Table 3: UK vessels having caught more than 1 tonne of scallops in 2009 by fisheries administration and size (MMO data)

34. In 2009, 78% of the 34,411 tonnes of scallops landed into the UK were from vessels over 15 metres in length. This reflects how the catching capacity of scallop vessels greatly increases with size. Larger vessels are more likely to use higher numbers of dredges which increases the rate at which scallops are caught. They are also able to stay out at sea for longer periods of time and in all weathers, greatly increasing their catching capacity in relation to a smaller scallop vessel.

35. The vast majority of scallops are caught and landed by the larger vessels, which account for, in terms of numbers of vessels alone, only 36% of the UK scallop fleet. As graph 2 demonstrates, the vast majority of vessels who dredge for scallops are fishing with 8 or fewer dredges per side.



Graph 2: Numbers of vessels using different quantities of scallop dredges (MMO data, data set may be incomplete)

Landings, effort and estimated stock levels

36. English scallop grounds are split between ICES Areas IV (the North Sea) and Area VII (all of the English Channel, the west coast and Irish Sea) where the vast majority of scallops are caught (see Annex 2). Between 2008 and 2010, scallop dredge effort in Area VII has increased significantly to levels not previously recorded. This increase in effort predominantly comes from the largest, most powerful vessels who are fishing more in this area due to an apparent increase in scallop abundance in the Eastern Channel, presumably following heavy recruitment¹⁰. This area is noted for occasional very strong recruitments leading to greatly increased fishing activity, the period in question however has been exceptional.
37. Knowledge of stock levels is limited due to a lack of robust scientific assessments, although work is currently underway to address this. The main information on which stock level estimates are based is commercial landings and effort data. These estimates are not currently providing any major cause for alarm, other than the inherent uncertainty in the estimates themselves.
38. Logbook data, provided by vessels over 10 metres in length, gives information on the ICES area in which fishing take place but does not contain any detail on the distance fishing takes place from the shore. Vessels over 15 metres in length are required to have fully operational Vessel Monitoring System (VMS) on board. By combining the geographical data from VMS with the catch data from logbooks, we are able to estimate the proportion of fishing activity, and hence catch taken, from within 12nm only for vessels over 15 metres in length.

¹⁰ Additional scallops in stock as a result of natural reproduction

POLICY OBJECTIVES

1. Protect the scallop stock from overfishing, particularly in the inshore area
2. Reduce gear conflict issues that occur between different sized scallopers due to the nomadic nature of parts of the scallop fleet, and conflict between non-scalloping vessels and scallopers.
3. Ensure the sustainability and viability of the small scale scallop fleet in line with the UK Government localism agenda and commitment to sustainable coastal communities.
4. Improve compliance of the two different MLSs in the English Channel.
5. Provide clarity on the attachments to dredges which may be used.

POLICY OPTIONS

Two policy options have been considered:

39. **Option 1) Do nothing** - continue with the existing situation in which scalloping activity remains largely unregulated in English waters outside the 6nm limit, resulting in effort of larger-scale UK scallop vessels being focussed more intensely on English waters due to more restrictive measures in devolved waters.
40. In a worst case scenario this could result in fishing exploitation continuing (and possibly increasing) to the extent where the scallop stocks in English waters fall to levels where they will not be commercially viable and possibly collapse altogether. This would then require more drastic and immediate action by Government.
41. A more likely scenario is one where, if the current situation continues, scallop stocks plunge to commercially unviable levels on a local or regional basis due to intense harvesting by larger nomadic scallopers. If this occurs in the inshore area, this is likely to result in parts of the small scale scalloping fleet being forced out of business
42. Additionally, gear conflict between scallopers and other fishermen will continue at the present level.
43. **Option 2)** our preferred option is to replace the existing English Scallop Order 2004 with a package of measures designed to manage the intensity of scallop dredging within 12nm of the shore and to ensure compliance with other fisheries management measures such as MLS. This will help ensure there are scallops for the small scale fleet to fish and also help safeguard the scallop stock and the economic benefits the fishery yields. It is our opinion that this can be achieved in a manner which will have minimal impact on the larger vessels prosecuting the same fishery.

The measures that would be introduced are:

a) A limit of 8 dredges per side within the 6 to 12nm zone

44. Over the last 20 years larger vessels, capable of fishing increasingly more dredges, have entered the fishery. This has the obvious effect of intensifying and increasing scalloping effort, with the number of dredges used being limited only by the size of the vessel. As a result of this, dredge per side limits have been introduced as an effective effort limiting tool throughout the UK.
45. The current English Order introduced a dredge per side limit of 8 within the English 0-6nm zone. Extending this limit out to 12nm will reduce the catching capacity of individual vessels in this area and discourage larger vessels, capable of fishing more dredges, from fishing in the inshore area. These vessels are predominantly built to tow a large number of dredges. Fishing with less inside 12nm reduces the economic viability of the vessels so it is assumed that they will elect to fish outside 12nm. This will allow sustainable stocks for the small scale fleet whose fishing activities are more restricted by distance of fishery from home port and weather.

b) improving compliance of the two different MLSs in the English Channel by applying the larger MLS to all scallops caught on a fishing trip which has covered both areas

46. One of the primary reasons for setting a MLS is to permit sufficient numbers of individuals to survive to maturity to safeguard the production of future generations. The size at which scallops reach maturity is dependent on growth rates and therefore the MLS needs to be set to reflect typical growth rates. Individuals with higher growth rates need to be allowed to grow to a greater size in order to reach maturity. Historically, growth rates have been significantly higher in the Eastern English Channel (ICES division VIIId) and the Irish Sea (ICES division VIIa north of 52°30'N) compared with other areas, which is why the MLS was set at 110mm in VIIId and the Irish Sea and 100mm elsewhere. We do not currently see a need to harmonise the two different MLSs in the English Channel at this time based on scientific advice.
47. The prohibition on the carriage of undersized scallops detailed in the current order has largely been effective in improving the enforcement of the different MLSs. A problem remains when vessels begin their fishing trip in an area where the higher MLS applies and then continue fishing in an area where the smaller MLS applies. This is of particular concern when vessels fish both VIIId and VIIe in the same trip, and from an enforcement point of view, it is impossible to determine where the undersize scallops came from.
48. By restricting vessels which fish in both English Channel areas in the same trip to retaining only scallops which meet the higher MLS we will improve compliance with this important stock management measure. This will in turn have a positive impact on the state of the stock.

c) Providing some clarity on legal definition of “attachments” to a dredge to allow those used solely for safety purposes

49. The current order bans the use of “any attachments to the rear, top or inside of the dredge”. This is because attachments can be used to limit the size of the belly rings (part of the chain bag which holds the caught scallops), reducing the selectivity, and increasing the likelihood of catching undersize scallops or fish. Attachments have also been used to apply more weight to a dredge, causing increased pressure on the seabed and increasing the by catch of high value flat fish, some of which are subject to recovery plans.
50. We are proposing to exempt ‘attachments’ used to increase the safety and speed of handling/tipping the dredge. This will, in the best case scenario, improve the safety of scallop dredging and potentially save lives. It will at least, make the legislation clearer and more user friendly.

COSTS AND BENEFITS OF EACH OPTION

Option 1) Do nothing

51. On a local or regional level, if the scallop fishery is allowed to continue under a ‘do nothing’ scenario then there is a risk scallop stocks will become overfished and the stock density plunge to the extent where commercial fishing becomes unviable in some areas.
52. If this is allowed to happen then the small scale fleet, who are restricted by where they can fish due to weather, may be forced out of business. This will in turn have an impact on the upstream infrastructure which relies on a number of smaller vessels existing to provide sufficient trade to remain viable. Rural communities, often some of the poorest in the UK, will have an important source of income denied to them. This is likely to have a significant socio-economic cost which, however, it is not possible to estimate.
53. The larger vessels would continue to be allowed to dredge for scallops with no restrictions outside of 6nm. They would be likely to continue to fish for scallops in areas until it becomes unprofitable to do so and then move on before returning a number of years later. There may be a slightly greater short term economic return from allowing them to continue to fish like this in all areas but we believe that a similar return can be realised from the larger vessels being encouraged to fish exclusively outside 12nm.
54. There would be remaining ongoing costs for enforcement of current Scallop Order and local byelaws both onshore and at sea by the MMO and IFCAs.

Option 2) Introduction of a new English Scallop Order

Costs- summary

Costs to the industry

55. The main potential costs incurred by the fishing industry will be the potential loss of earnings from the reduced effort they can exert inside 12nm as a result of dredge number restrictions. There is also a potential cost to the parts of the industry who fish in both ICES areas VIIId and VIle in a single trip as they will no longer be able to land scallops smaller than the higher MLS (110mm).
56. Vessels which previously fished in the 6-12nm zone would have to choose between increasing their activity outside 12nm or reduce the number of dredges they use inside 12nm. The amount of time vessels spend in the 6-12nm area varies greatly and clearly those which spend a greater proportion of their time in this area would face a greater potential impact on their activities. To counteract this impact they would need to increase the amount they catch outside 12nm. Evidence on this is limited, but the limited data we have suggests the scallops are abundant in this area and the majority of catches from vessels with more than 8 dredges per side already come from outside of 12nm. These vessels may however face greater fuel costs due to having to fish further offshore. However, since the majority of affected vessels already spend a significant proportion of their time outside 12nm, the increased fuel and time associated with this measure is likely to be low.
57. Vessels which have fished with more than 8 dredges per side in the 6-12nm zone, and who are unwilling to move their activity further offshore would face having to fish with fewer dredges. Fishing with fewer dredges may mean that a smaller quantity of scallops is caught by these vessels or they have to spend longer doing it, presuming that the density of scallops remains the same.
58. A more detailed account of the costs associated with each individual measure follows. Present value figures are discounted at the HM Treasury discount rate in real terms of 3.5% over ten years starting from 2012, when costs are first incurred.

Government / enforcement costs

a) A limit of 8 dredges per side within the 6 to 12nm zone

59. The MMO currently use aerial and surface surveillance to carry out routine checks, including the number of dredges used per side within the 6nm limit. Estimates by MMO enforcement experts indicate that there will be no increase in costs associated with extending this coverage to 12nm.

b) improving compliance of the two different MLSs in the English Channel by applying the larger MLS to all scallops caught on fishing trip which has covered both areas

60. MMO currently carry out routine sample measurements of all scallops caught, irrespective of area, and advise that there will be no further cost associated with the introduction of this measure.

c) Providing some clarity on legal definition of “attachments” to a dredge to allow those used solely for safety purposes

61. MMO currently carry out routine inspections of all attachments to scallop gear during inspections carried out at sea and onshore. They advise that clarification of the definitions of attachments may lead to a saving as less time is spent explaining or interpreting the legislation – this cannot be quantified easily. In any event, this measure will not lead to any extra work or further cost.

Detailed costs for industry on measure by measure basis

a) A limit of 8 dredges per side within the 6 to 12nm zone

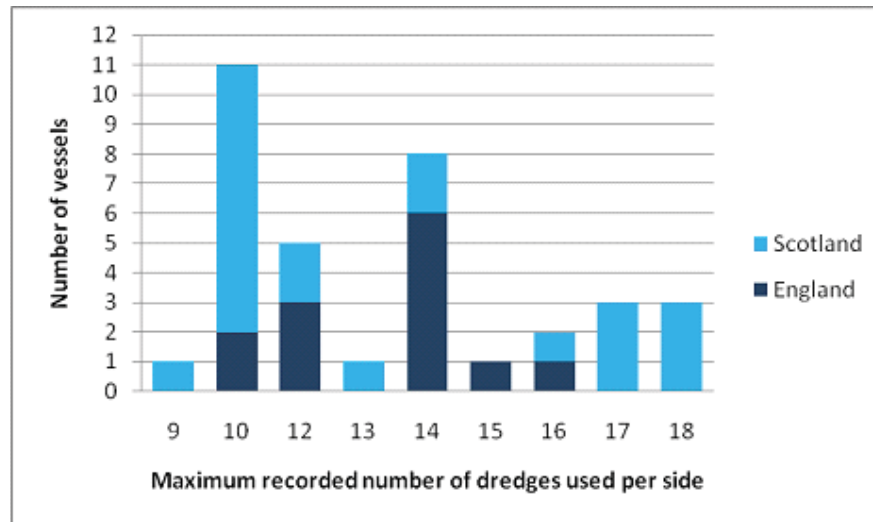
The main cost associated with this measure would be the potential for reduced catches if a vessel catches a significant proportion of its scallops in the 6-12nm zone. The five possible scenarios that a vessel could face are:

- I. A vessel cannot fish further offshore or reduce number of dredges they use in 6-12nm (highest impact- this is thought to be unrealistic and a hypothetical scenario)
- II. A vessel changes its fishing pattern to fish exclusively outside 12nm with same number of dredges it currently uses
- III. A vessel reduces the number of dredges used when fishing within 12nm to 8 per side
- IV. A combination of II and III
- V. A vessel currently fishes with 8 or fewer dredges per side and is unaffected by this management measure (no impact)

62. The information we hold on the number of dredges used by vessels indicates that there is only 1 vessel using more than 8 dredges per side in English waters which is less than 15 metres in overall length. This means that we can use VMS data, in combination with logbook data, to estimate the proportion of the scallop catch of vessels likely to be affected by this measure, and consider the likely income a vessel obtains from different distances from the shore.

63. It is worth noting that the clear majority (82%) of vessels on which we have associated dredge numbers data operate with a maximum of 8 dredges per side or fewer. These vessels will not be impacted by this new restriction at all.

64. Graph 3 shows the numbers of vessels using more than 8 dredges per side and how many they have been recorded as using.



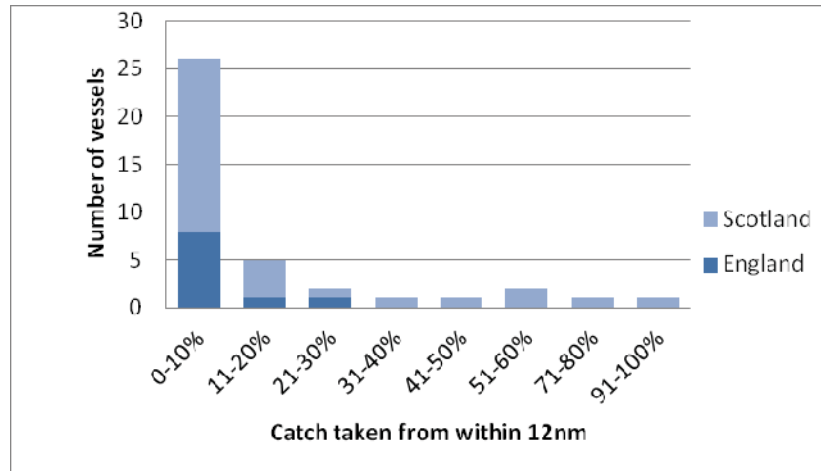
Graph 3: Vessels operating in English waters with more than 8 dredges per side also showing fisheries administrations (maximum recorded dredge use, data on some vessels may be missing)(MMO data)

65. As table 4 demonstrates, on a fleet wide level, the proportion of scallops caught in different fishery zones by 15 metre+ vessels using more than 8 dredges per side does vary from year to year. The exact level of this proportion will be affected by factors such as what new grounds are discovered and their distance from the shore. Over the past 5 years these vessels have caught an average of 16% of their scallops within 12nm, with the two lowest figures being the most recent and 2010's figure being as low as 5%. Neither consultation provided any information on the reason why vessels choose to spend some of their time fishing inside 12nm. We believe that these vessels might choose to fish inside 12nm in bad weather when smaller vessels are tied up in port, and due to presence of historically good fishing grounds in this area.

Location	2006	2007	2008	2009	2010
Beyond 12nm limit	76%	82%	75%	84%	94%
Within 6-12nm limit	21%	16%	22%	14%	5%
Within 3-6nm limit	2%	1%	2%	1%	0%
Within 0-3nm limit	2%	2%	2%	1%	1%
Total	100%	100%	100%	100%	100%

Table 4: Proportion of scallop catches by fishery limit for Over 15m vessel using more than 8 dredges p/s scallop catches in English waters (MMO data)

66. Table 4 demonstrates the behaviour of the industry as a whole, but individual vessels could of course spend a greater amount of their time catching scallops within 6-12nm. However Graph 4 demonstrates that a clear majority of the larger vessels, actually take a very small proportion of their catch from within 12nm.



Graph 4: Proportion of total catch taken within 12nm in English waters of vessels of 15 metre or more in overall length. Colours demonstrate current Fisheries Administrations of vessels (MMO data)

67. The greatest possible impact on vessels of this measure in scenario (I) should be directly proportional to the proportion of their catch which is from within 12nm. Therefore these figures represent the highest possible impact on the scalloping activity of these vessels based on the assumption that a vessel does not change fishing pattern at all. So averaged out over the whole affected fleet (over 15 metre fleet using over 8 dredges p/s), based on the previous 5 years activity, the maximum impact could be as low as 5% of the overall revenue, as high as 22% and with an average of around 16%. These figures are shown in table 4 above. A hypothetical maximum to the impact of these proposals on the large scale fleet, currently fishing with more than 8 dredges in the 6-12nm area, in revenue terms is therefore £1.15million¹¹ per year (average over 5 years). This figure overstates impacts, as the assumption that vessels will not change their fishing patterns at all is highly unlikely to be correct.

68. One way a vessel may alter its fishing pattern is increasing the amount of time, and hence amount of their catch, obtained from the scallop grounds beyond 12nm. Whilst data is lacking in this fishery, available science, local knowledge and current landings data does suggest there are scallop stocks to be further exploited outside 12nm, and there is no evidence to suggest that this is not possible. If a vessel were to do this and alter its fishing pattern accordingly, then the cost of introducing this measure could be minimal, particularly as the majority of affected vessels already spend a significant proportion of their time outside 12nm, meaning that fuel and time increases will be low. This corresponds to scenario (II) above.

69. As well as, or instead of, changing fishing patterns to spend more time outside 12nm, a vessel could choose to reduce the number of scallop dredges being used to 8 per side or fewer. This would permit them to fish within 12nm but at a lower catching rate. The exact change in catching rate would depend upon the

¹¹ Based on average prices (MMO data)

original number of dredges used - a vessel dropping from 18 dredges a side to 8 dredges per side would see a greater reduction than a vessels dropping from 9 dredges per side. This means it will be more tempting for a 9 dredges p/s vessel to drop dredges to fish within 12nm than for a vessel which usually operates with a far higher number. On this basis we expect the largest vessels, or those using the highest number of dredges, are more likely to increase dredging activity outside 12nm rather than those using a smaller number of dredges, who may choose to reduce their numbers to 8 dredges per side instead. The larger vessels will also generally have much higher operating costs (certifications, fuel, crew numbers, equipment) and will need to fish in an area which is most economically viable to cover their overheads.

70. The costs for this element of the proposals have an absolute (unrealistic) limit of £1.15million associated with the potential change in landings by the larger vessels if they no longer fish the 6-12nm limit, effectively not adapting to the proposed restrictions.
71. It is possible to refine the upper limit of the costs by assuming that all the vessels will, geographically at least, maintain the same fishing pattern and will simply reduce the number of dredges they use in the 6-12nm limit (Scenario III). The vessels using over 8 dredges per side currently employ, in total, a maximum of 912 dredges. The proposed restriction would reduce this by 560 to 352 dredges, or 39% of the current total. If we assume that each individual dredge catches scallops at the same rate (this is unlikely to be the case, but is a simplifying assumption which should not affect overall cost estimates) this means that the maximum reduction in fleet revenue will be 61% of the current figure. Taking the previous figure of £1.15million (reduction in revenue associated with the large scale fleet currently fishing with more than 8 dredges in the 6-12nm area) and reducing it proportionally to the new maximum number of dredges that may be used (by 39%) gives a new upper bound figure for loss of revenue of £0.7million. This figure assumes that no vessels increase the proportion of their time they spend outside 12nm as a result of this new measure.
72. Loss of revenue is not an accurate measure of the costs to the economy of the policy, as it also captures all of the operating costs required to catch the scallops. A better measure is gross value added (GVA), affected¹² However, there is not enough evidence on scallopers cost base to estimate accurately how GVA will be impacted by Scenario III. Because of this, the costs for this scenario are counted as the full loss of revenue, although this will overestimate the economic impact.
73. In terms of a best estimate for this cost, it is considered to be in the lower end of the remaining range. If any affected vessels are unwilling to replace current

¹² Gross Value Added (GVA) is a measure of the contribution of the fishing sector to the economy. GVA for the fishing fleet is generally estimated as operating profit plus crew share. The latest Seafish fleet survey (http://www.seafish.org/media/Publications/2009_Fleet_Econ_Report_Final_6May11.pdf) suggests the over 10m scallop fleet in both Area VII, North Sea and West of Scotland has operating profit of around 21% and crew share of around 30%. However, in the scenario where vessels continue to fish with reduced dredges (III), it is likely that a higher proportion of operating costs would still need to be employed, so loss of revenue may fall disproportionately on operating profit. For example, the latest Seafish fleet survey shows operating costs for Area VII scallop dredges were made up of crew share (33%), repairs (23%), fuel (17%), other vessel expenses (10%), gear (7%), other fishing expenses (5%), insurance (3%), commission (2%) and harbour dues (1%). It is unclear how these would be impacted by a decision to fish with reduced number of dredges, although some costs would probably still be reduced

practises of fishing within 6-12nm with fishing more outside 12nm, these are likely to be the medium sized vessels fishing 9 or 10 dredges per side. These will be able to drop the number of dredges they use to 8 per side without a large drop in their catching capacity, meaning the associated cost is low. The effect of dropping these dredges is already taken into account above.

74. It is likely to be more cost effective for the larger vessels (using more than 10 dredges per side) to increase the amount of time they spend outside 12nm (Scenario II) as opposed to dropping dredges and fishing inside. The available information on which state of stocks are currently assessed suggests there are scallop stocks outside of 12nm for the larger vessels to exploit and these large vessels are more than capable of fishing the greater distance from the shore- they do so already for the majority of their fishing time, some travelling miles from their home port in pursuit of high volumes of scallops on a regular basis. The expectation is that a significant proportion of the larger vessels will choose to do this rather than reduce their activity or the number of dredge used.
75. For these reasons the best estimate of costs relating to this measure assume that scenario II accounts for 75% of the behaviour change (i.e. on average vessels choose to spend 75% of the time which was previous spent inside 12nm fishing outside 12nm). The best estimate still assumes that some vessels spend some time fishing inside 12nm because the costs to vessels with 9 or 10 dredges would be much lower than the average, also due to presence of trusted fishing grounds and bad weather. However this assumption is thought to be a conservative one. The best estimate is estimated to have a cost of £0.175million (summarised in Table 5).
76. Estimates near the lower bound may result in increase in fuel costs if the large scale vessels maintain current catch levels by increasing catches outside the 12nm limit. As these vessels are currently spending a clear majority of their time outside the 12nm limit, an informed assumption is that any potential additional fuel cost will be low.

	Annual costs (GVA terms, £m)
Scenario II	0.00
Scenario III	0.70
Best Estimate	0.18

Table 5: Summary of estimated monetised annual costs of possible scenarios associated with the introduction of dredge limits within 6-12nm under policy option 2

b) Improving compliance of the two different MLSs in the English Channel by applying the larger MLS to all scallops caught on fishing trip which has covered both areas

77. The cost of this measure will be confined to those vessels who fish in both areas in a single trip. This cost will be associated with the scallops between 100 and

110mm caught in ICES division VIIe (where the lower MLS applies). The vessel will no longer be able to retain on board, and ultimately land, these scallops.

78. The value of these trips varies wildly from year to year, for example the value of the catch in 2010 was 10 times that of 2006. Whilst we have figures on the number of affected trips which take place we do not have information on size of individual scallops retained.

79. Table 6 shows the number of trips which have taken place over the past 5 years, the value associated with the landings from each trip and which ICES division (and hence MLS) the scallops were attributed to. Only scallops caught in VIIe can be affected by this measure and only those between 100 and 110mm. This means that the highest possible annual figure for costs associated with this measure, based on a 5 year average, would be £105,600 value of catches taken from Area VIIe on scallop fishing trips covering both Areas VIId and VIIe in a single trip as detailed in Table 6). This figure though assumes that ALL the scallops landed in Area VIIe are between the two MLSs (100-110mm), and this is simply not likely to be the case. There is insufficient data available to estimate what proportion of these scallops can now not be landed due to the introduction of this restriction. In a recent consultation (August 2011) a specific question was asked relating to this potential cost. Very little, and no quantitative, information was received from the scallop industry on this matter who are not required to record individual scallop sizes, merely to comply with the MLS rules. Qualitative evidence on this measure obtained from the industry as part of recent consultations, suggests that the cost would be minimal. For a cautious best estimate the revenue cost is placed at £25,000 annually, which assumes that a quarter of the scallops currently retained are between 100 and 110mm.

		Number of vessels	Number of Trips	£000s 7d	7e
2010	10m and under	0	0	0.0	0.0
	Over 10s	14	45	632.6	226.3
	Total	14	45	632.6	226.3
2009	10m and under	1	1	0.0	0.0
	Over 10s	8	12	173.3	30.8
	Total	9	13	173.3	30.8
2008	10m and under	2	5	1.7	1.4
	Over 10s	26	69	172.4	51.7
	Total	28	74	174.0	53.1
2007	10m and under	3	6	1.8	2.2
	Over 10s	28	84	300.6	81.4
	Total	31	90	302.5	83.6
2006	10m and under	4	9	0.6	0.2
	Over 10s	24	51	62.2	65.9
	Total	28	60	62.8	66.1
2005	10m and under	1	1	0.0	0.0
	Over 10s	30	78	76.2	68.1
	Total	31	79	76.2	68.1
	Average over 5 years			284.28	105.6

Table 6: Scallop Fishing Trips covering both Areas VIId and VIle in a single trip and value of catches taken from each division (MMO data)

	Annual costs (GVA terms, £m)
Scenario III	0.03
Scenario II	0.03
Best Estimate	0.03

Table 7: Summary of estimated monetised annual costs of possible scenarios associated with improving the compliance of the 2 English Channel MLSs under policy option 2

c) Rewording the legislation so that “attachments” to a dredge which are used solely for the purpose of emptying dredges safely are no longer banned

80. This will not have a cost to industry as it is in principle deregulatory, and in effect clarifies how existing legislation is sometimes applied.

81. The best estimate of total costs for policy option 2 is £0.20m annually. The present value of this cost discounted over 10 years is £1.81m (see Table 8).

Annual Costs (GVA terms, £m)				
	Introduction of dredge limits in the 6-12nm	Improving compliance of English Channel MLSs	Total annual cost	Present Value
Scenario II	0	0.03	0.03	0.22
Scenario III	0.70	0.03	0.73	6.24
Best Estimate	0.18	0.03	0.20	1.72

Table 8: Summary of estimated monetised costs of policy option 2

Benefits of the package of measures

82. The main benefit of this package of measures is that it helps address the decline of the small scale fleet around the English coast. The decline of small-scale industry and any supporting infrastructure, if permitted to happen, will be very difficult to reverse. The continued existence of this part of the scalloping fleet will have an associated benefit to the communities who depend on the local fleet to contribute to their economies. Local businesses, which require a certain critical mass of customers to remain viable, will benefit from the continued trade of these vessels. The maintenance of fishing ports, markets and other fishing infrastructure which may not be viable without this part of the local fleet, is essential in continuing the appeal of rural coastal locations to tourists. Tourism is an important source of income for coastal fishing towns and villages, with the fishing industry contributing to the character and image of these locations and their attractiveness as a tourist destination. The decline or disappearance of the local fishing industry would clearly have a negative effect on the traditions and wellbeing of these coastal towns. Estimating the socio-economic benefits of the small scale fleet to coastal communities is a major undertaking and would not be proportional for this proposal.

83. In terms of measurable monetised benefits associated with this package of measures, the proposed introduction of dredge limits will have the greatest effect. By limiting the number of dredges which can be used within 12nm of the shore, it is expected we will ensure there are scallops for the small scale fleet to catch throughout the year and increase the viability and sustainability of this part of the fleet. In order to quantify this effect, estimates of the amount of scallops the small scale fleet are able to increase their catches by are required. There is no existing data on the introduction of similar management measures which can be applied to this situation, so benefits have to be estimated.

84. If the small scale fleet are able to catch the scallops that are no longer being caught by the larger vessels within the 12nm limit, there is potential for them to benefit by a corresponding amount. The size of these benefits depends upon whether vessels adapt by continuing to fish in the 6-12nm with a reduced number of dredges, or (as is more likely) choose to fish outside 12nm.

85. These benefits will only be realised in full if there is sufficient existing capacity in the small scale fleet to make use of the additional available scallop stock. In reality this is unlikely to be the case, and there is likely to be some scallops which remain unexploited by the small scale fleet, although capacity may increase over time with increased pressure on quota stocks. There is insufficient evidence to fully predict behaviour, but given the sustained pressure from the small scale fleet on Government to give them some form of protection, it is reasonable to assume a significant proportion of available scallops will be caught. For these reasons in each scenario it is assumed that 60% of the additional available scallops will be caught:

- In a scenario (II) where vessels with more than 8 dredges adapt by fishing outside 12nm, the potential for benefit is the reduction in landings if all of these vessels stop fishing within 12nm (£0.575m). The estimated annual benefit in this scenario is £0.35m measured in GVA terms.
- In a scenario (III) where all vessels continue to fish inside 12nm, the potential for benefit comes from the reduction in landings of the large vessels due to their reduction in number of dredges (£0.35m). The estimated annual benefit in this scenario is therefore £0.21m measured in GVA terms¹³.
- In the best estimate scenario (IV), vessels adapt with a combination of the two changes, and the potential benefit is £0.519m. The estimated annual benefit in this scenario is £0.32m.

86. Total present value of monetised benefits discounted over 10 years is estimated to be £2.71m.

	Annual benefits (GVA terms, £m)
Scenario II	0.35 (Present Value 3.01)
Scenario III	0.21 (Present Value 1.81)

¹³ The latest Seafish fleet survey (http://www.seafish.org/media/Publications/2009_Fleet_Econ_Report_Final_6May11.pdf) does not contain figures for under 10m vessels but Seafish advise over 10m figures should be used for this portion of the scallop fleet, which is composed of both over and under 10m vessels.

Best Estimate	0.32 (Present Value 2.71)
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Table 9: Summary of estimated monetised annual benefits of possible scenarios associated with the introduction of dredge limits within 6-12nm under policy option 2

87. Other non-monetised benefits will be associated with the larger vessels fishing further offshore. Gear conflict, between nomadic scallopers and static gear fishermen, is likely to be reduced. This will result in a saving in the form of static gear which would have previously been lost and fewer disputes in the industry, some of which will incur legal fees.
88. Improving the compliance of the existing minimum landing sizes in the English Channel will have a non quantifiable but positive effect on the scallop stocks. Additionally, if, as expected, the small scale fleet is not able to exploit the inshore stocks in the 6-12nm limit at the same level as the larger vessels, the rate at which scallops are caught will be reduced.
89. The measure relaxing the regulations to allow the use of attachments to enable the safe emptying of dredges will have a clear non-monetised benefit associated with accidents at sea and potential loss of life. It is difficult to assess any monetary benefit associated with this and not proportionate to do so in this instance.

SUMMARY

	Annual Costs (GVA terms, £m)				Annual Benefits (GVA terms, £m)		Net Present Value (£m)
	Introduction of dredge limits in the 6-12nm	Improving compliance of English Channel MLSs	Total annual cost	Present Value	Introduction of dredge limits in the 6-12nm	Present Value	
Scenario II	0.00	0.03	0.03	0.22	0.35	3.01	2.80
Scenario III	0.70	0.03	0.73	6.24	0.21	1.81	-4.43
Best Estimate	0.18	0.03	0.20	1.72	0.32	2.71	0.99

Table 10: Summary of estimated monetised annual costs and benefits of policy option 2

90. Table 10 summarises the estimated costs and benefits of policy option 2. A positive net present value was calculated due to a net increase in scallops caught by the small scale fleet due to greater availability in the 6-12nm area as a result of larger vessels moving further offshore. This is also based on the assumption that the larger vessels will maintain current levels of catches primarily outside 12nm.

91. The package of measures described above will have a number of positive effects. Whilst there is a potential cost associated with the introduction of dredge limits to the largest vessels in the scallop industry, it is estimated to be minimal and significantly smaller than the associated benefit to other parts of the industry. The other two measures have a much lower cost, or are even of net benefit to the industry, and were universally supported in the two consultations relating to these proposals.
92. Above and beyond this direct benefit, the continued viability of the smaller part of the fleet has a clear benefit which it is not possible to estimate.
93. On this basis it is concluded that the benefits of introducing this package of measures, in the form of a new Scallop Order, are significantly greater than doing nothing and allowing the current situation to continue.

CONSULTATION

94. Two non formal consultations have been carried out in relation to these proposals. The first focussed on possible management measures and established that there was a need for some form of restriction on scalloping in inshore waters. The consultation responses were overwhelmingly in favour of the key aims of the proposals - ensuring there are scallops for small scale vessels to fish and better safeguarding stocks. There was some difference of opinion however, on how these 'small scale vessels' could best be defined and the methods which should be used. Unsurprisingly, the majority of responses from scallopers suggested that the line be drawn at vessels slightly bigger than their own and using slightly more dredges per side so that they would be relatively unaffected.
95. The second consultation outlined the proposed package of measures and asked for additional information to aid the construction of this Impact Assessment. This consultation did not result in any quantitative evidence.

RISKS AND ASSUMPTIONS

96. The main assumptions are:
- The introduction of a dredge limit of 8 per side will be sufficient to successfully deter the larger vessels from fishing within 12nm. This will ensure there are scallops for the small scale fleet to catch and remain viable, and that gear conflicts between large scallop vessels and static gear fishermen will be reduced.
 - Larger vessels can increase their activity outside 12nm to offset any loss in income from reduced or nil activity within 12nm.
 - There are sufficient scallop stocks outside 12nm to accommodate this increase in effort.

- A joint Anglo-Scottish approach and mirrored management measures will reduce the effect of displacement on the majority of the UK scallop sector (c. 95%).
- The data we hold on the number of dredges used by scallop vessels is accurate.

MORATORIUM ON REGULATIONS AFFECTING MICROBUSINESSES

97. We are seeking a waiver from the moratorium on regulations affecting microbusinesses for this proposed regulation. This is due to the structure of the fishing industry. Each vessel is usually registered as a separate business, even if part of a larger ownership which operates several vessels. Each of these individual vessels, even the larger ones, is likely to employ 10 or fewer people. The 'microbusinesses', which in a fisheries context are the smaller vessels, are likely to have even fewer employees than this.
98. This can be demonstrated by looking at the employment data which is held by the MMO for fishing companies (catching sector). Of the 3011 under 10 metre vessels on which crew number data is held, none of them (0%) have 10 or more employees. The equivalent figure for the 593 over 10 metre vessels is 16 (2.7%). Please note this data is for the whole fleet and not specifically scallop vessels.
99. As the proposed new Scallop order is intended to ensure the long term survival and sustainability of the smaller 'fisheries microbusinesses' we are seeking a waiver from the moratorium. The aims of this order will not be achievable without a waiver as, if the moratorium were to stand, and the package of measures were implemented, it would affect a small number of businesses.
100. It is also worth noting that a package of measures to control scalloping in English inshore waters was requested by parts of the scallop industry over a sustained number of years.

SPECIFIC IMPACT TESTS

Economic Impacts

a) Competition Assessment

The regulation is likely to have a low risk of a detrimental effect on competition. It will apply equally to all scallop fishers across the UK industry.

Under European Common Fisheries Policy rules only vessels of member states with official historic rights of fishing for a species in the waters of other member states may fish in their 6-12nm areas. France is the only European nation to have these rights to fish for scallops within the English 6-12nm limit but there is currently no French scalloping presence within English waters. This is something that will need to be kept under review.

There will be no negative competitive impact arising from this Order. It does not restrict the ability of firms to choose a price, quality, range or location of their products, nor will it lead to a differentiation in costs between new and existing fishermen. The Order is unlikely to affect the market structure.

b) Small Firms Impact Test

The impact of the proposals on small businesses (fewer than 20 employees) has been considered. Given that virtually all scallop vessels fall within this definition, it is considered that the proposals will not disproportionately disadvantage small businesses.

c) Justice Impact Test

It is not considered that the proposals will have any impact on the justice system. The proposed statutory instrument does not create any new offences or penalties as they are contained in the primary legislation (insert legislation reference), and does not cover any new parties.

Environmental Impacts

a) Greenhouse Gas (GHG) Impact Assessment

It is considered that the proposals will have a minimal impact on GHG emissions.

b) Wider Environmental Impact Test

The proposals in this Impact Assessment seek to better safeguard scallop stocks and will have a positive effect on the amount of this living species.

The proposals are not considered to have a significant impact on air quality; result in any material change to the appearance of landscape or townscape; lead to a change in financial, environmental or health impacts of waste management; change the degree of water pollution, levels of abstraction of water or exposure to flood risk; or have any impact on noise exposure.

Social Impacts

a) Statutory equality duties

Please see Annex 3 for completed pro-forma

b) Health and Well-being

The Health Impact Assessment considers the effects policies, plans, programmes and projects have on health and well-being, and in particular, how they can reduce health inequalities.

c) Human Rights

The proposals are consistent with the Human Rights Act 1998.

d) Rural Proofing

The proposals in this Impact Assessment partly seek ensure the continued viability of the small scale local scallop fleet in England. As such, they are specifically targeted at the fishing industry which is based in coastal communities in rural areas, and are therefore designed to take account of the circumstances and needs of rural people and places.

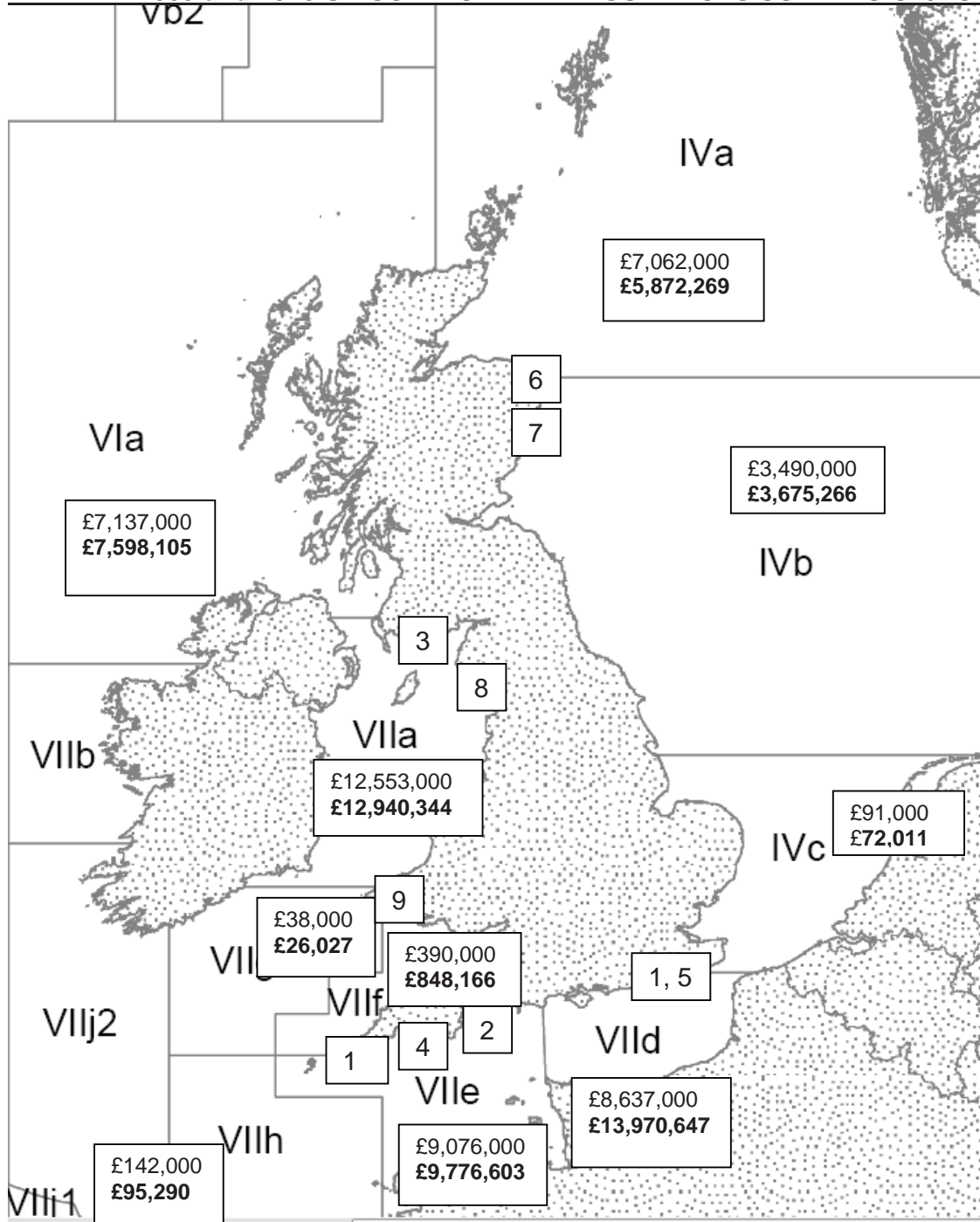
ANNEX 1-SUMMARY OF IFCA BYELAWS

Scalping byelaws by IFCA region

	Cornwall	Devon	Sussex	Eastern	Northumberland	Southern
Number of dredges	12 (total)	12 (total)	-	10 (total)	10 (total)	12 (total)
Tow bar length restriction	-	5.18m (2 bars max)	-	-	-	5.18m (2 bars max)
Curfew	0700-1900 only	0700-1900 only	-	-	-	0700-1900 only
Closed Season	-	July-September	June to October*	July-September	-	-
MLS	-	100mm (from before European MLS)	-	-	-	-
Vessel length	16.46m	15.24m	14.00m	-	-	-
Spatial management to reduce gear conflict	-	Inshore Potting agreement	-	-	-	-

*200 per day per person allowed

ANNEX 2- 2009 and 2010 UK SCALLOP LANDINGS BY ICES SUBDIVISION/PORT



2010 figures in bold. 2009 in plain text.

Rank	Port	Landings (2009)	2010	Port	Landings (2010)
1	Shoreham	£5,141,740	9	Fishguard	£1,341,094
2	Brixham	£4,003,743	10	Newlyn	£1,174,491
3	Kirkcudbright	£3,288,460			
4	Plymouth	£3,216,178			
5	Newhaven	£2,102,739			
6	Fraserburgh	£1,725,676			
7	Aberdeen	£1,554,680			
8	Whitehaven	£1,465,843			

ANNEX 3

DEFRA EQUALITY IMPACT ASSESSMENT
INITIAL SCREENING FORM

Directorate	Marine and Natural Environment
Unit	Sustainable Fisheries
Date	30/07/2011

Name of Policy/Guidance/Operational activity	
New technical management measures for scallop dredging in English waters (English Scallop Order)	
What are the aims, objectives & projected outcomes?	
<p>The proposed policy aims to secure a long term, sustainable future for small scale local scallop vessels operating in English waters and to better safeguard scallop stocks, through technical measures. It will achieve this through restrictions on the number of dredges which may be used within 12 nautical miles (nm) of the shore, encouraging larger vessels to fish farther offshore. It also introduces carriage restrictions to improve compliance with the two minimum landing sizes in the English Channel. Without government intervention, the cultural, environmental and economic benefits that can be associated with this form of small-scale/inshore fishing may be lost.</p> <p>The projected outcome is a scalloping sector where the largest, most efficient, nomadic vessels carry out the majority of their activity outside 12nm. This will leave the smaller local vessels with a sustainable source of scallops throughout the season, ensuring a viable source of income for these businesses. The scallop stocks in the English Channel will be better protected through improved compliance with the two minimum landing sizes, increasing the proportion of scallops which are able to breed before being harvested.</p>	
This is a new policy/guidance/operational activity.	Y
This is a change to an existing policy/guidance/operational activity (Check original policy was equality impact assessed. If so, review and update action plan).	N
This is an existing policy/guidance/operational activity.	N

Will the policy/guidance have an impact on	
Age	N
Disability	N
Gender	N
Religion or belief	N
Race	N
Sexual Orientation	N
Transgender	N
Working Patterns	N
Are there any aspects of the policy/guidance that could contribute to equality or inequality?	N
Could the aims of the policy/guidance be in conflict with equal opportunity, elimination of discrimination, promotion of good relations?	N

If your answer to any of these questions is **YES**, go on to the full EqIA.

If you have answered **NO** to all of these questions then please provide appropriate evidence and sign off.

This policy/guidance was screened for impact on equalities. The following evidence has been considered. No full equality impact assessment is required.

The features of these proposals are purely technical in nature.

The industry and associated coastal communities affected by the proposals are likely to include members of the equality groups listed above. However, the proposals do not suggest allocating or managing fishing opportunities specifically based on age, disability, gender (including transgender), religion or belief, race, or sexual orientation. Nor will the proposals force scallop fishermen to change their working patterns.

It is therefore considered that a full equality impact assessment is not required.

Line/Project Manager sign-off

Clare Mason

I have read the preliminary screening and I am satisfied that given the available evidence, a full impact assessment is not required.

Date

2 August 2011

Diversity Team sign-off

Please return an electronic copy to Diversityteamshr@defra.gsi.gov.uk once completed. An electronic copy should be kept within your directorate/team for audit purposes

Joi Rathbone 18/08/2011