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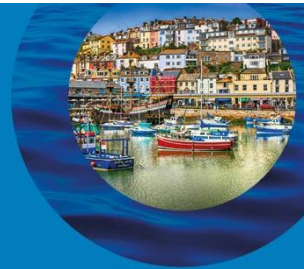
Department of
Agriculture, Environment
and Rural Affairs
www.daera-ni.gov.uk



Llywodraeth Cymru
Welsh Government

A call for evidence on proposals for king scallop fishery closures in ICES area 7d and Lyme Bay of area 7e in 2023

26 January – 19 March
2023



...ambitious for our seas and coasts

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Summary

The UK Fisheries Administrations (UKFAs) are committed to ensuring fisheries are managed to a level where stocks are healthy and fished sustainably, environmental damage is minimised, and economic return is maximised whilst ensuring sustainable harvesting.

The Marine Management Organisation (MMO), acting on behalf of all four UKFAs, is seeking views on proposals to close UK waters in the ICES area 7d and Lyme Bay in ICES area 7e to the king scallop (*Pectens maximus*) dredge fishery in summer of 2023. The proposed closures are to protect the stock during spawning in area 7d and limit depletion of the stock in area 7e due to displacement of fishing effort.

The spawning period for king scallops within ICES area 7d is between May and October, with peak spawning typically in summer. Scientific evidence indicates that protection for stocks against fishing activity during the summer months is likely to deliver the most benefit.

In 2022 the EU introduced a seasonal closure in EU waters of area 7d and some of 7e (North Finistère) to protect king scallop stocks, prohibiting UK and EU dredge vessels. The closures will be in place for the first time from 15 May to 30 September 2023 (extended to 15 October in the Baie de Seine area).

The impact of a closure in UK and EU waters of 7d and 7e may cause potential displacement of the fishery into neighbouring ICES areas 7e and 4c. Scientific advice and landings data have been considered to support measures to protect spawning stock in 7d and limit depletion of the stock in neighbouring areas due to displacement.

The most recent Cefas stock assessment published in 2022 indicates that most stock units in the English Channel, including ICES area 7d (Eastern English

Channel), are estimated to have been exploited above the rate associated with maximum sustainable yield (MSY) at some point over the last 6 years.

Initial findings in ICES area 7d suggest the stock continues to look relatively healthy, despite possibly a slight decline in abundance compared with 2020-21. However, scientific advice suggests the stock in Lyme Bay (7e) has been over exploited in the past and would be vulnerable to displacement from a 7d closure. As the harvest rates of 7e offshore were relatively low compared with the MSY in 2017 –20, the area may be able to support additional effort, although there is still some uncertainty about the exploitation status of 7e offshore.

Following scientific advice, UKFAs and the Scallop Industry Consultation Group (SICG) wish to explore the closure options to EU and UK vessels. This consultation runs from 26 January to 19 March 2023.

The options for proposed 7d king scallop closures are:

- 15 May to 30 September 2023 – a closure period that aligns with the EU closure of 7d to the king scallop dredge fishery.
- 1 July and 30 September 2023 – an extension of the 2022 closure to offer further protection of the species during the spawning period.
- 1 August and 30 September 2023 – the same closure period as 2022.

The closure would apply to EU and UK scallop dredge vessels and will consider excluding the 12 m and under vessels from the closure. See annex (Figure 6) for a map of ICES area 7d.

The proposed 7e king scallop dredge fishery closure is:

- A closure of Lyme Bay (ICES rectangles, 30E6, 30E7, 29E6 and 29E7) aligning to the agreed closure length in ICES area 7d.

The closure would apply to EU and UK scallop dredge vessels and will consider excluding the 12 m and under vessels. See annex (Figure 7) for a map of Lyme Bay and ICES area 7e.

Please note that the proposed closure will only apply in 2023, and any decision made does not set a precedent for any potential future closures, and future decisions will be made using best available scientific evidence, with input from a cross section of the scallop industry and alongside the development of the king scallop fisheries management plan.

Call for evidence questions

Given the evidence above, the four UKFAs would like to seek your views on:

- 1) A proposed closure prohibiting scallop dredge fishing in the UK waters of ICES area 7d, for the following time periods:
 - a) From 15 May to 30 September 2023
 - b) From 1 July to 30 September 2023
 - c) From 1 August to 30 September 2023
- 2) A proposed closure prohibiting scallop dredge fishing in Lyme Bay area of 7e (ICES rectangles 30E6, 30E7, 29E6 and 29E7) that aligns to the dates of the proposed 7d closure.
- 3) Do you think the closure should only apply to vessels greater than 12 m in length? (i.e. vessels 12 m and under in length are exempt from the closure) Please provide any reasoning.
- 4) Do you think the EU closure and the UK proposed closure are likely to result in displacement of fishing effort from UK and EU vessels?
 - a) Do you think there will be spatial (into different areas) and/or temporal (fishing at different times of the year) displacement?
 - b) What do you think will be the likely level of displacement?
 - c) Do you foresee potential issues the closures might cause to the scallop and/or other fisheries?
- 5) How would these proposed closures of ICES area 7d and Lyme Bay area of 7e to scallop dredging impact you and your business?
- 6) If you are a vessel owner/vessel agent or skipper: in which length group is your vessel; 10 m and under, 10.01 m – 12 m, 12.01 m – 15 m and the over 15 m fleet?
- 7) Do you have any other comments?

Please email your responses to effort@marinemanagement.org.uk or write to:

Effort Management
MMO Lancaster House
Hampshire Court
Newcastle upon Tyne
NE4 7YH

By midnight on 19 March 2023

In your response please state whether you are replying on behalf of an organisation or as a member of the public and if you wish your response to remain confidential.

If you are replying on behalf of an organisation or organisations:

- Which organisation(s)?
- What is your name and position?
- What is your email address?

We may wish to contact you about your submission for further details. If you are happy for us to do this, please let us know in your submission, setting out the best method (e.g. email, telephone, post) and time to do this. We will not contact you to follow up on this call for evidence unless you provide permission.

Next Steps

Once the consultation has closed, MMO will publish a summary of the responses and a decision on the scope of the proposed king scallop dredge fishery closure for 2023. The MMO will detail when, where and which vessels will be affected. Any closure will be enacted by a licence variation.

Supporting information

Background to 7d and 7e king scallop closures

Prior to leaving the EU Common Fisheries Policy, closures to the king scallop fishery in all 7d waters were introduced annually to all vessels over 15 m, with each member state responsible for managing their fleet. As a result of a UK-France industry agreement the UK and French fishing authorities applied similar measures in their waters.

Following the UK's exit from the EU, the UK-France industry agreement ceased. In 2021 and 2022 a similar call for evidence was undertaken by MMO, proposing a closure to all vessels. Based on the evidence received, and the need for UKFAs to introduce a balanced approach between stock protection and economic impacts, the king scallop fishery was closed in UK waters of 7d from 16 August to 3 October in 2021, and from 1 August to 30 September in 2022. The 2021 and 2022 closures applied to all UK and EU vessels in UK and EU waters except the under 10 m fleet in UK waters. The 10 m and under fleet were exempted after investigation into previous years landing data revealed that the risk to the fishery could be balanced with potential adverse economic impact that the closure would have on the smaller vessel fleet.

In 2023 the EU administered the seasonal closure through a new Regulation¹ that closes EU 7d and parts of 7e to protect king scallop mature stocks during the spawning season. These closures prohibit fishing for king scallop with dredges for all vessels, including UK, in EU waters and mirror previous closures introduced via French legislation:

- In 7d from 15 May – 30 September
- In the North Finistère area in 7e from 15 May – 30 September
- In the Baie de Seine area in 7d from 15 May – 15 October

¹ [EUR-Lex - 32022R1357 - EN - EUR-Lex \(europa.eu\)](#)

The inshore areas (0 – 6 nautical miles) are also subject to the Inshore Fisheries and Conversation Authorities (IFCA) regulation and control measures. Table 1 is a summary of the IFCA byelaws that restrict the scallop dredge fishery.

Table 1: King scallop dredge fishery closures in 7d and 7e exacted through IFCA byelaws

IFCA	District extent 0-6nm	ICES areas	Management measures	Closure timings	Number of months of a complete district closure
Cornwall	Cornwall county, the River Tamar to Marsland Mouth	7e and 7f	Gear restrictions All year round, diurnal closure from 19:00 – 07:00	In 4 Marine Protected Areas (MPAs) in the district all year around	0
Devon and Severn	Marsland Mouth to Gloucester weir and River Tamar to Lyme Regis	7e and 7f	Gear restrictions. All year round, diurnal closure from 19:00 – 07:00	1 July - 1 October	3
Southern	Lyme Regis to Chichester Harbour	7e and 7d	Gear restrictions. All year round, diurnal closure from 19:00 – 07:00	1 April - 1 October	6
Sussex	Chichester Harbour to Rye	7d	Gear restrictions	0 – 3 nm all year round. 3 – 6nm 1 June to 1 November	12 inside 3 nm 5 outside 3 nm
Kent and Essex	Rye to Harwich	7d and 4c	Gear restrictions	In former Sussex district 0 – 3 nm closed all year 3 – 6 nm June to November and in MPAs in the district	12 inside 3 nm and in former Sussex district 5 outside 3nm and in former Sussex district

Stock assessment

For the last six years (2017 - 2022) Cefas have undertaken king scallop dredge surveys in the English Channel (northern parts of ICES area 7d and 7e) to assess the biomass available to the dredge fishery and whether current fishing levels are considered sustainable². Data collected in 2021 and 2022 is currently being processed and will be available in April 2023, therefore evidence provided below relates to the most recent stock assessment published in 2022² using data up to 2020.

Results of the stock assessment indicate that most stock units in area 7d are estimated to have been exploited above the rate associated with maximum sustainable yield (MSY) at some point since 2017 (Table 2).

Cefas estimate a harvest rate of 21.5% of the population in a given year would be compatible with delivering MSY for this stock unit. 2017-2019 data indicate harvest rates above the level associated with MSY, suggesting stocks have a pattern of

² [Assessment of king scallop stock status for selected waters around the English coast 2020/2021 \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/105422/assessment-of-king-scallop-stock-status-for-selected-waters-around-the-english-coast-2020-2021.pdf)

overexploitation. The assessment for 2020 has a provisional harvest rate estimate just below the MSY rate (19.5 vs 21.5), however this is subject to change once full international landings data become available.

Table 2: Harvest rate estimates for area 7d, with an MSY harvest rate of 21.5%². Orange shading represents harvest rates greater than MSY rate.

Year	Harvest Rate on Dredged Portion of Stock (%) Area 7d
2017	49.0
2018	56.1
2019*	24.4
2020*	19.5

* Estimate from previous year, to be revised when 2021 international landings have been reported.

Preliminary analysis from data collected in 2022 indicate that the stock in area 7d continue to look relatively healthy, despite possibly a slight decline in abundance compared with 2020-21. This may be reflected in the perception of fishing pressure status as the latest provisional harvest rate estimated for 2020 was just below the MSY rate (19.5% for 21.5%).

There is no general rule that indicates what the minimum available data period is for a robust assessment of stock status. However, it should not cover fewer years than the number of cohorts that are significantly caught up in the fishery. King scallops in the English Channel start to be above minimum landing size from 3 to 4 years old, from the ages of 7 to 8 years old their caught numbers rapidly decrease. A data period of 5 years can therefore be taken as being sufficient for a robust stock assessment. Scientific evidence over this period indicates that stocks are at risk of being overexploited. This strengthens the need for appropriate management to be maintained and increased to ensure scallop stocks are protected and the fishery is managed sustainably.

Potential effort displacement from a closure in 7d could have an especially detrimental impact to the Lyme Bay stock (inshore part of 7e) which has estimated harvest rates substantially above MSY (Table 3). The offshore stock in the western Channel, particularly in French waters which tends to see the highest harvestable biomass estimates of that area, would be in a better position to support increased fishing activity. However, there remains some uncertainty around the exploitation status in 7e offshore.

Table 3: Harvest rate estimates for area 7e Lyme Bay and offshore, with an MSY harvest rate 21 and 20.9% respectively². Orange shading represents harvest rates greater than MSY rate.

Year	Harvest Rate on Dredged Portion of Stock (%) Area 7e Lyme Bay	Harvest Rate on Dredged Portion of Stock (%) Area 7e offshore
2017	55	11.0
2018	76.9	13.6
2019	37.9	11.7
2020*	42.9	5.5

* Estimate from previous year, to be revised when 2021 international landings have been reported.

Spawning in ICES area 7d

The spawning period for ICES area 7d king scallops is between May and October, and individuals may be found in spawning condition throughout this period. Peak spawning is typically summer, although spawning events occur from late spring through to October sometimes with multiple events within a year. The exact pattern of spawning in any one year will vary depending on environmental conditions but protecting stocks against fishing activity during the summer months is likely to deliver the most rewarding benefits.

The benefits of area closure in terms of stock protection are largely associated with reducing fishing pressure on stocks during the spawning season. This allows the stock to be left undisturbed as mature individuals spend energy on spawning, as well as increasing protection for juvenile scallops to grow to spawning size/ minimum landing size before encountering scallop gear.

A closure period that included the early summer months would also be beneficial for the reduction of environmental impacts from dredging; in particular, the removal of benthic organisms (hydrozoans and bryozoans) that scallop larvae use to settle on during metamorphosis.

Data analysis for the latest stock assessment is still in progress, and therefore the potential impacts of the 2021 and 2022 closures cannot be examined. However, most stock benefits from spawning closures would be expected to materialise as an increase in the average level of future recruitments. Even if a higher-than-average recruitment were observed for 2021 and 2022 (and the first signals won't be available until 2023), it would be difficult to separate management benefits from natural variability for a single event.

Potential displacement

Due to the 2023 EU closure in French waters and the proposed closure in UK waters, there is potential for UK and EU fleets to be displaced temporally and spatially. Potential displacement figures can be viewed diagrammatically, please see the annex (Figure 8 - Figure 12) for further details.

It should be noted that the annual variation in the behaviour and landings mean that modelling the prediction of displacement is based on averages with a wide variation. The modelling is also based on the worst-case scenario assuming that the vessels engaged in the fishery will divert effort from 7d to 7e.

Potential temporal displacement

- Displacement early in the spawning period, 15 May to 31 July. Due to the timing and the magnitude of effort that could be displaced, this has a high potential to have a negative impact on UK king scallop stocks.
- Displacement late in the spawning period, 1 – 15 October. Due to the timing and the shorter period, this has a low potential to have a negative impact on UK king scallop stocks.

Potential spatial displacement

The potential spatial displacement of fishing effort into UK 7d and 7e are summarised in Table 4.

Table 4: Potential spatial displacement and subsequent increase in fishing activity of the UK fishing effort comparing the EU 7d closures from 15 May to 30 September with the proposed UK 7d closures

EU 7d closure 15 May – 30 September	% Increase in UK fishing effort from EU 7d into UK 7d	% Increase in fishing effort from EU and UK 7d into UK 7e
UK 7d - No closure	11.5	0
UK 7d 1 August – 30 September closure	5.3	10.2
UK 7d 1 July – 30 September closure	4.8	15
UK 7d 15 May – 30 September closure	0	27.5

2022 King Scallop landings in UK waters

ICES area 7d

In 2022 English vessels across all vessel length sectors fished for scallops in 7d. EU vessels from Belgium, Ireland, and France (Table 5) fished in the scallop fishery in 7d throughout the year. The number of UK and EU vessels fishing in 7d in 2021 and 2022 remained relatively stable (Table 5).

During 2022, the under 10 m fleets had the lowest landing quantities and the highest number of vessels and trips, followed by EU vessels (Table 6). UK 10.01m – 15m vessels and EU vessels landed a similar amount (867 and 826 tonnes respectively) whilst UK over 15 m vessels landed the majority of scallops at 60%.

Across 2022, most landings occurred during spring and autumn, with reduced fishing activity from all vessels during the spawning season and in particular the closure from 1 August to 30 September 2022 (Figure 1).

Table 5: Number of vessel landings of king scallops from ICES area 7d during 2021 and 2022 (UK waters only). This is all king scallop landings regardless of gear type. The number of unique vessels that worked in 7d is shown in brackets

Vessel length	GBE	GBS	BEL	FRA	IRL	NLD
0-10m, 2021:	966 (63)	-	-	-	-	-
0-10m, 2022:	877 (60)	-	-	-	-	-
10.01-15m, 2021:	313 (15)	-	-	-	-	-
10.01-15m, 2022:	337 (18)	5 (1)	-	-	-	-
Over 15m, 2021:	112 (7)	471 (24)	372 (42)	5 (2)	100(4)	1(1)
Over 15m, 2022:	130 (11)	286 (21)	391 (40)	5 (2)	46 (3)	-

Table 6: King scallop landings (total weight in tonnes and as a percentage of total annual landings across all sectors) from ICES area 7d during 2022 across fleet segments. Number of vessel trips with associated landings is also shown with the number of unique vessels in brackets. Note this is all 7d king scallop landings with all gears.

Vessel length	Tonnes	% of total landings	Vessel trips (Unique vessels)
UK 0-10m	391	7.5	877 (60)
UK 10.01-15m	867	16.6	337 (18)
UK over 15m	3141	60.1	416 (32)
EU over 15m	826	15.8	442 (45)

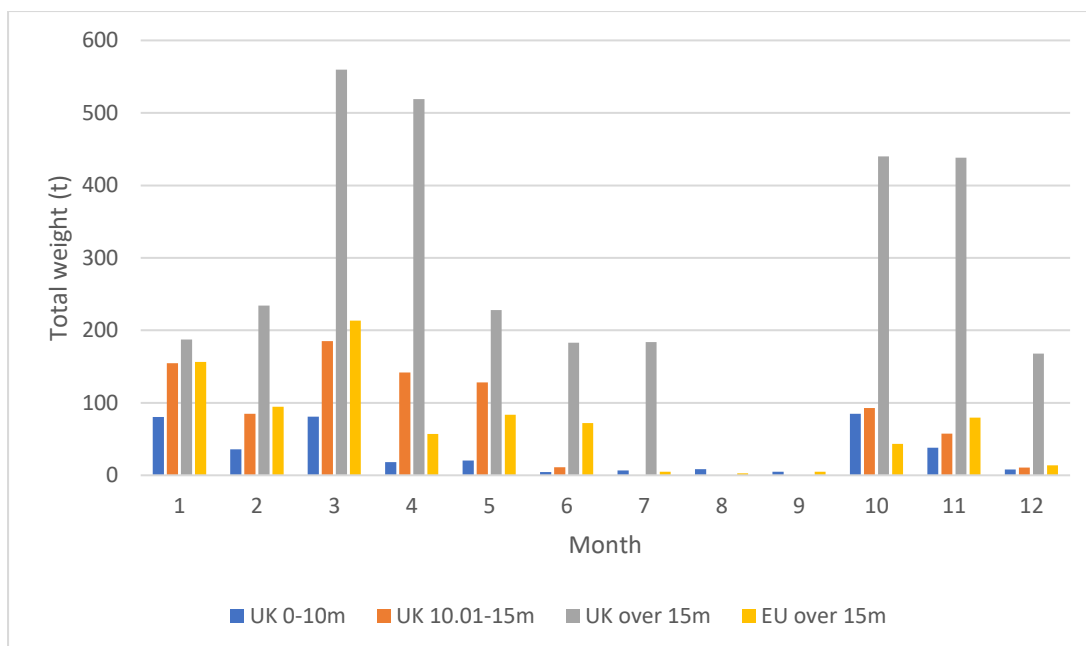


Figure 1: Total weight (tonnes) of landings of king scallops by vessels in ICES area 7d during 2022 (UK waters only). The different colours display UK vessel lengths including under 10 m vessels, 10.01 m – 15 m vessels and over 15 m vessels. EU vessels only had landings from over 15 m vessels.

During the period of the proposed extended closure (mid-May to September) there are limited landings across the fleet sectors, ranging from 7 – 20% of annual landings being caught during this period (Table 7). The majority of landings occurred during May and June for UK 10.01m -15m vessels and EU vessels, with UK over 15 m vessels landing the majority from mid-May to July. Under 10 m vessels landed 9% of their annual landings during this period, with a small amount being landed during the 2022 closure (13.2 tonnes) which they were exempt from. Fishing activity from 2014 to 2021 suggests that vessels of 12 m length and over account for about 90% of landings and effort within 7d during either the current or an extended closure period (Figure 2). Smaller length vessels are also less likely to be able to relocate to other ICES areas during a closure.

Table 7: Total weight (tonnes) of landings of king scallops by vessels in ICES area 7d (EU and UK waters) in 2022 during the proposed closure period. Landings during the closure for EU vessels were bycatch from the beam and demersal trawl fleet.

Vessel length and nationality	15 – 31 May	June	July	August	Sept	Total	% of annual landings
UK 0-10m in UK waters 7d	11.4	4.3	6.8	8.5	4.7	36	9
UK 10.01m-15m in UK waters 7d	66.9	11.2	0	0	0	78	9
UK over 15m in UK waters 7d	132.2	183.1	183.8	0	0	499	16
EU over 15m in UK waters 7d	83.6 (all May)	71.9	4.9	2.7	5.1	163	20
UK over 15m in EU waters 7d	160.1	125.2	2.8	0	0	288	7

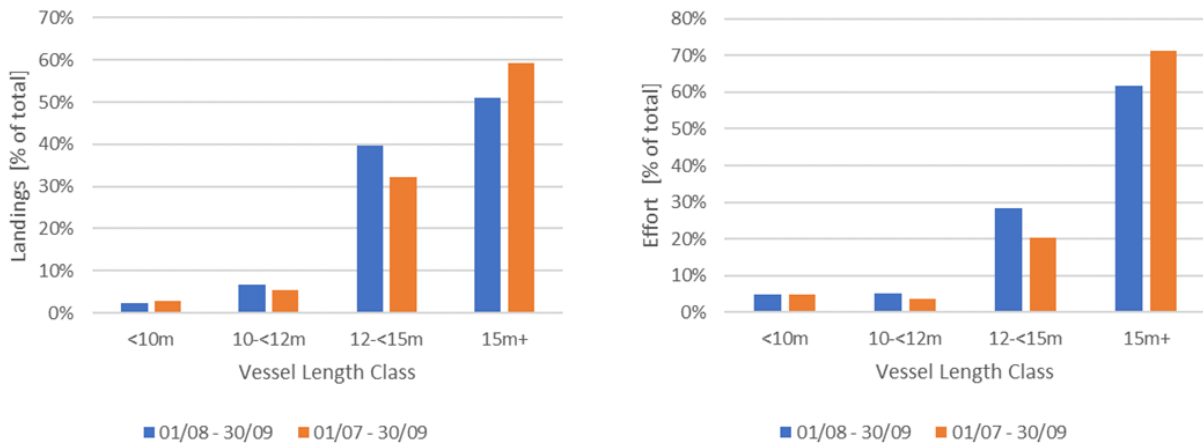


Figure 2: Fishing landings and effort by UK king scallop dredgers during proposed UK 7d closure periods. Landings and effort are averaged across the period 2014 – 2021.

ICES area 7e

Figure 3 shows king scallop landings in UK waters from UK and EU vessels in ICES area 7e during 2022. There was a notable peak of king scallop landings from the UK over 15 m fleet from June to September. The 10.01 m – 15 m fleet fished consistently through the year with increased landings May to August. The UK under 10 m sector have consistently small landings throughout the year. The EU vessel activity was confined to July and August.

There is a correlation between the closure dates of 2022 and fishing activity in 7e from EU and UK fleets. There was an overall increase in fishing activity and landings from July to September for all fleets across the entire ICES 7e region. There is a seasonal fishing pattern that naturally occurs as the 7e, and Channel Islands scallop fisheries produce high yields in the summer and offer good scallop fishing opportunities for all fleets.

Scientific advice suggests that the Lyme Bay area of ICES area 7e (Annex Figure 7) may receive displacement fishing effort from the proposed closure in 7d and due to harvest rates being above MSY, could potentially cause a long-term depletion of scallop stocks in that area.

Landings from 2022 suggest that vessels of 12 m length and over account for about of 85 % of landings within Lyme Bay during either the current or an extended closure period (Figure 4).

Most landings in 2022 from the inshore area of Lyme Bay (sub-rectangles 30E6 and 30E7) were by under 10 m and 10.01 m – 15 m vessels, with very limited landings from UK and EU over 15 m vessels (Table 8).

In the offshore area of Lyme Bay (sub-rectangles 29E6 and 29E7) most landings were from the 10.01 m – 15 m and over 15 m UK vessels. A potential closure in Lyme Bay mid-May to September could affect the under 10 m and 10.01 m – 15 m vessels in the inshore area, with 58% and 42% of landings caught within that period respectively and in the offshore area over 15 m UK vessels, with 73% of landings caught within that period.

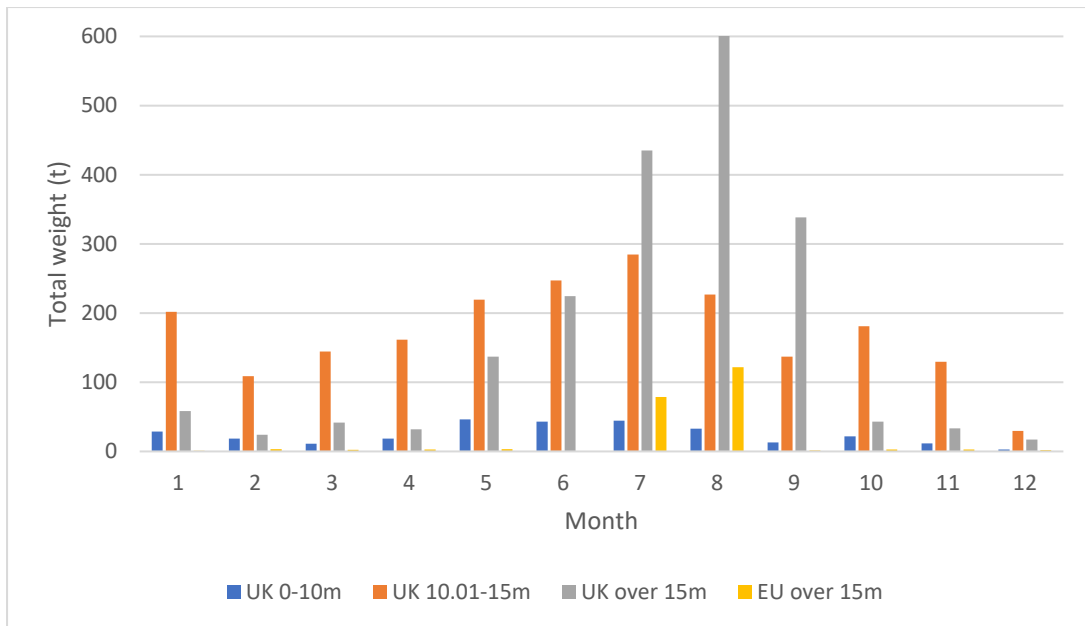


Figure 3: Total weight (tonnes) of landings of king scallops by vessels in ICES area 7e during 2022 (UK waters only). The different colours display UK vessel lengths including under 10m vessels, 10.01m - 15 m vessels and over 15m vessels. EU vessels only had landings from over 15m vessels.

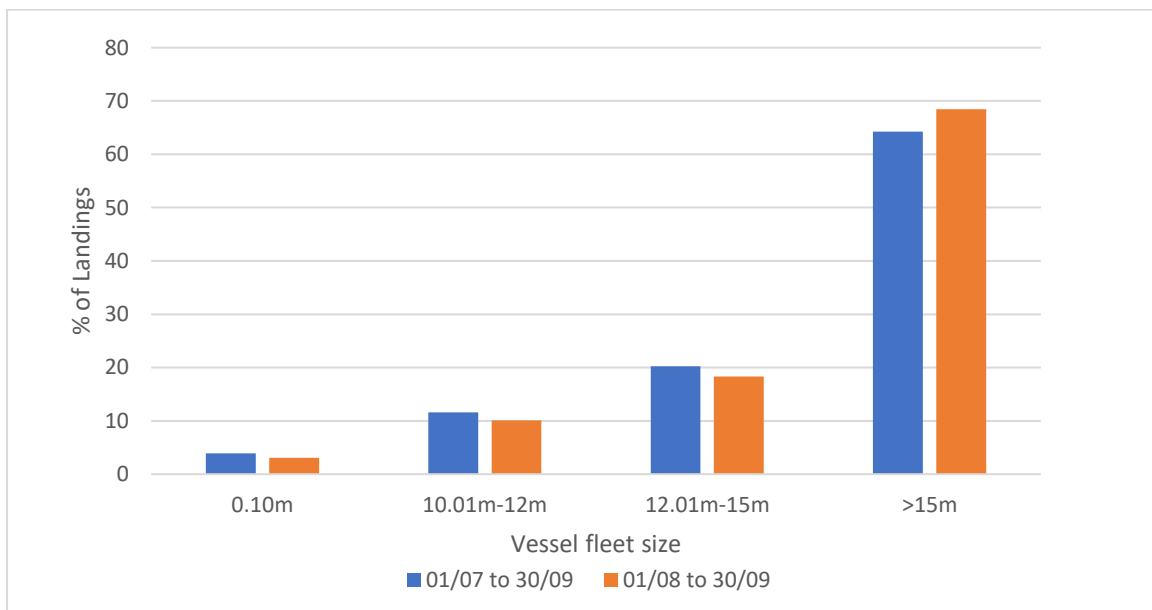


Figure 4: 2022 king scallop landing data for vessels in the Lyme Bay area (ICES rectangles 26E6, 29E7, 30E6 and 30E7) expressed as a percentage of total landings for that area throughout two of the 2023 proposed closure periods.

Table 8: Total weight (tonnes) of landings of king scallops by vessels in the Lyme Bay area in 7e during 2022. ICES sub-rectangles 30E6 and 30E7

Vessel length	Lyme Bay inshore (30E6 and 30E7)			Lyme Bay offshore (29E6 and 29E7)		
	Total	Total (Mid-May - Sep)	% of annual landings	Total	Total (Mid-May - Sep)	% of annual landings
UK 0-10m	141.9	81.5	57.5	58.0	19.8	34.2
UK 10.01-15m	357.9	150.4	42.0	673.3	188.4	28.0
UK over 15m	4.3	0.3	6.7	497.3	365.1	73.4
EU over 15 m	0.0	0.0 (all May included)	0.0	2.9	1.2 (all May included)	40.9

ICES area 4c

In ICES area 4c, in UK waters during 2022 there were landings of king scallops across the entire area predominantly from the UK under 10 m sector (Figure 5). The peak landing period was January to May.

EU landings are consistently small throughout the entire year indicating the scallop landings in this region are a bycatch of trawling and not a targeted scallop dredging fishery. The landing data from 2022 indicate the closure in 7d has not displaced fishing activity into 4c.

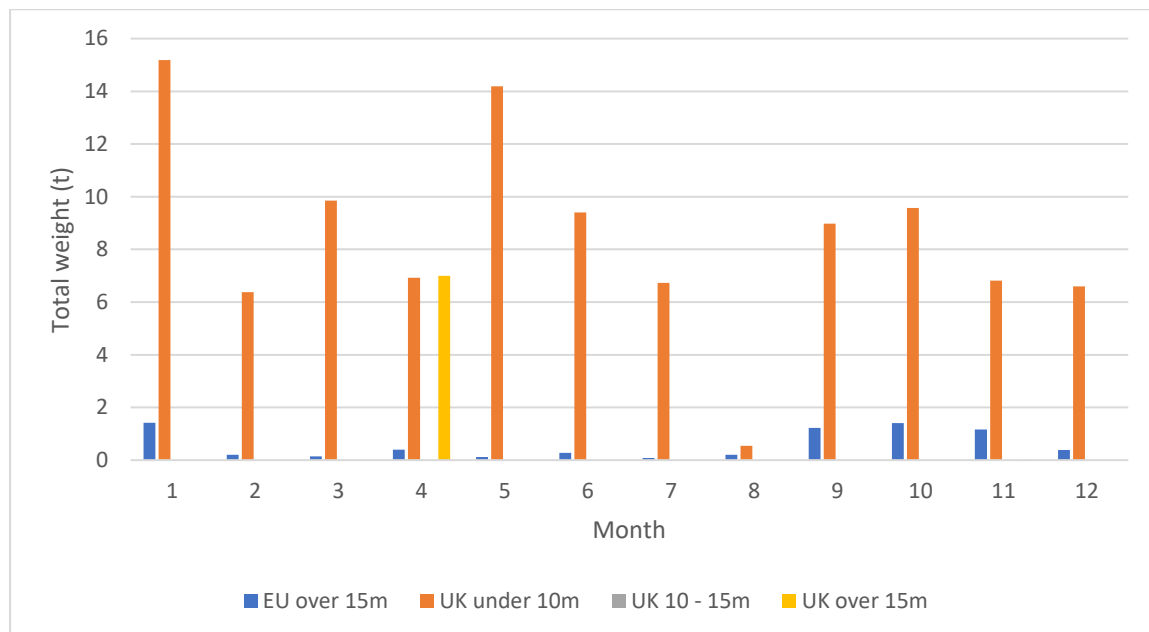


Figure 5: Total weight (tonnes) of landings of king scallops by vessels in ICES area 4c during 2022 (UK waters only). The different colours display UK vessel lengths including under 10 m vessels, 10.01 m – 15 m vessels and over 15 m vessels. EU vessels only had landings from over 15 m vessels. The landing from the UK over 15 m sector was from one Scottish vessel taking the fishing opportunity while transiting the North Sea into the English Channel.

Other considerations

During the 2022 closure there were concerns raised by the crab fleet that the closure led to displacement of effort to the western Channel (7e). Some scallop vessels fished in the 'mid-Channel blocks' which have historically been closed to mobile gears by voluntary agreement between the static and mobile gear sectors (see Annex Figure 13 for details). The blocks in ICES area 7e are productive crab grounds and incursions by scallop vessels into the blocks resulted in gear conflict and incidents of static gears being towed. A Shellfish Industry Advisory Group (SIAG) meeting to discuss this issue and resolutions took place in September 2022 where it was concluded that a SIAG subgroup would be formed to ensure there is good communication between sectors, understand pressures which could lead to gear conflict and feed into the Mid-Channel Conference in March 2023.

The closure of 7d may bring benefits to the static gear fleet in that area. When a fishery is excluded from an area it can deconflict the competition for access to fishing grounds.

A closure of Lyme Bay in 7e may also have an additional benefit to the inshore sole stock. Analysis carried out by Cefas showed an increase in dredge effort and sole landings by dredges in Lyme Bay. The analysis also showed that catches of sole in dredges have a higher portion of small fish (<28cm) compared to landings from static nets (13% and 5% respectively). The portion of small sole caught in dredges is however the same as that caught by otter and beam trawl.

Annex

Figure 6: Map of ICES area 7d

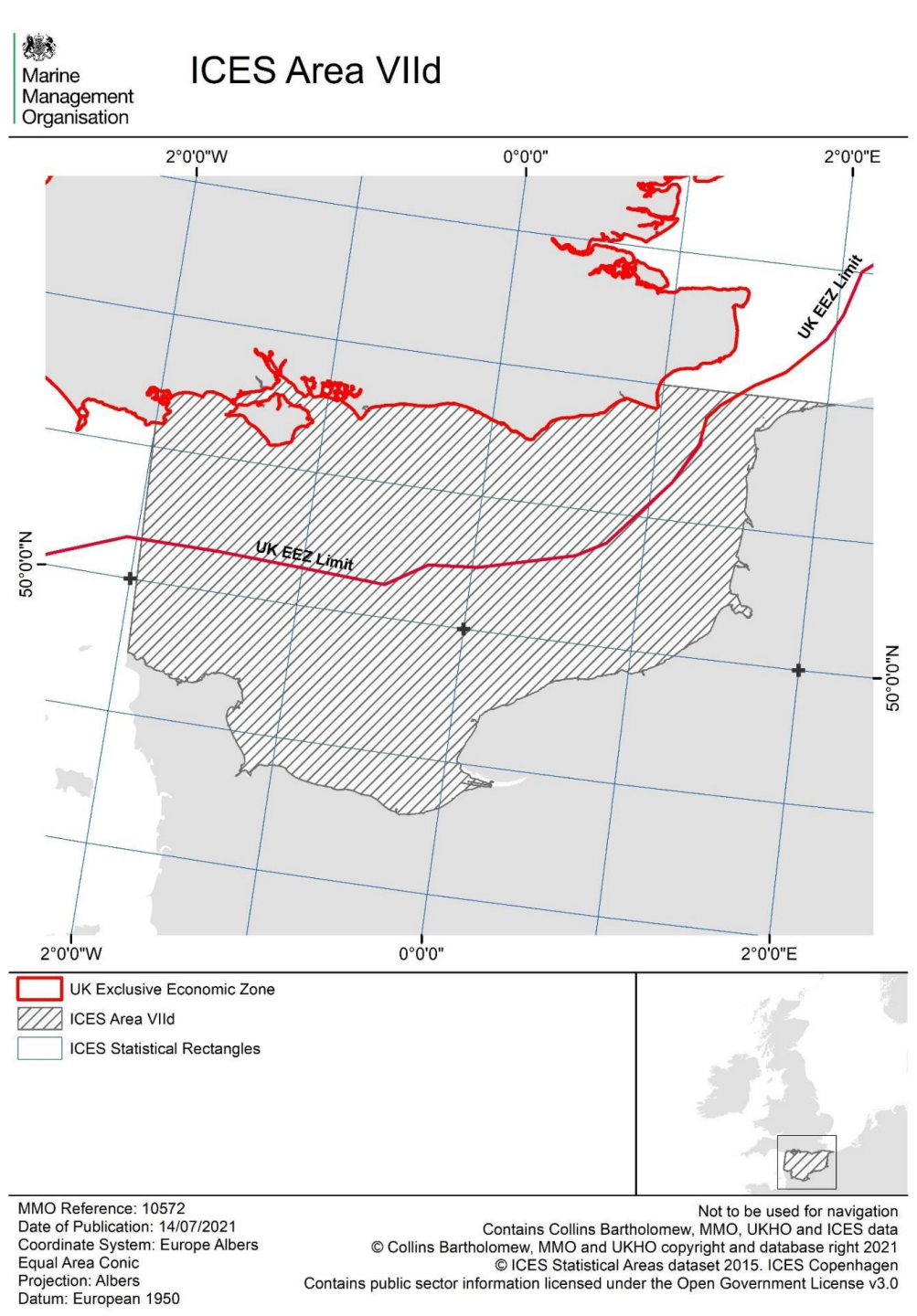


Figure 7: Map of Lyme Bay in ICES area 7e (defined in this context as sub-rectangles 30E6, 30E7, 29E6 and 29E7).



The following diagrams are a representation of the potential fishing effort displacement from the various closure scenarios. These diagrams were produced by CEFAS.

Figure 8: Current and proposed scenarios of closure periods for king scallop fisheries in UK and French zones of ICES Divisions 7d and 7e.

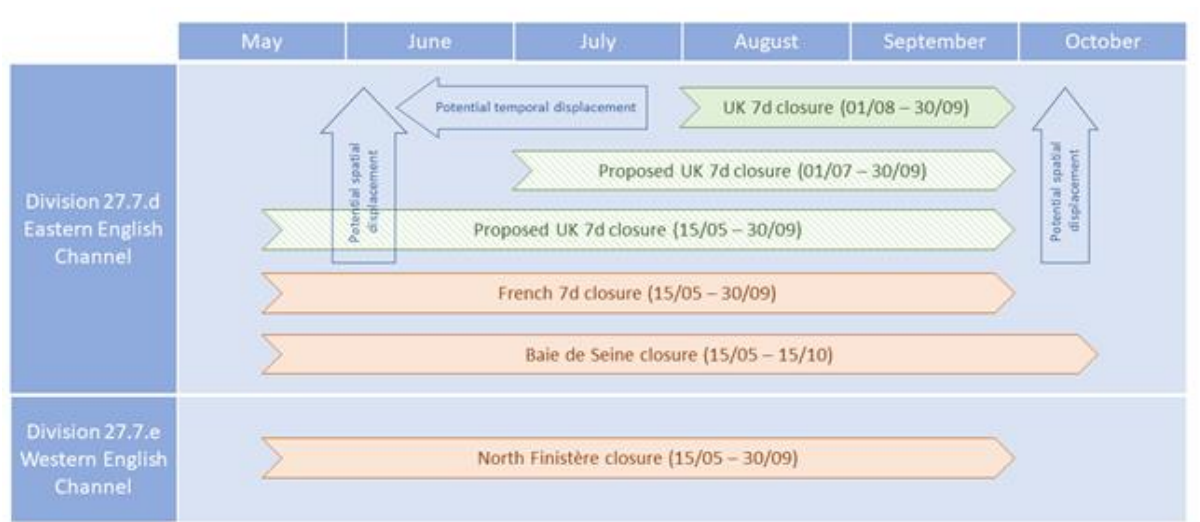


Figure 9: Representation of potential spatial effort displacement under the no UK 7d closure scenario. Dates in parentheses indicate closure periods in different regions. The percentage values indicate increases in annual UK fishing effort in the target area based on an average of 2014-2021 data.

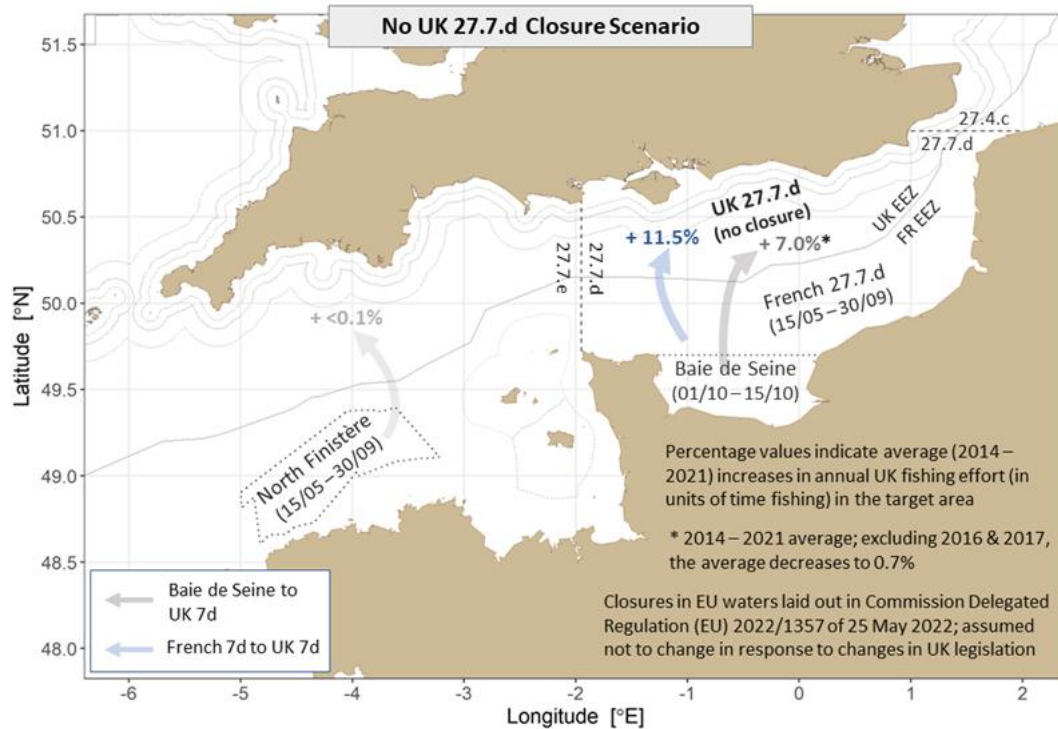


Figure 10: Representation of potential spatial effort displacement under the 2022 UK 7d closure scenario (1 August to 30 September). Dates in parentheses indicate closure periods in different regions. The percentage values indicate increases in annual UK fishing effort in the target area based on an average of 2014-2021 data.

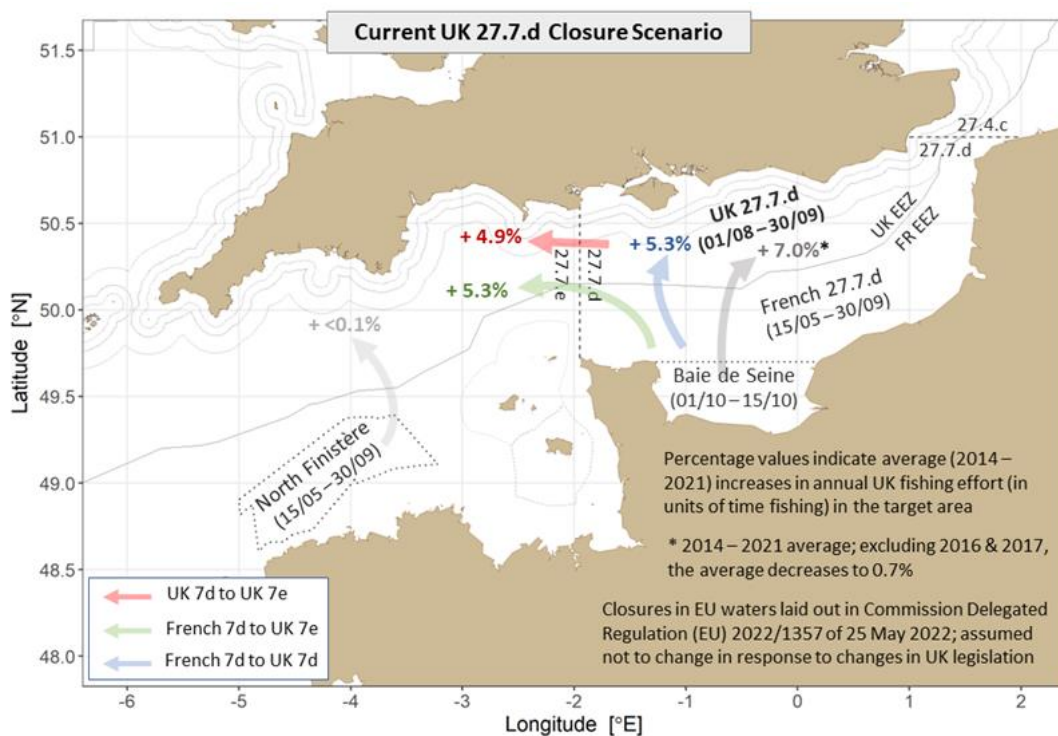


Figure 11: Representation of potential spatial effort displacement under the extended UK 7d closure scenario, 1 July to 30 September. Dates in parentheses indicate closure periods in different regions. The percentage values indicate increases in annual UK fishing effort in the target area based on an average of 2014-2021 data.

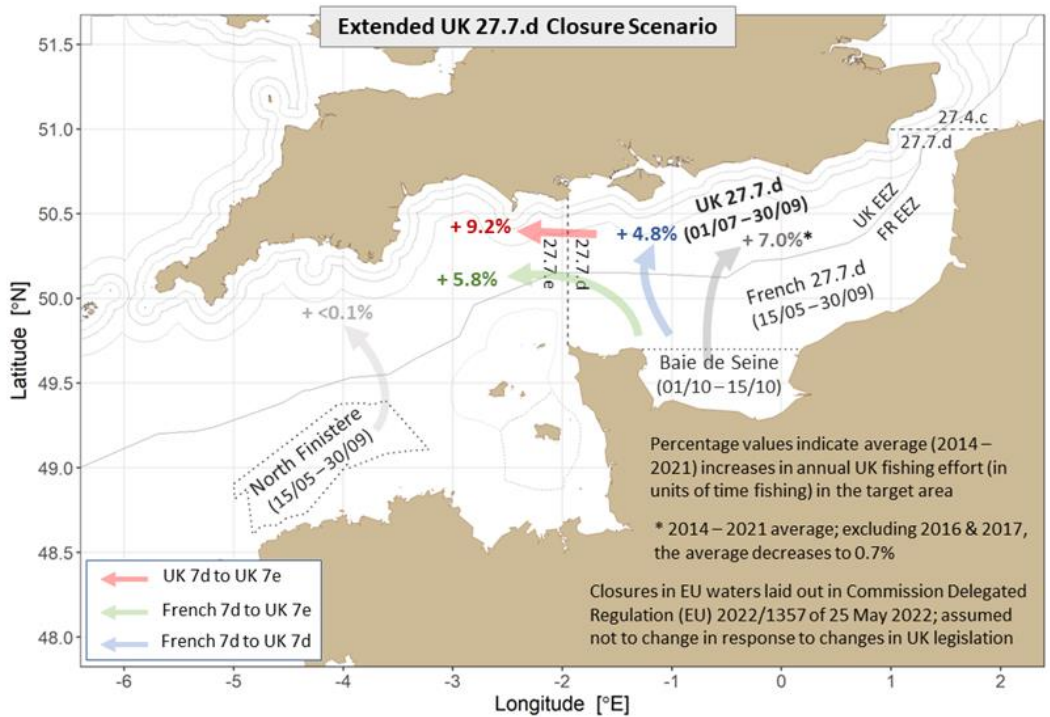


Figure 12: Representation of potential spatial effort displacement under the full UK 7d closure scenario, 15 May to 30 September. Dates in parentheses indicate closure periods in different regions. The percentage values indicate increases in annual UK fishing effort in the target area based on an average of 2014-2021 data.

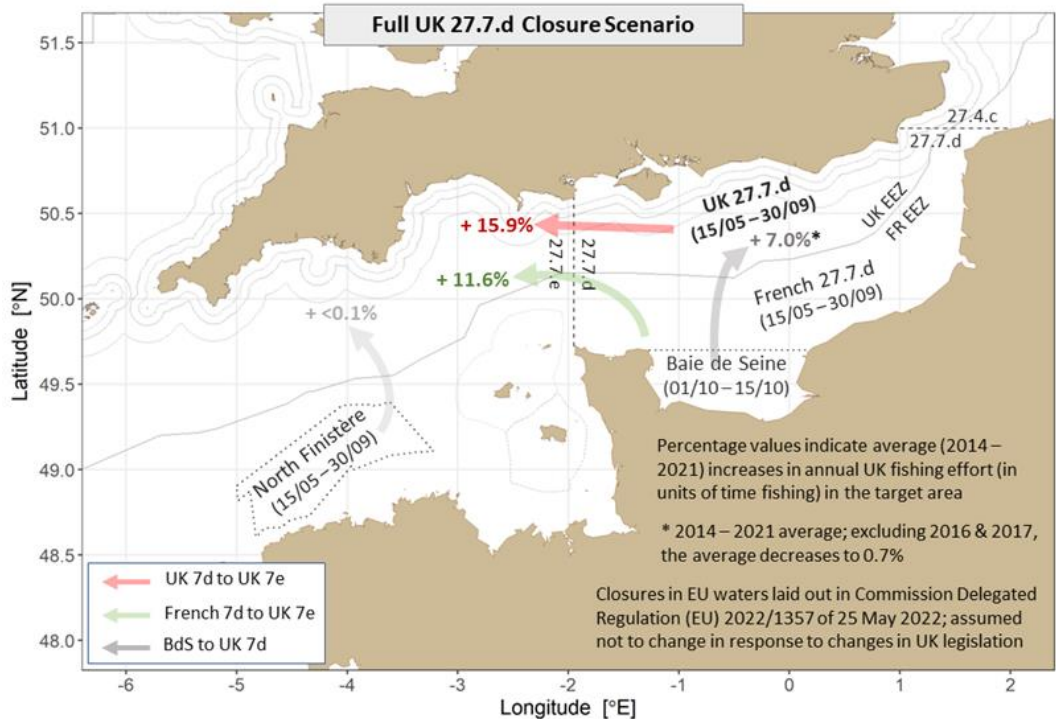


Figure 13: Midchannel potting agreement chart A and B for 2022

