

Title: Implementation of the demersal landing obligation IA No: N/A Lead department or agency: Department for Environment, Food and Rural Affairs Other departments or agencies: MMO	Impact Assessment (IA)
	Date: 23/01/2015
	Stage: Consultation
	Source of intervention: EU
	Type of measure: Primary legislation
	Contact for enquiries: cfp.consultation@defra.gsi.gov.uk
Summary: Intervention and Options	RPC Opinion: N/A

Cost of Preferred (or more likely) Option

Total Net Present Value	Business Net Present	Net cost to business per year (EANCB on	In scope of One-In, Two-Out?	Measure qualifies as
-0.098	-0.098	0.009	No	N/A

What is the problem under consideration? Why is Government intervention necessary?

The nature of fisheries means that without Government intervention stocks will be over exploited. One mechanism for dealing with this is the EU Common Fisheries Policy (CFP). Under the reformed CFP the demersal landing obligation (DLO) will be phased in from 2016, with full implementation by 2019. The aim of the landing obligation is to remove the wasteful practice of fish discarding. Government must ensure appropriate implementation in England. Successful implementation will ensure that discarding is prevented, fish stocks are protected and industry is supported in this transition to a new management regime.

What are the policy objectives and the intended effects?

The policy objectives are to implement new CFP requirements and address the issues which arise from implementing the DLO in England. To ensure that discarding is prevented, fish stocks are protected and the English demersal industry is supported in the transition to the new management regime under the DLO while ensuring that costs to business are minimised. The DLO is a legal requirement which industry must comply with, without Government intervention the English demersal industry would incur significant costs, impacting on industry profit, as they would be operating under a management regime that would be inappropriate under the reformed CFP. In addition, we are seeking to maximise the benefits that the fishing industry can derive from a potential increase in quotas and improvements in domestic management.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Doing nothing, or going further than EU requirements, would incur significant risks and cost on both industry and Government. The preferred approach does not include a regulatory approach, instead we will make targeted interventions across 5 key areas of fisheries management to maximise the benefits to the industry of the new requirements and minimise costs. These areas include changing from a land based to an at sea monitoring and enforcement system. This IA indicates the different ways that the demersal landing obligation could be implemented with the consultation to be used to develop these options further. The proposals are also designed to maximise potential industry benefits.

Will the policy be reviewed? Yes **If applicable, set review date:** 07/2022

Does implementation go beyond minimum EU requirements? No						
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	Large 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, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Please note as the proposed approach is non-regulatory an Impact Assessment was not required to be independently reviewed by the Regulatory Policy Committee (RPC). It has been internally peer reviewed by Defra's economists and is provided for information to assist in responding to the Consultation.

Description: implement the Demersal Landing obligation

FULL ECONOMIC ASSESSMENT

Price Base Year 2013	PV Base Year 2016	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: -0.098
COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant	Total Cost (Present Value)	
Low	Optional	0	Optional	Optional	
High	Optional		Optional	Optional	
Best Estimate	n/a		0.011	0.098	
Description and scale of key monetised costs by 'main affected groups'					
There are no additional costs to Government as all changes to the management regime will be funded from amending the current regime. Costs to industry will be incurred should REM be installed (this cost is minimal and occurs from a skipper/owners having to be on board when REM is fitted and hard drives switched). Analysis in this IA presents the worst case scenario of putting cameras on 136 vessels which would result in an NPC of £0.098m to business.					
Other key non-monetised costs by 'main affected groups'					
There are no non-monetised costs associated with this option. The consultation will seek views on whether there are any costs that have not been included.					
BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant	Total Benefit (Present Value)	
Low	Optional	0	Optional	Optional	
High	Optional		Optional	Optional	
Best Estimate	0.0		0.0	0.0	
Description and scale of key monetised benefits by 'main affected groups'					
There are no quantified benefits to Government from the implementation of the DLO. The main benefit to industry comes from access to the quota uplift which could be worth an estimated £1.2 - £6.0m per annum in increased turnover. This value is however highly uncertain and therefore not used in the calculation of net present values.					
Other key non-monetised benefits by 'main affected groups'					
There are benefits to Government and industry from a regional approach to fisheries management that will allow for a more efficient and effective regime, as well as access to exemptions and flexibilities, more suited to the regional fisheries. There are also benefits to industry from improved flexibilities in quota management which will improve their business planning and profitability.					
Key assumptions/sensitivities/risks					Discount rate (%)
					3.5
It has not been possible to identify, quantify and monetise the impact of the implementation of the DLO in a number of management areas due to the decisions still to be made at the regional level and the large number of uncertainties that are present at this stage. This IA therefore provides a high level discussion of the areas and potential costs and benefits where appropriate. A further detailed cost benefit analysis will be carried out following the consultation and as decisions are taken at a regional level etc.					

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: 0.009	Benefits: 0	Net: 0.009	No	N/A

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1. Introduction

1.1 Background

The Common Fisheries Policy (CFP) is the EU's instrument for the management of fisheries and aquaculture. The CFP is made up of three regulations, the CFP basic regulation, the Common Market Organisation of Fishery and Aquaculture Products (CMO) and the European Maritime and Fisheries Fund (EMFF). Reforms to the CFP basic regulation and the CMO came into force on the 1 January 2014, with support being made available under the EMFF from 2015. The reforms were designed to deliver sustainable fish stocks, a prosperous fishing industry and a healthy marine environment. They include:

- A greater emphasis on fishing sustainably for the long term, with legally binding commitments to set fishing rates at sustainable levels;
- An obligation to land all catches, progressively implemented from 2015 (pelagic fisheries in 2015, other fisheries from 2016), with practical measures to implement this and support behaviour change;
- A new form of regional governance, with decision making by Member States that share fisheries at a sea basin level, and a new process to enact these decisions in EU law;
- Agreement on a central set of principles for operating outside EU waters, applying the same principles of sustainability outside EU waters as within; and
- A greater integration of fisheries obligations with existing obligations under environmental legislation.

These reforms will help to meet the Government's priorities of leading the world in food and farming and protecting the environment.

1.2 The landing obligation

One of the most significant changes the reformed CFP makes to the way Europe's fisheries are managed relates to the introduction of a landing obligation, often referred to as the discard ban.

Currently limits are set on the amount of fish landed at port, rather than caught, meaning vessels can return a proportion of their catch to the sea, this is known as discarding. Discarding is a negative externality¹ as much of the catch returned to the sea does not survive, thereby reducing the spawning population for no economic value. The landing obligation is a ban on discarding fish which are subject to catch limits, i.e. quotas, so that all catches must be brought ashore, except where they are subject to specific exemptions.

There are a number of reasons why discarding occurs including:

- fishermen catching fish which they do not have quota for;
- catching fish which are damaged or less profitable; and/or,
- catching undersized fish.

The current regime is based on a system of landing limits where fishermen who exceed their quota allocations are obliged to discard that additional fish at sea or be subject to penalties. The

¹ A negative externality occurs when the actions of one party has an impact on another party, the costs of which are not borne by those undertaking the action.

regime also obliges fishermen to discard undersized fish – this measure was introduced to discourage fishermen from targeting juvenile fish. A third issue faced by fishermen is that a lack of market can make it uneconomical to land damaged or less profitable fish. Because of these reasons the discard rates for fish caught by the demersal industry vary greatly. A detailed analysis of these rates is included in Annex A.

The reformed CFP legislates for the landing of all quota species, including undersize fish. We must therefore consider the best policy to implement the landing obligation in a proportionate way, enabling the fishing industry to transition to the new management rules with minimum cost and disruption.

Provisions of the new regulations allow the phased introduction of the landing obligation beginning with pelagic² fisheries on 1 January 2015³. All other fisheries are to be introduced from January 2016, with full implementation of the landing obligation by 2019.

The landing obligation on pelagic species was the subject of a previous Impact Assessment, and consultation. All other fisheries for England predominately means the demersal fleets; these 1,629 vessels are targeting whitefish such as cod and haddock, flatfish like sole and plaice, Norway Lobster (otherwise known as Nephrops) or Northern prawns. The CFP also applies to deep sea species, but there are relatively few English vessels targeting deep sea species (no more than 5 vessels are permitted to land deep sea species excluding ling and conger eel). This impact assessment will therefore focus on the demersal fleet.

1.3 Issues under consideration

This Impact Assessment focuses solely on how we implement the demersal landing obligation (DLO) in England, and the impacts our decisions will have on the English fishing industry and public bodies. The assessment covers all sizes of English businesses (micro, small, medium and large) and because the basic CFP regulation is a directly applicable EU regulation to all businesses, micro businesses cannot be exempted. Additionally exempting small businesses would prevent them benefiting from a revised and improved management system.

1.4 Issues not under consideration

This Impact Assessment does not cover:

- The implementation of the demersal landing obligation in other UK administrations (i.e. Scotland, Wales and Northern Ireland). Fisheries management is a devolved issue and is being dealt with individually by each administration, though there has been extensive engagement across the UK on implementation.
- The introduction of the pelagic landing obligation in England. This will come into force on 1st January 2015 and lessons learnt from its implementation will help inform the detailed implementation of the demersal landing obligation.
- The impact of the landing obligation itself as it is a directly applicable EU regulation.

² Pelagic fish generally occupy the surface waters of the oceans or lakes, in depths between 20-400 metres. Examples include mackerel, herring and sprat.

³ A Regulatory Triage Assessment was submitted and approved by the Regulatory Policy Committee in February 2014 (RPC14-FT-DEFRA-2020). This impact assessment follows the same approach.

1.5 Other relevant policies

There are a number of other policies currently being considered which could have implications for the demersal landing obligation. Specifically:

Fixed Quota Allocation Units to under 10m vessels:

- an option to give fishermen in the under 10m pool (who are notified of their fishing opportunities on a monthly basis by the Marine Management Organisation (MMO)) the opportunity to leave the pool and be allocated Fishing Quota Allocations (FQAs –provide fishermen with a fixed percentage of the fisheries opportunities for a given stock and freedom for when they want to fish that within any given year) has recently been consulted on.

Latent capacity:

- At present a large number of vessels (approximately 48%) of the under 10m fleet hold fishing licences but do not fish, this places a high degree of uncertainty on how the quota for these vessels is managed and affects the ability of fisherman to effectively plan their businesses as they do not have certainty as to their quota allocations.
- Defra is shortly to consult on a proposal to cap vessels that have not fished for quota species between 2009 and 2012 at a level of 300kgs per year. The majority of these vessels are currently inactive so it is unlikely that this will cause any significant issues.

As these policies are still in development they have not been included in this Impact Assessment though we will assess their impacts once final decisions are made.

Additionally, changes are being made to the fishing licensing regime to remove restrictions which are incompatible with the landing obligation.

1.6 Fisheries management

Fisheries management is a complex combination of different processes with the objective of managing total catches and incentivising behaviour change (in terms of fishermen's gear choice, quota management etc.) in order to bring about sustainable fisheries. The 5 inter-linked areas of fisheries management which are key to effective management of a landing obligation are phasing, quota management, regionalisation (with a focus on access to exemptions), catch management and monitoring and enforcement.



a. Phasing

Phasing relates to when a quota species in a defined fishery will be subject to the rules relating to the landing obligation. The basic CFP regulation stipulates that from 1 January 2016 and by 1 January 2019 at the latest all catches of species managed using catch limits (i.e. quotas) will be subject to the landing obligation. The regulation lists the main fisheries in the different sea areas (for England, this relates to the North Sea and North Western waters – see Section 1.6c). These fisheries will be the focus for the first year of implementation. Otherwise the rollout of the landing obligation is at the discretion of Member States to agree through the new regional governance model. Discussions, in the regional groups, have begun on which species in which fisheries will come under the landing obligation when. The negotiating position of England will be to ensure the most efficient rollout for our demersal fleet.

b. Quota management

Quota management is the method of allocating quota to vessels, and the management of this quota individually or across groups of vessels.

There are currently two arrangements which are used for the management of quota in England. Arrangements that allow a degree of autonomy are currently in place for vessels that are members of Producer Organisations (POs). These vessels are allocated fishing opportunities annually using FQAs⁴. These vessels are typically 10 metres or greater in length. All remaining vessels, which are predominantly less than 10 metres in length, fish against a 'pool' of quota managed by the MMO.

The CFP basic regulation includes a number of quota provisions and flexibilities to smooth the transition for the fleet to the landing obligation. These include:

- Potential uplifts in quota to reflect the move to catch limits, rather than landing limits, as discarding is banned;
- An increase in the ability to bank and borrow quota between years from 5% to 10%, (Interannual Flexibility): and,

⁴ FQA units are the main means by which fishing quotas are apportioned and allocated amongst the UK fishing industry. Each FQA gives the holder a fixed percentage of the fisheries opportunities for a given stock in any given year.

- The ability to count catches of non-target species, when the stock is within safe biological limits,⁵ against the quota of the main target species subject to a limit of 9% (Interspecies Flexibility).

These provisions are designed to minimise the economic impact of the landing obligation. In particular the availability of uplifts in quotas also has the potential to offer a significant economic benefit to large portions of the fleet as fishermen will be able to land and sell all their catches. It is at our discretion how we allocate and manage these provisions in England. We may however seek to ensure that these rules, and those applied by other Member States who share our fisheries, are consistent.

c. Regionalisation (access to Exemptions)

The basic CFP regulation introduces a new regional governance structure where Member States with a direct management interest in an area can come together to decide on the management of that area. England, as part of the UK Member State, has an interest in two regional groups, the North Sea (with France, Germany, Denmark, the Netherlands, Sweden and Belgium) and North Western waters, which includes waters to the west of Scotland, the Irish and Celtic Seas and the English and Bristol Channels (with France, the Netherlands, Belgium, Ireland and Spain).

The scope of what these regional groups can do is defined in the basic CFP regulation⁶. Regions, in consultation with relevant EU stakeholder Advisory Councils (ACs), can produce joint recommendations for achieving the objectives of the CFP. This includes recommendations for specific Discard Plans detailing the implementation of the landing obligation for the Commission to consider and adopt.

Discard plans can be used to make decisions on when the species caught in the identified fisheries come under the landing obligation, as discussed above under phasing, but it will also stipulate whether there are any exemptions to the landing obligation. Table 1 below illustrates where decisions on implementation will be taken. The CFP basic regulation allows the use of scientifically justified exemptions to the landing obligation⁷. These exemptions exist to reduce the disproportionate cost of the landing obligation. The two possible exemptions are the high survivability and *de minimis* exemptions.

High survivability exemption - Species that have been scientifically proven to have a high rate of survival after discarding, taking account of gear characteristics, fishing practices and ecosystem influences, may be discarded if agreed regionally and set out in a regional Discard Plan.

The *de minimis* exemption- The *de minimis* exemption allows up to 5% of total annual catches of all species subject to the demersal landing obligation to be discarded in the following cases:

- i. Where scientific evidence indicates that increases in gear selectivity are very difficult to achieve; or

⁵ A range in which the stocks biomass and the estimated fishing mortality are between specific reference points.

⁶ Article 18 of the CFP basic regulation

⁷ Article 15(4) of the CFP basic regulation

- ii. To avoid disproportionate costs of handling unwanted catches, where the unwanted catches do not represent more than a certain percentage of total annual catch for each fishing gear.

For a transitional period of four years, the percentage of catch which can be discarded under the *de minimis* exemption can be up to 7% in 2015 and 2016; and up to 6% in 2017 and 2018.

It is our position that scientifically justified exemptions should be sought and utilised where appropriate to avoid disproportionate costs of the landing obligation falling on fishing vessels and their owners. We will use the consultation, as well as all other opportunities, to gather information to make scientifically robust requests for exemptions in the regional groups.

Table 1: Outlining decisions made at EU level and the decisions to be made in England

	EU Level Decisions	Regional Level Decisions	England only decisions
Phasing		Regional groups agree to introduce the landing obligation to a common timetable. (see regionalisation)	Whether to extend the discard ban to include additional species ahead of the deadlines in the basic regulation.
Quota Management	Size of quota uplift to reflect the ending of discarding. To provide banking & borrowing facility of up to 10% of each annual quota. Use of interspecies flexibility (up to 9%) to enable bycatch to be landed.	Use of interspecies flexibility will be kept under review by regional groups.	How to allocate any quota uplifts to address English discarding issues. Whether to allow English vessels to access the quota flexibilities (Banking and borrowing & interspecies) and any supporting management rules.
Regionalisation	Adopting the regionally agreed discard plans in EU law (Delegated Act).	Agreement of discard plans to support the introduction of the landing obligation. This includes fisheries covered, survival exemptions, de-minimis provisions, new minimum conservation reference sizes and rules on documenting catch.	Whether to permit English fisheries to utilise the agreed exemptions and de-minimis provisions.
Onshore Management	Fish below Minimum Conservation Reference Size shall not be used for direct human consumption. Agreement of Minimum Conservation Reference Sizes in EU law (Technical Conservation regulations).	Agreement on any changes to Minimum Conservation Reference Sizes included in regionally agreed discard plans.	The provision of information to operators clarifying responsibilities and options for use of landed fish.
Control and Enforcement	Agreement that Member States must have in place an effective and proportionate system of control.	Regional Member States have agreed to identify a common set of tools and provisions to ensure consistency in application.	Control and enforcement is a Member State competence. England will need to introduce a control regime that reflects the nature of its fleet whilst

			taking into account the regional agreement on consistency and monitoring tools.
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d. Catch management

Catch management covers how fishermen handle, store and manage catches while at sea and onshore. This includes abiding by the existing relevant regulations for catch entering the human and non-human consumption markets.

Most quota species have a minimum conservation reference size (MCRS), usually established at the EU level. This has been set to encourage fishermen to avoid juvenile fish. The MCRS is also the minimum size of catch which can enter the human consumption market. Regionally agreed Discard Plans can make changes to those sizes.

Under the demersal landing obligation all catches of quota species, regardless of size, have to be landed and counted against quota. The size, though, determines the available markets for the sale of that fish. Catches below MCRS are not to be sold for direct human consumption. This is to prevent undue economic gain from the catching of juvenile fish. There are many other markets available however, including, but not limited to:

- Fish meal/oil;
- Bait;
- Pet food; and,
- Fertiliser.

Catches of fish below MCRS have to be stored and recorded separately from catches above MCRS, but not by species.

e. Monitoring and enforcement

Monitoring and enforcement covers how we, Defra and its delivery bodies, enforce fisheries rules and monitor compliance. From 1 January 2016 this will include how the demersal landing obligation is monitored and enforced.

The CFP basic regulation states that in order to ensure compliance with the rules of the CFP, Member States must establish an effective and proportionate system of control, inspection and enforcement. The current regime is based on a limit on landings, under a landing obligation this will become a limit on catches. Changes to the monitoring and enforcement system need to be made to reflect this and to ensure the benefits of the DLO are realised.

1.7 Rationale for Government intervention

Fishing is a classic example of a common good⁸ problem resulting in the tragedy of the commons, as the private cost of exploitation is not equal to the social cost. This leads to the

⁸ A common good is rivalrous but non-excludable; the supply can be depleted, but people are not restricted in their use of the good.

depletion of a shared resource, as individuals act independently and rationally according to their self-interest, despite understanding this is contrary to the industry's long-term best interests.

Previous EU intervention to correct this market failure and prevent excess exploitation of fish stocks was through the allocation of quotas controlling the weight of fish that could be landed, a system of fisheries management reflecting this was established. The focus of quotas on the landed catch has however led to perverse incentives whereby fisherman discard catch at sea to prevent overshooting their quota limits.

Discarding is a negative externality, as it causes damage to the marine environment and fish stocks (from throwing dead fish back into the sea) but the cost of doing so is not fully accounted for by its users. Discarding is also wasteful as usable fish are discarded when they could be brought to market and sold.

The reformed CFP has intervened to remove this negative externality by implementing a series of landing obligations. Under a landing obligation quota will now apply to what is caught at sea, rather than what is landed onshore. The movement to a system of quotas which now control what is caught at sea means that the management regime needs to be adjusted and it is how the Government chooses to do this in demersal fisheries that is the subject of this IA.

Government must intervene to ensure an appropriate management regime is in place to efficiently implement EU rules on the demersal landing obligation in England. To do so we propose to make targeted interventions in the 5 key management areas illustrated above.

Successful implementation will ensure that discarding is minimised, fish stocks are protected and the English demersal industry is supported in the transition to a new management regime. If there was no Government intervention, leaving an unsuitable regime in place, we would be breaching CFP requirements and not encouraging sustainable fishing. There would be EU penalties on both Government and industry due to failure to comply with the CFP regulation.

The specific rationale for Government intervention for each of these key areas is:

a. Phasing

There is a degree of flexibility in how the landing obligation is phased in and therefore Government, though the regional groups, must determine what comes under the landing obligation in each year.

b. Quota management

Although Producer Organisations (POs) and fishing businesses are themselves responsible for optimising their use of quota, Government has a role to ensure English quota is set appropriately in initial allocations (including the use of the potential uplifts in quotas) and then effectively utilised to maximise public benefit.

c. Regionalisation

Under the regional groups the Government has a role in ensuring scientifically robust exemptions are secured for the benefit of the English fleet, to avoid disproportionate costs from the implementation of the landing obligation.

d. Catch management

Government has a responsibility to ensure that implemented changes to catch management, both at sea and onshore meet EU objectives. We are also responsible for informing the fishing industry of any new requirements.

e. Monitoring and enforcement

Monitoring and enforcement is key to ensuring sustainable fisheries. In addition Government is responsible under EU treaties for appropriately enforcing the requirements of the new CFP basic regulation, including the landing obligation.

1.8 Policy objectives and intended effects

The overall objective of the proposed policy is to amend the current fisheries management regime to reflect the new arrangements under the reformed CFP and enable the cost effective and proportionate implementation of the demersal landing obligation in England. This will allow the demersal fishing industry to most effectively transition to operating under the landing obligation, taking full advantage of the new opportunities while ensuring that costs to business are minimised. We will not go further than the basic CFP requirements, enforcing the landing obligation in a proportionate way rather than adding any additional rules, burdens or gold plating. These overarching objectives can be divided into objectives for each of the 5 key fisheries management areas where changes are proposed.

a. Phasing

- To implement the landing obligation, utilising the flexibility around phasing, to ensure that the sector has time to adjust to the new approach.

b. Quota management

- To implement quota management rules which maximise the socio-economic benefit to the English economy while ensuring stocks are fished at Maximum Sustainable Yield (MSY) levels.⁹
- To allow the English demersal industry to more easily match their catch with available quota under the landing obligation.

c. Regionalisation

- To ensure that the opportunity to employ the new regionalisation processes to secure any of the permitted exemptions to the landing obligation (*de minimis* and high survivability) is taken, so that the English fleet can operate effectively under the demersal landing obligation and stocks can grow to deliver additional benefits in the future.

d. Catch management

- To minimise the burden on industry of handling and sorting catch while at sea.
- To maximise the benefit industry can receive from landing and selling additional fish, including fish sold to non-human consumption markets.

⁹ MSY represents the maximum catch that may be taken from a fish stock indefinitely. The CFP Regulation sets sustainable fishing targets. Stocks are to be fished at MSY levels by 2015 wherever possible and by 2020 at the latest.

- To ensure the English demersal industry and onshore partners are aware of their responsibilities when landing catch in England under the demersal landing obligation.
- To avoid any nugatory public investments in onshore infrastructure and controls.
- To prevent a waste at sea problem becoming a waste on land problem.

e. Monitoring and enforcement

- To ensure the optimal balance of monitoring and control measures, drawing on the science relating to the effectiveness of different methods, that will deliver compliant fishing behaviour for English demersal vessels and other demersal vessels operating in English waters.
- To collect evidence of non-compliant actions of sufficient quality to apply appropriate sanctions where necessary.
- To ensure that the enforcement measures used across the fleet are proportionate and aligned to the degree of real or potential risk of non-compliance and overall impact on fishing mortality.
- To maximise opportunities to access any uplift in total allowable catches due to the removal of discarding by ensuring compliance with the landing obligation.

2. Analysis of options

There is only 1 viable policy option, which is to amend the current fisheries management regime to allow for the implementation of minimum EU requirements in England, as doing nothing, or going further than EU requirements, would incur significant risks and cost to industry and Government.

There are a number of ways the demersal landing obligation could be implemented and the consultation is designed to elicit stakeholder views on implementation, as a result the IA is at a very high level.

In addition many decisions will need to be determined at a regional level first and so there are still a large number of unknowns. The impact of implementation options will be considered in more detail as the policy is developed over the next year and as we learn lessons from the implementation of the pelagic landing obligation.

This IA includes, for each of the 5 key fisheries management areas, the issues to be addressed and solutions available, including any available analysis on likely costs and benefits. Decisions at a regional level and the responses from our stakeholders to the accompanying public consultation will enable us to refine those costs and benefits to determine the approach that we want to take on the detailed implementation.

2.1 Option 0 – Do Nothing

For reasons explained in detail below non-implementation is not an option as we have a legal obligation to implement and enforce the demersal landing obligation, as the basic CFP regulation is a directly applicable regulation. In addition there is a highly significant reputational risk to the UK if we do not implement the reformed CFP in England as the UK was a strong supporter of the reforms in particular regionalisation and the landing obligation. Non-implementation would therefore contradict and undermine the UK's position to date on reform of the CFP. Non-implementation would also prevent the UK accessing funding under the European Maritime and Fisheries Fund (EMFF), which would be used to help the industry transition to the DLO.

a. Phasing

Under the baseline option England would have no involvement in deciding in how to phase in the landing obligation. Without that involvement the phasing of the demersal landing obligation could result in negative implications for the industry, including disproportionate costs and lack of time to adjust to the landing obligation and find solutions to particular challenges.

b. Quota management

Under the baseline option there would be no change to the quota management rules for the English demersal industry. Those vessels within a Producer Organisation would continue to be able to swap and lease quota internationally and between other groups, but would not have access to the flexibilities, inter-annual and interspecies flexibilities, to enable industry to better match catches to quota. The MMO, who manages quota for the under 10 metre and non-sector vessels, would continue to set catch limits for the vessels it manages. These catch limits are generally set on a

monthly basis, but this varies for particular species. Under this system a vessel managed by the MMO will lose any quota it does not catch within the specified time limit. The MMO also has limited ability to lease quota with other groups. Therefore, continuing with the current system could lead to significant problems for the under 10 metre and non-sector vessels being able to access necessary quota, and remain economically viable under the demersal landing obligation.

Under the new CFP basic regulation, a fundamental change will be made to the way total allowable catches (TACs) will be calculated. Currently, scientific advice on the health of fish stocks (stock assessments) builds in assumptions about the amount of fish being discarded, meaning that the fishing industry ultimately receives quotas which are lower than total allowable catch. To reflect the landing obligation, and the assumption that fish are no longer being discarded, it is expected that at EU level TACs will be set at a higher level to account for the demersal fishing industry no longer discarding. Any additional quota will be allocated to the Member State in line with relative stability¹⁰, and England will receive a proportion of the UK quota uplift in line with current quota allocation arrangements. Under the baseline option the possibility of accessing any uplift in TAC is greatly reduced, as our enforcement regime would not be robust enough to ensure compliance with the landing obligation.

c. Regionalisation

Under the baseline option the UK would not seek to take part in regional fisheries management. This would mean Government would not seek to develop a Discard Plan (DP) or Multi-Annual Plan (MAP), to outline appropriate regional fisheries management measures for the demersal industry, rather than a one-size-fits-all Commission led proposal.

In the absence of agreement of fisheries management at regional level (either through a DP or co-decided MAP), the demersal fleet would not be able to take advantage of the full range of exemptions to the landing obligation available through regionalisation, including the high survivability and *de minimis* exemptions. Under this option the English demersal fleet would be at a disadvantage compared with other Member States whose industries did have access to those exemptions.

d. Catch management

Under the baseline option there would be no intervention by Government, leaving the market to adapt to the changes brought by the demersal landing obligation. Fishermen would continue to have responsibility to ensure compliance with all relevant legislation, such as those applicable for each market. Ports and fish markets will also be left to make any necessary adaptations to their handling procedures and infrastructure to take account of the changes in the composition and size distribution of fish that are landed and the associated regulation.

e. Monitoring and enforcement

Under the baseline option the UK Government would maintain the current enforcement regime for all sectors of the demersal fleet. The current enforcement regime was developed to monitor landings of fish, as quota controlled the weight of fish that could be landed. This regime includes the completion of fishing e-logs for all demersal vessels over 12 metres, paper logbooks for vessels

¹⁰ TACs are shared between EU countries in the form of national quotas. For each stock a different allocation percentage per EU country is applied for the sharing out of the quotas. This fixed percentage is known as the relative stability key.

between 10-12 metres in length and landing declarations and sales notes for vessels under 10 metres in length. These documentary checks are augmented by a programme of surveillance and inspection at port and at sea provided by the Royal Navy, and inspections of landing in port by Marine Enforcement officers as well as by limited aerial surveillance.

For all sectors of the demersal fleet (including both the under and over 10 metre vessels) maintaining the current monitoring regime will not provide sufficient resolution or confidence in relation to the landing obligation requirements, and would provide little or no incentive for fishermen to alter their current behaviour. It would be extremely unlikely that illegal discarding would be detected, introducing a significant risk of non-compliance to the landing obligation. This would lead to depletion of fish stocks through overfishing.

Furthermore, the CFP basic regulation¹¹ states that in order to ensure compliance with the rules of the CFP an effective system of control, inspection and enforcement should be established which includes the establishment of effective, proportionate and dissuasive penalties. Failure to appropriately alter the English monitoring regime would be viewed as a failure to implement this requirement, introducing a risk of infraction proceedings by the Commission, and the risk of heavy fines on Government and industry.

2.2 Option 1: Preferred Option

The preferred option is to amend the current fisheries management regime, developed under a system of quotas limiting what is landed, to a system to manage what is actually caught at sea, in a proportionate way. This will enable us to meet the objectives of the demersal landing obligation while not gold plating. Our aim is to allow the industry to most effectively transfer to the revised regime while ensuring that costs to business are minimised. The changes proposed also intend to maximise potential benefits to industry, allowing fishermen to benefit from landing, and selling, their entire catch instead of discarding a proportion of it.

For each of the areas of fisheries management potential approaches are discussed below.

a. Phasing

The basic CFP regulation stipulates the landing obligation is to be introduced from the 1st January 2016 at the latest for species which define the fisheries (these are the fish which are being targeted by a fishermen) and from 1st January 2019 at the latest for all other species (these are frequently referred to as bycatch) in:

- (i) the North Sea
 - fisheries for cod, haddock, whiting, saithe;
 - fisheries for Norway lobster*;
 - fisheries for common sole and plaice;
 - fisheries for hake[†];
 - fisheries for Northern prawn[†];

¹¹ Article 36 CFP basic regulation

(ii) North Western waters

- fisheries for cod, haddock, whiting, saithe;
- fisheries for Norway lobster*;
- fisheries for common sole and plaice;
- fisheries for hake;

* Norway lobster is otherwise known as Nephrops.

†England has no directed fisheries for hake or Northern prawn in the North Sea.

Decisions on phasing are to be taken in the regional groups to ensure that there is a consistent approach to what is covered under the landing obligation for all vessels fishing in an area no matter their nationality. There is a firm obligation that all quota stocks are to be covered by the landing obligation by 1st January 2019. Member States and the Advisory Councils are currently examining 3 approaches to phasing in the Landing Obligation in 2016, and variants thereof:

1. Introduction of a landing obligation for all the species listed in the defined fisheries in 2016 with all other quota species caught in those fisheries phased in between 2017 and 2019. This approach would mean vessels targeting:
 - *either cod, haddock, whiting and/or saithe will have to land **all** catches of cod, haddock, whiting **and** saithe in 2016;*
 - *Nephrops will have to land **all** catches of Nephrops in 2016;*
 - *plaice and/or sole will have to land **all** catches of plaice **and** sole in 2016;*
 - *hake will have to land **all** catches of hake in 2016; and*
 - *Northern prawn (North Sea only) will have to land **all** catches of northern prawn in 2016.*
2. The introduction of the landing obligation for only the target species from the list of defined fisheries in 2016, with the remaining quota species phased in between 2017 and 2019. For example this would mean vessels mainly targeting cod only having to land all catches of cod in 2016, those targeting haddock only haddock, those targeting sole only sole etc. Fisheries targeting hake, *Nephrops* and Northern prawn would also have to land all their catches of these species in 2016 as under option 1.
3. A pure species based approach has also been proposed by some elements of the fishing industry starting with a requirement that all fishermen must land haddock, sole and Northern prawn in the first year of the landing obligation. This approach would mean that all vessels, no matter what their primary target is, will be obliged to land all catches of haddock, sole and Northern prawn in 2016. The other species named in the regulation (whiting, saithe, *Nephrops*, followed by cod, hake and plaice) would be added to the landings list in the next two years with all other quotas species landed from 2019 onwards.

The regulation allows a great deal of flexibility with decisions to be taken by the regional groups, with the firm obligation that all quota stocks are to be covered by the landing obligation by 1st January 2019. Given that we have the ability to phase in the remaining stocks between 2016

and 2019 there is a tension between implementing a phased approach and gold plating. A literal reading of the CFP would mean that to avoid gold plating only those stocks set out in the regulation are covered from 2016 and nothing else until 2019. However, implementing in this way may in fact place greater burdens on the industry than implementing the ban in a phased approach for the following reasons:

- i) The complex nature of the fishery means that simply implementing the demersal landing obligation for the stocks set out in the regulation for 2016 may result in a complicated enforcement and compliance arrangement for fishermen. This is because fishermen frequently switch between fisheries during the year and sometimes by trip. This may place greater burdens on them when trying to determine whether they are compliant or not in the period 2016-19.
- ii) If most of the implementation is left until 2019 any issues may be difficult to disentangle and deal with leading to greater costs to industry. Implementing in a phased approach allows government to monitor impacts by stock and deal with them as and when they arise, it also allows industry to address challenges over time.
- iii) Access to quota uplifts early may be more uncertain if the majority of stocks are not subject to the landing obligation until 2019. Bringing benefits to the industry forward by using the flexibility to bring additional stocks under a landing obligation before 2019 will allow access to quota uplifts and other flexibilities sooner.

Additionally, phasing stocks in sooner provides greater certainty on the mortality that fishing vessels apply to fish stocks; providing greater accuracy to the scientific assessment of fish stocks and enable fisheries managers to take better informed decisions with regards to setting the level of fishing opportunities each year. This is expected to lead to long term sustainable catches in the future (MSY) as stocks continue to grow.

The implementation of phasing needs to be agreed at a regional level and therefore will ultimately be an EU level decision and thus what is introduced will not be gold plating. Whilst considering phasing there is also a need to ensure that actions used to manage the introduction of the discard ban do not undermine other policy aims such as the achievement of MSY and Good Environmental Status (GES) under the Marine Strategy Framework Directive (MSFD).

At this stage it is expected that the regional discussions will reach an agreement on the approach to phasing. We are seeking the views of our stakeholders through the consultation to help inform our negotiating position.

b. Quota management

Management processes

Changes will be made to quota management for those vessels within a Producer Organisation (PO) and those whose quota is managed by the MMO.

POs will continue to manage its collective quota holdings across its member vessels, including exchanging quota with other groups and internationally. The rules for these vessels are set out

annually in the Quota Management rules. We will update the QM rules to reflect the introduction of the landing obligation.¹²

To increase the flexibility in the quota management system for the under 10 metre and non-sector vessels, whose quota is managed by the MMO, we propose to increase the time period over which catch limits are allocated, on a stock by stock basis. Currently fishermen are allocated monthly limits and when the limit for any given species is reached they are unable to land any more fish of that species. Providing them with allocations for a longer time period e.g. 3 month allocations will give fishermen more flexibility in their fishing activity while still allowing managers to retain a degree of control over total fishing activity and uptake of quota.

Quota flexibilities

Under the preferred option the POs and the MMO, will have full access to the additional quota flexibilities outlined in the CFP basic regulation.

These flexibilities were created to help fishermen match their catch to quota, allowing them to land and sell their entire catch.

The flexibilities are:

- Inter-annual Flexibility: Member States may bank or borrow quota for stocks subject to the landing obligation between years up to a maximum of 10%¹³.
- Interspecies Flexibility (IF): ability to count unintended non-target catches against the quota of the target species, providing the non-target species is within safe biological limits, and the quota to be deducted doesn't exceed 9% of the quota of the target species. E.g. A fisherman is at sea targeting cod (for which he has quota) he also captures haddock (for which he has run out of quota). Using IF he will be able to convert up to 9% of his cod quota into additional haddock 'quota'. This enables him to land his unintended catch of haddock and thereby remain compliant with the landing obligation. The interspecies flexibility will also help address problems with choke species, where fisheries could be closed if quota for a particular species is exhausted.

The application of Interspecies Flexibility is at Member State discretion but the regional groups have agreed to monitor its use within a sea area to limit any unintended consequences and put in place a quota convertibility system to prevent abuse of this provision for economic gain i.e. targeting a high value quota species and counting it against a lower value species.

Quota uplift

As explained previously the basic CFP regulation changes the way quotas are to be calculated to take account of the change to limiting what is caught; on the basis that discarding will no longer continue. Effectively it should result in quota uplifts, all other things remaining equal, as the discard estimates of current stock assessments are converted into quota. The purpose of this is to support industry in the implementation of the landing obligation by providing additional quota to help cover their previous discards.

¹² Link to QM rules.

¹³ Currently the banking and borrowing rates set by the EU are predominantly set at 5% of a TAC.

The level and extent of any quota uplift is very uncertain at this stage. They will be considered each year as part of the usual annual round of negotiations on fishing opportunities for those stocks subject to the landing obligation. Any uplift will depend on many factors including the state of the stock, Maximum Sustainable Yield (MSY) commitments, the quality of data on discarding rates, how the discard ban is phased in over time, whether exemptions are provided for, 3rd country agreements (these are in place to manage fish stocks which are shared with countries such as Norway that lie outside the EU) and the robustness of our control and enforcement programme. If quota uplifts are agreed, any additional quota will be allocated to Member States in line with relative stability, and England will receive a proportion of the UK quota uplift in line with current quota allocation arrangements.

Once received, there are a number of ways quota uplifts could be allocated. This includes:

- allocating on a FQA basis;
- holding the uplift at a national level and using it to reward/incentivise good behaviour such as using the most selective gears or to address unexpected issues;
- allocating on the basis of discard rates, supporting those who have the largest problems with the landing obligation e.g. those with little or no quota at present, or those with the largest discard problems.

The consultation will be used to identify the most appropriate options for the fishing industry.

c. Regionalisation

Under the preferred option the UK Government would work with other Member States who have a direct interest in demersal fisheries, the relevant Advisory Councils and stakeholders to agree regional fisheries management measures. This would mean that industry will be operating under a more appropriate management regime, rather than a one size fits all approach. This will include, if scientifically justified, agreeing the use of the high survivability and *de minimis* exemptions in a regional Discard Plan. These exemptions, which will need to be put forward by Member States and supported by robust scientific evidence, are designed to help fishermen operate under the demersal landing obligation, by reducing the costs of compliance. During the summer of 2014 Defra held discussions with, and sent out letters to, the key industry bodies (the New Under Ten's Fishermen's Association (NUTFA), the National Federation of Fishermen's Organisations (NFFO) and the UK Association of Fish Producer Organisations (UKAFPO)) regarding what needs they may have for the use of exemptions. The key issues identified by the fishing industry included:

- Survivability of plaice, skates and rays and Nephrops;
- De minimis considerations for handling low levels of unwanted catches.

We will work further with industry to better understand their needs and with scientists to understand the feasibility of gaining exemptions. If agreed we would grant full access to the exemptions to the relevant sectors of the fleet in order to minimise the costs associated with the landing obligation.

d. Catch Management

Under the preferred option industry will be required to comply with the technical conservation and control regulations for separate storage and recording of catch below MCRS whilst at sea.

Catches will be subject to specific regulations depending on the market they enter. Under this option Defra will provide information to registered landing ports on the necessary requirements for markets for human and non-human catches. This will ensure that industry is aware of their responsibilities under a landing obligation and help focus their attention on securing, for their own benefit, the maximum value for each fish they catch.

A task force has been established in order to understand the problems facing the industry and the interventions that would most effectively mitigate risks in managing catch onshore under a landing obligation. A number of issues have been identified, through pre-consultation with industry, including:

- Making sure it is clear who has responsibility for complying with the regulations that apply (CFP, animal by-products regulations and hygiene regulations) to catches which are unmarketable and those that are below MCRS and therefore not for direct human consumption;
- The need for appropriate storage of fish in port in order to access non-human consumption markets;
- Transport of material to non-human consumption markets;
- Changes in ports and markets services to manage catch both for human and non-human consumption;
- Availability of markets for fish that is suitable for human consumption (i.e. above MRCS) but small or less desirable species;
- Potential impacts on existing markets from changes in the volume and quality of the catch marketed. Uplifts could result in more fish being landed but this may be of a different composition of species and sizes until more selective methodologies are fully adopted. The changes in supply could impact market prices.

Under this option the Government would assist industry in exploring potential solutions and seek to encourage previously discarded catch to be used effectively. Pre-consultation has highlighted that the issues identified above will have a varied impact at different ports and with different segments of the industry so a one size fits all approach to solutions would not be appropriate. To support the industries adaptation to the new requirements a number of tools could be used and the key areas for action will be explored with the task force, these may include:

- Improving access to a range of non-human consumption markets for disposal of fish by-products;
- Stimulating development of novel markets for less valuable catch for human consumption;
- Promotion of funding streams e.g. EMFF in high risk areas to store catch effectively to optimise its use; and,
- Adaptation of existing systems, in particular transport, in order to move unwanted catch.

The task force will continue to work through the issues and identify appropriate and tailored solutions. We will use the responses to the consultation in that analysis.

e. Monitoring and enforcement

Under the preferred option a revised system of monitoring and enforcement, respecting the principle of efficiency and proportionality,¹⁴ would be implemented from 1 January 2016 which will apply to all English vessels, in line with the agreed phasing of the DLO. This change is needed because the current monitoring and enforcement regime is not suitable to ensure compliance with the demersal landing obligation as monitoring is primarily focused on land based checks rather than at sea monitoring. At sea monitoring is crucial under the landing obligation as the point at which the catch is counted against quota is the point at which the fish is caught at sea.

An at sea monitoring system will provide greater confidence in compliance with the new landing obligation requirements, which in turn will incentivise fishermen to alter their current fishing practices. Adequate enforcement of the demersal landing obligation, ensuring compliance, will be necessary to secure any uplift in quota, as it is set out in the CFP regulation that quota uplifts will only be awarded where there is confidence fishermen are no longer discarding.

Furthermore, the CFP basic regulation¹⁵ states that in order to ensure compliance with the rules of the CFP an effective system of control, inspection and enforcement is required which includes the establishment of effective, proportionate and dissuasive penalties. Failure to appropriately alter the English monitoring regime would be viewed as a failure to implement this requirement, introducing a risk of infraction proceedings by the Commission, and the risk of heavy fines on Government and industry in addition to reducing the likely level of uplift.

Under the preferred option there are no proposed changes to the recording requirements of the English demersal industry. Recording requirements currently include the completion of fishing e-logs for all vessels over 12 metres, paper logbooks for vessels between 10-12 metres in length and landing declarations and sales notes for vessels under 10 metres in length.

The preferred option would be risk based, utilising a mixture of tools available to us:

- Remote Electronic Monitoring (REM) systems
- Vessel detection systems (VDS)
- Control Observers
- At sea inspection with patrol vessels
- At-sea controls with aircraft
- Catch composition comparison based on a reference fleet
- Controls at landing

Decisions on control and monitoring remain the prerogative of the individual Member States, but regional groups are working together to evaluate the available monitoring tools and their applicability to different sectors of the fishing fleet depending on their compliance risk. Therefore, at this time we are unable to set out exactly what combination of enforcement tools we will deploy in England, but Section 3 outlines the costs to industry of the available tools.

¹⁴ Article 15(13) of the CFP basic regulation

¹⁵ Article 36 of the CFP basic regulation

The consultation will help determine the most appropriate control and enforcement regime but additionally we have set up a Control Experts group in England to consider the implications of policy decisions of the implementation of the landing obligation on the control and monitoring of the fleet.

3. Costs and Benefits of the preferred option

This section outlines the costs and benefits to Government and industry of the preferred policy option compared to the do nothing option (option 0). These costs and benefits have been monetised as far as possible. Costs and benefits are calculated over a 10 year period as per Green Book guidance, therefore the analysis period is 2016-2025.

3.1 Assumptions

- 10 year appraisal period;
- 3.5% discount rate;
- 2013 prices and 2016 base year; and
- EANCB calculation: 2009 prices and 2010 base year.

3.2 Structure of the English demersal fleet

In 2013 there were 1,229 and 479 English registered vessels operating in the North West waters and North Sea respectively. Combined these vessels landed over 50,000 tonnes of demersal quota species with approximately £100million (Table A2, Annex A).

It is helpful to consider fishing operations on a regional basis as operations in the two regions of interest to the UK, the North West Waters and the North Sea, differ significantly in terms of ports of landing and species of interest. The ports where the English fleet landed the most significant proportion of catch from the North Sea region were Harlingen (the Netherlands), Peterhead (Scotland), Hantsholm (Denmark) and North Shields; and from the North West Waters it was Newlyn, Brixham, Castletownbere (Ireland) and Milford Haven (Wales) (Table A3, Annex A).

The catches by the demersal fleet are of a wide range of species reflecting the mixed nature of the fisheries targeting demersal stocks. The most landed species were plaice, saithe, anglerfish and megrim, however, cod, Nephrops and sole are important high value catches (Figures A1 and A2, Annex A).

In terms of fleet structure the larger vessels (over 24m) landed over 70% of demersal quota species in the North Sea and almost 50% in the North West Waters. While there are over 250 under 10m vessels operating in the North Sea and 1,000 in the North West waters, only 31% and 17% respectively landed over 5t of demersal quota species in 2013.¹⁶

3.3 Government Costs

There will be no additional costs to Government from the changes proposed as the activities are already undertaken in some form under the baseline. For example officials currently working on fisheries management measures will continue to do so but using the new procedures and the current enforcement budget will be used to provide at sea and on shore monitoring rather than just on shore monitoring as under the baseline. The costs to Government of the preferred option are therefore met by the reallocation or reprioritisation of current resources. In addition

¹⁶ MMO analysis of 2013 UK fisheries activity data (IFISH).

Government will make use of funding that is made available through the new EU funding mechanism – EMFF. As such, there are no additional costs to Government from this option.

3.4 Phasing

Under option 0 England would not engage with the phasing discussion at the regional level and therefore would be subject to whichever approach is decided by other Member States. Under option 1 England would engage at a regional level to ensure the best phasing approach is adopted for the benefit of the English fleet. The Member States and Advisory Councils are currently focusing on the proposals described in section 2.2a and variants thereof. We will be seeking evidence on the best approach as part of the consultation. Regarding phasing post 2016, the two potential approaches are:

- i) a **two-phased approach** whereby further phasing of the demersal landing obligation is delayed until 2019; or
- ii) a **Multi-phased approach** whereby the number of stocks subject to the landing obligation gradually increases between 2017 and 2019.

The main impacts of phasing, for both industry and Government, come from who is covered by the DLO at what point, noting that the whole industry will be covered by 2019. This creates two main risks:

- Phasing may have an impact on the level of quota uplift allocated and its timing. If there is still some discarding of a stock, a quota uplift may not be allocated until that stock is fully subject to the DLO. For example if cod cannot be discarded from 2016 by cod fishermen but is still being discarded by Nephrops fishermen then the cod uplift may not be issued until the point at which all cod catches are subject to the landing obligation. If the multi-phased approach is adopted the quota uplift may be available earlier.
- There is a risk that phasing may incentivise discarding in fisheries not yet covered by the DLO as trading in choke species quota will become economically attractive i.e. a Nephrops vessel may have some cod quota but in 2016 as cod isn't yet covered for him, he will sell his cod quota and continue to catch and discard cod. The multi-phased approach may reduce this happening earlier if for example all cod is covered before 2019.

The current uncertainty around phasing means it is not possible to quantify the costs and benefits to industry or Government at this stage. However, both of the approaches post 2016 set out would meet the legal requirements of the basic regulation. The two-phased approach gives industry and Government more time to prepare for the extension of the DLO to all species whereas the multi-phased approach allows Government and industry to identify and tackle problems on a stock by stock basis as stocks are covered by the DLO avoiding a big bang approach in 2019.

3.5 Quota Management

Management processes

There will be no significant costs to industry from the changes in quota management rules however there will be a cost to Government of adapting the quota management databases to incorporate any changes agreed. There may also be increased administrative costs to the MMO

in checking the data entries made by the fishing industry under the new rules. Benefits to industry are unquantifiable but will come from increased efficiency and profitability for fisherman from being better able to plan and control their businesses for example from being able to plan their activities over longer periods (this should help them maximise their quota and avoid the risk of losing quota at the end of each month or year), being able to fish at the optimal time and under optimal conditions

Quota Flexibilities

There are no costs to Government or industry from greater quota flexibilities. Benefits to industry are unquantifiable at present but will come from access to the banking and borrowing and interspecies flexibilities to help match catch to quota and prevent choke issues.

Quota Uplift

The principal benefit for industry from quota management will come from the additional fish landed and sold as a result of the quota uplift. To estimate the scale of this we have analysed available discard rates which were published in the ICES advice for 2015 TACs.¹⁷ A representative sample of the published discard rates is contained in Table 2. It is expected that ICES will provide further advice on discard rates in their advice for 2016 quotas ahead of the first year of the demersal landing obligation.

Table 2 - Estimated Discard Rates

Selected Stocks	Discard Rate (identified from ICES advice for 2015)
Cod (IV)	25.0%
Haddock (IV)	11.0%
Whiting (IV)	39.3%
Saithe (IV)	9.4%
Nephrops (IV)	0.0%
Plaice (IV)	28.4%
Sole (IV)	20.0%
Hake (IIa & IV)	0.0%
Plaice (VIIa)	68.3%
Cod Celtic Sea (VIIbc,e-k)	9.0%
Cod - (VIIId)	25.0%
Haddock Celtic Sea (VIIb-k)	46.3%
Whiting Celtic Sea (VIIb-k)	23.0%
Saithe (VII)	0.0%
Hake (VI and VII)	0.0%
Nephrops (VII)	0.0%
Average Discard Rate	19.0%

This suggests that there is currently an average discard rate of 19% across the demersal fisheries in which England has an interest. However in light of the poor health of some demersal fish stocks and the need to reduce fishing pressure to deliver the legal commitment to fish

¹⁷ Note that due to a lack of data, discard rates are not known for a number of species and in those instances a discard rate of 0% has been applied.

sustainably we have assumed that the uplift that may be granted will be no more than half of the estimated discard rate (9.5%).

Applying this discard rate to the current amount of demersal quota held by English vessels¹⁸ suggests the uplift could result in an additional 6,042 tonnes of quota for demersal species to be caught and landed.

The section on catch management below explains the potential value industry could extract from the use of this additional fish as the value depends on what happens to the fish once it comes ashore.

How the quota uplift is allocated will not impact the overall benefit to industry, but it will have impacts at the individual vessel level and we will use the consultation to help identify the most cost effective approach. Table 3 sets out the qualitative costs and benefits of some of the alternative approaches to how the quota uplift could be managed.

Table 3: Description of the costs and benefits of quota uplift options

	Benefits	Costs
Allocation on the basis of FQA's.	<p>Transparent basis on which quota is allocated with data already available to support allocation.</p> <p>Those who already employ best practices such as fishing selectively and have low discard rates will benefit most.</p> <p>Meets expectation from some within the industry that those with FQAs will gain from the uplift.</p>	<p>May not provide a solution for those with a by-catch issue and low levels of quota including the small scale fleet.</p> <p>Does not incentivise change in selectivity or fishing patterns.</p> <p>Potential for non-active fishermen to benefit financially by leasing quota at higher prices while those actively fishing struggle to find sources of additional quota to match to catches.</p>
Hold uplift at national level	<p>Ensures that the uplift can be used as an emergency fund to address problem areas that emerge as operators adapt to the new conditions.</p> <p>Provides opportunities to incentivise particular behaviours – e.g. increasing selectivity, taking part in reference fleets.</p> <p>Supported by some segments of the industry.</p>	<p>Less empowerment to the industry to manage quota themselves and develop creative solutions for operating under the ban.</p> <p>Higher cost to Government in managing the additional quota.</p> <p>May result in a race to fish as some fishermen exhaust their quotas quickly and make demands on the Government held reserve.</p>
Allocation of uplift based on discard rates	<p>Some discarding data is available for a significant proportion of the fleet which will enable uplift quota to be allocated.</p> <p>Quota is received by those that have currently discarded including those most likely to have difficulties complying with the ban.</p>	<p>The discard rates for small vessels are unknown and therefore they are unlikely to benefit.</p> <p>Fails to reward those that have already taken measures to improve selectivity as they would receive little or no uplift.</p> <p>Doesn't incentivise use of more selective fishing gears or participation in initiatives to implement and enforce the discard ban.</p>

¹⁸ The current demersal quotas for England is just under 64,000 tonnes.

		Significant administrative costs to government in identifying which vessels should receive quota and at what level.
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3.6 Regionalisation

Regional discussions on the specific exemptions that can be used in the demersal discard plans are currently ongoing and therefore it is not possible to estimate the costs and benefits at present. However a qualitative description of the costs and benefits to industry and government of the regional approach are set out in Table 4.

Table 4: Costs and benefits of a regional approach

	Industry	Government
Costs	No additional costs	No additional costs as officials currently working on fisheries management measures will continue to do so but using the new procedures.
Benefits	Industry will benefit from the development and introduction of tailored fisheries management measures which have been designed to address the specific challenges of each regional fishery. Industry can access scientifically justified exemptions to the landing obligation once agreed using the regionalisation process. These exemptions could relate to high survivability or <i>de minimis</i> rules. This will benefit industry by allowing them to operate more efficiently under the DLO. Faster decision making at regional level will reduce the time needed to renegotiate changes to inappropriate rules that adverse impact fishing businesses.	Government will benefit from more informed and simpler fisheries management that will result from regional decision making, this includes efficient and quicker negotiation of fisheries issues at regional, rather than EU level which will help with fisheries management and enable a more appropriate regulatory framework to be in place for our fisheries.

3.7 Catch Management

There are no significant costs to industry or Government from the implementation of onshore management, there may be small costs to industry and Government from engagement in the task force but the benefits of this are anticipated to exceed the costs.

Under the preferred option Government will aid industry to maximise the value of the entire catch. Using the figures from section 3.5 on additional tonnage from the quota uplift expected under the demersal landing obligation we can calculate the likely financial benefits to the industry from having to land all they catch.

The current average market price of demersal fish per tonne is £2,000¹⁹, however, we would assume that the value of this additional fish, which is currently discarded, would be less than that. This is because research commissioned by Seafish²⁰ showed that discarding occurs for a number of reasons: the majority of fish (50%) is discarded because of a lack of market, 25% is

¹⁹ 2013 Total value of demersal quota species landed by English vessels divided by the total tonnage landed.

²⁰ Fishing for the Markets, Seafish.

discarded due to being undersized and 25% is due to lack of quota. This suggests that up to 75% of the quota uplift may be fish of lower value if the behaviour of fisherman does not, or is unable to, change to increase selectivity.

Discussions with operators from fishmeal plants have indicated they may be willing to pay up to £200 per tonne for fish that cannot enter the human food chain. This value is used as the worst case scenario in calculating the potential benefit as some ‘discarded’ fish could sell for full value. A more optimistic scenario is that this additional fish could fetch an average of £1,000 per tonne – or 50% of the current market average – if a significant percentage entered the human consumption market. This is based on assumptions that: new markets may develop for species where previously no market existed; lack of quota may no longer be an issue (due to the quota uplift) and fishermen change their behaviour and practices to better target higher quality and larger fish. However, with all of these changes it is unlikely that catches of low value, smaller fish would be eliminated and therefore we assume £1,000 a tonne and not the average market price of £2,000 per tonne.

Table 5 illustrates the likely benefit to fishermen from the additional quota from the uplift based on the range of market values. The turnover that fishermen may gain from the additional landing of this fish is therefore expected to be between £1.2m - £6.0 million depending on the average market price. These figures are dependent on a large number of assumptions (including the amount of quota uplift and what fish is caught) and therefore should be seen as illustrative and as such are not used as part of a cost benefit analysis.

Table 5: Potential Benefit of Quota Uplifts

Uplifted tonnage	Market Value: £200 per tonne	Market Value: £1,000 per tonne
6,042	£1,208,400	£6,042,000

We are working with the industry task force to refine the estimates of additional landings and identify a tool kit of measures to assist fishermen and ports in adapting to handling fish not for human consumption as efficiently as possible. This will allow business to benefit from the additional catch that is to be brought ashore under quota uplifts.

3.8 Monitoring and enforcement

Due to uncertainty around phasing at this time, it is assumed that all monitoring and enforcement comes into force from the first of January 2016. This will result in the costs being over estimated as decisions on phasing may mean that the whole fleet is not covered by the landing obligation in 2016.

There are 1,629 vessels in the demersal fleet, 136 of them are over 15m long and account for over 80% of the catch (41,448 tonnes) of demersal quota species; Table 6 below illustrates the structure of the fleet.

Table 6: Number of English vessels, by length group, landing demersal quota species during 2013²¹

Length Group	Live Weight (t)	No. Vessels	No. Vessels landing >5t	Percentage of landings
24m+	31,764	72	69	63
15-23.99m	9,684	64	61	19
12-14.99m	2,837	89	66	6
10.1-11.99m	1,540	91	49	3
0-10m	4,954	1,313	247	10
Total	50,779	1,629	492	100

The only direct costs to industry from the amended management regime relates to monitoring and enforcement. As discussed there are a number of tools that can be used for monitoring and enforcement and at this stage the exact nature of the approach has not been determined. However, of all the tools only REM has a direct cost to industry. This analysis therefore considers the maximum number of vessels that would be required to carry REM systems in order to illustrate the highest cost that may be borne by the industry.

A risk based approach to monitoring and enforcement the DLO will be used. An illustrative example of a risk based approach would see all the over 15m vessels fitted with an REM system (136 vessels)²² as 80% of demersal fish is caught by these vessels. It is however important to note it is unlikely that this number of vessels would be fitted with REM as the costs to Government (of analysing the electronic records and purchasing the necessary equipment) of this approach would render this approach prohibitively expensive²³. This number of vessels should therefore be seen as a maximum and that the linked consultation is seeking views on the number of vessels (across the whole fleet) across the broad range of English fisheries could be subject to REM monitoring.

The costs to industry are incurred as a result of vessels needing to be docked to have the REM systems fitted and for the swapping of hard-drives. This can be managed around the current fishing patterns of the vessels, ensuring they are not subject to a cost from lost fishing time. However, the presence of the skipper or vessel owner is required for a proportion of the REM fitting (expected to take 1 day). Evidence from Government trials where REM systems have been used indicates that the cost to industry will be around £390 per vessel, based on an average wage of £52 p/h²⁴. This equates to a cost to industry of £53,040 which occurs in 2016 and 2021 (as the REM systems have a 5 year lifetime). The total costs are £106,080 over 10

²¹ MMO analysis of 2013 UK fisheries activity data (IFISH).

²² The number of vessels that will actually be fitted will be determined by the enforcement budget as although the costs to business are low from REM there is a cost to government from the capital cost of the cameras, their fitting and analysis of the footage. We will be looking to establish the most cost effective way to monitor the fleet in the budget that exists – this is likely to prevent REM being put on all over 15m vessels.

²³ It is estimated that in years 1 and 5 it would cost Government around £17,000 per vessel to buy and install the CCTV cameras, if 136 vessels were fitted with cameras this would cost in the region of £2.3m for the capital costs excluding the high cost of evaluation of the data, (the entire enforcement budget for fisheries is around £8m). The costs every 5 years are treated as an ongoing cost as they occur every 5 years rather than a transitional cost which would be a one off cost.

²⁴ Labour costs include NI, employer pension contributions and overheads.

years or £10,608 per year on average²⁵. The capital and installation costs of the REM equipment will be met by Government. The quantified costs to business are set out in Table 7.

Table 7: Quantified cost to business

	£	£(m)
Total Costs (2013 prices)	106,080	0.106
Present value cost (2013 prices 2016 base year)	97,698	0.098
Business Net Present Cost (2013 prices, 2016 base year)	97,698	0.098
EANCB (2009 prices and 2010 base year)	8525	0.009

The key benefits to the industry of the revised monitoring and enforcement regime include access to the quota uplift which cannot be secured without a sufficiently robust regime.

Costs to Government will occur as a result of whatever new regime is put in place however the cost of this regime will not be additional to the existing regime.

²⁵ Even if REM was fitted on all over 10m vessels and 5% of the under 10m vessels (as a reference fleet) the cost to business would be £148,844 in years 1 and 6 or £297,689 total cost. This situation is for illustrative purposes only to show that the costs to business will be lower than £1m as this scenario would not occur as the capital costs alone would cost the government £6.5m.

Small firm impact

No firms are exempt from this policy as it is intended to ensure that the regime the industry is working under reflects the landing obligation, an EU objective, and that it is implemented in the most cost effective and efficient way.

One in Two Out status

The demersal landing obligation is an EU obligation as defined in the reformed CFP basic regulation, with no further implementing legislation necessary. The policy objectives are to implement the demersal landing obligation in the most efficient and cost effective way, ensuring minimum cost to industry, and is therefore not gold plating. As such, this measure does not fall under one in two out rules.

4. Conclusion

The demersal landing obligation will come into force from the 1st January 2016. It is important that the current fisheries management regime is amended to reflect the DLO. This will require changes to 5 key areas of fisheries management: phasing; quota management; regionalisation; on shore management and monitoring and enforcement.

There are no additional costs to Government of making these changes as Government will amend the current regime to reflect the demands of the new regime by reprioritising and redirecting existing resources (for example in terms of monitoring and enforcement it will move from a land based approach to a land and sea based approach). There are benefits to Government from engaging in the regional decision making as it is anticipated that this will be more efficient and result in better outcomes for England than the previous European lead system.

There are anticipated to be few costs to industry from the implementation of the DLO. The potential quantified costs will occur as a result of costs to industry of having to have skippers/owners on board should REM be fitted to their vessels. A worst case scenario is estimated assuming 136 vessels – this gives a net present cost to industry of £0.098m.

Benefits to industry arise from a more appropriate management regime, a regionalisation process which results in decisions being made that are more appropriate to the regional fishery, quota flexibilities which improve fisherman's abilities to manage their business and thus increase profitability and a monitoring and enforcement regime that is sufficient as to allow access to quota uplift that could increase the turnover of the industry by £1.2 - £6.0m per year.

Due to the nature of the areas and the regional decision making process there are currently a large number of unknowns and therefore more detailed analysis will be conducted following consultation and as decisions are taken at a regional level to ensure that the amended management regime is the most cost effective and provides the industry with the best opportunities to maximise the benefits of the potential quota uplift.

Annex A: Discarding and the English demersal industry

Introduction to discarding

Discarding is the return of a proportion of catch to the sea. This includes returning catch to the sea once it has been brought on board the vessel and releasing catch from fishing gear while still in the water (known as slipping).

Previously it has not been illegal for the fishing industry to discard fish. Once the various landing obligations come into force for each fishery it will be illegal to discard fish in any fishery through any process unless specific exemptions are granted.

To help determine the most effective solution to prevent discarding it is important to understand those issues that result in discarding in the first instance. Defra's 'Fishing for the Markets' report published in 2011 and the EU Commission's own Impact Assessment on Discard Reducing Policies identified the following reasons why fishermen discard:

- Catching fish which they do not have quota for and are therefore unable to land and sell;
- Catching species which are damaged or less profitable;
- Catching undersize fish which are not legally permitted to be sold;
- High grading²⁶;
- Technical regulations intended to protect stocks that have unintended consequence; and
- Absence or limited accessibility to alternative markets for fish which are unpopular or cannot be sold for human consumption.

The policy options identified in this Impact Assessment pick up on the challenges that each of these issues raised in terms of the implementation of the landing obligation and the movement from the old to the new regime.

The English demersal industry

There were 1229 English vessels landing demersal quota species operating in the North West Waters and 479 in the North Sea in 2013. These vessels caught 50,778 tonnes of demersal fish (Table A1). This resulted in landings with an approximate value of ~£100m.

Table A1: 2013 English fleet landings of demersal species subject to the demersal landing obligation- both North Sea and North West Waters regions.

Length Group	Live Weight (t)		Value (£)	
	landings	% of total	landings	% of total
0-10m	4,954.21	9.7	11,850,301.40	11.5
10.1-11.99m	1,539.85	3.0	3,181,394.30	3.1
12-14.99m	2,836.92	5.6	5,839,587.81	5.6
15-23.99m	9,683.74	19.1	19,889,511.08	19.2
24m+	31,764.05	62.6	62,736,375.14	60.6
Total	50,778.76		103,497,169.73	

Source: MMO analysis of 2013 UK fisheries activity data (IFISH).

Examining the fleets in more detail it is clear that only 35% of the fleet in the North Sea (Table A2) and 28% of the fleet in the North West waters (Table A3) land over 5 tonnes of demersal quota species. In implementing the landing obligation this means that a number of vessels will be affected with only low levels of landings of quota species.

Table A2: 2013 English demersal quota fleet landings in the North Sea Region

Length Group	Live Weight (t)		No. Vessels	No. Vessels landing >5t
	landings	% of total		
0-10m	1994.7	6.7	263	82
10.1-11.99m	256.0	0.9	30	12
12-14.99m	791.2	2.7	24	20
15-23.99m	5019.5	16.9	33	28
24m+	21607.8	72.8	29	26
Total	29,669.2		479	168

MMO analysis of 2013 UK fisheries activity data (IFISH).

Table A3: 2013 English demersal quota fleet landings in the North West Waters

Length Group	Live Weight (t)		No. Vessels	No. Vessels landing >5t
	landings	% of total		
0-10m	2959.6	14.0	1000	172
10.1-11.99m	1283.9	6.1	63	39
12-14.99m	2045.7	9.7	73	52
15-23.99m	4664.3	22.1	37	35
24m+	10156.2	48.1	56	52
Total	21,109.6		1229	350

MMO analysis of 2013 UK fisheries activity data (IFISH).