North Western Waters Control Experts Group (CEG)

Evaluation of Compliance with the Landing Obligation

North Western Waters demersal species

2018 - 2020

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List of Acronyms

BMS	Below Minimum Size
CCTV	Closed Circuit Television
CDR	Commission Delegated Regulation
CEG	Control Expert Group
CFP	Common Fisheries Policy
COD	Cod (*Gadus morhua*)
DCF	Data Collection Framework
EM	Electronic Monitoring
FDI	Fisheries Dependent Information
FS	Fleet Segment
ICES	International Council for the Exploration of the Sea
HAD	Haddock (*Melanogrammus aeglefinus*)
HKE	Hake (*Merluccius merluccius*)
LH	Last haul
LO	Landing obligation
LSC	Legal size catches
MAP	Multiannual Plan
MCRS	Minimum Conservation Reference Size
MCS	Monitoring, Control and Surveillance
MS	Member States
NEP	Norway lobster (*Nephrops norvegicus*)
NS	North Sea
PLE	Plaice (*Pleuronectes platessa*)
POK	Saithe (*Pollachius virens*)
SD	ICES Subdivision
SBR	Blackspot seabream (*Pagellus bogaraveo*)
SOL	Sole (*Solea vulgaris*)
STECF	Scientific, Technical and Economic Committee for Fisheries
TCM	Technical Conservation Measures
WHG	Whiting (*Merlangius merlangus*)
WW	Western Waters

Executive summary

The current report presents the results of an analysis of discards in the North Western Waters fisheries targeting demersal species during the period 2018-2020 with the aim to evaluate their compliance with the provisions of the Landing Obligation (LO). This analysis was carried out following the request for assistance of the Member State (MS) Control Expert Group for the North Western Waters. The methodology described in the present document has been streamlined in relation to the methodology used in previous analysis on compliance carried out for the North Western Waters demersal fisheries for the period 2016 – 2017, to provide results on: (i) estimates of illegal discards based on the comparison of logbook and inspection information from the Last Haul (Method 1), (ii) discard estimates provided by scientific bodies (STECF and ICES) (Method 2) and (iii) the typology of the suspected infringements related to the non-compliance with the LO (Method 3). The current evaluation includes COD, ANF, NEP, SOL and PLE, in addition to the species already included in the previous evaluation (WHG, HKE and HAD). The current analysis followed the segmentation of the fleet presently used by EFCA which considered some changes compared to the one used in the previous analysis. The description of the results, in relation to trends in compliance over time, takes these changes into account.

The discard estimates have been assessed using the LH. Due to an insufficient number of LH for most FS and areas under consideration, scientific estimates have also been used to determine discard levels. Results indicate that for trawls, and specially for the smallest mesh size trawls (NWW02 trawls < 120 mm) and for the smallest mesh size beam trawls (NWW05 beam trawls < 120 mm), compliance with the LO has been low for some species such as PLE and WHG in most areas for the years considered. For other demersal species (e.g., COD, NEP), compliance has been assessed at low or medium levels depending on the area and year. There has been an apparent improvement in the reporting of BMS/DIM in the logbooks in 2020 when compared to previous years that has been incorporated into the assessment of compliance in the present evaluation. This is the case of HAD, PLE and WHG but only in some fleet segments and areas.

Lack of appropriate verified data has been a recurrent problem when evaluating compliance in this and other areas. The introduction of Electronic Monitoring systems and/or control observers could facilitate the collection of reliable discard data while acting also as control tools for effective enforcing the LO.

1 Introduction

Regulation (EU) No. 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy (CFP) introduced a phased obligation to land all catches of species subject to catch limits, the Landing Obligation (LO), and with MCRS in the Mediterranean Sea. From the perspective of the North Western Waters (NWW), the phasing introduced the obligation to land all catches of small pelagic species from 1 January 2015 and '*species which define the fisheries'* from 1 January 2016.

The Member State Control Expert Group (CEG) for the NWW region formally requested the assistance of EFCA to facilitate a compliance evaluation with the provisions of the LO in the NWW for eight demersal species: whiting (WHG), hake (HKE), haddock (HAD), cod (COD), anglerfish (ANF), Norway lobster (*Nephrops,* NEP), sole (SOL) and plaice (PLE) and one pelagic species, mackerel (MAC) for the period 2018-2020. This report presents the findings of this evaluation for the demersal species based on the fisheries segments (fleet segments, FS) used by EFCA currently (see Annex 1). This report includes the comparison with the previous evaluation conducted for WHG, HKE and HAD for the period of 2016-2017 and takes into account the changes in FS denomination.

The precise details of the implementation of the LO in the NWW region since 2015 were laid down in so-called '*discard plans*' adopted as delegated regulations by the European Commission for a period of no more than three years acting upon joint recommendations made by those Member States (MS) with interests in the fisheries. The applicable discard plans and other relevant legislation are briefly summarised below for the NWW demersal species. In NWW in 2015, only pelagic fisheries were subject to the LO.

2016

For demersal species, the discard plan laying down the provisions applying during 2016 was adopted as Commission Delegated Regulation (CDR) (EU) No. 2015/2438. This regulation placed the following demersal species under the LO as '*species which define the fisheries'* under Article 15 (1) of the CFP regulation: COD, HAD, WHG, saithe (POK), NEP, HKE and SOL. A survivability exemption was granted for NEP caught by pots, traps or creels in ICES division 6.a and subarea 7. *De minimis* exemptions for certain fisheries were provided for SOL, WHG and NEP.

2017

The CDR (EU) No. 2016/2375 repealed and replaced the foregoing discard plan. For 2017, the fisheries subject to the LO for the NWW were the same as in the previous year (with catches of COD,

HAD, WHG, POK, NEP, HKE and SOL), with the addition of fisheries targeting pollack (POL) and bycatches of PLE, megrims, SOL and HAD in certain fisheries. Survivability exemptions were granted for SOL and NEP, linked with specific technical gear restrictions. *De minimis* exemptions were applied to catches of SOL, WHG and NEP caught using certain gears and under certain Technical Conservation Measures (TCM) restrictions.

2018

CDR (EU) No. 2018/46 repealed and replaced CDR EU 2016/2375. For 2018, fisheries under the LO were those with catches of COD, HAD, WHG, POK, NEP, HKE, SOL and POL and bycatches of PLE, megrims and others in certain fisheries similarly to 2017. As in previous years, survivability exemptions continued to be granted for SOL and NEP. *De minimis* exemptions were granted to catches of SOL, WHG and NEP caught using certain gears and under certain TCM restrictions.

2019-2020

From 2019 the LO provided for in Article 15(1) of Regulation (EU) No 1380/2013 applied to all demersal fisheries which are subject to catch limits.

CDR (EU) No. 2018/2034 specified details of the implementation of the LO for the period 2019-2021 for certain demersal fisheries in the NWW, listing the survivability and *de minimis* exemptions available. Survivability exemptions included catches of NEP, SOL and PLE caught using certain gears and under certain TCM restrictions and in addition, survivability exemptions were also granted for catches of species caught with pots, traps and creels.

As it can be seen from the chronologic overview presented, due to the phasing-in of the LO and specific arrangements introduced by the discard plans, different FS became subject to the LO at different times, and for several species in particular FS, exemptions to the LO were granted. Table 1 summarises the process for the species which are the focus of this evaluation (WHG, HKE, HAD, COD, ANF, NEP, SOL and PLE). A list of the available exemptions for the species under consideration is presented in Annex 1 and the correspondence with the previous NWW FS is provided in Annex 2. The results of the current evaluation are provided under the current (2022) FS denomination.

*Table 1. Codification of the species subject (1) or not subject (0) to the Landing Obligation (LO). The code "X" represents a species subjected to the LO but with exemptions (*de minimis *or survivability) and it is also highlighted with a light grey background. For details on the available exemptions see Annex 2.*

Period	Year	Old FS denomination	COD	ANF	HAD	HKE	NEP	PLE	SOL	WHG	Current FS denomination
Pre - 2018	2016	*NWW01*	0	0	0	1	0	0	X	0	NWW07
		NWW02	0	0	0	1	0	0	X	0	NWW08
		NWW03	0	0	0	1	0	0	0	0	NWW09
		NWW04	0	0	1	1	1	0	1	X	NWW02*
		NWW05	0	0	1	1	X	0	0	X	NWW01/02
		NWW06	0	0	0	0	0	0	X	0	NWW05*
		NWW07	0	0	0	0	0	0	X	0	NWW04/05
		NWW08	0	0	0	0	X	0	0	0	NWW10
	2017	*NWW01*	0	0	0	1	0	0	X	0	NWW07
		NWW02	0	0	0	1	0	0	X	0	NWW08
		NWW03	0	0	0	1	0	0	0	0	NWW09
		NWW04	0	0	1	1	1	1	X	X	NWW02*
		NWW05	0	0	1	1	X	1	1	X	NWW01/02
		NWW06	0	0	0	0	0	0	X	0	NWW05*
		NWW07	0	0	0	0	0	0	1	0	NWW04/05
		NWW08	0	0	1	0	X	0	0	0	NWW10

Table 1. Cont.

Period	Year	Old FS denomination	Area	COD	ANF	HAD	HKE	NEP	PLE	SOL	WHG	Current FS denomination
2018	2018	NWW01	27.5.b	0	1	1	1	1	0*	0*	0	NWW02*
			27.6	0	1	1	1	X	0*	0*	0	
			27.7.a	0	1	1	1	X	0	0	0	
			27.7.d	0	1	0	1	X	0	X	X	
			Rest of 7	0	1	0	1	X	0	0	X	
		NWW02	27.5.b	0	1	1	1	1	0*	0*	0	NWW01/02
			27.6	0	1	1	1	X	0*	0*	0	
			27.7.a	0	1	1	1	X	0	0	0	
			27.7.d	0	1	0	1	X	0	X	X	
			Rest of 7	0	1	0	1	X	0	0	X	
		NWW03	27.5.b	0	1	0	0	0	0	0	0	NWW03
			27.6	0	1	0	0	0	0	0	0	
		NWW04	27.7.a	0	1	0	0	0	0	0	0	NWW05*
			27.7.d	0	1	0	0	0	0	X	0	
			Rest of 7	0	1	0	0	0	0	X	0	
		NWW05	27.7.a	0	1	0	0	0	0	0	0	NWW04/05
			27.7.d	0	1	0	0	0	0	X	0	
			Rest of 7	0	1	0	0	0	0	X	0	
		NWW06	27.5.b	0	1	0	0	0	0*	0	0	NWW06
			27.6	0	1	0	0	0	0*	0	0	
			27.7.a	0	1	0	0	0	0	0	0	
			27.7.d	0	1	0	0	0	0	0	X	
			Rest of 7	0	1	0	0	0	0	0	X	
		NWW06	27.5.b	0	1	0	1	0	0	0	0	NWW07
			27.6	0	1	0	1	0	0	0	0	
			27.7.a	0	1	0	1	0	0	0	0	
			27.7.d	0	1	0	1	0	0	X	0	
			Rest of 7	0	1	0	1	0	0	X	0	
		NWW07	27.5.b	0	1	0	1	0	0	0	0	NWW08
			27.6	0	1	0	1	0	0	0	0	
			27.7.a	0	1	0	1	0	0	0	0	
			27.7.d	0	1	0	1	0	0	X	0	
			Rest of 7	0	1	0	1	0	0	X	0	
		NWW08	27.5.b	0	1	0	1	0	0	0	0	NWW09
			27.6	0	1	0	1	0	0	0	0	
			27.7.a	0	1	0	1	0	0	0	0	
			27.7.d	0	1	0	1	0	0	0	0	
			Rest of 7	0	1	0	1	0	0	0	0	
		NWW09	27.5.b	0	1	0*	0	1	0*	0*	0	NWW10
			27.6	0	1	0*	0	X	0*	0*	0	
			27.7.a	0	1	0	0	X	0	0	0	
			27.7.d	0	1	0	0	X	0	0	0	
			Rest of 7	0	1	0	0	X	0	0	0	

* LO applicable only to the bycatch of the species under some specific conditions related to the catch composition of individual vessels on previous years (2015-2016).

Table 1. Cont.

Period	Year	Current FS denomination	Area	COD	ANF	HAD	HKE	NEP	PLE	SOL	WHG
After 2018	2019	**NWW01**	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	X	1	1	1
			27.7.a	1	1	1	1	X	1	1	1
			27.7.d	1	1	1	1	X	1	1	X
			Rest of	X	1	X	1	X	X	1	X
		NWW02	27.5.b	1	1	1	1	1	X	1	1
			27.6	1	1	1	1	X	1	1	1
			27.7.a	1	1	1	1	X	1	1	1
			27.7.d	1	1	1	1	X	X	X	X
			Rest of	X	1	X	1	X	X	1	X
		NWW03	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
		NWW04	27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	1	1	1
			Rest of	X	1	X	1	1	1	1	1
		NWW05	27.7.a	1	1	1	1	1	X	1	1
			27.7.d	1	1	1	1	1	X	X	X
			Rest of	X	1	X	1	1	X	X	X
		NWW06	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	1	1	X
			Rest of	X	1	X	1	1	1	1	X
		NWW07	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	1	X	1
			Rest of	1	1	1	1	1	1	X	1
		NWW08	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	X	X	1
			Rest of	1	1	1	1	1	X	X	1
		NWW09	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	1	1	1
			Rest of	1	1	1	1	1	1	1	1
		NWW10	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	X	1	1	1
			27.7.a	1	1	1	1	X	1	1	1
			27.7.d	1	1	1	1	X	1	1	1
			Rest of	1	1	1	1	X	1	1	1

Table 1. Cont.

Period	Year	Current FS denomination	Area	COD	ANF	HAD	HKE	NEP	PLE	SOL	WHG
After 2018	2020	**NWW01**	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	X	1	1	1
			27.7.a	1	1	1	1	X	1	1	1
			27.7.d	1	1	1	1	X	X	1	X
			Rest of	1	1	X	1	X	X	1	X
		NWW02	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	X	1	X	1	1	1
			27.7.a	1	1	1	1	X	1	1	1
			27.7.d	1	1	1	1	X	X	X	X
			Rest of	1	1	X	1	X	X	1	X
		NWW03	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
		NWW04	27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	X	1	1
			Rest of	1	1	1	1	1	X	1	1
		NWW05	27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	X	X	X
			Rest of	1	1	X	1	1	X	X	X
		NWW06	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	X	1	X
			Rest of	1	1	X	1	1	1	1	X
		NWW07	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	1	X	1
			Rest of	1	1	1	1	1	1	X	1
		NWW08	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	X	X	1
			Rest of	1	1	1	1	1	X	X	1
		NWW09	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	1	1	1	1
			27.7.a	1	1	1	1	1	1	1	1
			27.7.d	1	1	1	1	1	1	1	1
			Rest of	1	1	1	1	1	1	1	1
		NWW10	27.5.b	1	1	1	1	1	1	1	1
			27.6	1	1	1	1	X	1	1	1
			27.7.a	1	1	1	1	X	1	1	1
			27.7.d	1	1	1	1	X	1	1	1
			Rest of	1	1	1	1	X	1	1	1

2 Evaluation Methodology

EFCA's Administrative Board agreed in 2014 on a standard methodology for compliance evaluation with the LO. Given the specifics of the LO, the current evaluation exercise involved looking at compliance per species and FS exploiting the species selected from different perspectives (Table 2). The original methodology included two additional methods related with surveying the opinion of control experts and the industry and a market study which, in agreement with the North Western Waters CEG, have not been used in the current evaluation. The reason for this has been that the experience from the previous evaluation indicated a very low reply rate to the questionnaires.

Table 2. Methods for evaluating compliance with the Landing Obligation (LO).

	Evaluation Method	Applied to the LO
1	Inspection data compared with official landings statistics	Estimates of unreported discard ratio using last haul data
2	Considering the evaluation of scientific bodies (STECF, etc.)	Estimates of the catches, which before the implementation of the LO were discarded and should now be landed
3	Trends of infringements	Suspected infringements (or lack of) issued for non-compliance with the LO

Both Methods 1 and 2 involve the estimation of discards, which are used as a quantitative approach to arrive at an assessment of compliance, following the benchmarking criteria endorsed by the North Western Waters CEG (see Table 3). These same criteria are used for the compliance evaluation carry out in other areas.

Table 3. Compliance benchmarking criteria endorsed by the North Western Waters Control Expert Group. The estimates of illegal discards are expressed as the percentage of the amount discarded in relation to the total catch.

Compliance Level	Estimates of illegal discard ratio	Benchmark Icon
High	< 5%	
Medium	≥5% and < 15%	
Low	≥ 15%	

Although there are 11 FS identified in the NWW demersal, the evaluation was carried out only for FS NWW01, NWW02 and NWW04-NWW10. NWW03 includes the deep water trawls targeting deep water species and was not included in this analysis. In the case of NWW11, this FS includes all gears not included in FS NWW01-NWW10 and the analysis of compliance was not carried out for this FS either due to the variety of gears it represents, the heterogeneous pattern of activity represented and the lack of data.

Method 1: "Inspection data compared with official catch or landings statistics"

This is a quantitative method consisting of the estimation of an unreported discard ratio based on the comparison between the quantities of catches below minimum conservation reference size (B-MCRS) observed from last haul (LH) inspections carried out by MS and the quantities reported in the logbooks or at landing (see Figure 1 and further detailed method description in Annex 3). Information from the inspections is sent by MS to EFCA in the framework of the reporting of the NWW Joint Deployment Plan (JDP) and the catch data by species and category (BMS, legal size catch LSC, *de minimis* DIM, discards DIS) reported in the logbooks are provided by the MS in reply to an annual data call sent by EFCA. This analysis has been conducted by area for each FS and

was undertaken by an external expert contracted by EFCA applying the methodology developed by EFCA[1].

Annex 4 lists, by FS and area, for each of the species under this evaluation, the percentage of the total catch represented by each catch category (BMS, DIS, DIM, and LSC) reported in the logbooks. This information is presented since for some of the FS and areas, exemptions to the LO, in the form of *de minimis* and survivability, exist. *De minimis* exemptions are difficult to take under consideration for the evaluation of compliance since they are calculated based on a percentage of the total annual catch of a number of species. In the current report, and similarly to the process used in the NS evaluation, the difference of the BMS ratio in the LH and the ratio of DIM/DIS/BMS in the logbook has been used as an indicator of compliance. If there are exemptions, part (or all) the catch can be legally discarded but the provisions for the exemptions to the LO require that all amounts discarded are reported. The difference between both ratios calculated as part of Method 1 could result from illegal discarding and/or non-reporting of legal discards. To evaluate compliance as part of the current analysis, both cases have been considered non-compliance. As it can be seen from the numbers in Annex 4, where amounts discarded under each category in the logbook for each species are expressed as a percentage of the total catch of that species in an area, discard reporting is very low in almost all cases when exemptions are in place.

Data limitations

Because the catch composition in the LH is split generally only between B-MCRS and A-MCRS for each species, and no length/size data are routinely available, Method 1 assumes that illegal discarding takes place only in the BMS portion of the catches. Therefore, illegal discarding of fish above MCRS (to select bigger individuals which attain a bigger price, high-grading or because once the quota is exhausted fish cannot be landed), which was known to be important, at least for choke situations (e.g. HAD)[2] in some areas, is not taken into account. Discard estimates obtained using Method 1 are therefore underestimations of the true discard ratios if discarding of the LSC component of the catch is taking place.

[1]www.efca.europa.eu/sites/default/files/Guidelines%20on%20indicators%20to%20measure%20compliance%20in%20fisheries_1.pdf
[2] https://ices-library.figshare.com/articles/report/Benchmark_Workshop_on_Celtic_Sea_Stocks_WKCELTIC_/18619229

Figure 1. Estimation of BMS discard ratio for Method 1. BMS = fish below the minimum conservation reference size (MCRS), LSC = fish above the MCRS.

Method 2: "Considering the evaluation of scientific bodies"

This method consists of the analysis of the estimates of discards based on data made available by the Scientific, Technical and Economic Committee for Fisheries (STECF) of the European Commission and other scientific bodies such as the International Council for the Exploration of the Sea (ICES). Where possible, the estimates are linked to the respective FS and area to allow comparison with the results of *Method 1*.

Discard ratio estimates from STECF

Annually, an Expert Working Group of the Scientific, Technical and Economic Committee for Fisheries (STECF) revises the data on landings and discards by area, gear and species made available by Member States in response to the official call by the EU for Fisheries Dependent Information (FDI) in the framework of the EU-MAP (EC No 2017/1004).

The data for 2018, 2019 and 2020 were downloaded from the STECF portal[3] in February 2022. These data have been used to obtain estimates of discard ratios for ANF, COD, HAD, HKE, NEP, PLE, SOL, and WHG for those FS subject to this evaluation, using the total live weight and the total discard provided in the FDI database. Discards are generally based on scientific estimations carried out at national level, based on the Data Collection Framework (DCF) sampling and and does not differentiate between legal and illegal discards, as the focus of the sampling is not compliance but estimates of removals due to fishing. These estimates may also include discards of catches above MCRS (for example due to high-grading and/or when quota is exhausted). These data are

[3] https://stecf.jrc.ec.europa.eu/dd/fdi

aggregated at MS level and the information provided on sub-region, mesh size range and *métier* have been used to allocate the catch and discards to the EFCA's FS (Annex 5).

The estimation of the level of discards based on the FDI data was carried out by an external expert contracted by EFCA and are compared in this report with those estimates obtained from Method 1.

Data limitations

It should be noted that two factors may affect the data from Method 2 (STECF) presented in this report:

- because the FDI call request data at a detailed level, MS have the option of marking some data as confidential for data protection purposes and not provide the values of the variables (i.e., catches, discards, etc.). The STECF Expert Working Group on Fisheries Dependent Information (EWG 19-11) reviewed the data submitted by MS and reported that "a substantial part of the data submitted have been marked as confidential"[4]. The same conclusion was reached by STECF 21-12 which reviewed the landings and discard data submitted to the 2020 data call. Therefore, the discards estimated in this report are based only on data not marked as confidential, and do not necessarily represents the true estimate from the scientific observer sampling.
- as previously mentioned, discards are generally based on scientific estimations carried out at national level. These estimates of discards are then partitioned across the reporting categories (i.e., quarter, gear type, *métier*, etc.) by each MS, following different criteria. No information on the number of samples used to derived discard estimates is available and therefore it is not possible to determine the representativeness of the data. STECF, in its website, emphasises the risk of biases arising from this process with the following text, "*discards amounts in the catches data are scientific discards estimates based on national sampling programmes that do not support the level of disaggregation requested by the FDI data call. The quality of discards estimates cannot be assured and should be used with caution, as these estimates might be uncertain and biased*". Due to the lack of knowledge on the number of samples, a threshold on a minimum number of samples to be used, similarly to what has been done for the LH, could not be applied.

Discard ratio estimates from ICES

[4] http://publications.jrc.ec.europa.eu/repository/bitstream/JRC119066/kj-ax-19-019-en-n.pdf

Data used in this analysis are obtained from the published *ICES Advic*e for North Western Waters stocks for the years 2019, 2020 and 2021[5], which presents for most of the stocks, data on catches, landings and discards taken in 2018, 2019 and 2020, respectively. Generally, the discard estimates provided in the *ICES Advice* are derived from the data collection programmes conducted by fisheries research institutes that, in the case of EU Member States, are based on the DCF sampling. These data collection programmes also provide the data for the discard estimations from STECF. It should be noted that for EU stocks, ICES and STECF use the same data, derived from observer programmes but also self-sampling programmes where fishers report, collect or process biological samples themselves, but may arrive at different discard estimates due to different raising procedures.

Data limitations

The information provided by ICES is mostly on a stock basis (Annex 6), and therefore it was not possible to make the corresponding association of these estimates to the FS and areas used by EFCA in all cases since in many cases the stocks under analysis are exploited by several gears corresponding to more than one FS and area. However, for those stocks for which ICES provided the landings and discard information separately by gear type, an attempt has been made to assign the information to the FS used currently by EFCA (see Results section).

Method 3: "Trends of infringements"

This method involves an examination of the quantities and nature of any suspected infringement issued for non-compliance with the LO in the framework of the WW Joint Deployment Plan (JDP) for the applicable fisheries over the reported time series. The analysis uses suspected infringements related with the LO which have been reported to EFCA by the MS as part of the WW JDP framework.

Overall evaluation

An overall compliance evaluation by species was carried out by pooling together the information on discard estimates obtained from the LH (method 1) and from scientific bodies (STECF and ICES, Method 2). Method 3 was not used to derive an overall evaluation due to the lack of suspected infringements related with the area and species in analysis (see section 3.3). It is worth noting that

[5] http://www.ices.dk/publications/library/Pages/default.aspx

the detectability of a suspected infringement related with the non-compliance with the LO is extremely low because of the sporadic nature of discards allied to the non-continuous monitoring.

To estimate the overall compliance level, the process used was as follows:

- If the three sources of data (LH, STECF and ICES) provided a consistent picture of the compliance level, this level was used.
- If the three sources of data provided different compliance levels, the level obtained by Method 1 was chosen because this method is considered the most reliable to assess compliance for the reasons explained in the previous section. This was done except if: a) there were only a few LH available or b) the high variability in the estimates obtained from the LH indicated a low precision. In these cases, the estimated compliance level resulting from Method 2 were considered. Although a minimum number of LH has not been established in the previous compliance evaluations, those figures based on less than 5 LH and for which confidence intervals indicate low precision are given less weight in the final compliance result. The basis for the overall compliance given is explained in each case.
- STECF and ICES are both sources of discard information for Method 2. However, while the STECF discard ratio have been calculated for most FS/area combination, the ICES estimates are only available at stock level in most cases. Therefore, only the STECF estimates of discards have been used in those cases to assess compliance when no or a limited number of LH were available for a FS/area combination. In those cases where it was possible to assign a discard rate to a particular gear type and FS based on ICES data compliance was assessed taking both discard rates into consideration. In those cases where the results from STECF and ICES would indicate different compliance levels, the lower compliance level was used.

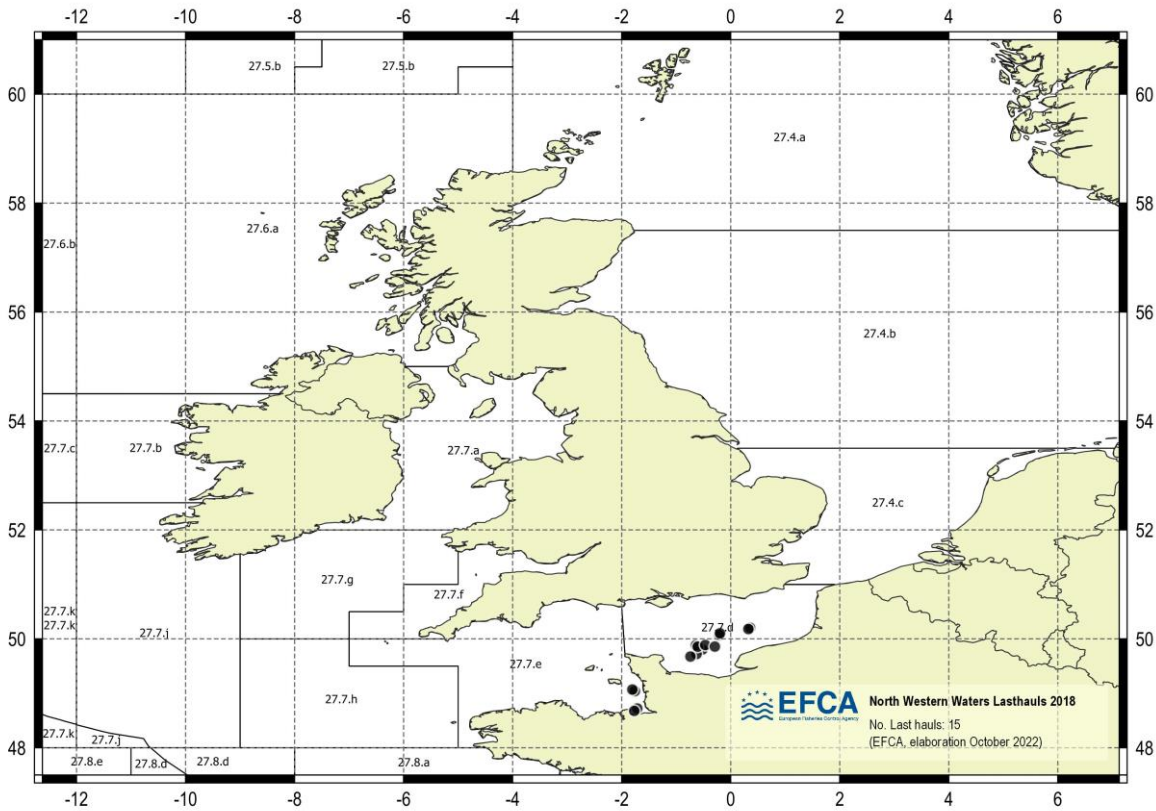
3 Results[6]

3.1 Estimation of a discard ratio using last haul data (method 1)

Using LH data and reported logbook data for the defined FS, the estimated illegal discard ratios were calculated. Figure 2 shows the LH spatial coverage over the evaluation period and Table 4 lists the discard ratio estimates obtained for 2018, 2019 and 2020 by FS. As it can be seen from Figure 2

[6] For ease of reading, results are described using the ICES subarea and division denomination, e.g., subarea 7. This corresponds to FAO area 27.7 as shown in Figure 2 and in the tables throughout the report.

and Table 4, in 2018 there were very few LH and they were concentrated in 7.d and 7.e but the spatial coverage of the LH have increased in the following years. Until 2018, the WW JDP activity only concerned pelagic fisheries and at that time the number of LH conducted was low. In 2020, inspection activity was impacted by the COVID-19 pandemic and the number of LH was lower than in the previous year. There has been more LH conducted in Q1 than in the other quarters in 2018 and 2019 for most areas while more LH took place in Q3 than in Q1, Q2 or Q4 in 2020 for almost all areas. In 2019 a number of LH was also conducted in Q2 and Q4 but none took place in Q3. In 2020, Q2 was the quarter without LH while some LH took place in Q1 and Q4.



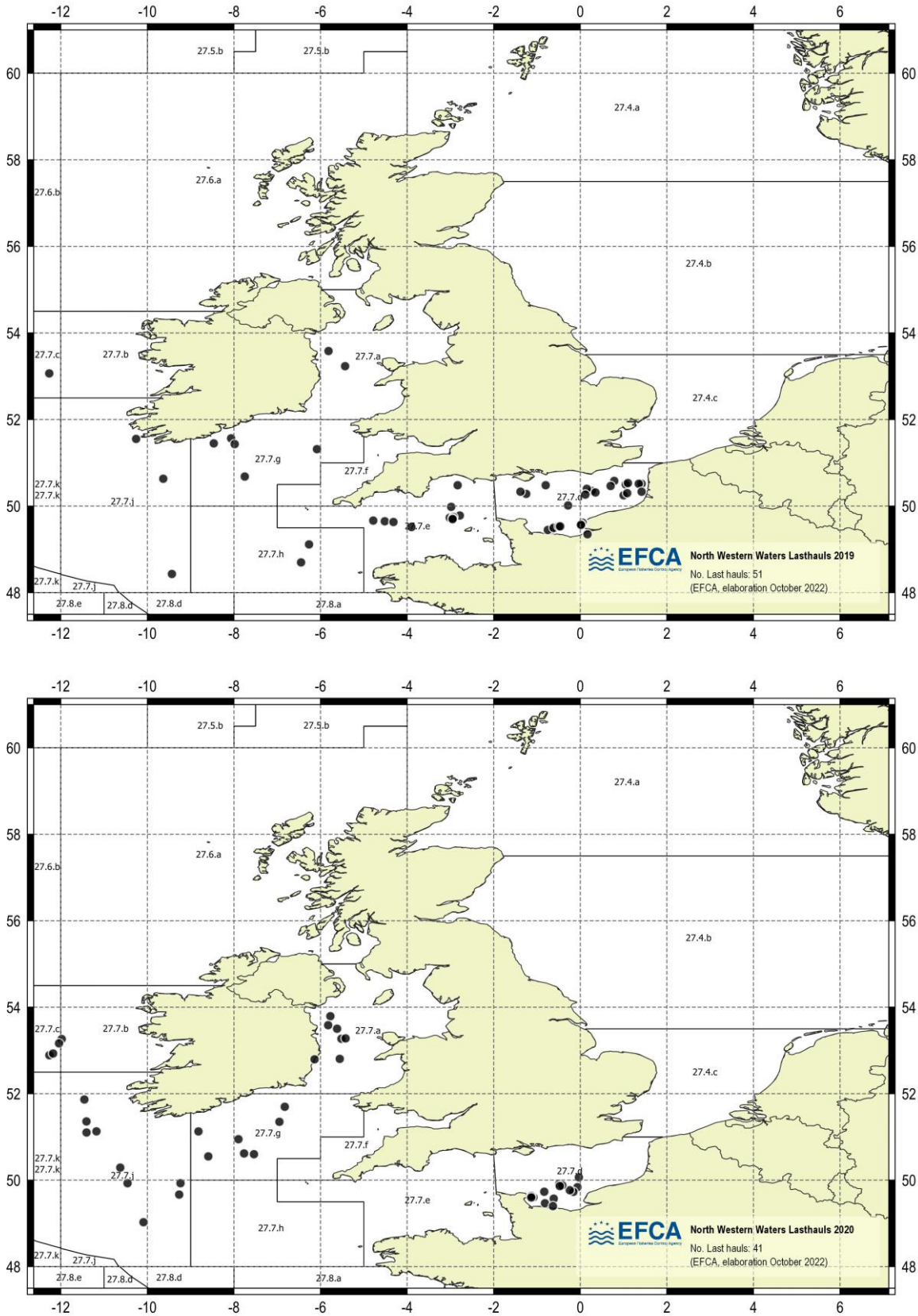


Figure 2. Last haul sampling coverage in 2018 (upper panel, n = 15), 2019 (middle panel, n = 51) and 2020 (lower panel, n = 41). Each dot represents one last haul (LH) inspection.

Table 4. Number of last haul (LH) inspections carried out in 2018, 2019 and 2020 by area and quarter. Q1= January-March, Q2= April-June, Q3= July-September, Q4= October-December.

	2018				2019				2020				2018-20
Area	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**All**
27.7.a	-	-	-	-	-	-	-	2	1	-	6	-	**9**
27.7.b	-	-	-	-	-	-	-	-	-	-	-	1	**1**
27.7.c.2	-	-	-	-	-	1	-	-	-	-	2	1	**4**
27.7.d	11	-	-	-	10	13	-	4	8	-	6	-	**52**
27.7.e	-	-	4	-	10	1	-	**-**	-	-	-	-	**15**
27.7.g	-	-	-	-	**-**	1	-	4	2	-	4	1	**12**
27.7.h	-	-	-	-	1	1	-	**-**	-	-	-	-	**2**
27.7.j.2	-	-	-	-	1	**-**	-	2	**-**	-	7	2	**12**
Total	**11**	**-**	**4**	**-**	**22**	**17**	-	**12**	**11**	**-**	**25**	**5**	**107**

Table 5. Summary of unreported discard ratios by species and area within each fleet segment (FS) after applying Method 1 for 2018, 2019 and 2020 in North Western Waters. The table lists the number of last hauls available (N), the estimated mean unreported discard ratio (DR) and the associated 95% confidence intervals (95% CI). A '-'indicates that no last hauls with the species concerned were available. If the number of LH was lower than 5 no discard rates are provided (see the Methods section for an explanation). Shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation.

			2018			2019			2020		
FS	Species	Area	N	DR	95% CI	N	DR	95% CI	N	DR	95% CI
NWW01 Trawls ≥ 120 mm	ANF	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	COD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			1	-	-
	HAD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			1	-	-
	HKE	27.5.b	-			-			-	-	-
		27.6	-			-			-	-	-
		27.7.a	-			-			-	-	-
		27.7.d	-			-			-	-	-
		Rest of 7	-			-			1	-	-
	NEP	27.5.b	-			-			-	-	-
		27.6	-			-			-	-	-
		27.7.a	-			-			-	-	-
		27.7.d	-			-			-	-	-
		Rest of 7	-			-			1	-	-
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	WHG	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		

Table 5. Cont.

			2018			2019			2020		
FS	Species	Area	N	DR	95% CI	N	DR	95% CI	N	DR	95% CI
NWW02 Trawls < 120 mm	ANF	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			1	**-**	-	-		
		27.7.d	-			-			-		
		Rest of 7	-			8	**6.0**	0.0-14.1	17	**0.9**	0.0-2.5
	COD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			4	**-**	-
	HAD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			6	**5.4**	0.0-26.6	6	**0.0**	0.0-0.0
	HKE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			6	**0.0**	0.0-0.0	9	**7.8**	1.1-14.5
	NEP	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			1	**-**	-	3	-	-
		27.7.d	-			-			-		
		Rest of 7	-			1	**-**	-	4	-	-
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	2	-	-	10	**37.5**	16.7-58.4	3	-	-
		Rest of 7	-			1	-	-	1	**-**	-
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			5	**8.7**	3.2-14.2	1	-	-
		Rest of 7	3	-	-	3	-	-	3	-	-
	WHG	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	4	-	-	3	-	-	4	-	-
		Rest of 7	-			5	**14.3**	0.0-31.3	1	-	-

Table 5. Cont.

			2018			2019			2020		
FS	**Species**	**Area**	**N**	**DR**	**95% CI**	**N**	**DR**	**95% CI**	**N**	**DR**	**95% CI**
NWW04 Beam trawls ≥ 120 mm	ANF	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	COD	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	HAD	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	HKE	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	NEP	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	PLE	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	SOL	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	WHG	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
NWW05 Beam trawls < 120 mm	ANF	27.7.a	-			1	-	-	3	-	-
		27.7.d	-			1	-	-	-		
		Rest of 7	-			1	-	-	2	-	-
	COD	27.7.a	-			1	-	-	-		
		27.7.d	-			-			-		
		Rest of 7	-			1	-	-	1	-	-
	HAD	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			1	-	-
	HKE	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			1	-	-
	NEP	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	PLE	27.7.a	-			-			2	-	-
		27.7.d	5	**4.4**	0.0-10.2	4	**-**	-	-		
		Rest of 7	-			5	**6.6**	0.0-18.9	1	-	-
	SOL	27.7.a	-			1	**-**		2	-	-
		27.7.d	5	**16.2**	5.6-26.7	5	**3.7**	0.5-7.7	-		
		Rest of 7	-			6	**0.0**	0.0-0.0	1	-	-
	WHG	27.7.a	-			-			-		
		27.7.d	1	**-**	-	-			-		
		Rest of 7	-			-			-		

Table 5. Cont.

			2018			2019			2020		
FS	Species	Area	N	DR	95% CI	N	DR	95% CI	N	DR	95% CI
NWW06 Seines	ANF	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	COD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			1	**-**	-
		Rest of 7	-			-			-		
	HAD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	HKE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	NEP	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	1	**-**	-	2	-	-	2	-	-
		Rest of 7	-			-			-		
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	WHG	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	1	**-**	-	2	-	-	5	**2.2**	0.0-9.7
		Rest of 7	-			-			-		

Table 5. Cont.

			2018			2019			2020		
FS	Species	Area	N	DR	95% CI	N	DR	95% CI	N	DR	95% CI
NWW07 Gillnet	ANF	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	COD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			1	-	-	-		
	HAD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			1	-	-	-		
	HKE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			1	-	-	-		
	NEP	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	WHG	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		

Table 5 highlights the lack of a sufficient number of LH to be able to calculate the unreported discard ratio for many FS and areas using method 1. For example, no, or almost no LH, are available in 2018, 2019 or 2020 for NWW01, NWW04 and for NWW07-NWW10. For the remaining FS, there are only LH for some but not for all the areas (e.g., in divisions 5.b and 7.d and subarea 6 for NWW02). For some other areas and species, LH are not available for all the years of the period analysed (for example for HKE in NWW02).

3.2 Discards estimates provided by scientific organisations (method 2)

3.2.1 Discard ratio estimates from STECF

The discard ratios calculated from the catches and discards data of the FDI database are presented in Table 6 by ICES area of each FS and species. In those cases, for which discard information available in the FDI database corresponds to landings that represent < 1% of the landing data declared in that fleet segment/area combination, no discard ratios are provided. This is done to avoid generating unrepresentative discard estimates due to the limited data. Table 6 also presents the discards reported in the logbooks as DIM and/or DIS since, as explained before, when exemptions are available, fishermen may legally discard the fish, but quantities need to be recorded in the logbooks. The non-reporting in these cases is also non-compliance with the requirements of the LO. It should be noted that in a few cases, catches appeared reported in the logbooks as DIM or DIS even when exemptions were not available for those FS and areas.

*Table 6. Mean discard ratio (DR) estimated per species and area within each fleet segment (FS) in 2018, 2019 and 2020 calculated from the Fisheries Dependent Information data downloaded from the STECF portal on February 2022, percentage of the total catch represented by the DIM and DIS categories reported in the logbooks (DR_{DIM}, DR_{DIS}) in 2018 - 2020 (data sent in reply to EFCA data calls). Dash (-) in the DR, DR_{DIM} and DR_{DIS} columns corresponds to areas/FS with no information (no discard information available and therefore no discard ratios provided). Shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. * discard information available from landings that represent < 1% of the landing data declared in that FS/area combination and no discard ratios provided (see Methods section for an explanation).*

			2018			2019			2020		
FS	**Species**	**Area**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**
NWW01 Trawls ≥ 120 mm	ANF	27.5.b	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.6	0.9	0.0	0.0	0.3	0.0	0.0	1.4	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-			-			-		
		Rest of 7	*	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.5.b	5.7	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
		27.6	72.6	0.0	0.0	5.3	0.0	0.0	14.0	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	7.1	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-		
		Rest of 7	7.1	0.0	0.0	7.1	0.0	0.0	7.1	0.0	0.0
	HAD	27.5.b	56.8	0.0	0.0	-	0.0	0.0	4.8	-	-
		27.6	12.7	0.0	0.0	7.2	0.0	0.0	7.1	0.0	0.2
		27.7.a	2.0	0.0	0.0	17.8	0.0	0.0	17.8	0.0	0.2
		27.7.d	-			-			-		
		Rest of 7	29.6	0.0	0.0	17.8	0.0	0.0	17.8	0.0	0.6
	HKE	27.5.b	-			-			-	0.0	0.0
		27.6	5.8	0.0	0.0	5.1	0.0	0.0	11.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	12.4	0.0	0.0	-	0.0	0.0
		27.7.d	-			-			-		
		Rest of 7	12.4	0.0	0.0	12.3	0.0	0.0	12.4	0.0	0.0
	NEP	27.5.b	-			-	-	-	-	-	-
		27.6	11.4	0.0	0.0	12.2	0.0	0.0	14.1	0.0	0.0
		27.7.a	-			-	0.0	0.0	-	0.0	0.0
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	PLE	27.5.b	-	0.0	0.0	-	0.0	0.0	-		
		27.6	0.9	0.0	0.0	14.1	0.0	0.0	3.6	0.0	0.5
		27.7.a	-	0.0	0.0	-	0.0	0.0	9.1	0.0	0.1
		27.7.d	59.6	0.0	0.0	30.5	0.0	0.0	-		
		Rest of 7	20.5	0.0	0.0	17.5	0.0	0.0	9.2	0.0	0.0
	SOL	27.5.b	-			-			-		
		27.6	3.2	0.0	0.0	3.2	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-	-	-	-	0.0	0.0	-		
		Rest of 7	7.4	0.0	0.0	6.0	0.0	0.0	1.0	0.0	0.0
	WHG	27.5.b	55.4	-	-	-	0.0	0.0	-		
		27.6	37.3	0.0	0.0	36.6	0.0	0.0	7.9	0.0	0.4
		27.7.a	-	0.0	0.0	12.7	0.0	0.0	12.7	0.0	0.0
		27.7.d	14.5	0.0	0.0	-			-		
		Rest of 7	12.7	0.0	0.0	12.7	0.0	0.0	12.7	0.0	0.1

Table 6. Cont.

			2018			2019			2020		
FS	**Species**	**Area**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**
NWW02 Trawls < 120 mm	ANF	27.5.b	-			-			-		
		27.6	**13.5**	**0.0**	**0.0**	**42.8**	**0.0**	**0.0**	**7.9**	**0.0**	**0.0**
		27.7.a	**-**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**-**	**0.0**	**0.0**
		27.7.d	**-**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**-**	**0.0**	**0.0**
		Rest of 7	**0.8**	**0.0**	**0.0**	**4.3**	**0.0**	**0.0**	**-**	**0.0**	**0.0**
	COD	27.5.b	-			-			-		
		27.6	**80.8**	**0.0**	**0.0**	**71.9**	**0.0**	**0.0**	**94.6**	**0.0**	**0.0**
		27.7.a	**15.0**	**0.0**	**0.0**	**2.6**	**0.0**	**0.0**	**7.1**	**0.0**	**0.0**
		27.7.d	**-**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**-**	**0.3**	**0.0**
		Rest of 7	**5.2**	**0.0**	**2.2**	**6.2**	**0.0**	**0.0**	**28.9**	**0.2**	**0.0**
	HAD	27.5.b	-			**-**	**0.0**	**0.0**	-		
		27.6	**57.3**	**0.0**	**0.0**	**60.2**	**0.0**	**0.0**	**69.3**	**0.0**	**0.9**
		27.7.a	**16.6**	**0.0**	**0.0**	**21.0**	**0.0**	**0.0**	**43.8**	**0.0**	**0.8**
		27.7.d	**-**	**0.0**	**0.0**	**-**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**54.8**	**0.0**	**0.8**	**31.0**	**0.0**	**0.0**	**20.6**	**1.1**	**0.3**
	HKE	27.5.b	-			**-**	**0.0**	**0.0**	-		
		27.6	**24.8**	**0.0**	**0.0**	**41.6**	**0.0**	**0.0**	**90.4**	**0.0**	**0.1**
		27.7.a	**3.2**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**7.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**21.4**	**0.0**
		Rest of 7	**24.7**	**0.0**	**0.0**	**25.6**	**0.0**	**0.0**	**23.9**	**0.0**	**0.0**
	NEP	27.5.b	-			**-**	**0.0**	**0.0**	-		
		27.6	*****	**0.0**	**0.0**	*****	**0.0**	**0.0**	**-**	**0.0**	**0.1**
		27.7.a	**11.4**	**0.0**	**0.0**	**11.2**	**0.0**	**0.0**	**14.1**	**0.0**	**0.7**
		27.7.d	**-**	**0.0**	**0.0**	-			-		
		Rest of 7	**10.5**	**0.0**	**0.0**	**12.2**	**0.0**	**0.0**	**14.1**	**0.0**	**0.3**
	PLE	27.5.b	-			-			-		
		27.6	**98.0**	**0.0**	**0.0**	**98.8**	**0.0**	**0.0**	**99.8**	**0.0**	**0.0**
		27.7.a	**64.8**	**0.0**	**0.0**	**80.0**	**0.0**	**0.0**	**76.4**	**0.0**	**4.0**
		27.7.d	**55.1**	**0.0**	**0.0**	**47.1**	**0.0**	**0.0**	**32.1**	**0.4**	**0.0**
		Rest of 7	**26.6**	**0.0**	**0.0**	**21.3**	**0.0**	**0.3**	**30.0**	**0.2**	**1.2**
	SOL	27.5.b	-			-			-		
		27.6	**27.1**	**0.0**	**0.0**	**62.8**	**0.0**	**0.0**	**-**	**0.0**	**0.0**
		27.7.a	**57.5**	**0.0**	**0.0**	**25.9**	**0.0**	**0.0**	**3.7**	**0.0**	**0.0**
		27.7.d	**3.1**	**0.0**	**0.0**	**38.3**	**0.0**	**0.0**	**24.4**	**0.0**	**0.0**
		Rest of 7	**1.3**	**0.0**	**0.0**	**2.9**	**0.0**	**0.0**	**2.2**	**0.0**	**0.0**
	WHG	27.5.b	-			**-**	**0.0**	**0.0**	-		
		27.6	**95.9**	**0.0**	**0.0**	**95.9**	**0.0**	**0.0**	**98.8**	**0.0**	**0.0**
		27.7.a	**97.1**	**0.0**	**0.0**	**96.6**	**0.0**	**0.0**	**99.9**	**0.0**	**1.0**
		27.7.d	**24.2**	**0.0**	**0.0**	**40.6**	**0.0**	**0.0**	**33.6**	**6.6**	**0.0**
		Rest of 7	**20.4**	**0.0**	**0.0**	**14.1**	**0.0**	**0.0**	**14.7**	**1.8**	**0.1**

Table 6. Cont.

			2018			2019			2020		
FS	Species	Area	DR	DR_{DIM}	DR_{DIS}	DR	DR_{DI}	DR_{DI}	DR	DR_{DI}	DR_{DIS}
NWW04 Beam trawls ≥ 120 mm	ANF	27.7.a	-			-			-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.7.a	-			-			-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	HAD	27.7.a	-			-			-	0.0	0.0
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	HKE	27.7.a	-			-			-	0.0	0.0
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	NEP	27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-	0.0	0.0
	PLE	27.7.a	-			-			-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.2
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.8
	SOL	27.7.a	-			-			-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	WHG	27.7.a	-			-			-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
NWW05 Beam trawls < 120 mm	ANF	27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	17.0	0.0	0.0	26.7	0.0	0.0	21.0	0.0	0.0
		Rest of 7	11.9	0.0	0.0	13.8	0.0	0.0	16.9	0.0	0.0
	COD	27.7.a	7.1	0.0	0.0	16.9	0.0	0.0	23.3	0.0	0.0
		27.7.d	5.2	0.0	0.0	3.2	0.0	0.0	24.6	0.0	0.0
		Rest of 7	11.9	0.0	0.0	25.0	0.1	0.0	16.6	0.0	0.0
	HAD	27.7.a	17.8	0.0	0.0	53.9	0.0	0.0	81.2	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0		0.0	0.0
		Rest of 7	71.6	0.0	0.5	55.7	0.5	0.0	54.7	0.2	0.5
	HKE	27.7.a	80.0	0.0	0.0	77.6	0.0	0.0	75.4	0.0	0.0
		27.7.d	80.0	0.0	0.0	80.7	0.0	0.0	75.4	0.0	0.0
		Rest of 7	48.7	0.0	0.0	60.6	0.0	0.0	51.4	0.0	0.0
	NEP	27.7.a	-			-	0.0	0.0	-	0.0	0.0
		27.7.d	-	0.0	0.0		-			-	
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	PLE	27.7.a	9.1	0.0	0.6	41.2	0.0	1.8	34.7	0.0	1.6
		27.7.d	40.1	0.0	1.2	57.0	0.0	1.8	62.3	0.0	2.1
		Rest of 7	30.3	0.0	0.3	10.9	0.0	0.3	24.4	0.0	0.7
	SOL	27.7.a	3.2	0.0	0.0	13.2	0.0	0.0	11.9	0.3	0.0
		27.7.d	12.6	0.6	0.0	13.9	0.8	0.0	22.3	0.7	0.0
		Rest of 7	8.0	0.3	0.0	7.0	0.4	0.0	5.8	0.6	0.0
	WHG	27.7.a	-	0.0	0.0	84.1	0.0	0.0	83.3	0.0	0.0
		27.7.d	75.9	0.1	0.0	89.7	0.4	0.0	84.7	0.1	0.0
		Rest of 7	65.5	0.0	1.4	59.0	0.3	0.0	49.3	0.2	0.1

Table 6. Cont.

			2018			2019			2020		
FS	Species	Area	DR	DR_{DIM}	DR_{DIS}	DR	DR_{DIM}	DR_{DIS}	DR	DR_{DIM}	DR_{DIS}
NWW06 Seines	ANF	27.5.b	-			-			-		
		27.6	1.0	0.0	0.0	0.3	0.0	0.0	1.7	0.0	0.0
		27.7.a	-	0.0	0.0	-			-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.5.b	-			-			-		
		27.6	72.4	0.0	0.0	5.1	0.0	0.0	14.5	0.0	0.0
		27.7.a	-	0.0	0.0	7.1	0.0	0.0	7.1	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	7.1	0.0	0.0	7.1	0.0	0.0	7.1	0.0	0.0
	HAD	27.5.b	-			-			-		
		27.6	9.2	0.0	0.0	14.6	0.0	0.0	12.0	0.0	0.0
		27.7.a	-	0.0	0.0	17.8	0.0	0.0	17.8	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	17.8	0.0	0.0	17.8	0.0	0.0	17.8	0.0	0.0
	HKE	27.5.b	-			-			-		
		27.6	14.0	0.0	0.0	8.0	0.0	0.0	10.1	0.0	0.0
		27.7.a	-	0.0	0.0	12.4	0.0	0.0	-	0.0	0.0
		27.7.d	-			-	0.0	0.0	-	0.0	0.0
		Rest of 7	12.4	0.0	0.0	12.4	0.0	0.0	12.4	0.0	0.0
	NEP	27.5.b	-			-			-		
		27.6	-			-	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-	0.0	0.0	-			-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-		
	PLE	27.5.b	-			-			-		
		27.6	0.2	0.0	0.0	14.2	0.0	0.0	3.3	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	9.2	0.0	0.0	9.1	0.0	0.0	9.1	0.0	0.0
	SOL	27.5.b	-			-			-		
		27.6	-			3.2	0.0	0.0	-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	WHG	27.5.b	-			-			-		
		27.6	46.2	0.0	0.0	40.2	0.0	0.0	6.7	0.0	0.0
		27.7.a	-	0.0	0.0	12.7	0.0	0.0	12.7	0.0	0.0
		27.7.d	-	0.0	1.4	-	0.0	0.3	-	1.7	0.1
		Rest of 7	12.7	0.0	0.0	12.7	0.0	0.0	12.7	0.0	0.0

Table 6. Cont.

			2018			2019			2020		
FS	**Species**	**Area**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**
NWW07 Gillnet	ANF	27.5.b	-			-			-	0.0	0.0
		27.6	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.5.b	-			-			-		
		27.6	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
		Rest of 7	7.1	0.0	0.0	7.1	0.0	0.0	7.1	0.1	0.0
	HAD	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-			-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-			-			-		
		Rest of 7	17.8	0.0	0.0	17.8	0.0	0.0	17.8	0.0	0.0
	HKE	27.5.b	-	0.0	0.0	-			-		
		27.6	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	-	-
		Rest of 7	6.8	0.0	0.0	10.6	0.0	0.0	12.4	0.0	0.2
	NEP	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-	0.0	0.0	-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-	0.0	0.0	-		
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	48.9	0.0	0.0	43.7	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	6.3	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	0.2	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
	WHG	27.5.b	-			-			-	0.0	0.0
		27.6	-	0.0	0.0	-			-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	92.0	0.0	0.0
		Rest of 7	46.5	0.0	0.0	7.8	0.0	0.0	25.4	0.0	0.0

Table 6. Cont.

			2018			2019			2020		
FS	**Species**	**Area**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**
NWW08 Trammel nets	ANF	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-	0.0	0.0	-		
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	57.5	0.0	0.0	0.0	0.0	0.0	-	0.8	0.0
	HAD	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.3	0.0
	HKE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	0.0	-	-	0.0	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	75.4	0.0	0.0	-	1.4	0.3
	NEP	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-	0.0	0.0	-		
		27.7.d	27.8	0.0	0.0	42.5	0.0	0.0	19.3	0.1	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	-	0.4	0.0
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	1.3	0.0	0.0	1.5	0.0	0.0	1.3	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
	WHG	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-	0.0	0.0	-		
		27.7.d	93.1	0.0	0.0	48.7	0.0	0.0	84.4	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	1.4	0.0

Table 6. Cont.

			2018			2019			2020		
FS	Species	Area	DR	DR_{DIM}	DR_{DIS}	DR	DR_{DIM}	DR_{DIS}	DR	DR_{DIM}	DR_{DIS}
NWW09 Lines	ANF	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-			-	0.0	0.0	-		
		Rest of 7	0.0	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	12.5
	HAD	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	3.4
	HKE	27.5.b	-			-	0.0	0.0	-	-	-
		27.6	0.0	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		27.7.a	-			-			-		
		27.7.d	-	0.0	0.0	-			-		
		Rest of 7	0.0	0.0	0.0	-	0.0	0.0	-	0.0	0.2
	NEP	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-			-	0.0	0.0
		27.7.a	-			-			-		
		27.7.d	-			-			-		
		Rest of 7	-			-			-		
	PLE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	WHG	27.5.b	-			-			-		
		27.6	0.0	-	-	-			-	0.0	0.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0

Table 6. Cont.

			2018			2019			2020		
FS	**Species**	**Area**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**	**DR**	**DR_{DIM}**	**DR_{DIS}**
NWW10 Pots and traps	ANF	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-			-		
		27.7.a	-	0.0	0.0	-			-	0.0	100.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	COD	27.5.b	-			-			-		
		27.6	-			-			-	0.0	100.0
		27.7.a	-	0.0	0.0	-	0.0	0.0	-		
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	HAD	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-			-	0.0	100.0
		27.7.a	-			-			-	0.0	100.0
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	87.2
	HKE	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-		
		27.7.d	-			-	0.0	0.0	-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	NEP	27.5.b	-			-			-		
		27.6	-			-	0.0	0.0	-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	4.8
		27.7.d	-			-			-		
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	41.9
	PLE	27.5.b	-			-			-		
		27.6	-	0.0	0.0	-			-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	100.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	SOL	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-	0.0	0.0	-	0.0	0.0	-	0.0	100.0
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
	WHG	27.5.b	-			-			-		
		27.6	-			-			-		
		27.7.a	-			-			-	0.0	100
		27.7.d	-	0.0	0.0	-	0.0	0.0	-	0.0	0.0
		Rest of 7	-	0.0	0.0	-	0.0	0.0	-	0.0	60.3

3.2.2 Discard ratio estimates from ICES

Table 7 presents the estimated unwanted catch ratios or discard ratios in 2018, 2019 and 2020 for the NWW stocks subject to the present compliance evaluation provided in the ICES advice. The overview of the information provided by ICES is presented in Annex 6. It should be noted that the unwanted catch ratio (presented for the COD stock in subarea 4, division 7.d, and SD 20 of division 3.a, for the year 2018) may include the illegal and legal discards. In some cases, the discard ratio include the BMS landings and therefore it could be an overestimate of the true discard ratio, although in the advice it is specified that "*the below minimum size (BMS) landings of cod reported to ICES are currently negligible, and are much lower than the discards below the minimum conservation reference size (MCRS) estimated by observer programmes*".

Table 7. 2018, 2019 and 2020 unwanted catch ratio/discard ratio (DR) by species as estimated by ICES for the selected North Western Waters stocks (Method 2), and associated coverage level when available (% landings with associated discard estimates). Assignation to EFCA current fleet segmentation is indicated after the DR between brackets. *The collection of data from the commercial fishery and research surveys during 2020 was impacted by COVID-19 restrictions to a varying degree across member states.

ANF stocks	2018	2019	2020
	DR	DR	DR
ANF in subareas 4 and **6** and division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	Discard estimates are available from 2007 onwards for most of the fleets (54% of the landings)		
	1.5	**2.3**	**1.6**
MON in **subarea 7** and in divisions 8.a–b and 8.d (southern Celtic Seas, Bay of Biscay)	**5.8**[1]	**6.6**[1]	**4.2**[1]
ANK in subarea 7 and divisions 8.a–b, and 8.d (Celtic Seas, Bay of Biscay)	**6.7**	**10.1**	**9.6**

[1]Values for subarea 7

Table 7. (Cont.)

COD stocks	2018		2019		2020	
	DR		DR		DR	
COD in **Division 6.a** (West of Scotland)	From 2019 COD is fully under the LO in division 6.a The BMS landings of COD reported to ICES are currently negligible, and they are much lower that ICES estimates of catches below the MCRS					
	Demersal finfish trawl	**38.4** (NWW01)		**5.2** (NWW01)	**19.5**	
	NEP fleet	**93.1** (NWW02)		**100** (NWW02)		
	Gillnet	**0.0** (NWW07)		**0.0** (NWW07)		
COD in **Division 6.b** (Rockall)	Uncertain discard rates estimates due to limited sampling data (from 2017 advice)					
COD in subarea 4, **division 7.d**, and SD 20 (North Sea, eastern English Channel and Skagerrak)	Below minimum size (BMS) landings, where reported, are included with discards in the assessment from 2016, more than half of the landings had associated discards reported					
**Discards include BMS landings*	**16.4***		**9.9***		**19.5^**	
COD in division 7.a (Irish Sea)	NEP directed otter trawls	**35.4** (NWW02)	**2.3**			**23.0** (NWW02)
	Demersal fish directed otter trawls	**3.2** (NWW01)				**0.0** (NWW01)
	Mid-water trawl	**0.0**				**0.0**
	Beam trawl	**30.3** (NWW04-5)				**25.7** (NWW04-5)
COD in divisions 7.e–k (western English Channel and southern Celtic Seas)	Observer-based estimates from 2004					
	17.4		Otter trawls	**17.4**		**18.2**
			Seine nets	**53.3** (NWW06)		**18.6** (NWW06)
			Beam trawls	**26.3** (NWW04-5)		**36.9** (NWW04-5)

* unwanted catch

^ the value may be an overestimate because BMS landings are included under the discards category.

Table 7. (Cont.)

HAD stocks	2018		2019		2020	
	DR		DR		DR	
HAD in division 5.b (Faroes grounds)	Discarding is considered negligible					
HAD in subarea 4, division 6.a, and subdivision 20 (North Sea, West of Scotland, Skagerrak)	Discards, BMS landings and by-catch are Included in the assessment, with data available for the main fleets. BMS landings, where reported, are included with discards and industrial bycatch in the assessment from 2016 onwards.					
	13.2		**15.6**		**25.7**	
HAD in division 6.b (Rockall)	At-sea observer sampling for discards remains sparse for Rockall haddock, which leads to uncertainty in fishery selectivity patterns and catch estimates data used in the assessment.					
	17.0		**3.7***		**2.3***	
HAD in division 7.a (Irish Sea)	Most discards in the Nephrops directed fishery with otter trawls, followed by the demersal fish directed fishery and the beam trawls					
	22.2		**27.4**		**24.0**	
HAD in divisions 7.b–k (southern Celtic Seas and English Channel)	Full observer-based estimates from 2005					
	Otter trawls	**43.3** (NWW01-02)		**27.8** (NWW01-02)		**33.6** (NWW01-02)
	Beam trawls	**62.7** (NWW04-05)		**70.2** (NWW04-05)		**70.5** (NWW04-05)
	Gillnets	**0.3** (NWW07)		**0.0** (NWW07)		**11.2** (NWW07)

* unwanted catch

Table 7. (Cont.)

HKE stocks	2018	2019	2020
	DR	DR	DR
HKE in subareas 4, 6, and 7, and in divisions 3.a, 8.a–b, and 8.d (Greater North Sea, Celtic Seas, and the northern Bay of Biscay)	Discard estimates from most fleet are available and are included in the assessment		
	10.0	**7.8**	**8.7**

Table 7. (Cont.)

NEP stocks	2018	2019	2020
	DR	DR	DR
NEP in division 6.a, FU11 (West of Scotland, North Minch)	Discard sampling was impacted by the COVID-19 pandemic in 2020, with samples only available from quarter 1. Estimates of discard rates for quarters 2–4 in the assessment were based on mean discard rates across all quarters 2017–2019 This change is considered to have had minimal impact on the quality of the assessment because discard rates have been consistently low in recent years.		
	2.9	**2.5**	**2.3**
NEP in division 6.a, FU12 (West of Scotland, South Minch)	Discard sampling was impacted by the COVID-19 pandemic in 2020, with samples only available from quarter 1. Estimates of discard rates for quarters 2–4 in the assessment were based on mean discard rates across all quarters 2017–2019 This change is considered to have had minimal impact on the quality of the assessment because discard rates have been consistently low in recent years.		
	2.1	**2.0**	**2.3**
NEP in division 6.a, FU13 (West of Scotland, the Firth of Clyde, and the Sound of Jura)	Discard sampling in 2020 was impacted by the COVID-19 pandemic, with no samples collected in FU 13. Estimates of discard rates for all quarters in the assessment were based on mean discard rates across all quarters 2017–2019. This change is considered to have had minimal impact on the quality of the assessment because discard rates have been consistently low in recent years.		
	1.6	**8.5**	**4.6**
NEP in division 7.a, FU14 (Irish Sea, East)	From 2013 onwards sampling information has improved, but it remains poor. Sampling was impacted by the COVID-19 pandemic with no catch samples avilable for 2020. Estimated of mean discard rates 2017-2019 were therefore used in the assessment. Observations from the fishery indicate some discarding above MCRS continues.		
	3.3	**5.3**	**6.1**
NEP in division 7.a, FU15 (Irish Sea, West)	The quality of input data and level of sampling for this stock are considered to be good. Levels of catch sampling in 2020 were reduced due to the COVID-19 pandemic. Observations from the 2018–2020 fishery indicate that some discarding above the minimum conservation reference size (MCRS) continues		
	17.6	**13.2**	**17.5**
NEP in divisions 7.b–c and 7.j–k, FU16 (west and southwest of Ireland, Porcupine Bank)	Discards not quantified since 2016 (before considered negligible)		
NEP in division 7.b, FU17 (west of Ireland, Aran grounds)	Observations from the 2018–2020 fishery indicate that some discarding above the minimum conservation reference size (MCRS) continues		
	16.5	**11.2**	**19.6**
NEP in divisions 7.a, 7.g, and 7.j, FU19 (Irish Sea, Celtic Sea, eastern part of southwest of Ireland)	Estimates include dead + surviving discards. Observations from the 2018–2020 fishery indicate that some discarding above MCRS continues		
	23.0	**31.0**	**35.3**
NEP in divisions 7.g and 7.h, FU20 and 21 (Celtic Sea)	Estimates include dead + surviving discards. Observations from the 2018–2020 fishery indicate that some discarding above MCRS continues.		
	17.4	**16.5**	**7.6**
NEP in divisions 7.g and 7.f, FU22 (Celtic Sea, Bristol Channel)	Estimates include dead + surviving discards. Observations from the 2018–2020 fishery indicate that some discarding above MCRS continues.		
	15.1	**11.2**	**15.8**

Table 7. (Cont.)

PLE stocks	2018		2019	2020	
	DR		DR	DR	
PLE in division 7.a (Irish Sea)	Since 2004, the majority of the catch has been discarded (62% average discard by weight). The assessment only uses the dead portion of the discards (60%).				
PLE in divisions 7.b–c (West of Ireland)	Discard rate is unknow				
PLE in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	Discard estimates were raised to total international commercial catches. SOL and PLE are caught in mixed fisheries, which generates high discards of PLE owing to a combination of the selectivity properties of the gear and the PLE MLS. In addition, the relatively low market value of PLE may contribute to the high and variable discard rates, PLE in 7.f and 7.g is primarily a bycatch of the targeted SOL fishery, so changes in effort in this fishery will impact fishing mortality on PLE.				
	54.6		**29.0**	**40.0**	
PLE in divisions 7.h–k (Celtic Sea South, southwest of Ireland)	ICES discards are derived from fishing fleet specific averaged discard rates of 42% from 2004–2019, 50% in 2020				
	69.6		**40.2**	**48.0**	
PLE in division 7.d (eastern English Channel)	Discards are included in the assessment and all major fleets are covered. More than 75% of the landings had associated discard information. PLE is caught in a mixed fishery targeting SOL, with 80 mm size. This leads to a large number of PLE being discarded because this mesh size is not matched to the MCRS.				
	55.4		**65.5**	**50.4**	
PLE in division 7.e (western English Channel)	Discard estimates are raised to total international commercial catches.The assessment includes a correction to the catch, adding 15% of the catch in division 7d to 7e catches, to account for the migration of a portion of the mature population from division 7.e to division 7.d				
	Beam trawlers	**24.0** (NWW04-05)	**17.5**		**17.6** (NWW04-05)
	Otter trawlers	**23.7** (NWW01-02)			**46.9** (NWW01-02)
	Fixed nets	**0.1** (NWW07-08)			**0.7** (NWW07-08)

Table 7. (Cont.)

<table>
<tr><th rowspan="2">SOL stocks</th><th colspan="2">2018</th><th colspan="2">2019</th><th colspan="2">2020</th></tr>
<tr><th colspan="2">DR</th><th colspan="2">DR</th><th colspan="2">DR</th></tr>
<tr><td>SOL in division 7.a (Irish Sea)</td><td colspan="2">5.3</td><td colspan="2">13.6</td><td colspan="2">12.2</td></tr>
<tr><td rowspan="2">SOL in division 7.d (eastern English Channel)</td><td colspan="6">In 2020, 54% of the landings had associated discarding information, and 52% of the discards were sampled.</td></tr>
<tr><td colspan="2">9.9</td><td colspan="2">19.7</td><td colspan="2">20.8</td></tr>
<tr><td>SOL in divisions 7.b and 7.c (West of Ireland)</td><td colspan="6">Considered negligible</td></tr>
<tr><td>SOL in division 7.e (western English Channel)</td><td colspan="2">0.3</td><td colspan="2">0.3</td><td colspan="2">0.1</td></tr>
<tr><td rowspan="3">SOL in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)</td><td colspan="6">Discard estimates are based on incomplete sampling of the fisheries in recent years. However, the main fleet is considered to be represented.</td></tr>
<tr><td rowspan="2">14.2</td><td>Beam trawlers</td><td>12.7 (NWW04-05)</td><td></td><td>7.2 (NWW04-05)</td></tr>
<tr><td>Otter trawlers</td><td>9.5 (NWW01-02)</td><td></td><td>0.0 (NWW01-02)</td></tr>
<tr><td>SOL in divisions 7.h–k (Celtic Sea South, southwest of Ireland)</td><td colspan="6">Considered negligible</td></tr>
</table>

Table 7. (Cont.)

WHG stocks	2018		2019		2020	
	DR		DR		DR	
WHG in division 6.a (West of Scotland)	In 2019–2021, there was a significant decrease in the proportion of discards.					
	77.9		Finfish directed otter trawl	**45.7** (NWW01)		**11.4** (NWW01)
			Nephrops directed otter trawl	**100.0** (NWW02)		**100.0** (NWW02)
WHG in division 6.b (Rockall)	Some discard data are available, but they are based on a low number of samples, so the estimates are too uncertain to quantify total discards					
WHG in division 7.a (Irish Sea)	The majority of catches have been discarded for the last couple of decades. Despite recent increased sampling levels, discard information remains very imprecise.					
	Nephrops-directed otter trawls	**99.2** (NWW02)		**99.9** (NWW02)		**100.0** (NWW02)
WHG in subarea 4 and division 7.d (North Sea and eastern English Channel)	BMS landings reported to ICES in 2015-2021 were low. Substancial discarding still continues, based on observations from sampling programmes					
	39.7		**35.3**		**44.7**	
WHG in divisions 7.b–c and 7.e–k (southern Celtic Seas and western English Channel)	Full observer-based estimates from 2003					
	Otter trawls	**12.4** (NWW01-02)	**12.8**			**18.0** (NWW01-02)
	Seine nets	**0.0** (NWW06)				**1.4** (NWW06)
	Beam trawls	**73.8** (NWW04-05)				**59.9** (NWW04-05)
	Gillnets	**14.6** (NWW07)				**29.9** (NWW07)

As mentioned above, the information presented is not always directly comparable with the results from Method 1, as the estimates provided by ICES for the majority of the stocks under consideration are on a stock basis and not by FS. In those cases where the information on discards and landings have been provided by gear type, an effort has been made to assign the calculated discard rates to the current EFCA fleet segmentation. But because this has not been possible for all the stocks under consideration, the level of discard presented per stock from the ICES advice should be mostly considered as supporting information to the other sources of data used in the current report.

ICES defines '*negligible discards*' as those with a discard ratio less than 5% (in relation to the total catches). Therefore, for a given stock if ICES considers discarding as negligible and no estimate is provided, for the purposes of this exercise, a discard ratio of less than 5% was assumed.

3.3 Infringement Trends (method 3)

For the period under consideration (2018-2020), there were no suspected infringements detected related with the LO for demersal species in the NWW.

4 Compliance outcome

Noting the caveats regarding the correspondence between assessing discards at the area and FS level and doing so at stock level, the following tables present a comparative overview of the benchmarked compliance situation for the years of the study period. The tables include an overall evaluation per species for each area of each FS, considering the discard information obtained applying methods 1 and 2 (for method 3, there were no infringements recorded to make a conclusive assessment). Details on the process to derive the overall compliance level are provided in the Methods section. Table 8 presents the overview of the benchmarked compliance situation for the years of the study period for each species and FS.

To help identify the areas where most catch is reported, Annex 7 presents the catch data, based on the data reported in the logbooks provided by the MS in reply to an annual data call sent by EFCA, for the years under consideration in this evaluation, 2018-2020.

It should be noted that this evaluation is done only for those FS/areas where information from the LH (Method 1) and/or the scientific sources (STECF, ICES, Method 2) is available.

For **ANF**, very limited information exists, with LH recording the species only available in 2019 and 2020 and only available in sufficient numbers for NWW02 (trawls < 120 mm) in divisions of rest of 7 which is the FS and areas where most catches of the species have been reported. Information from the LH available in this FS for this area indicate medium illegal discard ratios in 2019 (n = 8 although with wide confidence intervals)) and low illegal discard ratios in 2020 (n = 17 with narrow confidence intervals). For this FS and area, information from the STECF is available only for 2018 and 2019, indicating in both cases, low discard ratios (<5%). ICES provides discard ratios of >5% for the stock of ANK and similar discard ratios for the stock of MON in subarea 7. However, these estimates are not subdivided into gear types and therefore it was not possible to assign then to individual FS. Based on the information available, compliance has been assessed for NWW02 in divisions of rest of 7 as high for 2018 (based on the STECF information since no LH were available) and as medium for 2019 and as high for 2020 (based on the LH data). For subarea 6 of this FS, only STECF discard information has been used to assess compliance, since no LH were available and the information on discard rates from ICES refers to the whole stock. Compliance has been assessed as medium in 2018 and 2020 and as low in 2019.

For NWW01 (trawls ≥ 120 mm) in subarea 6, compliance has been assessed as high for the three years considered (2018-2020), following the information provided by STECF that indicates low discard ratios. ICES reports for the stock of ANF in both subarea 4 and 6 also low discard ratios although, as before, these estimates are at stock level. For NWW05 (beam trawls 80 - < 120 mm), compliance has been assessed as low for the three years under consideration for division 7.d based on the STECF discard information and the low reporting in the logbooks. In divisions of rest of 7 of this FS compliance has been assessed as medium for 2018 and 2019 and as low for 2020 based again in the STECF discard information and the comparison with the discard reporting in the logbooks. For NWW06 (seines) in subarea 6 compliance has been assessed as high for all years under consideration based on the STECF discard information that indicate discard ratios below 5%. Finally, compliance was also assessed as high in 2018 in NWW09 (lines) based again on the low discard ratios estimated in the analysis of the STECF information.

Table 8a. Overall compliance levels for ANF by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are solely available at stock level. Grey shaded cells highlight those areas and FS where the stocks were not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

ANF		2018					2019					2020				
FS	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.6	-	-	**0.9**	1.5	✅	-	-	**0.3**	2.3	✅	-	-	**1.4**	1.6	✅
NWW02 Trawls < 120	27.6	-	-	**13.5**	1.5	⚠	-	-	**42.8**	2.3	❌	-	-	**7.9**	1.6	⚠
	Rest of 7	-	-	**0.8**	*5.8/6.7*	✅	**6.0**	8	4.3	*6.6/10.1*	⚠	**0.9**	17	**-**	*4.2/9.6*	✅
NWW05 Beam trawls < 120	27.7.d	-	-	**17.0**		❌	-	1	**26.7**		❌	-	-	**21.0**		❌
	Rest of 7	-	-	**11.9**		⚠	-	1	**13.8**		⚠	-	2	**16.9**		❌
NWW06 Seines	27.6	-	-	**1.0**	1.5	✅	-	-	**0.3**	2.3	✅	-	-	**1.7**	1.6	✅
NWW09 Lines	Rest of 7	-	-	**0.0**		✅	**-**	-	**-**		-	**-**	-	**-**		-

For **COD**, the species was not subject to the LO in 2018. There were too few LH in 2018 and 2019 to assess compliance based on method 1 and therefore compliance has been assessed, when possible, based on the STEC and the ICES discard information and the comparison with the discard reporting in the logbooks which has been very limited over the study period. For NWW01 (trawls ≥ 120 mm), compliance was assessed as medium in 2019 and 2020 in subarea 6 based on the STECF discard rates. ICES discard estimates for the stock in 6.a indicate also medium discard ratios for the

demersal finfish trawl (assigned to NWW01) in 2019. For 2020, because the ICES estimates of discards are not available by gear type, compliance has been assessed in this case following the STECF discard information and the comparison, as explained in the methods section, with the low reporting of discards in the logbooks. Medium compliance levels have been assessed also for divisions of rest of 7 in 2019 and 2020 based on the STECF discard information and the low reporting in the logbooks. The ICES discard rates for otter trawls are higher than the STECF one but since it corresponds to more than 1 FS it has not been used to determine the compliance in this case. Compliance was assessed as medium for division 7.a in 2020 using also the STECF information. The ICES discard estimate for demersal fish directed otter trawls (assigned to NWW01) would indicate a lower discard rate but following the methodology compliance has been assessed based on the STECF information that indicate higher discard rates. For NWW02 (trawls < 120 mm), low compliance levels have been estimated for subarea 6 in 2019 and 2020 and for divisions of rest of 7 in 2020, using both the STECF and ICES discard rate information that provided in both cases high discard rates. Medium compliance levels have been estimated for divisions of rest of 7 in 2019. The ICES discard estimate available for divisions of rest of 7 in 2019 indicates higher discard rates than the STECF one but as explained before, this estimate is for otter trawls that corresponds to more than 1 FS and therefore it has not been used to determine the compliance in this case. High compliance levels have been assessed for division 7.a in 2019 based on the STECF information and as low in 2020 based on the ICES discard estimate for *Nephrops* directed otter trawls (assigned to NWW02). In this division and year, the STECF discard estimate was lower than the ICES one. For NWW05 (beam trawl 80 - <120 mm), compliance has been assessed as low for division 7.a and divisions of rest of 7 for 2019 and 2020 and for division 7.d in 2020. For 2019 in this division compliance was assessed as high based on the low discard ratio obtained by the analysis of the STECF information. In all cases compliance was assessed based on the STECF discard ratios and the comparison with the discard reported in the logbooks. The ICES discard ratio estimates were available for some of the COD stocks by gear, but not by mesh size in the case of beam trawlers and therefore it is not possible to assign them to a particular beam trawler FS. For NWW06 (seines), medium compliance levels were assessed for subarea 6 and division 7.a for both years considered (2019 and 2020) and in 2020 for divisions of rest of 7 based on the STECF and ICES discard estimates when available. In the case of divisions of rest of 7 in 2019, compliance has been assessed as low following the ICES discard estimate for seines (assigned to NWW06). For NWW07 (gillnets), compliance was assessed as high in subarea 6 and division 7.d in 2019 due to the low discard ratios obtained when analysing the STECF and ICES data. No STECF data were available for these areas for 2020 and the ICES discard estimate was for the whole stock and therefore, compliance was not assessed. For divisions of rest of 7, compliance was assessed as medium for both years (2019 and 2020) due to the discard ratios obtained from the STECF data and the low reporting in the logbooks.

Finally, for NWW08 (trammel nets), compliance was assessed as high in division 7.d and divisions of rest of 7 in 2019 and in division 7.d in 2020 using the STECF information since the ICES discard rates available were for the whole stock and were not available by gear type.

Table 8b. Overall compliance levels for COD by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are for some stocks solely available at stock level. Grey shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

COD		2018					2019					2020				
FS	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.6	-	-	72.6	38.4		-	-	**5.3**	5.2	!	-	-	**14.0**	-	!
	27.7.a	-	-	-	3.2		-	-	**-**	-	-	-	-	**7.1**	0.0	!
	Rest of 7	-	-	7.1	-		-	-	**7.1**	17.4	!	-	1	**7.1**	18.2	!
NWW02 Trawls < 120	27.6	-	-	80.8	93.1		-	-	**71.9**	100	✗	-	-	**94.6**	-	✗
	27.7.a	-	-	15.0	35.4		-	-	**2.6**	-	✓	-	-	**7.1**	23.0	✗
	Rest of 7	-	-	5.2	-		-	-	**6.2**	17.4	!	**-**	4	**28.9**	18.2	✗
NWW05 Beam trawls < 120	27.7.a	-	-	7.1	30.3		-	1	**16.9**	-	✗	-	-	**23.3**	25.7	✗
	27.7.d	-	-	5.2	16.4*		-	-	**3.2**	9.9*	✓	-	-	**24.6**	19.5*	✗
	Rest of 7	-	-	11.9	-		-	1	**25.0**	26.3	✗	-	1	**16.6**	36.9	✗
NWW06 Seines	27.6	-	-	72.4	-		-	-	**5.1**	*9.0*	!	-	-	**14.5**	-	!
	27.7.a	-	-	-	16.3		-	-	**7.1**	-	!	-	-	**7.1**	12.1	!
	Rest of 7	-	-	7.1	-		-	-	**7.1**	53.3	✗	-	-	**7.1**	18.6	!
NWW07 Gillnet	27.6	-	-	-	0.0		-	-	**0.0**	0.0	✓	-	-	**-**	-	-
	27.7.d	-	-	0.0	16.4*		-	-	**0.0**	9.9*	✓	-	-	**-**	19.5*	-
	Rest of 7	-	-	7.1	-		-	1	**7.1**	-	!	-	-	**7.1**	-	!
NWW08 Trammel nets	27.7.d	-	-	0.0	16.4*		-	-	**0.0**	9.9*	✓	-	-	**0.0**	19.5*	✓
	Rest of 7	-	-	57.5	-		-	-	**0.0**	**-**	✓	-	-	**-**	**-**	

* unwanted catch

For **HAD**, compliance was assessed for NWW01 (trawls ≥ 120 mm) in division 5.b as low in 2018 and as high in 2020 based solely on the STECF discard information since no LH data were available and the ICES estimate is available at stock level. For subarea 6, compliance has been assessed as medium for the three years considered, again based solely on the STECF discard data and the comparison with the low reporting of discards in the logbooks. For division 7.a, compliance was assessed as high in 2018 and as low in 2019 and 2020 based solely on the STECF discard information. For divisions of rest of 7, the LO did not apply for the species in 2018 and compliance was assessed as low in 2019 and 2020 based on the STECF discard data and the ICES discard information for otter trawls (applicable to NWW01 and NWW02). For NWW02 (trawls < 120 mm), compliance has been assessed as low for subarea 6 for the three years considered based also on the STECF information. For division 7.a compliance has been assessed as low in 2018 and 2019 based on the STECF discard information and the low reporting of BMS/DIS/DIM in the logbooks. For 2020, compliance has been also assessed as low because, although the reporting of BMS in the logbooks is much higher than in previous years, the STECF discard information indicates a high discard ratio that is not reflected in the DIM

or DIS categories in the logbooks. For division 7.d, the species was not subject to the LO in 2018 and compliance has been assessed as high in 2020 based on the STECF data. No STECF estimates or LH are available for 2019 and therefore, compliance was not assessed for this year in this area. For divisions of rest of 7, compliance was assessed as medium in 2019 and as high in 2020 based on the illegal discard ratio estimates obtained from the analysis of the LH available (6 in both occasions, although the 2019 estimate has wide confidence intervals). The STECF information and the ICES discard data for otter trawlers indicate higher discard ratios in 2019 and 2020 although it should be noted that there has been an increase in the reporting of BMS in the logbooks in this area from 2019 to 2020. The species was not subject to the LO in this area in 2018. For NWW05 (beam trawls 80 - < 120 mm), compliance was assessed as low for division 7.a and divisions of rest of 7 for the two years (2019 and 2020) for which the species was subject to the LO based on the STECF discard data and on the ICES discard information for beam trawlers (applicable to NWW04 and NWW05). For NWW06, (seines) compliance was assessed as medium in subarea 6 in 2019 and 2020 and as low for those years in divisions 7.a. For rest of 7 compliance was assessed as low in 2019 based on the STECF discard ratio and the low reporting in the logbooks. For 2020, compliance has been also assessed as low (although there has been an increase in reporting of BMS in the logbooks) because the STECF discard ratio is not reflected in the DIM or DIS reported in the logbooks. Finally, for divisions of rest of 7 of NWW07, compliance was assessed as low in 2019 and as low also in 2020 for the same reasons. It should be noted that the ICES discard information for gillnets indicate lower discard rates in both 2019 and 2020. In the case of NWW06 and NWW07, again the species was not subject to the LO in 2018.

Table 8c. Overall compliance levels for HAD by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are for some stocks solely available at stock level. Grey shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

HAD		2018					2019					2020				
FS	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.5.b	-	-	**56.8**	<5	✗	-	-	**-**	<5	-	-	-	**4.8**	<5	✓
	27.6	-	-	**12.7**	13.2	!	-	-	**7.2**	15.6	!	-	-	**7.1**	25.7	!
	27.7.a	-	-	**2.0**	22.2	✓	-	-	**17.8**	27.4	✗	-	-	**17.8**	24.0	✗
	Rest of 7	-	-	29.6	43.3		-	-	**17.8**	27.8	✗	-	1	**17.8**	33.6	✗
NWW02 Trawls < 120	27.6	-	-	**57.3**	13.2	✗	-	-	**60.2**	15.6	✗	-	-	**69.3**	25.7	✗
	27.7.a	-	-	**16.6**	22.2	✗	-	-	**21.0**	27.4	✗	-	-	**43.8**	24.0	✗
	27.7.d	-	-	**-**	43.3		-	-	**-**	27.8	-	-	-	**0.0**	33.6	✓
	Rest of 7	-	-	54.8			**5.4**	6	**31.0**		!	**0.0**	6	20.6		✓
NWW05 Beam trawls	27.7.a	-	-	17.8	22.2		-	-	**53.9**	27.4	✗	-	-	**81.2**	24.0	✗
	Rest of 7	-	-	71.6	62.7		-	-	**55.7**	70.2	✗	-	1	**54.7**	70.5	✗
NWW06 Seines	27.6	-	-	9.2	13.2		-	-	**14.6**	15.6	!	-	-	**12.0**	25.7	!
	27.7.a	-	-	-	22.2		-	-	**17.8**	27.4	✗	-	-	**17.8**	24.0	✗
	Rest of 7	-	-	17.8	-		**-**	-	**17.8**	-	✗	**-**	-	**17.8**	-	✗
NWW07 Gillnet	Rest of 7	-	-	17.8	0.3		**-**	1	**17.8**	0.0	✗	**-**	-	**17.8**	11.2	✗

For **HKE**, compliance was mostly assessed using the STECF discard information and the comparison with the reported discards in the logbooks. LH were only available in sufficient numbers for NWW02 (trawls < 120 mm) in rest of 7 for which the calculated illegal discard ratios indicate high compliance in 2019 and medium compliance in 2020. The estimate of illegal discard ratios in 2019 has narrow confidence intervals while the one for 2020 has wider confidence intervals. The STECF discard information for the same area and years indicate higher discard ratios. Compliance was assessed as low in 2018 in this area using the STECF information. For subarea 6 of NWW02, compliance was assessed as low for the three years considered based on the STECF information. Compliance was assessed as high in 2018 and 2019 and as medium in 2020 for division 7.a and as high for the three years under consideration for division 7.d. Compliance has been assessed as medium for 2018-2020 for subarea 6 and divisions of rest of 7 of NWW01 (trawls ≥ 120 mm) using the STECF information. Compliance was assessed as high in 2018 and as medium in 2019 in division 7.a of this FS. There was no STECF discard data available for this division in 2020 and therefore compliance was not assessed for this year. For NWW05 (beam trawls 80 - < 120 mm), the species was not subject to the LO in 2018. Low compliance levels were assessed for divisions 7.a, 7.d and of rest of 7 for 2019 and 2020 based on the discard ratios obtained when analysing the STECF information and the low reporting of discards in the logbooks. For NWW06 (seines), again, the species was not subject to the LO in 2018 and based on the STECF discard estimates compliance has been assessed as medium in subarea 6, and divisions of rest of 7 in 2019 and 2020. Compliance was also assessed as medium in division 7.a in 2019, no discard information from STECF was available for this division for 2020 and therefore, compliance was not assessed for this year. For NWW07 (gillnets), compliance has been assessed as medium for the three yeas (2018-2020) in divisions of rest of 7 based on the STECF information. For NWW08 (trammel nets), compliance was assessed as high in 2018 and 2019 for division 7.d and as low for 2019 in divisions of rest of 7, based on the STECF information. Finally, for NWW09 (lines), based on the discard information obtained from the STECF database, compliance was assessed as high in subarea 6 and divisions of rest of 7 in 2018. There is no information (no LH, no STECF discard data) to assess compliance for the remaining years.

Table 8d. Overall compliance levels for HKE by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are solely available at stock level. Grey shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained.

HKE		2018					2019					2020				
FS	Area	1-LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.6	-	-	**5.8**		!	-	-	**5.1**		!	-	-	**11.0**		!
	27.7.a	-	-	**0.0**		✓	-	-	**12.4**		!	-	-	**-**		-
	Rest of 7	-	-	**12.4**		!	-	-	**12.3**		!	-	1	**12.4**		!
NWW02 Trawls < 120	27.6	-	-	**24.8**	10.0	✗	-	-	**41.6**	7.8	✗	-	-	**90.4**	8.7	✗
	27.7.a	-	-	**3.2**		✓	-	-	**0.1**		✓	-	-	**7.0**		!
	27.7.d	-	-	**0.0**		✓	-	-	**0.0**		✓	-	-	**0.0**		✓
	Rest of 7	-	-	**24.7**		✗	**0.0**	6	25.6		✓	**7.8**	9	23.9		!

NWW05 Beam trawls < 120	27.7.a	-	-	80.0	10.0		-	-	**77.6**		✗	-	-	**75.4**		✗
	27.7.d	-	-	80.0			-	-	**80.7**		✗	-	-	**75.4**		✗
	Rest of 7	-	-	48.7			-	-	**60.6**		✗	-	1	**51.4**		✗
NWW06 Seines	27.6	-	-	14.0			-	-	**8.0**		!	-	-	**10.1**		!
	27.7.a	-	-	-			-	-	**12.4**		!	-	-	-		-
	Rest of 7	-	-	12.4			-	-	**12.4**		!	-	-	**12.4**		!
NWW07 Gillnet	Rest of 7	-	-	**6.8**	10.0	!	-	1	**10.6**		!	-	-	**12.4**		!
NWW08 Trammel nets	27.7.d	-	-	**0.0**		✓	-	-	**0.0**		✓	-	-	-		-
	Rest of 7	-	-	-		-	-	-	**75.4**		✗	-	-	-		-
NWW09 Lines	27.6	-	-	**0.0**		✓	-	-	-		-	-	-	-		-
	Rest of 7	-	-	**0.0**		✓	-	-	-		-	-	-	-		-

For **NEP**, very limited information on which to assess compliance was available, and the STECF discard information has been used to assess compliance as medium for NWW02 (trawls < 120 mm) in division 7.a and in for all years considered (2018-2019). The same source of information has been used to assess compliance as medium for subarea 6 of NWW01 (trawls ≥ 120 mm) for 2018-2020. There are several FU exploited under each division/subarea, each with a separate discard ratio from ICES (see Table 6 and Annex 6). The discard ratios provided in the table below attempts to capture this variability by expressing the discard ratios in ranges (e.g., < 3) or quoting the highest discard ratio from the ones reported for the different FU. Looking at this information, it appears that the ICES discard ratios and the STECF discard rates do not provide the same picture, with the ICES discard rates appearing to be higher than the STECF ones in most cases. However, as explained before, the ICES estimates are by FU in this case and although they have been assigned to the FS reporting most of the catches (NWW02) there are other FS reporting catches of NEP, although in much smaller quantities. There has been limited reporting of BMS/DIS/DIM in the logbooks for these two FS and areas for the years analysed (2018-2020).

Table 8d. Overall compliance levels for NEP by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are for some stocks solely available at stock level. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

NEP		2018					2019					2020				
FS	**Area**	**LH**	**N**	**STECF**	**ICES**	**Overall**	**LH**	**N**	**STECF**	**ICES**	**Overall**	**LH**	**N**	**STECF**	**ICES**	**Overall**
NWW01 Trawls ≥ 120	27.6	-	-	**11.4**	<3	!	-	-	**12.2**	*9.0*	!	-	-	**14.1**	<5	!
NWW02 Trawls < 120	27.7.a	-	-	**11.4**	*>15*	!	-	1	**11.2**	*>15*	!	-	3	**14.1**	*>15*	!
	Rest of 7	-	-	**10.5**	*>15*	!	-	1	**12.2**	*>15*	!	-	4	**14.1**	*>15*	!

For **PLE**, the species was not subject to the LO in 2018. For the remaining years, a sufficient number of LH to assess compliance was only available for NWW02 (trawls < 120 mm) in division 7.d in 2019 indicating a low compliance. The STECF discard estimate also indicated high discard ratios. For 2020, only 3 LH were available, and compliance was assessed as low based on the STECF discard estimate, that again indicated high discard ratios, and the low reporting of discards declared in the logbook for this division. For the remaining divisions of NWW02, compliance was also considered to be low following the STECF discard information for 2019 and 2020 in subarea 6 and divisions 7.a and of rest of 7. However, for 2020, an increase in the reporting of BMS in the logbooks is apparent (see Annex 4) in divisions 7.a and of rest of 7 although very small quantities of DIM or DIS are reported in the logbooks. For NWW05 (beam trawls 80 - < 120 mm), 5 LH were available for in 2019 and compliance was assessed as medium based on this information. The STECF discard estimate also indicated medium discard rates. For 2020, due to lack of enough LH compliance was assessed based solely on the STECF information that indicated high discard ratios and compliance assessed as low. For the remaining areas of this FS, compliance was based on the analysis of the STECF discard information and was assessed as low for divisions 7.a and 7.d for both 2019 and 2020. For NWW01 (trawls ≥ 120 mm), compliance was assessed as medium in subarea 6 in 2019 and as high in 2020 based on the STECF information. Compliance was assessed as low in divisions 7.d and of rest of 7 in 2019 while compliance was assessed as medium in divisions 7.a and of rest of 7 in 2020. For NWW06 (seines), compliance was assessed as medium in subarea 6 and divisions of rest of 7 in 2019 and as high in subarea 6 and as medium in divisions or rest of 7 in 2020 based on the STECF information. For NWW07 (gillnets), compliance was assessed as low in 2019 in division 7.d. Compliance in division 7.d of NWW08 (trammel nets) was also assessed as low in both 2019 and 2020. Finally, compliance was assessed as high in divisions of rest of 7 in NWW08 in 2019. There was no STECF discard information for 2020 and therefore compliance was not assessed for this area for this year.

Table 8e. Overall compliance levels for PLE by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are for some stocks solely available at stock level. Grey shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

PLE		2018					2019					2020				
FS	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.6	-	-	0.9			-	-	**14.1**	-	!	-	-	**3.6**		✓
	27.7.a	-	-	-	~60%		-	-	-	~60%	-	-	-	**9.1**	~60%	!
	27.7.d	-	-	59.6	55.4		-	-	**30.5**	65.5	✗	-	-	-	50.4	-

	Rest of 7	-	-	20.5	*>15*		-	-	**17.5**	*>15*	✗	-	-	**9.2**	*>15*	!
NWW02 Trawls < 120	27.6	-	-	98.0			-	-	**98.8**	-	✗	-	-	**99.8**		✗
	27.7.a	-	-	64.8	~60%		-	-	**80.0**	~60%	✗	-	-	**76.4**	~60%	✗
	27.7.d	-	2	55.1	55.4		**37.5**	10	47.1	65.5	✗	-	3	**32.1**	50.4	✗
	Rest of 7	-	-	26.6	*>15*		-	1	**21.3**	*>15*	✗	-	1	**30.0**	*>15*	✗
NWW05 Beam trawls < 120	27.7.a	-	-	9.1	~60%		-	-	**41.2**	~60%	✗	-	2	**34.7**	~60%	✗
	27.7.d	4	5	40.1	55.4		-	4	**57.0**	65.5	✗	-	-	**62.3**	50.4	✗
	Rest of 7	-	-	30.3	*>15*		**6.6**	5	10.9	*>15*	!	-	1	**24.4**	*>15*	✗
NWW06 Seines	27.6	-	-	0.2			-	-	**14.2**	-	!	-	-	**3.3**		✓
	Rest of 7	-	-	9.2	*>15*		-	-	**9.1**	*>15*	!	-	-	**9.1**	*>15*	!
NWW07 Gillnet	27.7.d	-	-	48.9	55.4		**-**	-	**43.7**	65.5	✗	**-**	-	**-**	50.4	-
NWW08 Trammel nets	27.7.d	-	-	27.8	55.4		**-**	-	**42.5**		✗	**-**	-	**19.3**		✗
	Rest of 7	-	-	0.0	*>15*		-	-	**0.0**	*>15*	✓	-	-	**-**	*>15*	-

For **SOL**, in NWW01 (trawls ≥ 120 mm), the species was not subject to the LO in 2018. In 2019 compliance has been assessed as high in subarea 6 due to the low discard ratio obtained from the analysis of the STECF information. No information on which to base compliance was available for 2020. In divisions of rest of 7, compliance was assessed as medium in 2019 and as high in 2020 based again on the STECF discard rate information that was consistent with the ICES discard rates obtained for otter trawlers (FS NWW01 and NWW02). For NWW02 (trawls < 120 mm), the species was subject to the LO in 2018 only in division 7.d. In this division, compliance was assessed as high in 2018 based on the STECF information but as medium in 2019 based on the data obtained from the 5 LH analysed. Only 1 LH was available for this division in 2020 and therefore, compliance was assessed a low in 2020 based on the STECF information that indicated high discard ratios. There is very limited reporting of BMS/DIS/DIM SOL in the logbooks during this period. In subarea 6, divisions 7.a and of rest of 7, the LO was not applicable to this species in 2018. In these three areas, for 2019 and 2020, compliance was assessed based on the STECF information available. In 2019, low compliance levels were considered for subarea 6 and division 7.a while medium and high compliance levels were considered for divisions 7.d and of rest of 7, respectively. The ICES discard estimate in divisions of rest of 7 for otter trawlers in 2019 indicate higher discard rates but since it is not possible to differentiate between NWW01 and NWW02 in the ICES information, compliance was assessed using the STECF discard data. In 2020, high compliance levels were considered for division 7.a and divisions of rest of 7 while low compliance level was considered for division 7.d. For NWW05 (beam trawls 80 - < 120 mm), SOL was not subject to the LO in division 7.a in 2018. Due to the limited number of LH available, compliance was assessed in 2019 and 2020 as medium based solely on the STECF information. For division 7.d, based on the information provided by the LH available (n=5) compliance was assessed as low in 2018 (the estimate had relatively wide confidence intervals). In 2019, based again on the information provided by the analysis of 5 LH, compliance was assessed as high (the estimate had relative narrow confidence intervals). In 2020, due to the lack of LH, compliance was assessed as low using the STECF discard data that indicated high discard rates. In divisions of rest of 7, compliance was assessed as medium in 2018 and 2020 based on the STECF information and on the ICES discard estimates for beam trawlers (NWW04 and NWW05) and as high in 2019 based on the information from the 6 LH available (the estimate had narrow confidence intervals). For NWW06 (seines), information on which to base compliance was only available for 2019 in subarea 6. Compliance

was assessed as high based on the STECF discard information. For NWW07 (gillnets), compliance was assessed again based solely on the STECF information which was available for division 7.d in 2018 indicating medium discard levels and for divisions of rest of 7 in 2018 and 2019 indicating low discard levels. Compliance was therefore assessed as medium and as high respectively. Finally, for NWW08 (trammel nets), compliance was assessed as high based on the STECF discard information in 2018 and 2019 for divisions 7.d and of rest of 7 and in 2020 for division 7.d. No information was available for 2020 for divisions of rest of 7.

Table 8f. Overall compliance levels for SOL by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are for some stocks solely available at stock level. Grey shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

SOL		2018					2019					2020				
FS	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.6	-	-	**3.2**			-	-	**3.2**		✓	-	-	**-**		-
	Rest of 7	-	-	**7.4**	**14.2**		-	-	**6.0**	**9.5**	!	-	-	**1.0**	**0.0**	✓
NWW02 Trawls < 120	27.6			**27.1**			-	-	**62.8**		✗	-	-	**-**		-
	27.7.a			**57.5**	**5.3**		-	-	**25.9**	**13.6**	✗	-	-	**3.7**	**12.2**	✓
	27.7.d			**3.1**	**9.9**	✓	**8.7**	5	**38.3**	**19.7**	!	-	1	**24.4**	**20.8**	✗
	Rest of 7		3	**1.3**	**14.2**		-	3	**2.9**	**9.5**	✓	-	3	**2.2**	**0.0**	✓
NWW05 Beam trawls < 120	27.7.a	-	-	**3.2**	**5.3**		-	1	**13.2**	**13.6**	!	-	2	**11.9**	**12.2**	!
	27.7.d	**16.2**	5	**12.6**	**9.9**	✗	**3.7**	5	**13.9**	**19.7**	✓	-	-	**22.3**	**20.8**	✗
	Rest of 7	-	-	**8.0**	**14.2**	!	**0.0**	6	**7.0**	**12.7**	✓	-	1	**5.8**	**7.2**	!
NWW06 Seines	27.6	-	-	**-**			-	-	**3.2**		✓	-	-	**-**		-
NWW07 Gillnet	27.7.d	-	-	**6.3**	**9.9**	!	**-**	-	**-**	**19.7**	-	**-**	-	**-**	**20.8**	-
	Rest of 7	-	-	**0.2**	**14.2**	✓	-	-	**0.0**	**-**	✓	-	-	**-**	**-**	-
NWW08 Trammel nets	27.7.d	-	-	**1.3**	**9.9**	✓	**-**	-	**1.5**	**19.7**	✓	**-**	-	**1.3**	**20.8**	✓
	Rest of 7	-	-	**0.0**	**14.2**	✓	-	-	**0.0**	**-**	✓	-	-	**-**	**-**	-

For **WHG**, for NWW01 (trawls ≥ 120 mm) compliance was assessed a medium for divisions of rest of 7 for all years considered (2018-2020) based on the STECF discard information coupled with the low reporting of discards in the logbooks. The STECF discard estimates agreed with those obtained in 2018 for otter trawls using the ICES information on discards (applicable to NWW01-02). For 2020, the ICES discard estimates indicate a slighter higher discard rates than the STECF estimate but this estimate is applicable to both NWW01-NWW02. For subarea 6 and division 7.a, the species was not subject to the LO in 2018. In 2019 and 2020 based again on the STECF information, compliance was assessed as low for subarea 6 in 2019 and as medium in 2020. These levels of discards were confirmed by the ICES estimates obtained for finfish directed otter trawls (assigned to NWW01). For division 7.a, compliance was assessed as medium for both 2019 and 2020. For division 7.d compliance was assessed as medium in 2018 based on the STECF discard information. There were no STECF data for the remaining years and no LH and therefore compliance was not assessed in this area for 2019-2020. For NWW02 (trawls < 120 mm), the species was not subject to the

LO in subarea 6 and division 7.a in 2018. Compliance was assessed as low in both areas in both 2019 and 2020 based on the high discard ratios obtained by the analysis of the STECF discard information and on the discard estimates obtained for *Nephrops* directed otter trawls using the ICES advice (assigned to NWW02). It should be noted that the was a big increase in the reporting of BMS in this area and FS in 2020. For division 7.d compliance was assessed as low for the three years considered based on the STECF information since the number of LH available was too limited. There was some reporting of DIM in the logbooks in 2020 but almost none before that year. In divisions of rest of 7, compliance was assessed as low in 2018 and as medium in 2020 based on the STECF information. The ICES discard information calculated for otter trawls gave a slightly different picture but since it is applicable to all otter trawlers the STECF estimation was given more weight when assessing compliance. Compliance was assessed as medium in 2019 based on the analysis of 5 LH (the estimate had wide confidence intervals). For NWW05 (beam trawls 80 - < 120 mm), the species was not subject to the LO in 2018. In 2019 and 2020, compliance has been assessed as low for all areas based on the STECF discard information and the very low reporting of discards in the logbooks. It is worth noting that the ICES discard estimate for divisions of rest of 7 for beam trawlers (applicable to NWW04-05) available for 2018 and 2020 also provide high discard rates. For NWW06 (seines), the species was not subject to the LO in 2018 in subarea 6 and division 7.a. For these areas, compliance was assessed as low in 2019 and as medium in 2020 (subarea 6) and as medium in both years (division 7.a) based on the STECF information. For division 7.d information on discards was only available for 2020 from 5 LH and based on these data compliance was assessed as high (the estimate had relatively narrow confidence intervals). For divisions of rest of 7, compliance has been assessed as medium for all the years considered (2018-2020) based on the STECF information although the ICES estimate obtained for seines appear to indicate lower discard rates, at least for 2018 and 2020 for which the estimates of discards are available by gear type. For NWW07 (gillnets) and NWW08 (trammel nets) the species was not subject to the LO in 2018. Based on the STECF information available compliance has been assessed as low in division 7.d of NWW07 in 2020, as medium in divisions of rest of 7 in 2019 (based solely on the STECF discard estimates) and as low in this area in 2020 based in both the STECF information and the ICES discard estimates for gillnets in this area. Although there has been an increase in reporting of BMS in the logbooks the reporting of DIM or DIS in the logbooks is very low when compared with the STECF discard ratios. For NWW08, compliance has been assessed as low in 2019 and 2020 in division 7.d.

Table 8g. Overall compliance levels for WHG by year (columns Overall) per fleet segment in NWW in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). N = number of LH available. The ICES discard estimates are for some stocks solely available at stock level. Grey shaded cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).

WHG		2018					2019					2020				
FS	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120	27.6	-	-	37.3	77.9		-	-	**36.6**	45.7	✖	-	-	**7.9**	11.4	!
	27.7.a	-	-	**-**	-		-	-	**12.7**	-	!	-	-	**12.7**	-	!
	27.7.d	-	-	**14.5**	39.7	!	-	-	**-**	35.3		-	-	**-**	44.7	
	Rest of 7	-	-	**12.7**	12.4	!	-	-	**12.7**	-	!	-	-	**12.7**	18.0	!

NWW02 Trawls < 120	27.6	-	-	95.9	77.9		-	-	**95.9**	100	✗	-	-	**98.8**	100	✗
	27.7.a	-	-	97.1	99.2		-	-	**96.6**	99.9	✗	-	-	**99.9**	100	✗
	27.7.d	-	4	**24.2**	39.7	✗	-	3	**40.6**	35.3	✗	-	4	**33.6**	44.7	✗
	Rest of 7	-	-	**20.4**	12.4	✗	**14.3**	5	14.1	-	!	-	1	**14.7**	18.0	!
NWW05 Beam trawls	27.7.a	-	-	**-**	**-**		-	-	**84.1**	-	✗	-	-	**83.3**	-	✗
	27.7.d	-	1	75.9	39.7		-	-	**89.7**	35.3	✗	-	-	**84.7**	44.7	✗
	Rest of 7	-	-	65.5	73.8		-	-	**59.0**	-	✗	-	-	**49.3**	59.9	✗
NWW06 Seines	27.6		-	46.2	77.9		-	-	**40.2**	-	✗	-	-	**6.7**	-	!
	27.7.a		-	**-**	**-**		-	-	**12.7**	-	!	-	-	**12.7**	-	!
	27.7.d	-	1	**-**	39.7	**-**	-	2	**-**	35.3	-	**2.2**	5	**-**	44.7	✓
	Rest of 7	-	-	**12.7**	0.0	!	-	-	**12.7**	-	!	-	-	**12.7**	1.4	!
NWW07 Gillnet	27.7.d	-	-	-	39.7		-	-	**-**	35.3	-	**-**	-	**92.0**	44.7	✗
	Rest of 7	-	-	46.5	14.6		-	-	**7.8**	-	!	-	-	**25.4**	29.9	✗
NWW08 Trammel nets	27.7.d	-	-	93.1	39.7		-	-	**48.7**	35.3	✗	**-**	-	**84.4**	44.7	✗

In summary for all species and FS, in many cases it was necessary to base the compliance levels on the STECF discard data due to the low number of LH available for some FS/area combinations. There is not always a concordance between the STECF discard estimates and the ICES ones for the same years. However, when interpreting these differences, it has been attempted to take into consideration the difficulties in assigning FS and areas to the discard ratios provided by ICES for individual stocks as explained before.

Table 9 presents the overview of the benchmarked compliance situation for the years of the study period for each species as before but listing all the species evaluated for each FS.

Table 9. Overall compliance levels by species (columns Overall) per fleet segment (FS) in the North Western Waters in 2018, 2019 and 2020 derived from the discard ratios obtained by the 3 sources of information (LH – method 1, STECF and ICES – method 2). See main text for the explanation on how the overall evaluation was obtained. Shaded grey cells highlight those areas and FS where the species was not subject to the Landing Obligation. Bold font highlights the source of information used to determine the overall compliance level (see main text for a detailed explanation on how the overall evaluation was obtained. Blue shaded cells highlight those areas and FS where there are exemptions in place (see Annex 2 for details).). discard information available from landings that represent < 1% of the landing data declared in that FS/area combination.*

			2018					2019					2020				
FS	Sp	Area	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW01 Trawls ≥ 120 mm	ANF	27.6	-	-	**0.9**	1.5	✓	-	-	**0.3**	2.3	✓	-	-	**1.4**	1.6	✓
	COD	27.6	-	-	72.6	38.4		-	-	**5.3**	5.2	!	-	-	**14.0**	-	!
		27.7.a	-	-	-	3.2		-	-	**-**	-	**-**	-	-	**7.1**	0.0	!
		Rest of 7	-	-	7.1	-		-	-	**7.1**	17.4	!	-	1	**7.1**	18.2	!
	HAD	27.5.b	-	-	**56.8**	<5	✗	-	-	**-**	<5	**-**	-	-	**4.8**	<5	✓
		27.6	-	-	**12.7**	13.2	!	-	-	**7.2**	15.6	!	-	-	**7.1**	25.7	!
		27.7.a	-	-	**2.0**	22.2	✓	-	-	**17.8**	27.4	✗	-	-	**17.8**	24.0	✗
		Rest of 7	-	-	29.6	43.3		-	-	**17.8**	27.8	✗	-	1	**17.8**	33.6	✗
	HKE	27.6	-	-	**5.8**	10.0	!	-	-	**5.1**	7.8	!	-	-	**11.0**	8.7	!
		27.7.a	-	-	**0.0**		✓	-	-	**12.4**		!	-	-	**-**		**-**
		Rest of 7	-	-	**12.4**		!	-	-	**12.3**		!	-	1	**12.4**		!
	NEP	27.6	-	-	**11.4**	<3	!	-	-	**12.2**	*9.0*	!	-	-	**14.1**	<5	!
	PLE	27.6	-	-	0.9			-	-	**14.1**	-	!	-	-	**3.6**		✓
		27.7.a	-	-	-	~60%		-	-	**-**	~60%	**-**	-	-	**9.1**	~60%	!
		27.7.d	-	-	59.6	55.4		-	-	**30.5**	65.5	✗	-	-	**-**	50.4	**-**
		Rest of 7	-	-	20.5	*>15*		-	-	**17.5**	*>15*	✗	-	-	**9.2**	*>15*	!
	SOL	27.6	-	-	3.2			-	-	**3.2**		✓	-	-	**-**		**-**
		Rest of 7	-	-	7.4	14.2		-	-	**6.0**	9.5	!	-	-	**1.0**	0.0	✓
	WHG	27.6	-	-	37.3	77.9		-	-	**36.6**	45.7	✗	-	-	**7.9**	11.4	!
		27.7.a	-	-	-	-		-	-	**12.7**	-	!	-	-	**12.7**	-	!
		27.7.d	-	-	**14.5**	39.7	!	-	-	**-**	35.3	**-**	-	-	**-**	44.7	**-**
		Rest of 7	-	-	**12.7**	12.4	!	-	-	**12.7**	-	!	-	-	**12.7**	18.0	!

Table 9. Cont.

			2018					2019					2020				
FS	**Sp**	**Area**	**LH**	**N**	**STECF**	**ICES**	**Overall**	**LH**	**N**	**STECF**	**ICES**	**Overall**	**LH**	**N**	**STECF**	**ICES**	**Overall**
NWW02 Trawls < 120 mm	ANF	27.6	-	-	**13.5**	1.5	!	-	-	**42.8**	2.3	✗	-	-	**7.9**	1.6	!
		Rest of 7	-	-	**0.8**	*5.8/6.7*	✓	**6.0**	8	4.3	*6.6/10.1*	!	**0.9**	17	**-**	*4.2/9.6*	✓
	COD	27.6	-	-	80.8	93.1		-	-	**71.9**	100	✗	-	-	**94.6**	-	✗
		27.7.a	-	-	15.0	35.4		-	-	**2.6**	-	✓	-	-	**7.1**	23.0	✗
		Rest of 7	-	-	5.2	-		-	-	**6.2**	17.4	!	**-**	4	28.9	18.2	✗
	HAD	27.6	-	-	**57.3**	13.2	✗	-	-	**60.2**	15.6	✗	-	-	**69.3**	25.7	✗
		27.7.a	-	-	**16.6**	22.2	✗	-	-	**21.0**	27.4	✗	-	-	**43.8**	24.0	✗
		27.7.d	-	-	-	43.3		-	-	**-**	27.8	**-**	-	-	**0.0**	33.6	✓
		Rest of 7	-	-	54.8			**5.4**	6	31.0		✓	**0.0**	6	20.6		✓
	HKE	27.6	-	-	**24.8**	10.0	✗	-	-	**41.6**	7.8	✗	-	-	**90.4**	8.7	✗
		27.7.a	-	-	**3.2**		✓	-	-	**0.1**		✓	-	-	**7.0**		!
		27.7.d	-	-	**0.0**		✓	-	-	**0.0**		✓	-	-	**0.0**		✓
		Rest of 7	-	-	**24.7**		✗	**0.0**	6	25.6		✓	**7.8**	9	23.9		!
	NEP	27.7.a	-	-	**11.4**	*>15*	!	-	1	**11.2**	*>15*	!	-	3	**14.1**	*>15*	!
		Rest of 7	-	-	**10.5**	*>15*	!	-	1	**12.2**	*>15*	!	-	4	**14.1**	*>15*	!
	PLE	27.6	-	-	98.0			-	-	**98.8**	-	✗	-	-	**99.8**		✗
		27.7.a	-	-	64.8	~60%		-	-	**80.0**	~60%	✗	-	-	**76.4**	~60%	✗
		27.7.d	-	2	55.1	55.4		**37.5**	10	47.1	65.5	✗	-	3	**32.1**	50.4	✗
		Rest of 7	-	-	26.6	*>15*		-	1	**21.3**	*>15*	✗	**-**	1	**30.0**	*>15*	✗
	SOL	27.6	-	-	27.1			-	-	**62.8**		✗	-	-	**-**		**-**
		27.7.a	-	-	57.5	5.3		-	-	**25.9**	13.6	✗	-	-	**3.7**	12.2	✓
		27.7.d	-	-	**3.1**	9.9	✓	**8.7**	5	38.3	19.7	!	-	1	**24.4**	20.8	✗
		Rest of 7	-	3	1.3	14.2		-	3	**2.9**	9.5	✓	-	3	**2.2**	0.0	✓
	WHG	27.6	-	-	95.9	77.9		-	-	**95.9**	100	✗	-	-	**98.8**	100	✗
		27.7.a	-	-	97.1	99.2		-	-	**96.6**	99.9	✗	-	-	**99.9**	100	✗
		27.7.d	-	4	**24.2**	39.7	✗	-	3	**40.6**	35.3	✗	-	4	**33.6**	44.7	✗
		Rest of 7	-	-	**20.4**	12.4	✗	**14.3**	5	14.1	-	!	-	1	**14.7**	18.0	!

Table 9. Cont.

FS	Sp	Area	2018					2019					2020				
			LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW05 Beam trawls < 120 mm	ANF	27.7.d	-	-	**17.0**	*5.8/6.7*	✗	-	**1**	**26.7**	*6.6/10.1*	✗	-	-	**21.0**	*4.2/9.6*	✗
		Rest of 7	-	-	**11.9**		!	-	1	**13.8**		!	-	2	**16.9**		✗
	COD	27.7.a	-	-	7.1	30.3		-	**1**	**16.9**	-	✗	-	-	**23.3**	25.7	✗
		27.7.d	-	-	5.2	16.4*		-	-	**3.2**	9.9*	✓	-	-	**24.6**	19.5*	✗
		Rest of 7	-	-	11.9	-		-	1	**25.0**	26.3	✗	-	1	**16.6**	36.9	✗
	HAD	27.7.a	-	-	17.8	22.2		-	-	**53.9**	27.4	✗	-	-	**81.2**	24.0	✗
		Rest of 7	-	-	71.6	62.7		-	-	**55.7**	70.2	✗	-	1	**54.7**	70.5	✗
	HKE	27.7.a	-	-	80.0	10.0		-	-	**77.6**	7.8	✗	-	-	**75.4**	8.7	✗
		27.7.d	-	-	80.0			-	-	**80.7**		✗	-	-	**75.4**		✗
		Rest of 7	-	-	48.7			-	-	**60.6**		✗	-	1	**51.4**		✗
	PLE	27.7.a	-	-	9.1	~60%		-	-	**41.2**	~60%	✗	-	2	**34.7**	~60%	✗
		27.7.d	4.4	5	40.1	55.4		-	4	**57.0**	65.5	✗	-	-	**62.3**	50.4	✗
		Rest of 7	-	-	30.3	*>15*		**6.6**	5	**10.9**	*>15*	!	-	1	**24.4**	*>15*	✗
	SOL	27.7.a	-	-	3.2	5.3		-	1	**13.2**	13.6	!	-	2	**11.9**	12.2	!
		27.7.d	**16.2**	5	12.6	9.9	✗	**3.7**	5	**13.9**	19.7	✓	-	-	**22.3**	20.8	✗
		Rest of 7	-	-	**8.0**	14.2	!	**0.0**	6	**7.0**	12.7	✓	-	1	**5.8**	7.2	!
	WHG	27.7.a	-	-	**-**	-		-	-	**84.1**	-	✗	-	-	**83.3**	-	✗
		27.7.d	-	1	75.9	39.7		-	-	**89.7**	35.3	✗	-	-	**84.7**	44.7	✗
		Rest of 7	-	-	65.5	73.8		-	-	**59.0**	-	✗	-	-	**49.3**	59.9	✗

* unwanted catch

Table 9. Cont.

FS	Sp	Area	2018					2019					2020				
			LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW06 Seines	ANF	27.6	-	-	**1.0**	1.5	✓	-	-	**0.3**	2.3	✓	-	-	**1.7**	1.6	✓
	COD	27.6	-	-	72.4	-		-	-	**5.1**	*9.0*	!	-	-	**14.5**	-	!
		27.7.a	-	-	-	16.3		-	-	**7.1**	-	!	-	-	**7.1**	12.1	!
		Rest of 7	-	-	7.1	-		-	-	**7.1**	53.3	✗	-	-	**7.1**	18.6	!
	HAD	27.6	-	-	9.2	13.2		-	-	**14.6**	15.6	!	-	-	**12.0**	25.7	!
		27.7.a	-	-	-	22.2		-	-	**17.8**	27.4	✗	-	-	**17.8**	24.0	✗
		Rest of 7	-	-	17.8	-		-	-	**17.8**	-	✗	-	-	**17.8**	-	✗
	HKE	27.6	-	-	14.0	10.0		-	-	**8.0**	7.8	!	-	-	**10.1**	8.7	!
		27.7.a	-	-	-			-	-	**12.4**		!	-	-	-		-
		Rest of 7	-	-	12.4			-	-	**12.4**		!	-	-	**12.4**		!
	PLE	27.6	-	-	0.2			-	-	**14.2**	-	!	-	-	**3.3**		✓
		Rest of 7	-	-	9.2	*>15*		-	-	**9.1**	*>15*	!	-	-	**9.1**	*>15*	!
	SOL	27.6	-	-	-			-	-	**3.2**		✓	-	-	-		-
	WHG	27.6		-	46.2	77.9		-	-	**40.2**	-	✗	-	-	**6.7**	-	!
		27.7.a		-	-	-		-	-	**12.7**	-	!	-	-	**12.7**	-	!
		27.7.d	-	1	-	39.7	-	-	2	-	35.3	-	**2.2**	5	-	44.7	✓
		Rest of 7	-	-	**12.7**	0.0	!	-	-	**12.7**	-	!	-	-	**12.7**	1.4	!

Table 9. Cont.

FS	Sp	Area	2018					2019					2020				
			LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall	LH	N	STECF	ICES	Overall
NWW07 Gillnet	COD	27.6	-	-	-	0.0		-	-	**0.0**	0.0	✓	-	-	-	-	-
		27.7.d	-	-	0.0	16.4*		-	-	**0.0**	9.9*	✓	-	-	-	19.5*	-
		Rest of 7	-	-	7.1	17.4		-	1	**7.1**	-	!	-	-	**7.1**	-	!
	HAD	Rest of 7	-	-	17.8	0.3		-	1	**17.8**	0.0	✗	-	-	**17.8**	11.2	✗
	HKE	Rest of 7	-	-	**6.8**	10.0	!	-	1	**10.6**	7.8	!	-	-	**12.4**	8.7	!
	PLE	27.7.d	-	-	48.9	55.4		-	-	**43.7**	65.5	✗	-	-	-	50.4	-
	SOL	27.7.d	-	-	**6.3**	9.9	!	-	-	-	19.7	-	-	-	-	20.8	-
		Rest of 7	-	-	**0.2**	14.2	✓	-	-	**0.0**	-	✓	-	-	-	-	-
	WHG	27.7.d	-	-	-	39.7		-	-	-	35.3	-	-	-	**92.0**	44.7	✗
		Rest of 7	-	-	46.5	14.6		-	-	**7.8**	-	!	-	-	**25.4**	29.9	✗
NWW08 Trammel nets	COD	27.7.d	-	-	0.0	16.4*		-	-	**0.0**	9.9*	✓	-	-	**0.0**	19.5*	✓
		Rest of 7	-	-	57.5	-		-	-	**0.0**	-	✓	-	-	-	-	-
	HKE	27.7.d	-	-	**0.0**	10.0	✓	-	-	**0.0**	7.8	✓	-	-	-	8.7	-
		Rest of 7	-	-	-		-	-	-	**75.4**		✗	-	-	-		-
	PLE	27.7.d	-	-	27.8	55.4		-	-	**42.5**	65.5	✗	-	-	**19.3**	50.4	✗
		Rest of 7	-	-	0.0	*>15*		-	-	**0.0**	*>15*	✓	-	-	-	*>15*	-
	SOL	27.7.d	-	-	**1.3**	9.9	✓	-	-	**1.5**	19.7	✓	-	-	**1.3**	20.8	✓
		Rest of 7	-	-	**0.0**	14.2	✓	-	-	**0.0**	-	✓	-	-	-	-	-
	WHG	27.7.d	-	-	93.1	39.7		-	-	**48.7**	35.3	✗	-	-	**84.4**	44.7	✗
NWW09 Lines	ANF	Rest of 7	-	-	**0.0**	*5.8/6.7*	✓	-	-	-	*6.6/10.1*	-	-	-	-	*4.2/9.6*	-
	HKE	27.6	-	-	**0.0**	10.0	✓	-	-	-	7.8	-	-	-	-	8.7	-
		Rest of 7	-	-	**0.0**		✓	-	-	-		-	-	-	-		-

* unwanted catch

Comparison with the previous evaluation

In the previous evaluation of compliance, carried out for the years 2016 and 2017, the evaluation only considered those FS in which the species under study (HAD, HKE and WHG) were subject to the LO, as it has been done with the current evaluation. This meant that compliance was assessed for the three species solely for generic bottom trawls (old FS NWW01 and NWW02) and for HKE in gillnet (old FS NWW06), trammel net (old FS NWW07) and longline (old FS NWW08). In addition, STECF data were only available for 2016 and for this reason the 2017 compliance evaluation was based mainly on the LH and the ICES discard estimates. It was not possible to split the STECF data between old FS NWW01, NWW02, and NWW03.

For **HAD**, compliance was evaluated in 2016 for the generic bottom trawl < 100 mm (corresponding partially to the current FS NWW02, trawls < 120 mm), and generic bottom trawl ≥ 100 mm (corresponding to the current FS NWW01 and partially to NWW02). Because of the small number of LH available, compliance was mostly based on the STECF discard information. Compliance was estimated to be low for the smallest mesh size trawlers in subarea 6 and division 7.a in 2016 and medium for division 5.b. The species was not subject to the LO in divisions 7.d and of rest of 7. For 2017, only 1 LH was available for divisions of rest of 7 for the biggest mesh size trawlers (corresponding to the current FS NWW01 and partially to NWW02) and since the 2017 STECF data were not available at the time the report was completed, compliance was not assessed. For the biggest mesh size trawlers, compliance was assessed to be low in division 7.a and medium for division 5.b and subarea 6 (see Table 10). Compliance was also assessed as low for divisions 7.a and of rest of 7 in 2019 and 2020 of NWW01. However, compliance was assessed as high in 2018 in division 7.a. For subarea 6, compliance has remained at medium levels while for division 5.b compliance has fluctuated. For NWW02, low levels of compliance continue to be assessed for area 6 in the period 2018-2020 and for division 7.a in 2018-2020 while high levels of compliance were determined for divisions of rest of 7 and for division 7.d in 2020. It is worth mentioning that in all these cases, compliance was only based on the STECF discard information and the comparison with the BMS/DIM/DIS reporting in the logbooks due to the lack of LH data. The increase in reporting of BMS in the logbooks is apparent in 2020 for some areas (e.g., division 7.a of NWW02 and divisions of rest of 7 of NWW07, gillnets).

For **HKE**, compliance was also evaluated in 2016 for the generic bottom trawl <100 mm (corresponding partially to the current FS NWW02, trawls < 120 mm), and generic bottom trawl ≥ 100 mm (corresponding to the current FS NWW01 and partially to NWW02). Compliance was again

assessed using the STECF discard information since only 1 LH with the species was available for the period under consideration. Compliance was estimated to be low for both types of trawlers in subareas 6 and divisions 7.a and of rest of 7, medium in subarea 6 and high in division 7.d in 2016 (see Table 10). Compliance has remained mostly at medium levels in the areas of NWW01 that have been assessed for the period 2018-2020 (subarea 6, and divisions of rest of 7) based on STECF information. The exception is divisions 7.a for which compliance was assessed as high in 2018 and as medium in 2019. For NWW02, compliance has remained at low levels in subarea 6 for 2018-2020 and at high levels since 2016 in division 7.d. For division 7.a compliance has fluctuated from high levels in 2018-2019 to medium levels in 2020. Finally, for divisions of rest of 7, compliance has fluctuated from low levels in 2018 (based on the STECF discard information), to high levels in 2019 (based on the LH data available) and medium levels in 2020 (based again in the LH data available). Compliance was also assessed in 2016 for gillnetters (current FS NWW07), trammel nets (current FS NWW08) and lines (current FS NWW09) in some areas. Compliance was assessed to be high for subarea 6 and division 7.d and medium for divisions 7.a. For divisions of rest of 7 compliance, assesses as medium in 2016, has remained at medium levels also in 2018-2020. Compliance was assessed to be high in subarea 6 and division 7.d of trammel nets in 2016. For division 7.d compliance has remained stable at high levels in 2018 and 2019 based on the STECF information. Compliance was assessed as high in 2016 for subarea 6 and for divisions 7.a and of rest of 7 in lines. Compliance was also assessed as high in subarea 6 and divisions of rest of 7 in 2018 based on the STECF discard information.

For **WHG**, compliance was also evaluated in 2016 for the generic bottom trawl < 100 mm (corresponding partially to the current FS NWW02, trawls < 120 mm), and generic bottom trawl ≥ 100 mm (corresponding to the current FS NWW01 and partially to NWW02) in divisions 7.d and of rest of 7 (the LO did not apply to the species in the remaining areas). Compliance was estimated to be low for both types of trawlers in divisions 7.d and of rest of 7 in 2016. For division 7.d of the smallest mesh size trawlers, both the LH information (n= 13) and the STECF discard rates confirmed low compliance. Compliance was assessed for division 7.d (as low) in 2017 for the smallest mesh size trawlers following the information obtained from the analysis of the 7 LH available. Compliance has remained at medium levels in NWW01 in 2018-2020 in divisions of rest of 7 and was assessed as medium in division 7.d in 2018 (no information was available to assess compliance in this area in 2019-2020). For NWW02, compliance had remained low in most areas during 2018-2020 with the exception of divisions of rest of 7 for which compliance was assessed as low in 2018 based on LH information but at medium levels in 2019 and 2020 based on STEFC discard data.

ANF, COD, NEP, PLE and **SOL** were not included in the previous compliance evaluation exercise.

Table 10. Comparison of the compliance levels obtained by species per area and fleet segment (FS) in North Western Waters in 2016-2020. The evaluation on the years 2016-2017 has been reproduced from the results of the previous evaluation report of the North Western Waters carried out by EFCA under the same agreement with the NWW CEG as the current one. FS denomination has changed over time, but results are presented following the current (2022) denomination. See main text for the explanation on how the compliance evaluation was obtained. A "-" indicate where lack of data prevented the evaluation of compliance. Grey shaded cells highlight those areas and FS where the species was not subject to the LO and therefore no compliance evaluation was conducted. Orange shaded cells highlight those areas where a one-to-one correspondence between old and new FS cannot be carried out (for example old NWW02 comprised bottom trawlers < 100 mm).

FS	Old FS	Area	HAD					HKE					WHG				
			2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
NWW01 Trawls ≥ 120 mm	NWW02*	5.b	!	-	✗	-	✓	✗	-	-	-	-				-	-
		6	!	-	!	!	!	!	-	!	!	!				✗	!
		7.a	✗	-	✓	✗	✗	✗	-	✓	!	-				!	!
		7.d				-	-	✓	-	-	-	-	✗	-	!	-	-
		Rest of 7				✗	✗	✗	-	!	!	!	✗	-	!	!	!
NWW02 Trawls < 120 mm	NWW01/ NWW02	5.b	!	-	-	-	-	✗	-							-	-
		6	✗	-	✗	✗	✗	!	-	✗	✗	✗				✗	✗
		7.a	✗	-	✗	✗	✗	✗	-	✓	✓	!				✗	✗
		7.d				-	✓	✓	-	✓	✓	✓	✗	✗	✗	✗	✗
		Rest of 7				!	✓	✗	-	✗	✓	!	✗	-	✗	!	!
NWW07 Gillnet	NWW06	6				-	-	✓	-	-	-	-				-	-
		7.a				-	-	!	-	-	-	-				-	-
		7.d				-	-	✓	-	-	-	-				-	✗
		Rest of 7				✗	✗	!	-	!	!	!				!	✗
NWW08 Trammel nets	NWW07	6				-	-	✓	-	-	-	-				-	-
		7.d				-	-	✓	-	✓	✓	-				✗	✗
		Rest of 7				-	-	-	-	-	✗	-				-	-
NWW09 Lines	NWW08	6				-	-	✓		✓	-	-				-	-
		7.a				-	-	✓		-	-	-				-	-
		Rest of 7				-	-	✓		✓	-	-				-	-

* NWW02 (generic bottom trawl < 100 mm)

5 Discussion, conclusions and recommendations

Three different sources of data have been used to estimate discard levels in this evaluation. Information from the LH (Method 1) is prioritised over that obtained from Method 2 because of the difficulties encountered with the accurate allocation of catches (and discards) to a given FS when conducting the analysis of the STECF data, or when using the discard information provided in the ICES advice which is given at stock level. Given this constraint and the lack of information on the number of samples used to infer the precision of the given estimates, Method 2 would have been used, when possible, only to support the estimates obtained by Method 1. However, the number of LHs available for this evaluation has been very limited over the study period (15 in 2018, 51 in 2019 and 41 in 2020), so that in most FS/areas it was not possible to evaluate compliance based solely on the LH. In addition, when only a few LH were available or the estimates obtained were imprecise, the evaluation of compliance also takes into account the information from Method 2.

Additional differences between both methods are related with the consideration of the discarding of fish above the MCRS (which can take place for a number of reasons, low price of the catch, low quality of older catches, etc. which is not taken into account in Method 1 but could be accounted for in Method 2 since STECF and ICES report total discard figures. This issue could also affect several stocks, such as those of WHG and ANF in some areas due to lack of market for the smaller fish. However, due to the lack of appropriate reference data (for example, LH with information on grade sizes in the catch or sale notes from vessels equipped with cameras) it is not possible to quantify the level of discarding on this component of the catch.

An additional issue, which had already been discussed in the previous evaluation of compliance for the NWW, is the difficulty of incorporating into the calculations of illegal discarding the provisions of the different exemptions available for the species of interest. These exemptions, in the form of *de minimis* or survivability have different reporting requirements and allow that some proportion of the fish caught (in some cases, the BMS part of the catch, in others, all catches) can be legally discarded. In the present report, reported discards in the logbooks (as DIM, DIS or BMS) have been considered when calculating the discard ratios, both in reporting the results of Method 1 as well as when interpreting the results of Method 2. Those discards which have not been reported have been considered illegal since reporting discards is a mandatory requirement under the provisions of the LO even if the fisheries had exemptions available.

These issues mentioned above should be considered when interpreting the results on the current compliance evaluation.

For **ANF**, and for the FS reporting most of the catches of the species (NWW02, trawls < 120 mm), compliance has fluctuated between high levels (in 2018 and 2020) and medium levels (in 2019) in divisions of rest of 7, although it is worth noting that compliance was based on the LH information only for 2019-2020 and on STECF discard information in 2018. Compliance appeared to be lower in subarea 6 (medium in 2018 and 2020 and low in 2019) although in this area, compliance was assessed based solely on the STECF discard information. Based on the information provided by the STECF discard data and the comparison with what has been reported in the logbooks, it appears that compliance has remained stable at low levels in division 7.d of NWW05 (beam trawls < 120 mm) while for divisions of rest of 7, compliance, estimated as medium in 2018 and 2019 has decreased to a low level in 2020. Compliance appeared to remain stable at high levels for NWW01 (trawls ≥ 120 mm) and NWW06 (seines) in subarea 6 for the three years considered.

For **COD**, and for the FS and areas reporting most catches, NWW02 (trawls <120 mm), divisions 7.a and of rest of 7, compliance appeared to have worsened: from a high level in 2019 to a medium level in 2020 (in division 7.a) and from a medium level in 2019 to a low level in 2020 (for divisions of rest of 7). In subarea 6, compliance in 2019 and 2020 has remained at low levels in 2019-2020. It should be noted that due to the limited number of LH, compliance has been assessed for the species solely using the STECF discard information and the comparison with the discards reported in the logbooks. For NWW01 (trawls ≥ 120 mm) the data available (STECF information) indicate that compliance has remained stable at medium levels in subarea 6 and divisions of rest of 7 in 2019 and 2020. For NWW05 (beam trawls < 120 mm) compliance has remained at low levels in divisions 7.a and of rest of 7. For 2019-2020 and it has decreased for division 7.a from a high level in 2019 to a low level in 2020. For the seines (NWW06), compliance appeared to have remained stable at medium levels in 2019 and 2020 in subarea 7. For the gillnets (NWW07) compliance has remained at medium levels in 2019 and 2020 in divisions of rest of 7, the only area of this FS for which STECF information was available for more than 1 year. These data appear to also indicate that compliance for trammel nets (NWW08) has remained at high levels in 2019 and 2020 for division 7.d.

For **HAD**, and for the FS reporting the most catches of the species (NWW02) compliance remained at low levels in division 7.a during the period evaluated although with a higher level of reporting of BMS in the logbooks in 2020 that would indicate an apparent improvement in compliance with the LO, particularly in relation to the compliance with the reporting obligation of legal discards. This is not the case of subarea 6 where a low compliance continues to be assessed. For divisions of rest of

7, the LH information available appears to indicate also an improvement in compliance from 2019. For NWW05 and NWW06 compliance continues to be an issue for most areas while an improvement in reporting of BMS in the logbooks is apparent for divisions of rest of 7 in 2020 in NWW07.

For **HKE**, compliance appears to have remained stable at medium levels for divisions of rest of 7 of NWW07, the area and FS where most catches of HKE have been reported in reply to the EFCA data calls. For divisions of rest of 7 of NWW02 where important catches have also been reported, compliance has fluctuated from low levels in 2016 and 2018 (based on the STECF discard information), to high levels in 2019 and medium levels in 2020 (in both years based on the LH data). For other areas where important catches have been reported, e.g., subarea 6 and divisions of rest of 7 of NWW09, compliance has not been assessed for all the years considered due to lack of data but appears to have been high in 2016 and 2018.

For **NEP**, compliance appears to have been stable at medium levels in NWW02 in divisions 7.a and of rest of 7 in 2018 and 2020 which are the FS and areas where most catches have been reported. Medium compliance levels for the whole period analysed (2018-2020) were also obtained for NWW01 in subarea 6. In the case of both FS, the limited number of LH available implied that compliance has been assessed based solely on STECF discard information.

For **PLE**, and for the FS reporting most catches (NWW05, beam trawls < 120 mm), lack of compliance continues to be an issue for all areas. For NWW02, where important catches of the species are also reported, an increase of BMS reporting in the logbooks, is apparent for divisions of 7.a and of rest of 7 in 2020. This is not the case for division 7.d where compliance has remained at low levels. Lack of compliance with the LO appears to be an issue in some areas of other FS as well (e.g., division 7.d of NWW08)

For **SOL** and for the main FS exploiting it (NWW05 beam trawls <120 mm), compliance has fluctuated over the study period with high levels in divisions 7.d and of rest of 7 in 2019 but low or medium levels in 2018 and 2020. It is worth noting that the 2019 estimates are based on the LH data while the 2018 and 2020 assessments are based on the STECF discard information due to the lack of enough LH for those years. For division 7.a compliance appears stable at medium levels. For NWW02 (trawls < 120 mm) compliance appears to have worsened over time in division 7.d, although, again, not the same source of information has been used to assess compliance for each year. For division 7.a compliance appears to have improved between 2019 and 2020 based on the STECF discard information. For the remaining FS, compliance appears to be high in some areas of

NWW07 and NWW08 although information to assess compliance is not available for all years in all cases.

For **WHG**, and for the main FS exploiting it, NWW02, compliance has remained at low levels for division 7.d and it appeared to have improved from low levels in 2016-2018 to medium levels in 2019-2020 in divisions of rest of 7. There has been also an increase in reporting of BMS/DIM in these areas from 2019 to 2020. For other areas and FS where important catches have been reported, e.g. NWW06 in divisions of rest of 7, compliance appears to have remained stable at medium levels for the period 2018-2020. There has been again an increase in the reporting of BMS in the logbooks in this area in 2020. For division 7.d, another area where important catches have been reported, there was information on which to base compliance only for 2020 (5 LH) and the analysis of these data indicted high compliance.

Conclusions

1. This evaluation has been made using three methods as agreed with the CEG. Method 1, which uses discard data derived from direct observations in the form of LH inspections, is the preferred method to determine compliance but there were not enough last haul inspections carried out for all the areas and fleet segments under consideration. This was also the case in the previous evaluation and reflects the difficulty of performing inspections at sea, a problem that has been made worse in 2020 due to the restrictions imposed by the COVID-19 pandemic.

2. Method 2, the use of scientific discard estimates, has been used in those cases where no, or very few LH were available instead. However, determining compliance using this information, which was collected to meet a different objective, is problematic.

3. Method 3, which uses the trends in suspected infringements (or lack of) issued for non-compliance with the LO, provided very little additional information on compliance given the difficulties in detecting illegal discarding during an inspection at sea due to the variability in discard patterns and the limited tools for monitoring.

Recommendations

Lack of appropriate verified data has and continues to be a recurrent problem when evaluating compliance with the LO, matched with the lack of proper control tools and systems to detect infringements related with the LO. To solve the lack of verified data, the introduction of EM systems

and/or control observers in some of these segments would facilitate the collection of reliable reference data. EM systems would also serve a dual purpose, not only as a tool to improve the reference data available but also as a control and monitoring tool for effective enforcing the LO, especially since traditional control tools have proven to be inefficient in enforcing the LO.

In addition, the level of LH sampling needs to be increased, in order to obtain sufficient numbers of LH to be able to evaluate compliance more accurately . Where LH inspections occurred, an analysis of the verified catches, ideally from a follow up land inspection or, if not possible, by the cross-check of the logbook vs. sales notes / landing declaration of trips, should also be systematically carried out.

The use of other control and monitoring tools, such as RPAS combined with documentary checks, could also help, in some cases, obtaining a better picture of compliance.

Additional recommendations related with the gathering of data are:

1. In the short term, a more detailed look into the STECF data could offer additional insights into discarding patterns, for example by comparing the sampled length frequencies and the data collected as part of the control procedures (i.e., the length frequencies in sale notes) to determine if discarding of some length classes could be taking place.
2. Another possible source of valuable information would be obtaining the catch data based on haul-by-haul recording. This will facilitate the gathering of discard and other catch data. In addition, it could have a deterrence effect. It should be noted that some MS already have this requirement at national level (e.g., DK). Noting that haul-by-haul reporting will become compulsory for all EU catching vessels > 12 m two years from the entry into force of the revised EU Control Regulation.

Finally, given the important role of the fishing industry in improving compliance, it is appropriate to present the results of this compliance evaluation exercise to the fishing sector and relevant stakeholders. The organisation of a joint workshop on LO control, monitoring, and compliance to present and discuss the results of this compliance evaluation and exchange views with the industry is the final step of this process, as included in the multiannual workplan of MS regional group.

Annex 1. 2022 North Western Waters Demersal Fleet Segmentation

Fleet segment (FS) definition and equivalence with segment codes used in previous years.

Main Group	Correspondence to old FS	Segment Code	Segment Name	Gears	Mesh Size	Areas
Active	NWW02 (previously with seines)	**NWW01**	Trawls ≥ 120mm	OT, OTB, OTM, OTT, PTB, PT, PTM, TBN, TBS, TX, TB	≥ 120mm	5.b, 6, 7.a, 7.d, rest of 7
	NWW01 (previously with seines)	**NWW02**	Trawls < 120mm	OT, OTB, OTM, OTT, PTB, PT, PTM, TBN, TBS, TX, TB	< 120mm	5.b, 6, 7.a, 7.d, rest of 7
	NWW03	**NWW03**	Deep water trawl *	OTB, OTT, PTB, TBN, TBS, OTM, PTM, TB, OT, PT, TX	≥ 100mm	5.b, 6
	NWW05	**NWW04**	Beam trawl ≥120mm	TBB	≥ 120mm	7.a, 7.d, rest of 7
	NWW04	**NWW05**	Beam trawl 80 - <120mm	TBB	≥ 80 and < 120 mm	7.a, 7.d, rest of 7
	NWW01 (previously with trawls) NWW02 (previously with trawls)	**NWW06**	Seines	SDN, SSC, SPR, SX, SV	All	5.b, 6, 7.a, 7.d, rest of 7
Passive	NWW06	**NWW07**	Gillnet	GN, GNS, GND, GNC, GTN, GEN	All	5.b, 6, 7.a, 7.d, rest of 7
	NWW07	**NWW08**	Trammel nets	GTR	All	5.b, 6, 7.a, 7.d, rest of 7
	NWW08	**NWW09**	Lines	LL, LLS, LLD, LTL, LX, LHP, LHM	-	5.b, 6, 7.a, 7.d, rest of 7
	NWW09	**NWW10**	Pots and Traps	FPO, FIX	-	5.b, 6, 7.a, 7.d, rest of 7
Others	-	**NWW11**	Others not included in segments 1-10		-	5.b, 6, 7.a, 7.d, rest of 7

***** Fishing trips where the sum of black scabbardfish, blue ling and grenadiers corresponds of more than 20% of total catch.

Annex 2. Survivability and *De minimis* exemptions for COD, HAD, NEP, PLE, SOL and WHG in North Western Waters in 2018, 2019 and 2020

Species	Year	Exemption Conditions			
		Survivability	**Corresponding fleet segments**	***De Minimis***	**Corresponding fleet segments**
COD	2019	Nil		ICES Divisions 7.b-c and 7.e-k: gear bottom trawls, seines and beam trawls (mesh size ≥80 mm) *"up to a maximum of 7% in 2019 of the total annual catches of that species"*	NWW01, NWW02*, NWW04 NWW05, NWW06
HAD	2019	Nil		ICES Divisions 7.b-c and 7.e-k: gear bottom trawls, seines and beam trawls (mesh size ≥80 mm) *"up to a maximum of 7% in 2019 of the total annual catches of that species"*	NWW01, NWW02*, NWW04 NWW05, NWW06
NEP	2018	ICES Subareas 6 and 7: NEP caught in FPO and FIX	NWW10	ICES subarea 7: "*up to a maximum of 6% of the total annual catches of that species by vessels obliged to land NEP and fishing for NEP*"	NWW01, NWW02, NWW06, NWW10
				ICES subarea 6: "*up to a maximum of 6% of the total annual catches of that species by vessels obliged to land NEP and fishing for NEP*"	NWW01, NWW02, NWW06, NWW10
	2019-2020	ICES Subareas 6 and 7: NEP caught FPO and FIX	NWW10		
		ICES Subarea 7: NEP caught with bottom trawls with a mesh size ≥ 100 mm	NWW01, NWW02*		
		ICES Subarea 7: NEP caught with bottom trawls with a mesh size 70-99 mm "*in combination with highly selective gear options*"	NWW02*		
		ICES Division 6.a: NEP caught with bottom trawls with a mesh size 70-99 mm "*in combination with highly selective gear options within 12 nm of the coast*"	NWW02*		
PLE	2019	ICES Divisions 7.a-7.k: PLE caught by vessels having a maximum engine > 221	NWW05		

		kW, and using beam trawls (BT2) fitted with a flip-up rope or benthic release panel			
		ICES Divisions 7.a-7.k: PLE caught by vessels using beam trawls (BT2), having a maximum engine power of 221 kW or a maximum length of 24 meters, which are constructed to fish within 12 nm of the coast and with average tow durations of no more than 1:30 hours	NWW05		
	2019-2020	ICES Divisions 7.d, 7.e, 7.f and 7.g: PLE caught with trammel nets	NWW08		
		ICES Divisions 7.d, 7.e, 7.f and 7.g: PLE caught with otter trawls	NWW01, NWW02		
SOL	2018	ICES Division 7.d within six nautical miles of the coast and outside identified nursery areas catches of SOL below MCRS: gear OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX with cod end mesh size of 80-99 mm in the fishing operations meeting the following conditions: - vessels with maximum length of 10 m, - maximum engine power of 221 kW - when fishing in waters with the depth of 30 m of less and - with limited tow durations of no more than 1:30 hours	NWW02	ICES Divisions 7.d, 7.e, 7.f and 7.g: gear trammel and gill nets *"up to a maximum of 3% of the total annual catches of SOL by the vessels obliged to land SOL"*	NWW07, NWW08
				ICES Divisions 7.d, 7.e, 7.f, 7.g and 7.h: gear TBB with mesh size of 80-199 mm with increased selectivity, such as large mesh extension "*up to a maximum of 3% of the total annual catches of SOL by vessels obliged to land SOL*"	NWW05, NWW04
	2019-2020	ICES division 7.d within six nautical miles of the coast and outside identified nursery areas catches of SOL below MCRS with OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX with cod end mesh size of 80-99 mm by vessels: - with maximum length of 10 m and maximum engine power of 221 kW - fishing in waters with the depth of 30 m of less and with tow durations of no more than 1:30 hours	NWW02	ICES Divisions 7.d, 7.e, 7.f and 7.g: gear trammel and gill nets *"up to a maximum of 3% of the total annual catches of SOL"*	NWW07, NWW08
				ICES Divisions 7.d, 7.e, 7.f, 7.g and 7.h: gear TBB with mesh size of 80-199 mm equipped with Flemish panel "*up to a maximum of 3% of the total annual catches of SOL by vessels obliged to land SOL*"	NWW05, NWW04

WHG	2018	Nil		ICES Divisions 7.d and 7.e: gear OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX (mesh size <100 mm) and OTM, PTM *"up to a maximum of 6% of the total annual catches of that species by vessels obliged to land whiting"*	NWW01, NWW02*, NWW06
				ICES Divisions 7.b-7.j: gear OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX (mesh size ≥100 mm) and OTM, PTM *"up to a maximum of 6% of the total annual catches of that species by vessels obliged to land whiting"*	NWW01, NWW02*, NWW06
				ICES Subarea 7 (except Divisions 7.a, 7.d and 7.e): gear OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX (mesh size < 100 mm) and OTM, PTM *"up to a maximum of 6% of the total annual catches of that species by vessels obliged to land whiting"*	NWW01, NWW02*, NWW06
	2019-2020	Nil		ICES Division 7.d: gear OTB, OTT, OT, PTB, PT, SSC, SDN, SPR, SX, SV, TBN, TBS, TB, TX (mesh size ≥80 mm), OTM, PTM and beam trawls with mesh size of 80-119 mm *"up to a maximum of 6% in 2019 and up to 5% in 2020 of the total annual catches of that species"*	NWW01, NWW02*, NWW05, NWW06
				ICES Divisions 7.b-c and 7.e-k: gear OTB, OTT, OT, PTB, PT, SSC, SDN, SPR, SX, SV, TBN, TBS, TB, TX (mesh size ≥80 mm), OTM, PTM and beam trawls with mesh size of 80-119 mm *"up to a maximum of 6% in 2019 and up to 5% in 2020 of the total annual catches of that species"*	NWW01, NWW02*, NWW05, NWW06
ALL species	2019-2020	ICES Subareas 5 (excluding 5.a and including only Union waters of 5.b) 6 and 7: species caught with pots, traps and creels	NWW10		

Annex 3. Detailed description of the methodology used to estimate the discard ratio

BMS discards ratio

The generic calculations are presented below, where *f* denotes reference data and *n* denotes non-reference. Considering the BMS ratio, $bmsR_f$, of the reference data as:

Equation 1 $$\mathbf{bmsR_f} = \frac{\mathbf{BMS_f}}{\mathbf{BMS_f + LSC_f}}$$

The catch categories ratios (the BMS ratio and the LSC) of the reference data are assumed to be representative of the fleet segment. The ratio of LSC on non-reference data ($lscR_n$), is assumed to be equal to the LSC ratio of the reference data ($lscR_f$).

Equation 2 $$lscR_f = lscR_n = \frac{LSC_n}{LSC_n + BMS_n}$$

Considering that:

Equation 3 $$lscR_f = 1 - bmsR_f$$

Expanding the right term of Equation 3 and also using Equation 2:

Equation 4 $$1 - bmsR_f = \frac{LSC_n}{LSC_n + BMS_n}$$

Note that the BMS_n in the denominator of the second term of Equation 4 has two components: i) the BMS that is declared (i.e., retained, landed and reported, $rBMS_n$) and ii) the BMS that is not declared (unreported and not landed, $uBMS_n$). The latter is unknown. Equation 4 can be re-written so that BMS_n, is split in the two components mentioned above, as:

Equation 5 $$1 - bmsR_f = \frac{LSC_n}{LSC_n + (rBMS_n + uBMS_n)}$$

which corresponds to:

Equation 6 $$uBMS_n = \frac{bmsR_f \cdot LSC_n}{(1 - bmsR_f)} - rBMS_u$$

Having an estimate of the discarded component, the discard ratio, uDR_n, is then calculated as:

Equation 7 $$uDR_n = \frac{uBMS_n}{uBMS_n + rBMS_n + LSC_n}$$

Equation 7 can be written directly as a function of the BMS discard ratio of reference data as:

Equation 8 $$uDR_n = \left(\frac{DR_f \cdot LSC_n}{1 - DR_f} - rBMS\right) \cdot \left(\frac{1 - DR_f}{LSC_n}\right)$$

Annex 4. Discard category (BMS, DIS, DIM) proportions of total catch

Percentage of each discard category (BMS, DIS, DIM) reported in the logbooks in relation to the total catch by fleet segment (FS), area and year, for each of the species under this evaluation. Data obtained from the logbook information submitted by MS in reply to the EFCA data calls (see Annex 7).

rBMS=BMS reported divided by the total catch and expressed as a %; rDIM and rDIS were similarly calculated; rTot= sum of reported BMS+DIM+DIS divided by the total catch as expressed as a %. "-" no data reported.

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
ANF	NWW01	27.5.b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.d	-				-				-			
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW02	27.5.b	-				-				-			
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	NWW03	27.5.b	-				0.0	0.0	0.0	0.0	-			
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW04	27.7.a	-				-				0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0
	NWW05	27.7.a	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.2
	NWW06	27.5.b	-				-				-			
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	-	-	-	-	0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW07	27.5.b	-				-				0.0	0.0	0.0	0.0
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-			
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-			
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW08	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				-							
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW09	27.5.b	-				-				-			
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-			
		27.7.d	-				0.0	0.0	0.0	0.0	-			
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW10	27.5.b	-				-				-			
		27.6	0.0	0.0	0.0	0.0	-				-			
		27.7.a	0.0	0.0	0.0	0.0	-				0.0	0.0	100.0	100.0
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-			
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
COD	**NWW01**	27.5.b	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW02	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.0**	**0.3**
		Rest of 7	**0.0**	**0.0**	**2.2**	**2.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.2**
	NWW03	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW04	27.7.a	**-**				**-**				**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW05	27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**0.1**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW06	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.2**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**2.5**	**0.0**	**0.0**	**2.5**
	NWW07	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**
	NWW08	27.5.b	**-**				**-**				**-**			
		27.6	**-**				**-**				**-**			
		27.7.a	**-**				**0.0**	**0.0**	**0.0**	**0.0**	**-**			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.8**	**0.0**	**0.8**
	NWW09	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**12.5**	**12.5**
	NWW10	27.5.b	**-**				**-**				**-**			
		27.6	**-**				**-**				**0.0**	**0.0**	**100.0**	**100.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
HAD	**NWW01**	27.5.b	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.6	**0.3**	**0.0**	**0.0**	**0.3**	**0.2**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.2**	**0.2**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.2**
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.6**	**0.6**
	NWW02	27.5.b	-				**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.9**	**0.9**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**82.5**	**0.0**	**0.8**	**83.3**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.8**	**0.8**	**0.2**	**0.0**	**0.0**	**0.2**	**10.6**	**1.1**	**0.3**	**12.0**
	NWW03	27.5.b	-				-				-			
		27.6	**0.1**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW04	27.7.a	-				-				**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW05	27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.6**	**0.0**	**0.0**	**0.6**	**0.6**	**0.0**	**0.0**	**0.6**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.5**	**0.5**	**0.1**	**0.5**	**0.0**	**0.5**	**14.4**	**0.2**	**0.5**	**15.1**
	NWW06	27.5.b	-				-				-			
		27.6	**2.8**	**0.0**	**0.0**	**2.8**	**1.1**	**0.0**	**0.0**	**1.1**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.7**	**0.0**	**0.0**	**0.7**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**5.9**	**0.0**	**0.0**	**6.0**
	NWW07	27.5.b	-				-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	-				**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**1.1**	**0.0**	**0.0**	**1.1**	**53.9**	**0.0**	**0.0**	**54.0**
	NWW08	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				-				-			
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.0**	**0.3**
	NWW09	27.5.b	-				-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	-				-				-			
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3.4**	**3.4**
	NWW10	27.5.b	-				-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	-				**0.0**	**0.0**	**100.0**	**100.0**
		27.7.a	-				-				**0.0**	**0.0**	**100.0**	**100.0**
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**87.2**	**87.2**

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
HKE	**NWW01**	27.5.b	-				-				**0.0**	**0.0**	**0.0**	**0.0**
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW02	27.5.b	-				**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.6	**0.1**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.0**	**0.1**	**0.1**	**0.0**	**0.1**	**0.2**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**21.4**	**0.0**	**21.4**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**0.8**	**0.0**	**0.0**	**0.8**
	NWW03	27.5.b	-				**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW04	27.7.a	-				-				**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	-				-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW05	27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.4**	**0.0**	**0.0**	**0.4**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.0**	**0.0**	**0.3**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW06	27.5.b	-				-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**31.3**	**0.0**	**0.0**	**31.3**
		27.7.d	-				**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**3.5**	**0.0**	**0.0**	**3.5**
	NWW07	27.5.b	**0.0**	**0.0**	**0.0**	**0.0**	-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.2**
	NWW08	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				-				-			
		27.7.d	-				**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.4**	**0.3**	**1.7**
	NWW09	27.5.b	-				**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	-				-				-			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	-				-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.3**
	NWW10	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				-				-			
		27.7.d	-				**0.0**	**0.0**	**0.0**	**0.0**	-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
NEP	**NWW01**	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	**1.4**	**0.0**	**0.0**	**1.4**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	-	-	-	-	-	-	-	-	-	-	-	-
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW02	27.5.b	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.1**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**	**1.0**	**0.0**	**0.7**	**1.7**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-	-	-	-	-
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.3**	**0.4**
	NWW03	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	-	-	-	-	-	-	-	-	-	-	-	-
	NWW04	27.7.a	-	-	-	-	-	-	-	-	-	-	-	-
		27.7.d	-	-	-	-	-	-	-	-	-	-	-	-
		Rest of 7	-	-	-	-	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**
	NWW05	27.7.a	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-	-	-	-	-
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW06	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
	NWW07	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	-	-	-	-	-	-	-	-	-	-	-	-
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-	-	-	-	-
		27.7.d	-	-	-	-	-	-	-	-	-	-	-	-
		Rest of 7	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
	NWW08	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	-	-	-	-	-	-	-	-	-	-	-	-
		27.7.a	-	-	-	-	-	-	-	-	-	-	-	-
		27.7.d	-	-	-	-	-	-	-	-	-	-	-	-
		Rest of 7	-	-	-	-	-	-	-	-	-	-	-	-
	NWW09	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	-	-	-	-	-	-	-	-	-	-	-	-
		27.7.d	-	-	-	-	-	-	-	-	-	-	-	-
		Rest of 7	-	-	-	-	-	-	-	-	-	-	-	-
	NWW10	27.5.b	-	-	-	-	-	-	-	-	-	-	-	-
		27.6	-	-	-	-	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**4.8**	**4.8**
		27.7.d	-	-	-	-	-	-	-	-	-	-	-	-
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**41.9**	**41.9**

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
PLE	**NWW01**	27.5.b	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.0**	**0.0**	**0.3**	**0.0**	**0.0**	**0.5**	**0.5**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**13.8**	**0.0**	**0.0**	**13.8**	**0.0**	**0.0**	**0.1**	**0.1**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW02	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.9**	**0.0**	**0.0**	**0.9**	**81.6**	**0.0**	**4.0**	**85.6**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.4**	**0.0**	**0.7**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.3**	**0.3**	**44.1**	**0.2**	**1.2**	**45.4**
	NWW03	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**-**				**-**			
	NWW04	27.7.a	**-**				**-**				**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.2**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.8**	**0.8**
	NWW05	27.7.a	**0.0**	**0.0**	**0.6**	**0.6**	**0.1**	**0.0**	**1.8**	**1.9**	**0.6**	**0.0**	**1.6**	**2.2**
		27.7.d	**0.0**	**0.0**	**1.2**	**1.2**	**0.2**	**0.0**	**1.8**	**2.0**	**0.0**	**0.0**	**2.1**	**2.1**
		Rest of 7	**0.0**	**0.0**	**0.3**	**0.3**	**0.1**	**0.0**	**0.3**	**0.4**	**0.1**	**0.0**	**0.7**	**0.7**
	NWW06	27.5.b	**-**				**-**				**-**			
		27.6	**3.0**	**0.0**	**0.0**	**3.0**	**1.4**	**0.0**	**0.0**	**1.4**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**1.5**	**0.0**	**0.0**	**1.5**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW07	27.5.b	**-**				**-**				**-**			
		27.6	**-**				**-**				**-**			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.2**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW08	27.5.b	**-**				**-**				**-**			
		27.6	**-**				**-**				**-**			
		27.7.a	**-**				**0.0**	**0.0**	**0.0**	**0.0**	**-**			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.1**
		Rest of 7	**0.2**	**0.0**	**0.0**	**0.2**	**0.2**	**0.0**	**0.0**	**0.2**	**0.0**	**0.4**	**0.0**	**0.4**
	NWW09	27.5.b	**-**				**-**				**-**			
		27.6	**-**				**-**				**-**			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**-**	**-**	**-**	**-**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW10	27.5.b	**-**				**-**				**-**			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**-**				**-**			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**58.8**	**0.0**	**0.0**	**58.8**	**0.0**	**0.0**	**100.0**	**100.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
SOL	**NWW01**	27.5.b	-				-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	-				**0.0**	**0.0**	**0.0**	**0.0**	-			
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW02	27.5.b	-				-				-			
		27.6	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.1**
	NWW03	27.5.b	-				-				-			
		27.6	-				-				-			
	NWW04	27.7.a	-				-				**0.8**	**0.0**	**0.0**	**0.8**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW05	27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.2**	**0.0**	**0.0**	**0.2**	**0.0**	**0.3**	**0.0**	**0.3**
		27.7.d	**0.0**	**0.6**	**0.0**	**0.6**	**0.0**	**0.8**	**0.0**	**0.8**	**0.0**	**0.7**	**0.0**	**0.7**
		Rest of 7	**0.0**	**0.3**	**0.0**	**0.3**	**0.0**	**0.4**	**0.0**	**0.4**	**0.0**	**0.6**	**0.0**	**0.7**
	NWW06	27.5.b	-				-				-			
		27.6	-				**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW07	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW08	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				-				-			
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW09	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	-	-	-	-
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
	NWW10	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**100.0**	**100.0**
		27.7.d	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
		Rest of 7	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Annex 4 (Cont.)

			2018				2019				2020			
SPECIES	**FS**	**AREA**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**	**rBMS**	**rDIM**	**rDIS**	**rTot**
WHG	**NWW01**	27.5.b	-				0.0	0.0	0.0	0.0	-			
		27.6	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.4	0.4
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	-				-			
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2
	NWW02	27.5.b	-				0.0	0.0	0.0	0.0	-			
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.4
		27.7.a	0.2	0.0	0.0	0.2	0.1	0.0	0.0	0.1	40.6	0.0	1.0	41.6
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.0	6.6
		Rest of 7	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.2	4.6	1.8	0.1	6.5
	NWW03	27.5.b	-				0.0	0.0	0.0	0.0	-			
		27.6	0.0	0.0	0.0	0.0	-				-			
	NWW04	27.7.a	-				-				0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW05	27.7.a	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.8	0.0	0.0	0.8
		27.7.d	0.0	0.1	0.0	0.1	0.0	0.4	0.0	0.4	0.0	0.1	0.0	0.1
		Rest of 7	0.0	0.0	1.4	1.4	0.0	0.3	0.0	0.3	1.7	0.2	0.1	2.0
	NWW06	27.5.b	-				-				-			
		27.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9
		27.7.d	0.2	0.0	1.4	1.6	0.1	0.0	0.3	0.4	0.1	1.7	0.1	1.9
		Rest of 7	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	3.7	0.0	0.0	3.7
	NWW07	27.5.b	-				-				0.0	0.0	0.0	0.0
		27.6	0.0	0.0	0.0	0.0	-				0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		27.7.d	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	2.5	0.0	0.0	2.5	61.0	0.0	0.0	61.0
	NWW08	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				0.0	0.0	0.0	0.0	-			
		27.7.d	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	1.4	0.0	1.4
	NWW09	27.5.b	-				-				-			
		27.6	-				-				0.0	0.0	0.0	0.0
		27.7.a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	-	-	-
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	NWW10	27.5.b	-				-				-			
		27.6	-				-				-			
		27.7.a	-				-				0.0	0.0	100	100
		27.7.d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Rest of 7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.3	60.3

Annex 5. North Western Waters demersal fleet segments correspondence with area/ gear type/ mesh size range in FDI database

NK = Not known mesh size range, NA = not available/not applicable

Combination of gear code “Gear_NS” (Table A), area “Area_NS” (Table B) and mesh size range “Mesh size” assigned to EFCA fleet segments (FS). NA = not applicable.

Gear_NS	Area_NWW	Mesh size	FS
FIX	Rest of VII	NA	NWW10
FIX	V	NA	NWW10
FIX	VI	NA	NWW10
FIX	VIIa	NA	NWW10
FIX	VIId	NA	NWW10
FIX	Rest of VII	NK	NWW10
FIX	VI	NK	NWW10
FIX	VIIa	NK	NWW10
FIX	VIId	NK	NWW10
GN	Rest of VII	00D50	NWW07
GN	VIIa	00D50	NWW07
GN	VIId	00D50	NWW07
GN	Rest of VII	100D110	NWW07
GN	VI	100D110	NWW07
GN	Rest of VII	100D120	NWW07
GN	VI	100D120	NWW07
GN	VIIa	100D120	NWW07
GN	VIId	100D120	NWW07
GN	Rest of VII	110D120	NWW07
GN	VI	110D120	NWW07
GN	Rest of VII	120D130	NWW07
GN	VI	120D130	NWW07
GN	VIIa	120D130	NWW07
GN	VIId	120D130	NWW07
GN	Rest of VII	120DXX	NWW07
GN	V	120DXX	NWW07
GN	VI	120DXX	NWW07
GN	VIIa	120DXX	NWW07
GN	Rest of VII	130D150	NWW07
GN	VIIa	130D150	NWW07
GN	VIId	130D150	NWW07
GN	Rest of VII	150D220	NWW07
GN	VI	150D220	NWW07
GN	VIIa	150D220	NWW07
GN	VIId	150D220	NWW07
GN	Rest of VII	16D32	NWW07
GN	VIIa	16D32	NWW07
GN	Rest of VII	220D250	NWW07
GN	VIIa	220D250	NWW07
GN	VIId	220D250	NWW07
GN	Rest of VII	250DXX	NWW07
GN	VI	250DXX	NWW07
GN	VIIa	250DXX	NWW07
GN	VIId	250DXX	NWW07
GN	Rest of VII	32D70	NWW07

Gear_NS	Area_NWW	Mesh size	FS
GN	VI	32D70	NWW07
GN	VIIa	32D70	NWW07
GN	Rest of VII	50D90	NWW07
GN	VI	50D90	NWW07
GN	VIIa	50D90	NWW07
GN	VIId	50D90	NWW07
GN	Rest of VII	90D100	NWW07
GN	VI	90D100	NWW07
GN	VIIa	90D100	NWW07
GN	VIId	90D100	NWW07
GN	Rest of VII	NK	NWW07
GN	VIIa	NK	NWW07
GN	VIId	NK	NWW07
GT	Rest of VII	00D50	NWW08
GT	VIIa	00D50	NWW08
GT	VIId	00D50	NWW08
GT	Rest of VII	100D120	NWW08
GT	VI	100D120	NWW08
GT	VIIa	100D120	NWW08
GT	VIId	100D120	NWW08
GT	Rest of VII	120D130	NWW08
GT	VIIa	120D130	NWW08
GT	VIId	120D130	NWW08
GT	Rest of VII	120DXX	NWW08
GT	Rest of VII	130D150	NWW08
GT	VIId	130D150	NWW08
GT	Rest of VII	150D220	NWW08
GT	VIIa	150D220	NWW08
GT	VIId	150D220	NWW08
GT	Rest of VII	220D250	NWW08
GT	VIId	220D250	NWW08
GT	Rest of VII	250DXX	NWW08
GT	VIIa	250DXX	NWW08
GT	VIId	250DXX	NWW08
GT	Rest of VII	50D90	NWW08
GT	VIIa	50D90	NWW08
GT	VIId	50D90	NWW08
GT	Rest of VII	90D100	NWW08
GT	VI	90D100	NWW08
GT	VIIa	90D100	NWW08
GT	VIId	90D100	NWW08
GT	Rest of VII	NK	NWW08
GT	VI	NK	NWW08
GT	VIId	NK	NWW08
LL	Rest of VII	NA	NWW09

Annex 5 (Cont.)

Gear_NS	Area_NWW	Mesh size	FS
LL	V	NA	NWW09
LL	VI	NA	NWW09
LL	VIIa	NA	NWW09
LL	VIId	NA	NWW09
LL	Rest of VII	NK	NWW09
LL	V	NK	NWW09
LL	VI	NK	NWW09
LL	VIIa	NK	NWW09
LL	VIId	NK	NWW09
OT	Rest of VII	00D16	NWW02
OT	VI	00D16	NWW02
OT	VIIa	00D16	NWW02
OT	VIId	00D16	NWW02
OT	Rest of VII	100D110	NWW02
OT	V	100D110	NWW02
OT	VI	100D110	NWW02
OT	VIIa	100D110	NWW02
OT	VIId	100D110	NWW02
OT	Rest of VII	100D120	NWW02
OT	VI	100D120	NWW02
OT	VIIa	100D120	NWW02
OT	V	100DXX	NWW03
OT	VI	100DXX	NWW03
OT	Rest of VII	110D120	NWW02
OT	V	110D120	NWW02
OT	VI	110D120	NWW02
OT	VIIa	110D120	NWW02
OT	VIId	110D120	NWW02
OT	Rest of VII	120D130	NWW01
OT	VI	120D130	NWW01
OT	VIIa	120D130	NWW01
OT	Rest of VII	120DXX	NWW01
OT	V	120DXX	NWW01
OT	VI	120DXX	NWW01
OT	VIIa	120DXX	NWW01
OT	VIId	120DXX	NWW01
OT	Rest of VII	16D32	NWW02
OT	VI	16D32	NWW02
OT	VIIa	16D32	NWW02
OT	VIId	16D32	NWW02
OT	Rest of VII	32D70	NWW02

Gear_NS	Area_NWW	Mesh size	FS
OT	V	32D70	NWW02
OT	VI	32D70	NWW02
OT	VIIa	32D70	NWW02
OT	VIId	32D70	NWW02
OT	VI	32D80	NWW02
OT	Rest of VII	50D90	NWW02
OT	VI	50D90	NWW02
OT	VIIa	50D90	NWW02
OT	Rest of VII	70D80	NWW02
OT	VI	70D80	NWW02
OT	VIIa	70D80	NWW02
OT	VIId	70D80	NWW02
OT	Rest of VII	80D100	NWW02
OT	V	80D100	NWW02
OT	VI	80D100	NWW02
OT	VIIa	80D100	NWW02
OT	VIId	80D100	NWW02
OT	Rest of VII	90D100	NWW02
OT	VI	90D100	NWW02
OT	Rest of VII	NK	NWW11
OT	VI	NK	NWW11
OT	VIIa	NK	NWW11
OT	VIId	NK	NWW11
SX	Rest of VII	00D16	NWW06
SX	Rest of VII	100D110	NWW06
SX	VI	100D110	NWW06
SX	VIIa	100D110	NWW06
SX	VIId	100D110	NWW06
SX	Rest of VII	100D120	NWW06
SX	VIId	100D120	NWW06
SX	Rest of VII	110D120	NWW06
SX	VI	110D120	NWW06
SX	Rest of VII	120DXX	NWW06
SX	VI	120DXX	NWW06
SX	VIIa	120DXX	NWW06
SX	VIId	120DXX	NWW06
SX	VIId	16D32	NWW06
SX	VIId	32D70	NWW06
SX	VIId	70D80	NWW06
SX	Rest of VII	80D100	NWW06
SX	VI	80D100	NWW06

Annex 5 (Cont.)

Gear_NS	Area_NWW	Mesh size	FS
SX	VIIa	80D100	NWW06
SX	VIId	80D100	NWW06
SX	Rest of VII	NK	NWW06
SX	VIIa	NK	NWW06
TBB	Rest of VII	00D16	NWW11
TBB	VIId	00D16	NWW11
TBB	Rest of VII	100D110	NWW05
TBB	VIIa	100D110	NWW05
TBB	VIId	100D110	NWW05
TBB	VIIa	110D120	NWW05
TBB	Rest of VII	120DXX	NWW04
TBB	VI	120DXX	NWW04
TBB	Rest of VII	16D32	NWW11

Gear_NS	Area_NWW	Mesh size	FS
TBB	VIIa	16D32	NWW11
TBB	VIId	16D32	NWW11
TBB	Rest of VII	32D70	NWW11
TBB	VIId	32D70	NWW11
TBB	Rest of VII	70D80	NWW11
TBB	Rest of VII	80D100	NWW05
TBB	VI	80D100	NWW05
TBB	VIIa	80D100	NWW05
TBB	VIId	80D100	NWW05
TBB	Rest of VII	NK	NWW11
TBB	VIIa	NK	NWW11
TBB	VIId	NK	NWW11

Annex 6. ICES discard estimates by stock

Stock	Source	2018				2019				2020			
		Total catch (t)	Discards (t)	Official BMS landings	Discard ratio (%)	Total catch (t)	Discards (t)	BMS landings	Discard ratio (%)	Total catch (t)	Discards (t)	BMS landings	Discard ratio (%)
Anglerfish (*Lophius budegassa*, *L. piscatorius*) in subareas 4 and 6 and division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	anf.27.3a46	21898	326	-	1.5	22064	513	-	2.3	19388	316	-	1.6
White anglerfish (*L. piscatorius*) in subarea 7 and in divisions 8.a–b and 8.d (southern Celtic Seas, Bay of Biscay)	mon.27.78abd	23595	1250	-	5.3	22196	1364	-	6.1	21387	1350	-	6.3
Black-bellied anglerfish (*L. budegassa*) in subarea 7 and divisions 8.a–b, and 8.d (Celtic Seas, Bay of Biscay)	ank.27.78abd	10803	727	-	6.7	10764	1084	-	10.1	9602	926	-	9.6
Cod *(Gadus morhua)* in subarea 4, division 7.d, and SD 20 (North Sea, eastern English Channel and Skagerrak)	cod.27.47d20 (ices.dk)	47897	7744^	12	16.2	35916	3555^	44	9.9	24073	4700^	36	19.5
Cod in division 6.a (West of Scotland)	cod.27.6a	3419	2426		71.0	2264	204	-	9.0	1583	309	-	19.5
Cod in division 6.b (Rockall)	cod.27.6b	Uncertain discard rate estimates due to limited sampling data											
Cod in division 7.a (Irish Sea)	cod.27.7a	257	42	-	16.3	302	7	-	2.3	206	25	-	12.1

Cod in divisions 7.e–k (western English Channel and southern Celtic Seas)	cod.27.7e-k	1812	316	-	17.4	1351	300	-	22.2	1153	231	-	20.0
Haddock (*Melanogrammus aeglefinus*) in division 5.b (Faroes grounds)	had.27.5b	5549	Negligible	-	-	9334	Negligible	-	-	7329	Negligible	-	-
Haddock in Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak) *Includes the Norwegian component of BMS landings **Discards include BMS landings from EU and UK fleet	had.27.46a20	39686*	5245**	-	13.2	36449*	5702**	-	15.6	38929*	9987**	-	25.7
Haddock in Division 6.b (Rockall) *Including BMS landings	had.27.6b	4638	788	-	17.0	8085*	303	4	3.7	5643*	131	2	2.3
Haddock in Division 7.a (Irish Sea)	had.27.7a	2561	568	-	22.2	2450	672	-	27.4	976	234	-	24.0
Haddock in divisions 7.b–k (southern Celtic Seas and English Channel)	had.27.7b-k	12844	5798	-	45.1	11259	3603	-	32.0	12119	4260	-	35.2
Hake (*Merluccius merluccius*) in subareas 4, 6, and 7, and in divisions 3.a, 8.a–b, and 8.d, Northern stock (Greater North Sea, Celtic Seas, and the northern Bay of Biscay) [1]*Model estimates*	hke.27.3a46-8abd	99629	9934[1]	-	10.0	89264	6966[1]	-	7.8	79525	6946[1]	-	8.7

Norway lobster (*Nephrops norvegicus*) in Division 6.a, Functional Unit 11 (West of Scotland, North Minch)	nep.fu.11	2015	59	-	2.9	2030	51	-	2.5	1362	31	-	2.3
Norway lobster in Division 6.a, Functional Unit 12 (West of Scotland, South Minch)	nep.fu.12	2594	54	-	2.1	2266	46	-	2.0	2022	46	-	2.3
Norway lobster in Division 6.a, Functional Unit 13 (West of Scotland, the Firth of Clyde, and the Sound of Jura)	nep.fu.13	4211	68	-	1.6	5118	435	-	8.5	3813	177	-	4.6
Norway lobster in Division 7.a, Functional Unit 14 (Irish Sea, East)	nep.fu.14	272	9	-	3.3	285	15	-	5.3	247	15	-	6.1
Norway lobster in Division 7.a, Functional Unit 15 (Irish Sea, West)	nep.fu.15	6987	1231	-	17.6	8749	1159	-	13.2	7409	1294	-	17.5
Norway lobster in divisions 7.b–c and 7.j–k, Functional Unit 16 (west and southwest of Ireland, Porcupine Bank)	nep.fu.16	Not quantified											
Norway lobster in Division 7.b, Functional Unit 17 (west of Ireland, Aran grounds)	nep.fu.17	642	106	-	16.5	188	21	-	11.2	276	54	-	19.6
Norway lobster in divisions 7.a, 7.g, and 7.j, Functional Unit 19 (Irish Sea, Celtic Sea, eastern part of southwest of Ireland)	nep.fu.19	309	71	-	23.0	361	112	-	31.0	385	136	-	35.3

Norway lobster in divisions 7.g and 7.h, functional units 20 and 21 (Celtic Sea)	nep.fu.2021	2184	381	-	17.4	3262	539	-	16.5	447	34	-	7.6
Norway lobster in divisions 7.g and 7.f, Functional Unit 22 (Celtic Sea, Bristol Channel	nep.fu.22	2325	350	-	15.1	2345	262	-	11.2	1754	278	-	15.8
Sole in Division 7.a (Irish Sea)	sol.27.7a	38	2	-	5.3	463	63	-	13.6	460	56	-	12.2
Sole in Division 7.d (eastern English Channel)	sol.27.7d	2658	263	-	9.9	2052	404	-	19.7	1971	409	-	20.8
Sole in divisions 7.b and 7.c (West of Ireland)	sol.27.7bc	Considered negligible											
Sole in Division 7.e (western English Channel)	sol.27.7e	1078	3	-	0.3	1189	4	-	0.3	1220	1	-	0.1
Sole in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	sol.27.7fg	991	141	-	14.2	1213	145	-	12.0	1630	106	-	6.5
Sole in divisions 7.h–k (Celtic Sea South, southwest of Ireland)	sol.27.7h-k	236	1	-	0.4	309	1	-	0.3	299	<1	-	0.2

Plaice (*Pleuronectes platessa*) in division 7.a (Irish Sea)	ple.27.7a	830	395√	-	47.6	1002	537√	-	53.6	601	271√	-	45.1
Plaice in divisions 7.b–c (West of Ireland)	ple.27.7bc	Discards are unknown											
Plaice in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	ple.27.7fg	930	508	-	54.6	652	189	-	29.0	892	357	-	40.0
Plaice in divisions 7.h–k (Celtic Sea South, southwest of Ireland)	ple.27.7h-k	316	220	-	69.6	107	43	-	40.2	75	36	-	48.0
Plaice in Division 7.d (eastern English Channel)	ple.27.7d	11214	6215^		55.4	10785	7064^	<1	65.5	4343	2191^	<1	50.4
Plaice in Division 7.e (western English Channel) *Discards and landings include the migration correction*	ple.27.7e	2513	633		25.2	2091	366		17.5	1887	514		27.2
Whiting (*Merlangius merlangus*) in Division 6.a (West of Scotland)	whg.27.6a	855	666	-	77.9	1444	960	-	66.5	1375	834	-	60.7
Whiting in Division 6.b (Rockall)	whg.27.6b	Estimates are too uncertain to quantify total discards											

Whiting in Division 7.a (Irish Sea)	whg.27.7a	899	853	-	94.9	1261	1089	-	86.4	1118	1030	-	92.1
Whiting in Subarea 4 and Division 7.d (North Sea and eastern English Channel)	whg.27.47d	26648	10588	-	39.7	28589	10080	-	35.3	31867	14229	-	44.7
Whiting in divisions 7.b–c and 7.e–k (southern Celtic Seas and western English Channel)	whg.27.7b-ce-k	11146	2139	-	19.2	7558	970	-	12.8	7197	1266	-	17.6

^Discards include BMS landings.
√Total discards (dead and surviving components)

Annex 7. Catches of ANF, COD, HAD, HKE, NEP, PLE, SOL and WHG by fleet segment/area

Data obtained from the logbook information submitted by MS in reply to the EFCA data calls.

Amount of ANF, COD, HAD, HKE, NEP, PLE, SOL and PRA reported caught (Catch, tons) by fleet segment (FS) and area and percentage of the total catch reported that year for the species (% of TC).

ANF		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	3	0.01	19	0.07	9	0.04
	27.6	183	0.76	3 354	12.19	1 047	4.69
	27.7.a	-		<1	<0.01	17	0.08
	27.7.d	-		-		-	
	Rest of 7	70	0.29	10	0.04	282	1.26
NWW02 Trawls <120 mm	27.5.b	-		-		-	
	27.6	402	1.68	1 168	4.25	1 346	6.03
	27.7.a	250	1.04	157	0.57	52	0.23
	27.7.d	9	0.04	10	0.04	13	0.06
	Rest of 7	17142	71.62	14 757	53.64	15 178	67.94
NWW03 Deep water trawls (*)	27.5.b	-		10	0.03	-	
	27.6	-		1 296	4.71	28	0.13
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		<!	<0.01
	27.7.d	-		1	<0.01	3	0.01
	Rest of 7	33	0.14	7	0.03	21	0.09
NWW05 Beam trawls < 120 mm	27.7.a	59	0.25	30	0.11	63	0.28
	27.7.d	81	0.34	80	0.29	103	0.46
	Rest of 7	2425	10.13	2 325	8.45	1 458	6.53
NWW06 Seines	27.5.b	-		-		-	
	27.6	-		7	0.02	4	0.02
	27.7.a	1	0.01	-		1	<0.01
	27.7.d	2	0.01	3	0.01	3	0.01
	Rest of 7	87	0.36	65	0.24	84	0.37
NWW07 Gillnets	27.5.b	-		-		<1	<0.01
	27.6	1229	5.14	1 436	5.22	231	1.03
	27.7.a	-		<1	<0.01	-	
	27.7.d	1	0.01	<1	<0.01	-	
	Rest of 7	1585	6.62	1 910	6.94	976	4.37
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	-		<1	<0.01	<1	<0.01
	Rest of 7	368	1.54	848	3.08	1418	6.35
NWW09 Lines	27.5.b	-		-		-	-
	27.6	-		1	<0.01	<1	<0.01
	27.7.a	-		-		-	
	27.7.d	-		<1	<0.01	-	
	Rest of 7	2	0.01	1	<0.01	3	0.01
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	-		<1	<0.01	-	
	Rest of 7	1	0.01	7	0.03	1	<0.01
Total catch under evaluation		**23934**		**27513**		**22341**	

* Fishing trips where the sum of black scabbardfish, blue ling and grenadiers corresponds to > 20% of total catch

COD		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	11	0.69	238	7.77	<1	<0.01
	27.6	3	0.21	1 317	43.05	181	14.62
	27.7.a	7	0.44	51	1.67	55	4.45
	27.7.d	-		<1	<0.01	-	
	Rest of 7	17	1.06	17	0.54	25	2.04
NWW02 Trawls <120 mm	27.5.b	-		-		-	
	27.6	13	0.81	129	4.23	22	1.78
	27.7.a	206	12.89	156	5.11	31	2.53
	27.7.d	11	0.68	5	0.18	5	0.39
	Rest of 7	951	59.36	658	21.52	589	47.62
NWW03 Deep water trawls (*)	27.5.b	-		-		-	
	27.6	-		79	2.58	1	0.09
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		<1	0.02
	27.7.d	-		<1	<0.01	<1	0.02
	Rest of 7	1	0.08	<1	<0.01	<1	0.01
NWW05 Beam trawls < 120 mm	27.7.a	19	1.19	37	1.20	29	2.36
	27.7.d	4	0.27	2	0.06	5	0.39
	Rest of 7	133	8.28	118	3.87	71	5.74
NWW06 Seines	27.5.b	-		-		-	
	27.6	-		10	0.33	<1	0.04
	27.7.a	4	0.28	11	0.36	29	2.31
	27.7.d	20	1.27	10	0.34	3	0.24
	Rest of 7	91	5.67	68	2.23	71	5.71
NWW07 Gillnets	27.5.b	-		-		-	
	27.6	5	0.33	35	1.14	19	1.57
	27.7.a	2	0.13	3	0.09	3	0.28
	27.7.d	15	0.96	6	0.19	<1	0.01
	Rest of 7	70	4.38	56	1.84	49	4.00
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		<1	<0.01	-	
	27.7.d	9	0.58	8	0.27	3	0.28
	Rest of 7	3	0.17	2	0.08	3	0.27
NWW09 Lines	27.5.b	-		-		-	
	27.6	-		35	1.13	37	2.98
	27.7.a	<1	0.01	<1	<0.01	-	
	27.7.d	1	0.03	<1	<0.01	<1	0.01
	Rest of 7	2	0.14	3	0.10	3	0.22
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	1	0.06	<1	0.01	-	
	27.7.d	<1	0.01	<1	0.01	<1	<0.01
	Rest of 7	<1	0.02	1	0.02	<1	0.02
Total catch under evaluation		**1602**		**3059**		**1236**	

HAD		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	1	0.01	283	1.42	-	
	27.6	562	6.24	9471	47.62	1082	12.51
	27.7.a	25	0.28	703	3.54	425	4.91
	27.7.d	-		-		-	
	Rest of 7	43	0.48	71	-	254	2.93
NWW02 Trawls <120 mm	27.5.b	-		-		-	
	27.6	381	4.24	1393	7.01	153	1.77
	27.7.a	2 331	25.90	1225	6.16	74	0.85
	27.7.d	1	0.01	1	0.00	<1	0.01
	Rest of 7	4 593	51.02	4890	24.58	4947	57.19
NWW03 Deep water trawls (*)	27.5.b	-		-		-	
	27.6	-		53	0.27	1	0.01
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		<1	<0.01
	27.7.d	-		-		-	
	Rest of 7	3	0.03	<1	<0.01	3	0.03
NWW05 Beam trawls < 120 mm	27.7.a	12	0.13	11	0.05	5	0.06
	27.7.d	<1	0.01	<1	<0.01	1	0.01
	Rest of 7	350	3.89	316	1.59	295	3.42
NWW06 Seines	27.5.b	-		-		-	
	27.6	57	0.63	296	1.49	54	0.63
	27.7.a	220	2.44	397	2.00	240	2.77
	27.7.d	-	-	6	0.03	1	0.01
	Rest of 7	203	2.25	392	1.97	946	10.94
NWW07 Gillnets	27.5.b	-		-		-	
	27.6	-		<1	<0.01	<1	0.01
	27.7.a	-		30	0.15	22	0.25
	27.7.d	-		-	-	-	
	Rest of 7	210	2.34	206	1.03	140	1.62
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	-		-		-	
	Rest of 7	2	0.02	1	<0.01	1	0.01
NWW09 Lines	27.5.b	-		-		-	
	27.6	-		1	0.01	3	0.03
	27.7.a	-		-		-	
	27.7.d	-		-		-	
	Rest of 7	7	0.07	12	0.06	4	0.04
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	-		-		-	
	Rest of 7	-		2	0.01	<1	<0.01
Total catch under evaluation		**9002**		**19890**		**8650**	

HKE		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	-		-		<1	<0.01
	27.6	-		848	2.08	784	2.11
	27.7.a	22	0.09	6	0.02	2	0.01
	27.7.d	-	0.00	-		-	
	Rest of 7	103	0.42	111	0.27	125	0.34
NWW02 Trawls <120 mm	27.5.b	-		-		-	
	27.6	-		686	1.69	297	0.80
	27.7.a	128	0.53	21	0.05	1	<0.01
	27.7.d	-	0.00	1	<0.01	<1	<0.01
	Rest of 7	6 163	25.34	5 080	12.48	4 356	11.73
NWW03 Deep water trawls (*)	27.5.b	-		-		-	
	27.6	-		966	2.37	3	0.01
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		-	
	27.7.d	-		-		-	
	Rest of 7	1	<0.01	<1	<0.01	<1	<0.01
NWW05 Beam trawls < 120 mm	27.7.a	-		<1	<0.01	<1	<0.01
	27.7.d	-		<1	<0.01	<1	<0.01
	Rest of 7	170	0.70	133	0.33	115	0.31
NWW06 Seines	27.5.b	-		-		-	
	27.6	-		18	0.04	4	0.01
	27.7.a	1	<0.01	3	0.01	1	<0.01
	27.7.d	-		1	<0.01	<1	<0.01
	Rest of 7	834	3.43	1 301	3.20	1 321	3.56
NWW07 Gillnets	27.5.b	-		-		-	
	27.6	-		468	1.15	229	0.62
	27.7.a	-		4	0.01	5	0.01
	27.7.d	-		<!	<0.01	-	
	Rest of 7	13526	55.61	13 251	32.56	13 645	36.75
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	-		<1	<0.01	<1	<0.01
	Rest of 7	30	0.13	27	0.07	8	0.02
NWW09 Lines	27.5.b	-		<1	<0.01	-	
	27.6	-		4 288	10.54	2139	5.76
	27.7.a	-		-		-	
	27.7.d	2	0.01	-		-	
	Rest of 7	3340	13.73	13 465	33.09	14091	37.95
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	-		-		-	
	Rest of 7	3	0.01	4	0.01	3	0.01
Total catch under evaluation		**24324**		**40698**		**37132**	

NEP		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	-		-		-	
	27.6	-		110	0.46	15	0.25
	27.7.a	-		1	0.01	2	0.03
	27.7.d	-		-		-	
	Rest of 7	33	0.25	25	0.10	16	0.28
NWW02 Trawls <120 mm	27.5.b	-		1	<0.01	-	
	27.6	-		7 729	32.00	129	2.18
	27.7.a	6185	45.88	7 747	32.07	1608	27.28
	27.7.d	-		<1	<0.01	-	
	Rest of 7	7239	53.70	7 173	29.70	4110	69.72
NWW03 Deep water trawls (*)	27.5.b	-		-		-	
	27.6						
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		-	
	27.7.d					-	
	Rest of 7					<1	0.01
NWW05 Beam trawls < 120 mm	27.7.a	-		-		<1	<0.01
	27.7.d	-		-		-	
	Rest of 7	11	0.08	27	0.11	1	0.01
NWW06 Seines	27.5.b	-		-		-	
	27.6	-		<1	<0.01	1	0.01
	27.7.a	<1	<0.01	<1	<0.01	<1	<0.01
	27.7.d	<1	<0.01	-		<1	<0.01
	Rest of 7	<1	<0.01	1	<0.01	-	
NWW07 Gillnets	27.5.b	-		-		-	
	27.6			-			
	27.7.a			<1	<0.01		
	27.7.d			-			
	Rest of 7			<1	<0.01		
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6						
	27.7.a						
	27.7.d						
	Rest of 7						
NWW09 Lines	27.5.b	-		-		-	
	27.6						
	27.7.a						
	27.7.d						
	Rest of 7						
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		1 326	5.49	-	
	27.7.a	11	0.08	10	0.04	12	0.20
	27.7.d	-		-		-	
	Rest of 7	-		5	0.02	1	0.01
Total catch under evaluation		**13480**		**24155**		**5895**	

PLE		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	-		<1	1.63	-	
	27.6	-		227	0.05	14	0.57
	27.7.a	-		89	1.63	55	2.27
	27.7.d	-		3	0.05	-	
	Rest of 7	5	0.10	4	1.63	8	0.33
NWW02 Trawls <120 mm	27.5.b	-		-		-	
	27.6	-		8	0.15	<1	0.01
	27.7.a	179	3.35	60	1.11	11	0.46
	27.7.d	553	10.35	843	15.57	544	22.62
	Rest of 7	498	9.30	473	8.73	216	8.98
NWW03 Deep water trawls (*)	27.5.b	-		-		-	
	27.6	-		-		-	
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		1	0.03
	27.7.d	10	0.19	7	0.13	13	0.52
	Rest of 7	4	0.08	3	0.06	9	0.39
NWW05 Beam trawls < 120 mm	27.7.a	244	4.56	309	5.70	192	7.99
	27.7.d	1 990	37.20	1341	24.75	756	31.44
	Rest of 7	1 377	25.74	1475	27.24	412	17.15
NWW06 Seines	27.5.b	-		-		-	
	27.6	-		9	0.17	1	0.05
	27.7.a	14	0.26	5	0.10	9	0.39
	27.7.d	174	3.24	137	2.54	75	3.11
	Rest of 7	21	0.39	25	0.46	24	1.01
NWW07 Gillnets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	3	0.06	1	0.01	<1	<0.01
	27.7.d	175	3.28	169	3.13	7	0.30
	Rest of 7	33	0.62	66	1.23	1	0.06
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		<1	<0.01	-	
	27.7.d	59	1.10	125	2.30	40	1.66
	Rest of 7	2	0.03	6	0.11	14	0.60
NWW09 Lines	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	<1	0.01	<1	<0.01	-	
	27.7.d	3	0.05	4	0.07	<1	0.02
	Rest of 7	2	0.03	3	0.05	2	0.06
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	2	0.04	<1	<0.01	-	
	27.7.d	1	0.02	20	0.38	<1	<0.01
	Rest of 7	-		3	0.06	<1	<0.01
Total catch under evaluation		**5349**		**5417**		**2406**	

SOL		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	-	-	-	-	-	-
	27.6	-	-	17	0.39	9	0.25
	27.7.a	-	-	4	0.08	2	0.07
	27.7.d	-	-	<1	<0.01	-	-
	Rest of 7	1	0.05	3	0.08	3	0.10
NWW02 Trawls <120 mm	27.5.b	-	-	-	-	3	0.08
	27.6	-	-	2	0.05	19	0.56
	27.7.a	13	0.42	43	1.00	445	13.11
	27.7.d	100	3.15	241	5.61	398	11.73
	Rest of 7	372	11.76	502	11.67	3	0.08
NWW03 Deep water trawls (*)	27.5.b	-	-	-	-	-	-
	27.6	-	-	-	-	-	-
NWW04 Beam trawls ≥ 120 mm	27.7.a	-	-	-	-	4	0.10
	27.7.d	1	0.03	<1	0.01	6	0.18
	Rest of 7	9	0.27	8	0.19	19	0.57
NWW05 Beam trawls < 120 mm	27.7.a	28	0.89	357	8.30	322	9.50
	27.7.d	719	22.73	647	15.03	675	19.89
	Rest of 7	1529	48.34	1 827	42.46	1 279	37.70
NWW06 Seines	27.5.b	-	-	<1	<0.01	-	-
	27.6	-	-	<1	<0.01	-	-
	27.7.a	<1	<0.01	<1	<0.01	-	-
	27.7.d	<1	0.01	<1	0.01	2	0.06
	Rest of 7	<1	0.01	1	0.02	1	0.02
NWW07 Gillnets	27.5.b	-	-	-	-	-	-
	27.6	-	-	-	-	-	-
	27.7.a	1	0.04	1	0.02	-	-
	27.7.d	201	6.36	69	1.61	1	0.04
	Rest of 7	46	1.46	143	3.32	7	0.21
NWW08 Trammel nets	27.5.b	-	-	-	-	-	-
	27.6	-	-	-	-	-	-
	27.7.a	-	-	-	-	-	-
	27.7.d	130	4.10	354	8.24	152	4.47
	Rest of 7	-	-	20	0.46	44	1.31
NWW09 Lines	27.5.b	-	-	-	-	-	-
	27.6	-	-	-	-	-	-
	27.7.a	<1	0.01	<1	0.01	-	-
	27.7.d	2	0.05	1	0.02	<1	<0.01
	Rest of 7	1	0.05	3	0.06	<1	0.01
NWW10 Pots and traps	27.5.b	-	-	-	-	-	-
	27.6	-	-	-	-	-	-
	27.7.a	<1	<0.01	<1	0.01	-	-
	27.7.d	9	0.29	45	1.04	<1	<0.01
	Rest of 7	<1	0.01	14	0.32	1	0.02
Total catch under evaluation		**3164**		**4304**		**3392**	

WHG		2018		2019		2020	
FS	Area	Catch	% of TC	Catch	% of TC	Catch	% of TC
NWW01 Trawls ≥ 120 mm	27.5.b	-		11	0.14	-	
	27.6	5	0.05	407	5.10	138	1.86
	27.7.a	1	0.01	22	0.28	19	0.26
	27.7.d	-		-		-	
	Rest of 7	50	0.55	72	0.90	419	5.68
NWW02 Trawls <120 mm	27.5.b	-		-		-	
	27.6	9	0.10	146	1.83	23	0.30
	27.7.a	34	0.37	105	1.31	16	0.22
	27.7.d	474	5.20	647	8.11	1 007	13.63
	Rest of 7	5 745	62.96	3 914	49.00	4 041	54.74
NWW03 Deep water trawls (*)	27.5.b	-		-		-	
	27.6	-		6	0.07	-	
NWW04 Beam trawls ≥ 120 mm	27.7.a	-		-		<1	<0.01
	27.7.d	<1	<0.01	-		<1	<0.01
	Rest of 7	1	0.01	<1	<0.01	1	0.01
NWW05 Beam trawls < 120 mm	27.7.a	1	0.01	4	0.06	4	0.06
	27.7.d	36	0.40	41	0.52	19	0.26
	Rest of 7	190	2.08	153	1.91	91	1.23
NWW06 Seines	27.5.b	-		-		-	
	27.6	-		69	0.86	16	0.21
	27.7.a	2	0.02	12	0.15	11	0.14
	27.7.d	1 160	12.72	1 259	15.77	607	8.22
	Rest of 7	1 296	14.21	997	12.49	943	12.77
NWW07 Gillnets	27.5.b	-		-		-	
	27.6	-		-		1	0.01
	27.7.a	<1	<0.01	1	0.01	<1	<0.01
	27.7.d	6	0.07	4	0.05	<1	<0.01
	Rest of 7	95	1.04	75	0.94	17	0.23
NWW08 Trammel nets	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	3	0.03	8	0.10	1	0.02
	Rest of 7	4	0.04	6	0.07	2	0.03
NWW09 Lines	27.5.b	-		-		-	
	27.6	-		-		1	0.01
	27.7.a	<1	<0.01	<1	<0.01	-	
	27.7.d	<1	<0.01	1	0.02	<1	<0.01
	Rest of 7	11	0.12	3	0.03	2	0.23
NWW10 Pots and traps	27.5.b	-		-		-	
	27.6	-		-		-	
	27.7.a	-		-		-	
	27.7.d	<1	<0.01	1	0.02	2	0.03
	Rest of 7	1	0.01	18	0.23	3	0.04
Total catch under evaluation		**9125**		**7986**		**7383**	