



The challenges of the landing obligation in EU fisheries



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ABSTRACT

A feasibility study was conducted on the impacts of the new Common Fisheries Policy (CFP) rules requiring catches in regulated fisheries to be landed and counted against quotas of each Member State - the landing obligation (LO), and that catch of species subject to the LO below a minimum conservation reference size (MCRS) be restricted to purposes other than direct human consumption. The aim was to estimate the level of discarded fish likely to be covered by the new rules, the impact of the rules on EU fisheries and the regulatory challenges and responses to them. Data from EU's Scientific, Technical and Economic Committee on Fisheries (STECF) database were analysed to estimate the volume of unwanted catches produced by EU fisheries. Views were sought from policy officials and fisheries scientists through a questionnaire on the implications of the LO and the control of fisheries across Member States, and the potential adjustments that might be needed. Findings show that 11% (44,000 t) of the total catches of EU countries from which data were available are of fish under MCRS. The species with the highest volume of undersized discards associated with the lowest quota, which would potentially restrict the fishing opportunities for other quota species (i.e. choke species), are plaice and haddock with 18,000 and 14,000 t of undersized fish respectively, followed by whiting and cod with 5000 and 6000 t of undersized fish respectively. Discards data shows that the Netherlands, United Kingdom, France and Belgium will be most affected by landings for non-human markets. Findings also show that existing infrastructure at landing ports in all Member States is limited because there are currently limited facilities in place to handle animal by-products produced by the catching sector. Policy officials maintained that while they could support the fishing industry through funding programmes, it is the responsibility of fishers to ensure they have the right infrastructure to handle unwanted catches. The expectation is that the LO combined with the restriction to non-human consumption purposes will encourage fishers to internalise the costs of catching unwanted fish and motivate them to avoid unwanted catch. This will be realised if sufficient flexibility is given to fishers to find their own solutions to reducing unwanted catches. It is concluded that gear technology measures exist to enable the regulated fisheries to increase gear selectivity.

1. Introduction

High-levels of discards have been considered a big problem in European and global fisheries for many years [1,2]. Discards vary throughout EU fisheries – in some cases representing more than 60% of the catch, while in other cases – including pelagic fisheries – being very low [3]. In global fisheries, Kelleher [1] estimated that at least 7.3 million tonnes of catch are thrown away each year. There are several ecological and socioeconomic reasons for wanting to reduce fisheries discards. Discarding of dead or dying catch results in fishing mortality with no economic benefit as the catch cannot be sold or eaten, and

cannot contribute to the fishery in future years [4]. Alverson et al. [5] suggest that the foregone value of discards may match that of landings, equating to potentially billions of dollars lost. For commercial species discarding not only represents a waste of resources but may also threaten the future of stocks, endangering fisheries and the livelihoods of many fishers [6]. One of the major issues associated with discarding commercial species, particularly in EU fisheries, is that it means that catches are higher than the Total Allowable Catches (TAC), which can result in fishing mortality exceeding targets [7–9]. Non-target species may also be overexploited due to incidental capture and discarding [10]. Furthermore, the impacts of discarding extend beyond the

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commercial and non-target fish species [11], affecting the balance, diversity and functioning of ecosystems [4] including disruption of ecosystem nutrient cycles [7,12]. Discarding is therefore a major problem especially in mixed fisheries where it threatens endangered species, wasting resources, increasing fishery costs and impacting on food webs [13,14].

The need to reduce discards in European fisheries has long been recognised and the elimination of discarding and unwanted catches was identified as one of the main objectives under the 2012 reform of the Common Fisheries Policy (CFP). Article 15 of the new CFP Basic Regulation (Council Regulation No 1380/2013) introduces new rules on discards including: (i) a landing obligation (LO) under which all catches of regulated species must be landed and counted against quotas of each Member State; and (ii) a requirement that catch of species subject to the LO below a minimum conservation reference size (MCRS) be restricted to purposes other than direct human consumption [15]. The new regulation was introduced on 1 January 2015 for pelagic fish which have a TAC such as mackerel, herring and sprat, and is being rolled out to all demersal species which have TACs in a phased manner between 2016 and 2019. The assumption behind the LO is that fishers will be incentivised to avoid catching fish under MCRS because it will be deducted from their catch quota and have to be sold in non-human consumption markets, with lower profit than that which can be achieved from the human consumption market [16,17]. These new rules for discards are the most important changes to fisheries management in the EU since the creation of the CFP, and therefore feasibility studies are needed to understand the foreseeable challenges and shortcomings of the new policy.

The LO is expected not only to gradually end discarding of dead fish, but also record fishing mortality more comprehensively and thereby improve the quality of data used for scientific stock assessments [15]. However, discard bans are a relatively novel approach to address the discards problem, and still only used in a relatively small number of countries (e.g. Faroe Islands, Iceland, Norway and New Zealand) or particular fisheries (e.g. US Alaskan and Canada's British Columbian ground fish trawl fisheries) [16,18]. Furthermore, past evidence shows that banning discards only works if supported by considerable data collection on the fishery (discarding rates, reasons for discarding, etc.) and integrated with incentives for compliance and additional mitigation measures [16,19]. In a management system with extensive mixed fisheries such as the EU, a LO could be particularly challenging for the viability of these fisheries, due to the high potential for 'choke' species (species with the lowest quota in a mixed-fishery, which restrict the fishing opportunities for other quota species) [20]. The LO therefore has potential socio-economic and ecological consequences that need to be understood. Further, the odds for success of an EU LO need to be determined to enable fisheries managers put in place supporting measures to ensure success when fully implemented.

One of the most challenging impacts of the LO is the need to find uses for the fish under MCRS. The combined effect of the requirements to land this fish and to restrict use for non-human consumption is to increase the supply of fish (of different species) for the non-human consumption market. This presents some infrastructural and market challenges, and to meet them, there may need to be adaptations both in ports and in business organisations [17]. For instance, landing ports will need to have sufficient equipment, infrastructure and logistics to deal not only with an increase in landings, but also landings subject to separate regulatory conditions and destined for separate markets. In a UK based practical trial of the LO, Catchpole et al. [21] concluded that some ports, particularly the smaller ports, will have problems of congestion, logistical difficulties and added cost (for staff and transport) to deal with the previously discarded fish. They also concluded that with the various exemptions from the LO [15], it is difficult to predict the actual levels of material that will be landed and therefore the level of investment required for additional infrastructure (transport, storage bins, physical space, freezers, cold rooms). Moreover, given that

discards cannot go to direct human consumption, they may need to fulfil all requirements provided in the EC Regulation 1224/2009, such as having a physical barrier to avoid cross contamination with catch destined for human consumption.

This feasibility study reviews the impacts of the new CFP rules requiring catches in regulated fisheries to be landed and counted against quotas of each Member State (the LO), and requiring that catch of species subject to the LO below a MCRS be restricted to purposes other than direct human consumption. The study estimates the level of discarded fish likely to be covered by the new rules, the impact of the rules on EU fisheries and the regulatory challenges and responses to them. The introduction of the LO has brought the need for a fundamental rethink of how fishing activities are managed and controlled in the EU. In particular, the LO provides an opportunity for a decisive move away from technical measures based on prescriptive rules to a radically more flexible and adaptable approach to achieving greater selectivity, focused at regional, fishery or even individual vessel level. Here, the major challenges facing the LO are explored and management recommendations are provided on how to (i) enforce the LO regulations, (ii) avoid unwanted catches, (iii) utilise fish under MCRS, and (iv) incentivise implementation of the LO.

2. Methods

2.1. Estimating levels of fish under the Minimum Conservation Reference Size (MCRS)

A preliminary question underlying the impact of the LO and the related requirements concerns estimates of the volume of unwanted catches produced by EU fisheries. Under the new CFP, only discarded fish under the MCRS will have to come ashore and put to the non-human consumption market. Unlike the old CFP, there will be no discarding of over-quota fish; all of which will go to the human consumption market. Estimates of the volume of fish under MCRS can provide not only an indication of the scale and nature of the problem, but also information on the ports that will be affected, the final destinations of catches, and potential products that they could be turned into.

The main source of data for estimating the volume of discards was the EU's Scientific, Technical and Economic Committee on Fisheries (STECF) database compiled by the STECF Expert Working Group on the Evaluation of Fishing Effort Regimes in European Waters [22]. Under the Data Collection Framework (DCF) (<http://stecf.jrc.ec.europa.eu/web/stecf/ewg1313>), each EU Member State is obliged to carry out data collection programmes and quantify levels of discards using on-board observers. The STECF database has details of landings and discards estimates for a range of fisheries, areas and species covering 2003–2012 [22]. As data are more reliable in more recent years, and the focus is on species subject to the LO, only information on TAC regulated species covering the years 2010–2012 were used.

This paper is also only focused on demersal species under quota. Pelagic species were excluded since they have limited data on discard levels. It is important to understand the quality and limitations of the data presented. Although observer programmes provide good quality data from the sampled trips, owing to their cost they often have low coverage; typically, around 1% of all of the fishing activities. These data are therefore extrapolated to the fleet level. The low sampling levels and the inherent variation in discarding levels between trips can lead to high variability in the data. Further, the low coverage of national sampling programmes means that confidence bounds around discard estimates are wide and in some cases discard estimates for fisheries 'borrow' information from other fisheries where no specific discard information is available for that fishery under the assumption that discard patterns are comparable. Therefore, owing to the incomplete nature of information on discarded fish and the assumptions used to generate estimates, care should be taken in the interpretation of these

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