

AN EVALUATION OF CETACEAN BYCATCH IN UK FISHERIES: PROBLEMS AND SOLUTIONS



A report to WDC and HSI

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SUMMARY

Cetacean bycatch has been a serious and persistent welfare and conservation issue in UK waters for many years. The most recent estimates indicate that over 1000 cetaceans are killed each year in UK fisheries. The species most affected are harbour porpoise, common dolphin, minke and humpback whale, but all cetaceans in UK waters are vulnerable. The level of suffering for mammals that become entangled in fishing gear has been described as 'one of the grossest abuses of wild animal sensibility in the modern world'.

Although potential solutions exist, the mitigation efforts to date have only achieved small reductions in the numbers of animals that are killed. The Fisheries Act 2020 commits the UK to minimise and, where possible, eliminate bycatch of sensitive species. The Act does not include details of how to achieve this, but requires reconsideration of fisheries management and practices, the phasing out of some gears, and a change of approach from strategies previously pursued.

While gill nets are recognised as the highest risk gear category globally for cetacean bycatch, there are also serious bycatch problems associated with trawl fisheries and with creel fisheries using pots and traps. The different characteristics of these gear types and the types and size of vessels involved, require different approaches to bycatch monitoring and mitigation.

Acoustic deterrent devices (ADDs), such as 'pingers', have been shown to be effective at reducing harbour porpoise bycatch in gill nets, but the reduction achieved so far has been small, they may cause unwanted disturbance or displacement, and they may not be effective for other species. Gill nets are a very small proportion of total UK fisheries (2% of value) but cause most of the cetacean bycatch. Hence there should be increased attention to moving away from gill nets towards alternative gears.

There is a very large bycatch problem for common dolphins associated with trawl fisheries in the Bay of Biscay. Although this is occurring in adjacent rather than UK waters, adequate monitoring of similar trawl fisheries in UK waters is needed in order to enable a rapid response to indications of any changes in dolphin distribution or fishing effort that might result in bycatch, even for fisheries that currently appear to be lower risk. Mitigation plans that can be put into action as soon as there is any evidence that bycatch is occurring should be developed for all trawl fisheries that may pose a risk. Such plans could include testing strategies such as a 'moving on' procedure, where fishing activity moves away from areas –where bycatch is occurring.

Creel fisheries pose an entanglement risk to cetaceans, especially larger species such as minke and humpback whales. Unlike gill nets which are often designed to catch species of similar size to a small cetacean, entanglements in creel gear involve interactions with parts of the gear that are not related to catching the target species. Thus, there is much greater scope for technical modifications to creel gears to reduce entanglement risk without affecting the target catch than there is for other gears such as gill nets.

INTRODUCTION

Fisheries bycatch, including of cetaceans, seals, turtles and birds, is a welfare and conservation problem for many UK fisheries.

The Fisheries Act 2020¹ contains a commitment that ‘incidental catches of sensitive species are minimised and, where possible, eliminated’ but does not provide details about how this might be achieved. With regards to cetacean bycatch, there has been a similar UK objective to that of the Fisheries Act for decades, as a Party to the Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Sea (ASCOBANS), which has a target of reducing cetacean bycatch to zero.

However, thus far the only tangible steps that the UK has taken towards this target in terms of mitigation have been as part of the UK’s obligations under EU Regulation 812/2004 which required the use of pingers on some gill nets in certain areas. This has contributed to an annual reduction of less than 15% of the total number of cetaceans that are killed in UK fisheries. Nevertheless, the UK Government has stated that the Fisheries Act will ensure that ‘sensitive marine species, such as dolphins, are protected² suggesting there is now a greater commitment to eliminating cetacean bycatch.

The result of previous inaction is that cetacean bycatch is a problem that has effectively continued largely unabated in UK fisheries. This should be viewed in the context not only of international conservation obligations, but also of strong public concern over the welfare of marine mammals. The level of suffering for mammals that become entangled in fishing gear has been described as ‘one of the grossest abuses of wild animal sensibility in the modern world².

The types of UK fisheries which have the highest risk of cetacean bycatch can be separated into three main types:

- (1) gill nets are recognised as the highest risk gear category globally and pose a serious risk to harbour porpoise wherever they are used around the UK and other cetaceans where their distribution overlaps with gill net use;**
- (2) trawls have lower bycatch rates in UK fisheries but trawl fisheries in waters adjacent to those of the UK in the Bay of Biscay have a high bycatch of common dolphins;**
- (3) creels (pots and traps) are largely considered to be a relatively environmentally friendly form of fishing but present an entanglement risk, particularly to large whales.**

The different characteristics of these gear types and the different types of vessels involved require different approaches to bycatch monitoring and mitigation. At the ‘Hauling up Solutions’ bycatch workshop in March 2019, it was recognised that monitoring and mitigation should be brought together as part of collaborative efforts between the fishing industry and other stakeholders⁴. For most UK fisheries using high risk gears there is a need for expanded independent monitoring in order to estimate total cetacean bycatch but already sufficient evidence of a bycatch problem to implement measures involving concurrent mitigation and monitoring. The collaborative effort required to work with fishermen to develop effective monitoring can also lead directly to a more proactive approach with actions to reduce bycatch. For those trawl fisheries which currently do not have a bycatch problem but use similar gear to that which is known to create a high risk in other areas there is a need for an awareness that problems may develop quickly and require a rapid response.

[1] <https://www.legislation.gov.uk/ukpga/2020/22/contents/enacted> [2] <https://www.gov.uk/government/news/flagship-fisheries-bill-becomes-law>

[3] M. Moore, A. Bogomolni, R. Bowman, P. Hamilton, C. Harry, A. Knowlton, S. Landry, D.S. Rotstein, K. Touhey, Fatally entangled right whales can die

extremely slowly, Oceans 06, MTS-IEEE-Boston, Massachusetts, September 18–21, 2006, p.1–3. [4] <https://www.cefas.co.uk/cetacean-bycatch-workshop/>

GILL NETS

Gill net effort is recorded in UK fisheries statistics as 'drift and fixed nets' which includes a number of types of gear. Most UK gill nets are fixed set nets that are anchored to the sea bed (FAO code GNS). Set gill nets consist of a single vertical netting wall hanging between a float line and a weighted ground line. Other types of gill nets include tangle nets which are often set close to the sea bed and trammel nets (FAO code GTR, GTN) with layers of different mesh sizes, which are designed to entangle fish rather than simply trapping them by the gills⁵.

Distribution of UK effort (indicated by live weight landed in ICES rectangles)

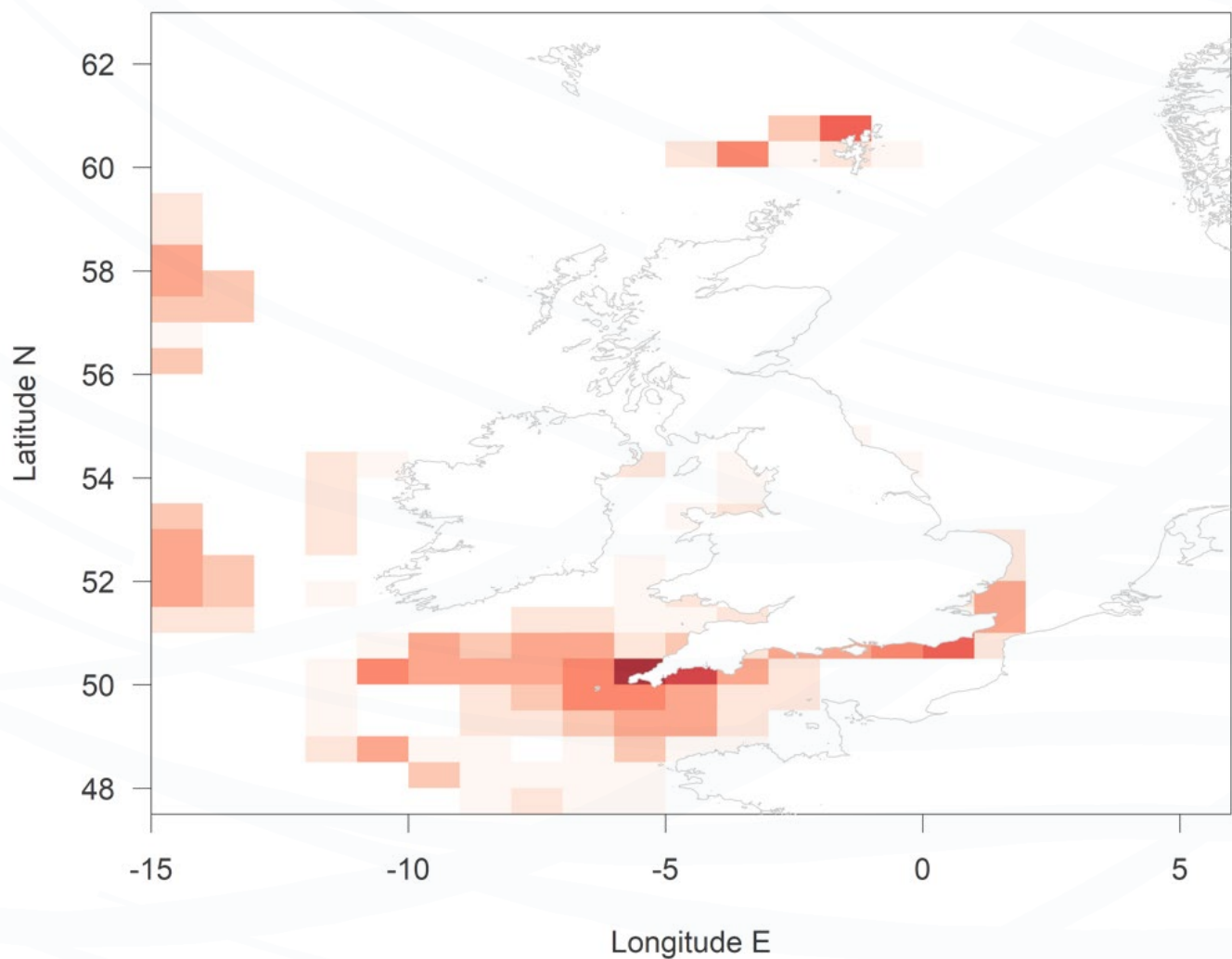


Figure 1. Distribution of UK gill net (drift and set) live weight catches (Data from UK sea fisheries annual statistics report 2018)

MAIN SPECIES CAUGHT

The top species caught in UK gill net fisheries by weight are monkfish and anglerfish (reported in UK data⁶ as a single category, 'monks and anglers'), hake, pollack, sole and thornback ray. The main species caught by value are shown in Figure 2; although catches by weight of turbot and bass are lower than thornback ray, they are of higher value. In 2018, gill nets contributed 2% of UK live weight landings and 2% of the value. Most gill net vessels are less than 10m which is the vessel length at which many regulations change. The total value of gill net (termed 'drift and set net' in UK data) fisheries landings in 2018 was £24m. Prices for the most commonly caught species in 2018 varied from £2,100 per tonne for pollack up to £11,000 per tonne for turbot.

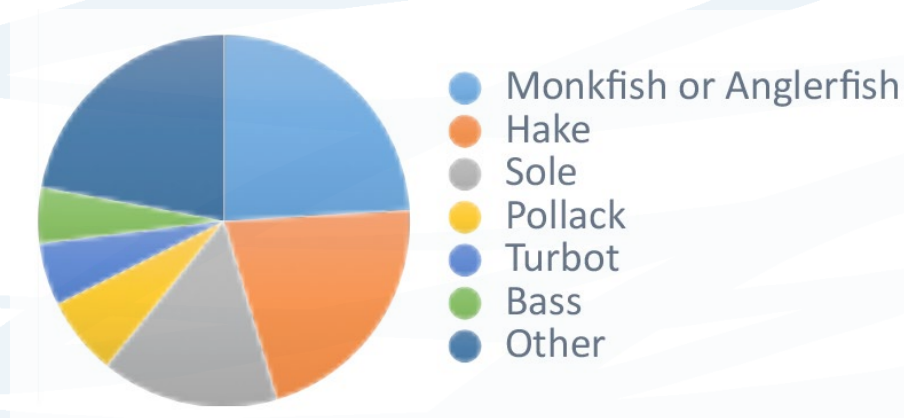


Figure 2. Main species caught in gill nets by value (Data from UK sea fisheries annual statistics report 2018)

MAIN BYCATCH CONCERNS

Gill nets are recognised as the highest risk type of fishery for cetaceans globally, especially for small cetaceans in coastal areas. In the UK, the species most affected is the harbour porpoise, but a number of other species have been reported, and it should be assumed that most cetaceans are vulnerable to gill net bycatch. Northridge et al. (2019) estimated that the annual harbour porpoise bycatch in all UK gill net fisheries for 2018 would be between 845 and 1633 animals (best estimate 1150; CV=0.087) if there was no pinger use, but that this would likely have been reduced by around 200 animals if all boats over 12 m used pingers in the areas where these are required (the pinger requirements of EU Regulation 812/2004 which were also carried forward into EU 2019/1241 applied to 24 UK registered vessels in 2018). The equivalent annual estimate for common dolphin was 248 individuals (range 171-452) and for seals 474 (range 376-691) (pinger requirements have not been shown to impact the bycatch rates of these taxa in gillnets). All the estimates come with a number of caveats because of limitations of the data on effort. This meant that it had to be assumed that net lengths were the same regardless of vessel size resulting in likely underestimation of bycatch from larger offshore vessels and overestimation for smaller inshore vessels (Northridge et al. 2019).

Calderan and Leaper (2019) note that the overlap of porpoise distribution and gill net effort indicates three main high risk areas for bycatch: NW of Shetland, SE England from Essex to Sussex, and SW England including the Celtic Shelf and SW Approaches. Of these, the SW areas have been the most intensively monitored; the SE is a recognised concern with large numbers of strandings showing evidence of bycatch but very limited observer data; deep water fisheries for monkfish and anglerfish NW of Shetland have no information about bycatch and very limited data on the fisheries themselves.

[5] See <http://www.fao.org/fishery/gear/type/223/en> [6] <https://www.gov.uk/government/statistics/uk-sea-fisheries-annual-statistics-report-2019>

Of the different types of gill net, tangle/trammel nets appear to be the highest risk to harbour porpoise, with rates around three times higher than the unspecified gill net category (Northridge et al. 2018). This results in estimates of around 45% of UK harbour porpoise bycatch being in trammel/tangle nets, making them the largest contributor from the different gill net metiers. Studies in the Netherlands also identified trammel nets as the highest risk (Scheidat et al. 2019). Tangle/trammel nets also have a much higher bycatch rate of common dolphins than other gill net types (Northridge and Kingston, 2009; ICES, 2020). Worth mentioning the high levels of porpoise bycatch in the Celtic Sea, that ICES have identified.

UK fisheries only contribute a proportion of the total bycatch mortality for harbour porpoise and common dolphin populations in the North Atlantic. ICES has considered estimates of bycatch by ecoregion⁷ which do not necessarily follow population boundaries. For harbour porpoise, ICES (2019) found that the estimated bycatch mortality of the subpopulation in the Celtic Seas assessment unit including also the eastern Bay of Biscay Shelf, ranged between 2.12% and 5.57% (536–1409 individuals per annum) of the population estimate. The estimated average annual common dolphin bycatch from all gill net fisheries in the Celtic Seas ecoregion for the period 2016–2018 was 180 dolphins (95% CI 80 – 280) out of a total estimate of 720 common dolphins bycaught in the Celtic Seas. The Celtic Seas region accounts for around 15% of the estimated common dolphin bycatch from the Northeast Atlantic with the majority (85%) occurring in the Bay of Biscay (ICES, 2020).

MONITORING REQUIREMENTS

UK gill net fisheries have had higher levels of monitoring than other sectors due to the higher rates of bycatch. Initial monitoring from 2005, as a requirement under Regulation 812/2004, was directed at >15m vessels, but in recent years there has been more effort to monitor smaller vessels. Most of the monitoring has occurred in SW England, although estimates have been made for the southern North Sea and Channel. In 2018, there were 172 dedicated protected species bycatch monitoring days conducted during 150 trips on board static net vessels with an additional 100 days of non-dedicated observer monitoring (Northridge et al. 2019). There has been almost no monitoring of deep water gill net fisheries west of Shetland; there are very limited data on this fishery even though it is one of the fisheries required to use pingers due to vessel length and mesh size. Estimates for SE England (ICES 4c) suggest a substantial harbour porpoise bycatch (Northridge et al. 2019), but there has been relatively little monitoring in this area compared to SW England.

MEASURES TO REDUCE BYCATCH

Pingers were required to be used by 24 vessels using gill nets in UK waters in 2018 (Northridge et al. 2019), many of these were in the SW of England where pingers are also being used as part of an ongoing industry-led cetacean bycatch monitoring trial from one port in Cornwall organised by DEFRA/CEFAS and the Cornwall Regional Bycatch Focus Group, but the majority of gill net fishing effort in the area is from the under 12m fleet which have not been required to use pingers. Pingers are required for set net fisheries west of Shetland where the four UK vessels operating in 2017 were greater than 15m and using a mesh size >220mm. In some areas, nets properly equipped with pingers have been found to have an 83% lower bycatch rate of harbour porpoise compared to nets with no pingers, but there has not been any obvious significant reduction in common dolphin bycatch rates when pingers are in use (Northridge et al. 2019).

Although pingers can be quite effective for porpoises, and other technical mitigation methods have also been investigated (see IWC, 2020), gill nets will always pose a risk to small cetaceans as they are designed to target fish species of a similar size. There should therefore be increased attention focused on moving away from gill nets towards alternative gears given gill nets' large contribution to UK

cetacean bycatch compared to their small proportion of the value of annual UK landings. Many of the commercial fish species caught in gill nets are already also caught by other means, particularly hook and line gears. Fish caught using hooks can also be of better quality and higher value (Santos et al. 2002). Calderan and Leaper (2019) identified fisheries for hake, pollack, thornback ray, ling and cod as having most potential for switching to gear using hooks. For the UK under 10m fleet, the average daily income is higher for vessels using gear with hooks compared to gill nets and also operating costs are lower due to less fuel consumption (Seafish, 2017). Creel fishing using pots and traps may also be effective for some species, particularly where there is potential for value-maximisation and a higher price for higher quality fish (e.g. Meintzer et al. 2018).

TRAWLS

UK trawl fisheries which include a number of different types of trawl (e.g. bottom and mid-water otter trawls, otter twin trawls, mid-water pair trawls) which create different levels of risk of cetacean bycatch.

Distribution of UK effort

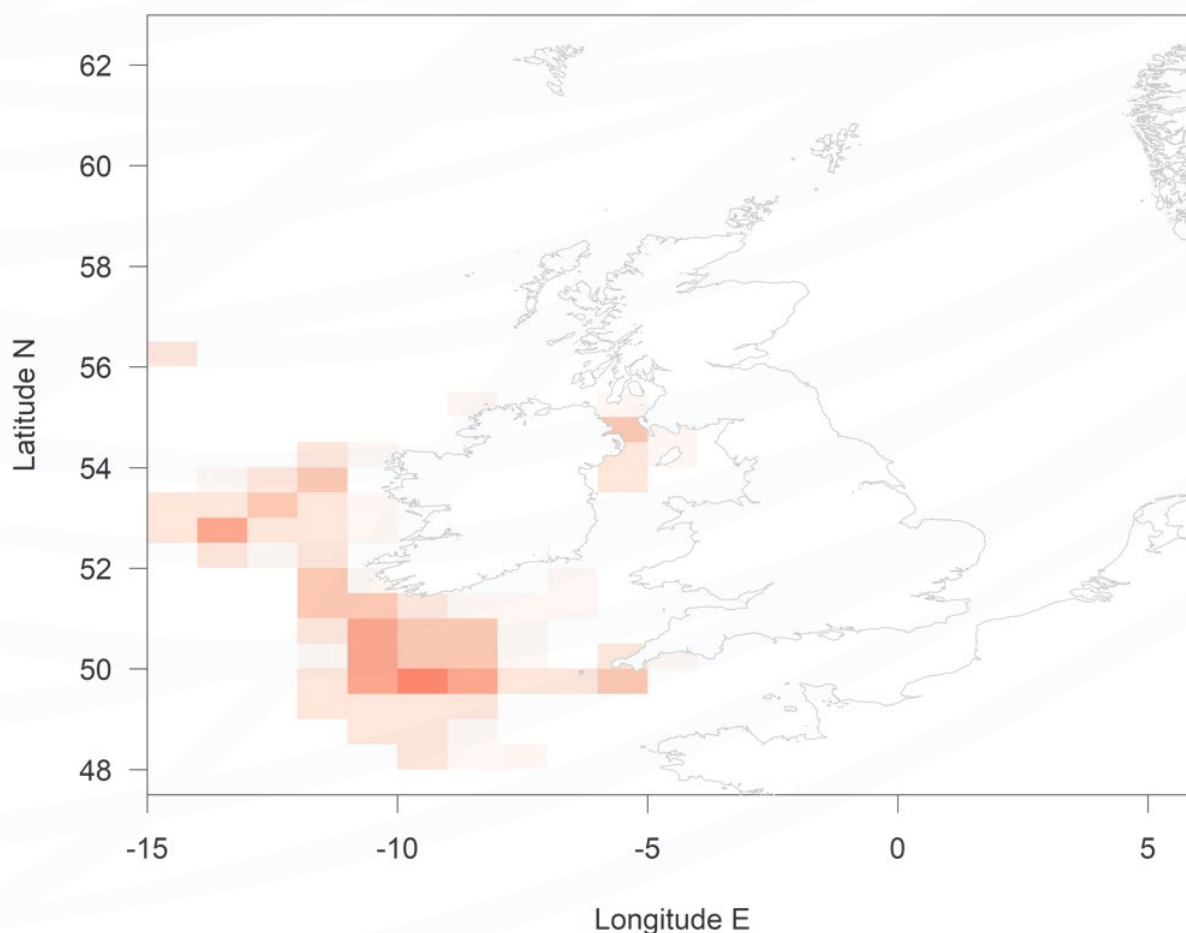


Figure 3. Trawling occurs throughout UK waters but some trawl types have a low bycatch risk. This plot shows the distribution of UK trawl catch of hake and megrim (live weight) by ICES rectangle. These are fisheries targeting similar species to those in Biscay that have a very high bycatch of common dolphin and occur in areas of relatively high dolphin density (Data from UK sea fisheries annual statistics report 2018).

MAIN SPECIES CAUGHT BY VALUE

UK trawl fisheries are diverse and dominate UK fisheries in terms of landed weight (79% of total) and value (64% of total). The main species by weight are mackerel, herring, blue whiting, haddock and cod, but a wide variety of other species are also caught. Although nephrops (Norway lobster) catches by weight are quite low, they are high value (Figure 4). Average prices in 2018 ranged from £5,300 per tonne for nephrops to £440 per tonne for herring. The total landed value from UK trawl fisheries in 2018 was £638m.

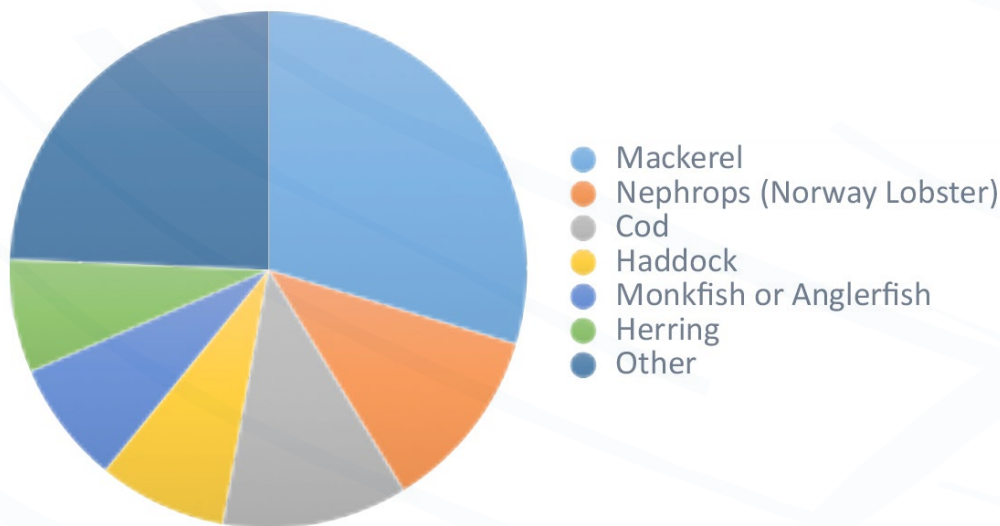


Figure 4. Main species caught in trawl fisheries by value (Data from UK sea fisheries annual statistics report 2018).

MAIN BYCATCH CONCERNS

Concerns over bycatch in trawl fisheries are mainly related to common dolphins but other dolphin species are also known to be vulnerable. Harbour porpoises have also been reported as bycatch in bottom and midwater otter trawls as well as in mid-water pair trawls in other areas (ICES, 2020). Levels of bycatch are dependent on both the type of trawl and the overlap with cetacean distribution. Pair trawls generally appear to be high risk, and in the Bay of Biscay bottom and mid-water pair trawls are associated with high levels of common dolphin bycatch (ICES, 2020).

MONITORING REQUIREMENTS

A number of UK trawl fisheries have been monitored through dedicated onboard bycatch observers and also observers whose main duties were fisheries-related. Generally low bycatch rates in most pelagic trawl fisheries has led to a gradual reduction in dedicated bycatch monitoring of this gear type. In 2016, dedicated sampling in pelagic trawl fisheries was just 23 days (Northridge et al. 2017). However, observations are also made as part of discard sampling programmes and in 2018 there were 571 days on a variety of demersal trawl or dredge gears with no marine mammal bycatch observed (Northridge et al. 2019).

However, trawl fisheries have high variability in bycatch rates which probably reflects small scale changes in the overlap between the

fisheries and cetacean distribution. For example, bycatch in the pelagic pair trawl fishery for bass in the western channel exceeded 400 animals in 2004 compared to just 40 in 2002 despite similar fishing effort (Northridge et al. 2009). Another example is the French pelagic trawl fishery for tuna in ICES Areas 6, 7 and 8. In 2009, around 900 common dolphins were estimated bycaught whereas in previous years this fishery had been estimated to have an annual average of less than 100 (ICES, 2020). Differences in trawling techniques and dolphin behaviour have also been found to influence the rates of dolphin capture in an Australian trawl fishery (Fernández- Contreras et al. 2010, Allen et al. 2014). These factors all present a challenge for designing monitoring schemes. Monitoring and mitigation need to be able to respond rapidly to indications that a fishery might have a high bycatch even if it has previously been judged to be of low risk.

MEASURES TO REDUCE BYCATCH

The factors that most affect bycatch risk in relation to the design and operation of trawls are not well understood, but pair trawling does appear to have a higher risk than trawls from single vessels. There is some evidence that a higher vertical opening also increases risk (Fernández- Contreras et al. 2010). Nets with a Very High Vertical Opening (VHVO), which can be 25m in height when used by pair trawls are likely to be particularly high risk. In some areas bycatch rates at night have been higher than during daylight, and some indications that dolphins are most likely to be caught when the net is being hauled (Morizur et al., 1999).

The current priority in the Northeast Atlantic related to bycatch in trawls is to reduce the numbers of common dolphins killed in the Bay of Biscay, where bycatch levels are very high. Pingers have been used in some trawl fisheries and experiments with the high intensity DDD-03 pingers in the English Channel pair trawl fishery for bass suggested a 75-90% reduction in optimally pinged hauls (Northridge et al. 2011). A more recent study carried out in the Bay of Biscay on three midwater pair trawl teams in winter 2018 also used the DDD-03 pingers and suggested a reduction in bycatch rates of common dolphins of 65% (ICES, 2020). Following this experiment, the use of pingers became mandatory for all French midwater trawlers (OTM and PTM) in the Bay of Biscay. However, strandings for the winter 2019/20 were the highest ever recorded in the French time series so it is not clear whether the pingers were less effective than expected or that the majority of the bycatch was coming from other fisheries.

Other mitigation methods have involved modifications to trawls to enable dolphins to escape through various designs of escape panels. None of these designs have proven consistently effective (Leaper and Calderan, 2017). There may also be potential for fishing to shift area when dolphins are encountered. This 'moving on' procedure has yet to be properly tested as a mitigation strategy. The IWC Scientific Committee recommended testing 'moving on' as a mitigation as a possible alternative to fishery closures in the Bay of Biscay but noted that full monitoring coverage (either through observers or electronic monitoring) is required to facilitate compliance with and monitoring of 'moving on' procedures as a mitigation measure and further work is needed to specify what a moving on procedure should involve (IWC, 2019).

CREEL (POTS AND TRAPS) FISHERIES

Distribution of UK effort (indicated by live weight landed in ICES rectangles)

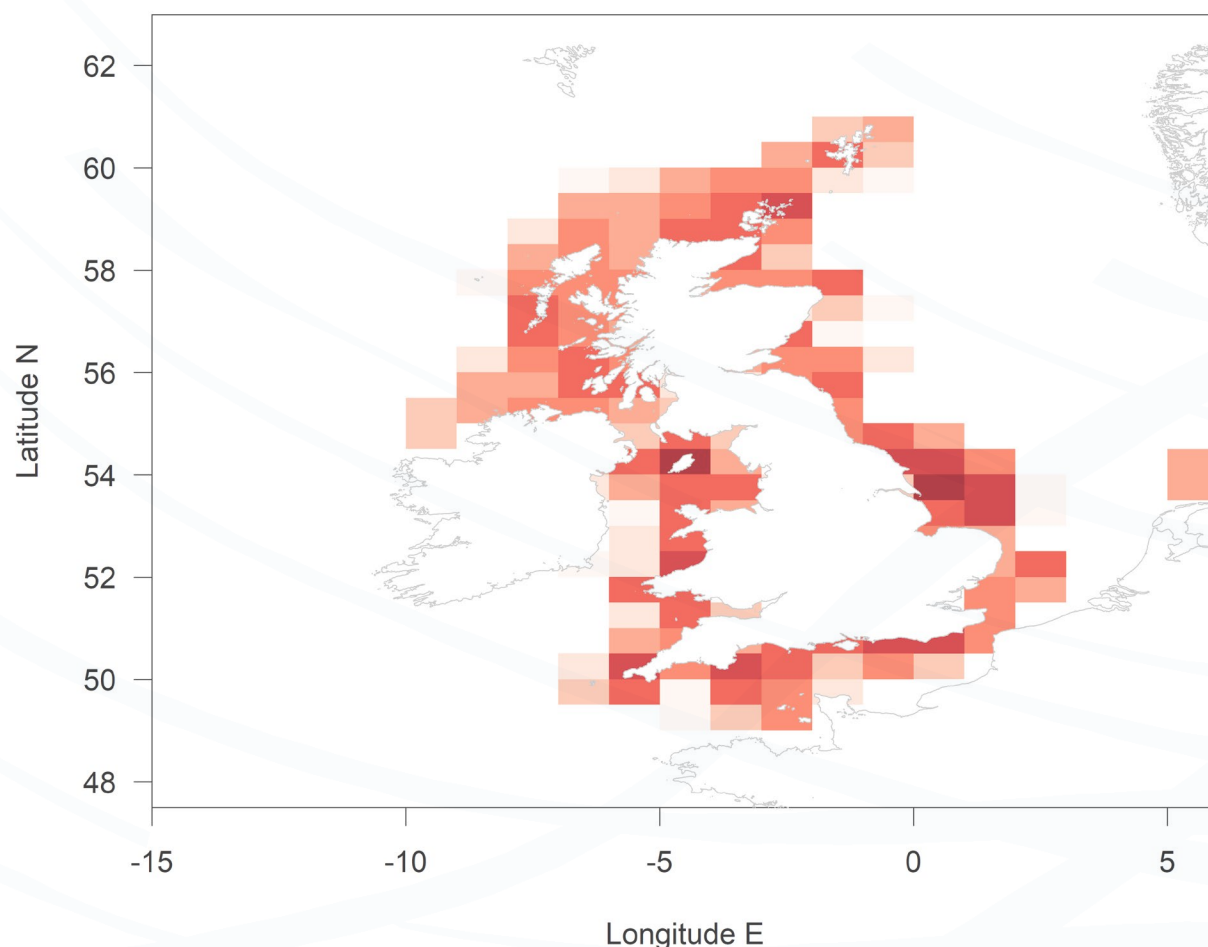


Figure 5. Live weight from pots and traps from each ICES rectangle (Data from UK sea fisheries annual statistics report 2018).

Creel fishing takes place around all UK coasts. Although Scotland has seen the highest number of both entanglement-related strandings and reported entanglements, the creel density is no higher than other coastal regions of the UK. In 2018, creeling contributed 8% of UK live weight landings and 16% of the value. It was second only to demersal trawl/seine both for weight and value. In October 2020, there were 2704 under 10m vessels registered in the UK with a shellfish licence⁸. There were 299 over 10m vessels with a shellfish but not a scallop licence. The great majority of these will be creel fishing although not all registered vessels are active and many are part-time.

MAIN SPECIES CAUGHT BY VALUE

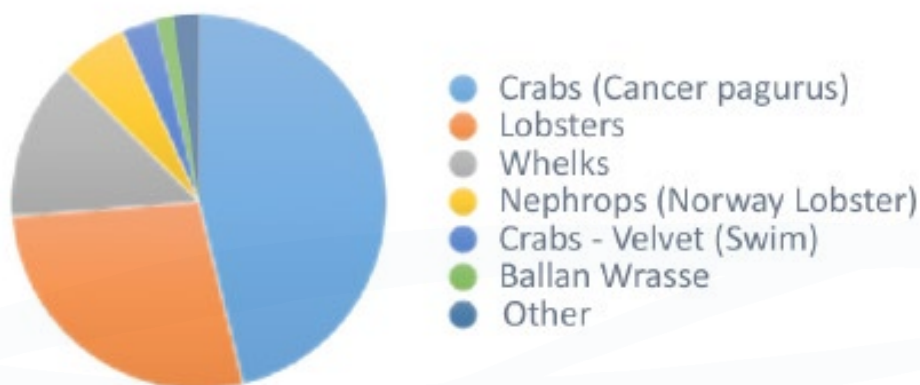


Figure 6. Main species caught in pots and traps by value ((Data from UK sea fisheries annual statistics report 2018).

Total value in 2018 of £160m, dominated by edible crab, but lobsters and whelks were also significant. Fishing for nephrops occurs mainly in Scotland. For the main species landed by value there is a large difference in price from £1,200 per tonne for whelks to £79,450 per tonne for ballan wrasse. Shellfish species fetch a higher price on average than other sea fish. In 2019 the average price for shellfish species was £2,714 per tonne, compared to £2,166 for demersal species and £854 for pelagic species.

MAIN BYCATCH/ENTANGLEMENT CONCERNS

The main species of concern with respect to entanglement in creel lines are minke whale, humpback whale and basking shark. Recent estimates indicate that the Scottish creel fishery may be responsible for considerably more whale bycatch than previously thought, with estimates of around five humpback whales and 30 minke whales becoming entangled each year (MacLennan et al. 2020). However, most cetacean species are also likely to be vulnerable and fin whale, killer whale, pilot whale, sei whale, harbour porpoise and Risso's dolphin have all been reported entangled in creels in Scotland. There are potential conservation concerns for humpback whales where any entanglements occurring in UK waters could potentially impact on small populations in the NE Atlantic and also potential for localised depletion of minke whales. For the west coast of Scotland the annual fatal entanglement rate of minke whales was estimated as 2.2% of the abundance (MacLennan et al. 2020). Dolman and Brakes (2018) describe welfare impacts of entanglements and that these provide a compelling case for immediate action in fisheries that pose an entanglement risk.

No estimates are available elsewhere in the UK. It appears from stranding records that risks to minke whales are lower in other areas of the UK compared to Scotland, and this is probably due to whale distribution. However, unlike humpback whales, which are strong enough to break free and swim with gear, minke whales usually die at the location of the gear with few carcasses stranding (82% of reported entanglements were fatal). Hence, strandings are not a good indication of minke entanglements. MacLennan et al. (2020) found that for 82% of reported minke whale and 60% of humpback whale entanglements where the location in the gear was identified, the whale was entangled in ground line. Nevertheless, there were three minke whale entanglements based on observed strandings or carcasses floating at sea on east coast of England in September 2020, at least one of which was reported as observed within a few hours of death, suggesting entanglements are also occurring in this area.

MONITORING REQUIREMENTS

Estimates of annual entanglement numbers for humpback and minke whales have been made for Scotland based on interviews with fishermen representing about 11% of the inshore creel fleet (MacLennan et al. 2020). For humpback whales it was also possible to use a capture-recapture approach to estimate entanglements by comparing interview results and other reports (e.g. disentangling efforts and strandings). The estimates for two estimation methods were not significantly different. Although subject to a number of potential biases, these results suggest that the semi-structured interview approach can provide estimates of entanglement numbers. This approach could be extended to all areas of the UK. With around 3000 creel vessels around the UK and likely entanglement rates considerably less than one a year for each vessel, it would not be feasible to use an observer programme in this fishery. Thus it is important that all fishermen are aware of the problem and understand the need to report any entanglements.

MEASURES TO REDUCE ENTANGLEMENT RISK

Unlike gill nets which are often designed to catch species of similar size to a small cetacean, entanglements in creel gear involve interactions with parts of the gear that are not related to catching the target species. Thus, there is much greater scope for technical modifications to creels to reduce entanglement risk without affecting the target catch than there is for gill nets.

The Scottish Entanglement Alliance (SEA) was established in 2018 to develop collaborative efforts with fishermen on ways to reduce entanglement risk and also interviewed around 10% of fishermen to find out their experiences of entanglements (SEA, 2021). The next steps are to follow this work with the implementation of some of the mitigation options identified by the fishermen themselves. These include modifications to the way the gear is set (e.g. minimising the amount of rope in the water and reducing wet storage), sinking ground line, and ropeless technologies to remove vertical line. Small modifications to the way gear is set could be implemented straight away and could result in a small but significant reduction in risk. Modifications to gear such as sinking ground line will need further trials but could be particularly appropriate for creel fisheries on soft bottoms (where there is little abrasion on the line), which include nephrops fisheries in Scotland. A number of fishermen have indicated that they would be interested in trialling ropeless gear technologies which can remove the need for vertical lines to retrieve the gear. Measures to improve the management of fisheries which will also reduce entanglement risks through reduction in the number of creels are also being trialled in the Outer Hebrides. The Outer Hebrides Pilot Pot Limitation Scheme⁹ aims to help reverse decreasing catch per unit effort, prevent gear being placed on the ground to stop others from fishing, and encourage a more responsible role in the management of the marine environment through limitations on the number of creels and ensuring that only creels that are being actively fished are in the water. This pilot project is part of a need identified by the industry (SEA, 2021) for better regulation to address a number of issues including gear conflicts and over-capacity which could also reduce the number of entanglements that are occurring.

All the mitigation measures considered by the SEA programme would reduce the amount of line in the water and the associated risk for all species. There are also a number of socio-economic benefits of modifications to gear that reduce entanglement risk: there would be less loss of gear due to interactions with whales and other vessels; disentangling efforts are a high risk to human safety and entanglements are distressing and time consuming for the fishermen involved. The possible gear modifications could have a number of benefits for other marine users through reducing the risks of small craft becoming entangled. This is a common problem for recreational users in many areas and the cause of many calls on the rescue services.

SUMMARY OF PRIORITY ACTIONS TO ADDRESS BYCATCH IN UK FISHERIES

Gill nets

- **Examine the operation of fisheries using alternative gears to catch the same species as gill net fisheries in order to develop a plan for support and regulations to reduce and eventually phase out gill net use.**
- **Tangle and trammel nets should be the highest priority to be phased out because of the high bycatch rates.**

An FAO workshop in 2018 concluded that ‘there is an overwhelming bycatch risk to marine mammals in general, posed by gillnets that is disproportionate to the risks from other gear types’ (FAO, 2018). Despite a large amount of research effort to try to reduce cetacean bycatch in gill nets over the last few decades, the limited success of these efforts led the IWC Scientific Committee to conclude that ‘in many situations there may be no technical option that can be implemented effectively and the only solution is to stop using high risk fishing gears’ (IWC, 2020). Gill nets are a very small proportion of the value of annual UK landings and for many UK gill net fisheries there are already other vessels using alternative gears to catch the same target species. Therefore there are clear opportunities for the UK to take a global lead in moving away from gill nets.

Trawls

- **Develop reporting systems such that all trawl fisheries report bycatch immediately, backed up by comprehensive Electronic Monitoring to ensure compliance.**
- **All trawl fisheries in UK waters that have a risk of bycatch (i.e. using gear that has been known to catch cetaceans) should have a mitigation plan that can be put into action as soon as there is any evidence that bycatch is occurring- Mitigation plans should include operational practices such as ‘moving on’ that can be implemented quickly and are also carefully monitored to assess their effectiveness.**

Creels

- **Expand the approach of the Scottish Entanglement Alliance to obtain an understanding of entanglement for the whole of the UK.**
- **Require all fishermen to set gear in a way that minimises risk through removing unnecessary line and avoiding wet storage.**
- **Trial gear modifications in high risk areas using sinking ground line and ropeless technologies.**

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