



## IDENTIFYING THE UK'S BYCATCH HOTSPOTS

Clean Catch briefing

June 2026

### EXECUTIVE SUMMARY

Action on bycatch in UK waters requires us to know the hotspots which pose the most risk to sensitive marine species such as seabirds and sharks. Our new report brings together available evidence to provide **the most comprehensive overview to date of these hotspots**, which exist within four broad categories of fishery in the UK:

- Longline - Northern fulmar
- Creel - humpback and minke whales
- Static net and trawls - various species of seabird, shark, skate and ray, and marine mammal

#### **We recommend that policymakers:**

- Prioritise bycatch monitoring and mitigation in known hotspots, particularly trawl fisheries.
- Continue to fund long-term monitoring and research programmes which are irreplaceable sources of knowledge of hotspots, particularly as hotspots can be expected to shift in time and place.
- Fund and facilitate the involvement of the fishing industry alongside Remote Electronic Monitoring (REM) to provide cost-effective and vital data.
- Close the "shark data gap" by resourcing UK-wide research on elasmobranch bycatch.

In this briefing, we also explore the initiatives already underway to help address known bycatch hotspots, with fishermen playing vital roles in many of these.



**SECTION 1: OVERVIEW AND RECOMMENDATIONS FOR POLICYMAKERS.....3**

Bycatch hotspots in UK waters.....4

Recommendations for policy-makers.....6

**SECTION 2: CURRENT BYCATCH HOTSPOTS IN UK WATERS.....8**

**SECTION 3: HOW DID WE CONDUCT THE LITERATURE REVIEW?.....11**

**SECTION 4: ONGOING INITIATIVES TO ADDRESS HOTSPOTS.....12**

Static nets (under-12 metre fleet).....12

Static nets (over-12 metre fleet).....14

Trawls (over-12 metre fleet).....15

Longlines.....16

Creels (pots).....17



# SECTION 1: OVERVIEW AND RECOMMENDATIONS FOR POLICYMAKERS



The incidental capture of sensitive marine species such as sharks, seabirds, and porpoises, known as “bycatch”, remains one of the most persistent and complex challenges in fisheries management. The loss of these animals can threaten the health and resilience of marine ecosystems, with many of them playing key roles, such as cycling nutrients through food webs and keeping prey populations in balance. There are human costs too; bycatch events can cost fishermen time and money, and can be psychologically distressing.

## What makes a species more vulnerable to bycatch?

Some species, by their nature, are more sensitive to the impacts of bycatch. This can be because they grow slowly, take a long time to reach sexual maturity, have long lifespans, or have fewer offspring. Many of the UK’s seabirds, elasmobranchs (sharks, skates, and rays) and marine mammals share combinations of these traits, meaning that their populations can be slow to recover from the loss of individuals, especially those already depleted or impacted by other threats. As a result, even modest bycatch rates can have significant impacts at the population level.

Bycatch is not uniform over space and time. It varies across fisheries, areas, depths, and seasons. Access to detailed and reliable data is therefore essential to identify where and when levels of bycatch are of conservation concern – **the “hotspots”**.



Clean Catch has conducted a **literature review** drawing on existing monitoring and research efforts to provide the most comprehensive overview to date of bycatch hotspots in UK waters for seabirds, marine mammals, and elasmobranchs (sharks, skates, and rays). By synthesising available evidence on both bycatch and the intensity of fishing effort by different fleets, we identify:

- Where and when sensitive species face the greatest risk from interactions with fisheries in the UK.
- Opportunities to enhance monitoring and research to address sensitive species bycatch.

**Strategic monitoring and research, including through science-industry collaboration, are essential to identify bycatch hotspots and address them through evidence-based policy. By implementing mitigation measures in a targeted way, conservation wins can be maximised while supporting profitable and sustainable fisheries.**

### **BYCATCH HOTSPOTS IN UK WATERS**

Clean Catch's literature review identifies known bycatch hotspots that are of particular concern by using the following criteria:

1. The hotspot has been identified through multiple independent studies using different methods.
2. The hotspot is sizeable in terms of the scale of the fishery, volume of bycatch, and impacts.
3. The hotspot is thought to have population impacts on sensitive species of conservation concern (i.e. species whose populations are already depleted or being affected by other threats).
4. The hotspot is current and has persisted for multiple years.



**Four bycatch hotspots meet the criteria and are summarised in Table 1 below.**

While each hotspot corresponds to a specific fishery, bycatch risk only arises where populations of sensitive species coincide with higher intensities of fishing effort. The maps on pages 8-10 show the distribution of fishing effort for these fisheries, while specific details of where and when sensitive species bycatch is known to occur can be found in the literature review. Table 1 also provides examples of ongoing UK initiatives to address the hotspots, with summaries of these given on pages 12-17.

Finally, it is important to note that the hotspots in Table 1 are the known ones, and that others may exist which pose similar risk to certain sensitive marine species.

Table 1: Bycatch hotspots in UK waters

Hotspot	Species most affected	Examples of ongoing UK initiatives
Longline hake fishery - North coast of Scotland and the Celtic Sea	<ul style="list-style-type: none"> <li>Northern fulmar<sup>1</sup></li> </ul>	Collaboration through the Bycatch Monitoring Programme and CIBBRiNA
Pot (creel) fishery - Scotland	<ul style="list-style-type: none"> <li>Minke whale<sup>2</sup></li> <li>Humpback whale<sup>3</sup></li> </ul>	Scottish Entanglement Alliance
Static net fisheries - UK-wide	Various species of seabird, shark, skate, and ray, and marine mammal	<ul style="list-style-type: none"> <li>Clean Catch pinger trial</li> <li>CIBBRiNA pearl trial</li> <li>Cornwall Bycatch Project</li> <li>Co-designed byelaw for the Filey Bay salmon and seatrout fishery</li> <li>Mandatory use of pingers in the over-12 metre fleet</li> </ul>
Trawl fisheries - UK-wide	Various species of seabird, shark, skate, and ray, and marine mammal	Clean Catch EEFPo North Sea trial

<sup>1</sup> Least concern globally (IUCN). Amber Listed Birds of Conservation Concern 5 in the UK.

<sup>2</sup> Least Concern globally (IUCN), Priority species in the UK (UKBF).

<sup>3</sup> Least Concern globally (IUCN), Priority species in the UK (UKBF).

## RECOMMENDATIONS FOR POLICYMAKERS

The literature review provides recommendations for consideration by Defra, the devolved nations, and other actors. Those of most relevance to policymakers are summarised below.

### **Explore and facilitate use of self-reporting by fishermen and Remote Electronic Monitoring for bycatch data collection (Recommendation 3 in the report)**

While observers are widely considered the most robust source of bycatch data, costs and logistics limit observer coverage and representation across the breadth of the UK fleet. Fishermen can provide valuable insights, as shown by an ever-growing list of successful science-industry partnerships (for example, the Scottish Pelagic Industry-Science Data Collection Programme<sup>4</sup>). Remote Electronic Monitoring (REM) and self-reporting by fishermen offer cost-effectiveness if used to complement observer programmes, especially in the inshore fleet where observer coverage is patchier; however, these approaches have their own limitations and cannot replace observers.



### **Fully realise the potential of the fishing industry to collect vital bycatch data by funding science-industry partnerships and consolidating data collection processes (Recommendation 4 in the report)**

There is already an opportunity to incorporate collection of bycatch data by fishermen into existing systems and processes, such as logbooks and the MMO's Record Your Catch app. This will ensure that valuable data is made available for research and fisheries management purposes and that fishermen are not overburdened; as well as improving the evidence base to identify where the risk of bycatch is lower or minimal.

<sup>4</sup> This programme is a partnership between the Marine Directorate's Science, Evidence, Data and Digital (SEDD) portfolio and the Scottish Fishermen's Federation (SFF).



## **Continue to fund long-term research and monitoring programmes (Recommendation 5 in the report)**

The UK-wide Bycatch Monitoring Programme (BMP), the UK Cetacean Strandings Investigation Programme and the Scottish Marine Animal Stranding Scheme all apply consistent methods over time and space. They can therefore track any shifts in hotspots and other trends, to inform understanding of risks to populations and where mitigation efforts should be (re)directed – benefits which cannot be replicated by stand-alone studies.



## **Close the “shark gap” by resourcing UK-wide research on shark, skate, and ray bycatch (Recommendation 10 in the report)**

Compared to marine mammal and seabird bycatch, far less research has been carried out on bycatch of elasmobranchs (sharks, skates, and rays) in the UK. A more comprehensive picture of the scale and distribution of their bycatch, and impacts on their populations, is urgently needed – both for their conservation and to support sustainable fishing of those elasmobranchs with commercial value.



## **Prioritise bycatch monitoring and mitigation in fisheries or areas identified as high-risk, particularly trawl fisheries (Recommendation 11 in the report)**

Recognising that resources are finite, support for bycatch monitoring and mitigation should be prioritised. Given that trawl effort exceeds that of all other gears in the UK, mobile demersal fisheries (which particularly affect elasmobranchs) and demersal and pelagic trawls (which particularly affect seabirds) should be a focus for action.



**FIND THE FULL  
REVIEW [HERE](#)**

# STATIC NET HOTSPOTS

More details about this hotspot can be found on page 48 of the literature review.

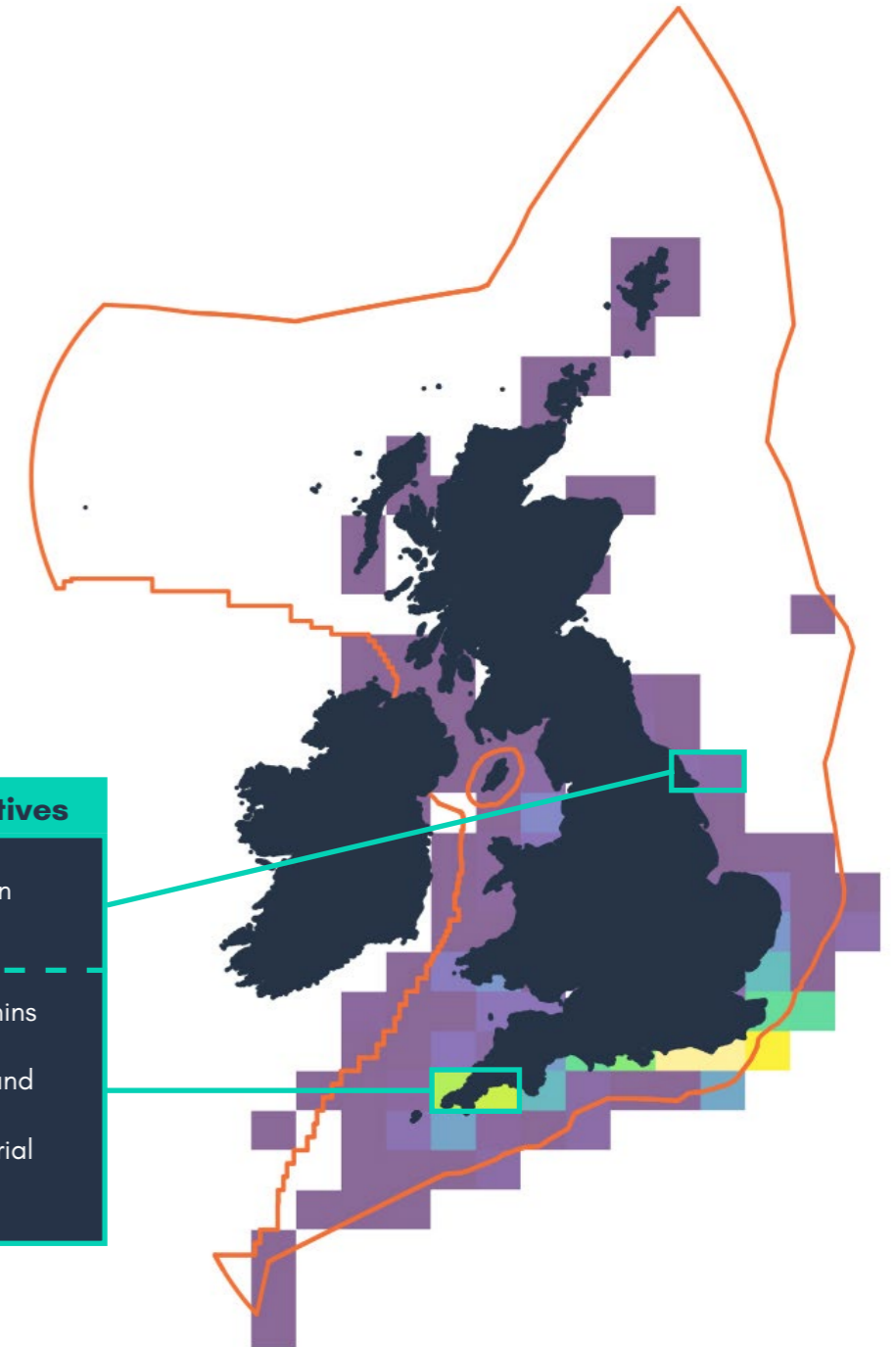
## OVER-12M FLEET



### Ongoing mitigation initiative

- Mandatory for over-12m vessels to use pingers (Celtic Sea, Channel, and North Sea)

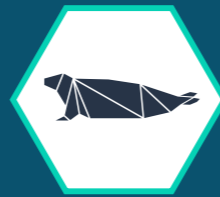
## UNDER-12M FLEET



### Ongoing mitigation initiatives

- Co-designed byelaw for salmon and sea trout fishery (seabirds)
- Clean Catch pinger trial (dolphins and porpoises)
- CIBBRiNA pearl trial (dolphins and porpoises)
- Fishtek Marine and D&S IFCA trial (seabirds)

### Species groups affected



### Species most affected

- Guillemot
- Cormorant
- Shag
- Great northern diver
- Razorbill

- Harbour porpoise
- Autumn and Spring
- Common dolphin
- Winter

- Harbour seal
- Late Autumn to early Spring
- Grey seal
- Late Autumn to early Spring

- Unknown for sharks, skates, and rays

### Fishing effort (days)



UK EEZ

# TRAWL HOTSPOTS

(Pelagic and demersal otter trawls, seines and beam trawls)

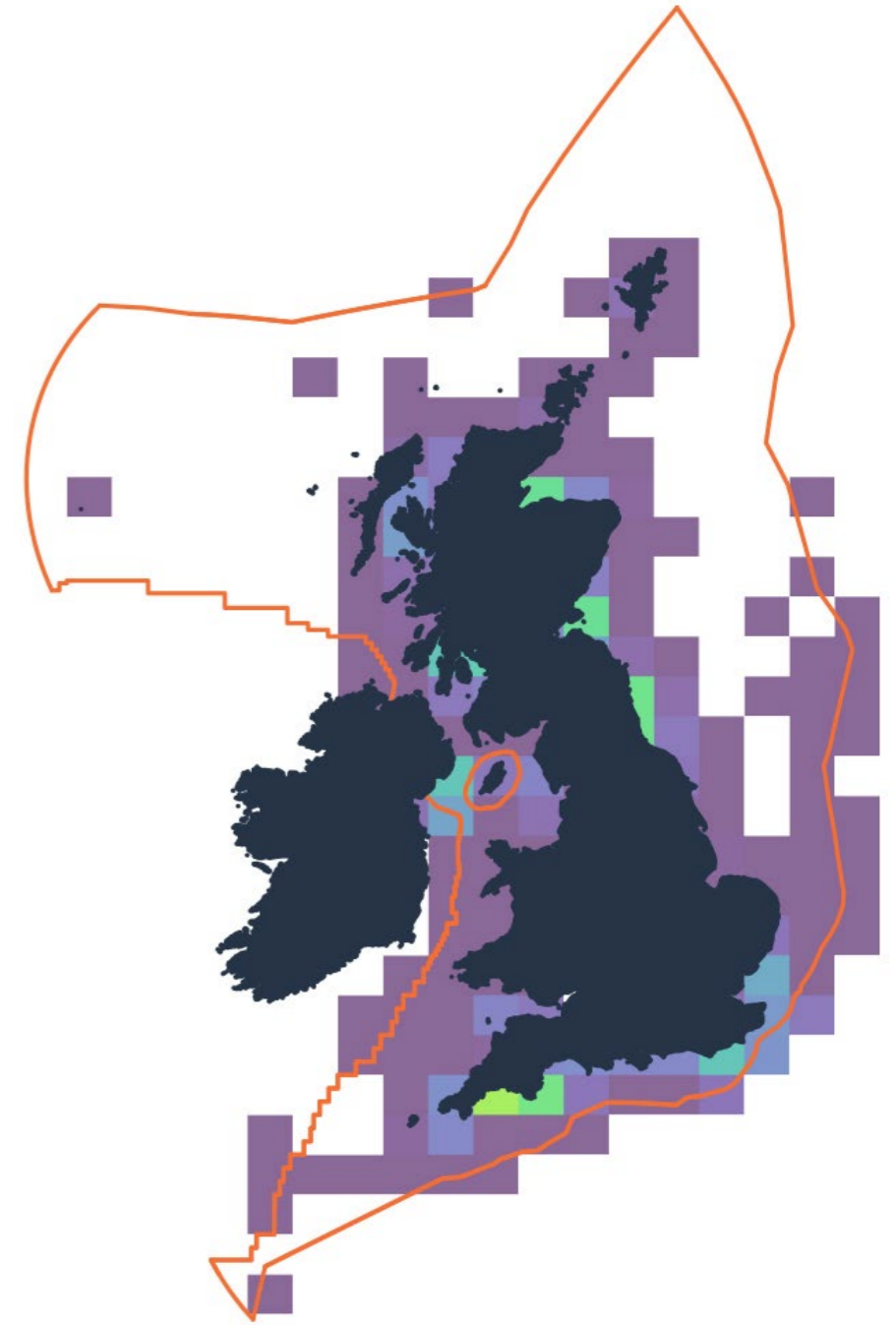
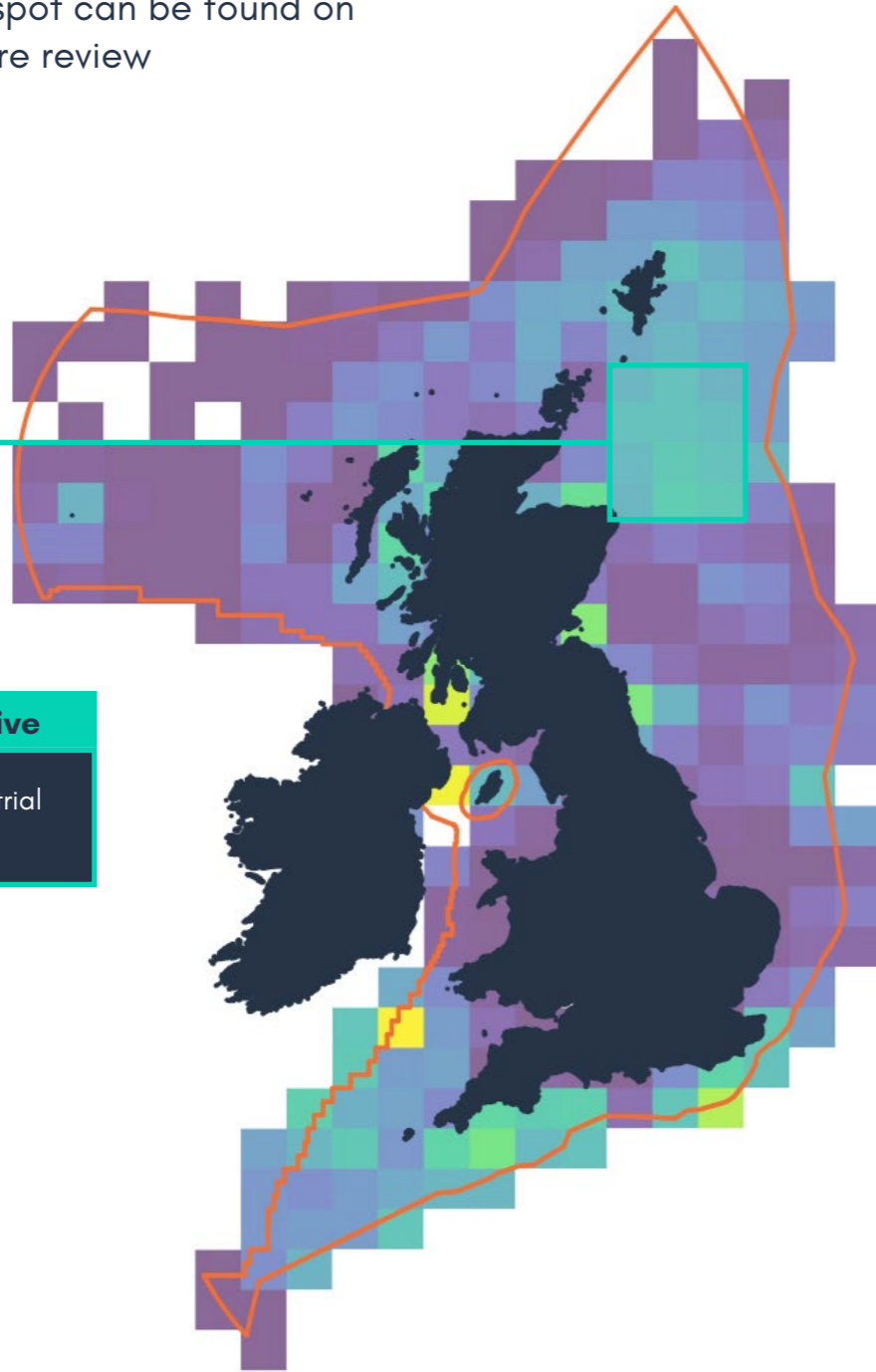
More details about this hotspot can be found on pages 48–49 of the literature review

## OVER-12M FLEET

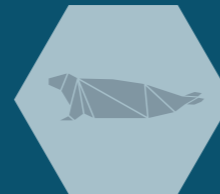
## UNDER-12M FLEET

### Ongoing mitigation initiative

- Clean Catch EEFPO North Sea trial (seabirds)



### Species groups affected



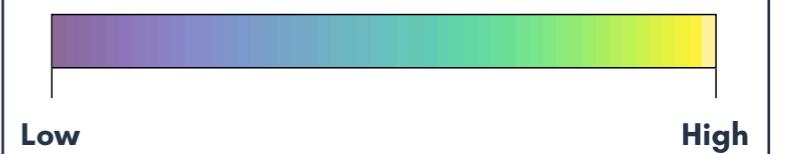
### Species most affected

- Gannet

- Common dolphin (specifically Celtic Sea and Western Approaches to the English Channel)

- Numerous species

### Fishing effort (days)

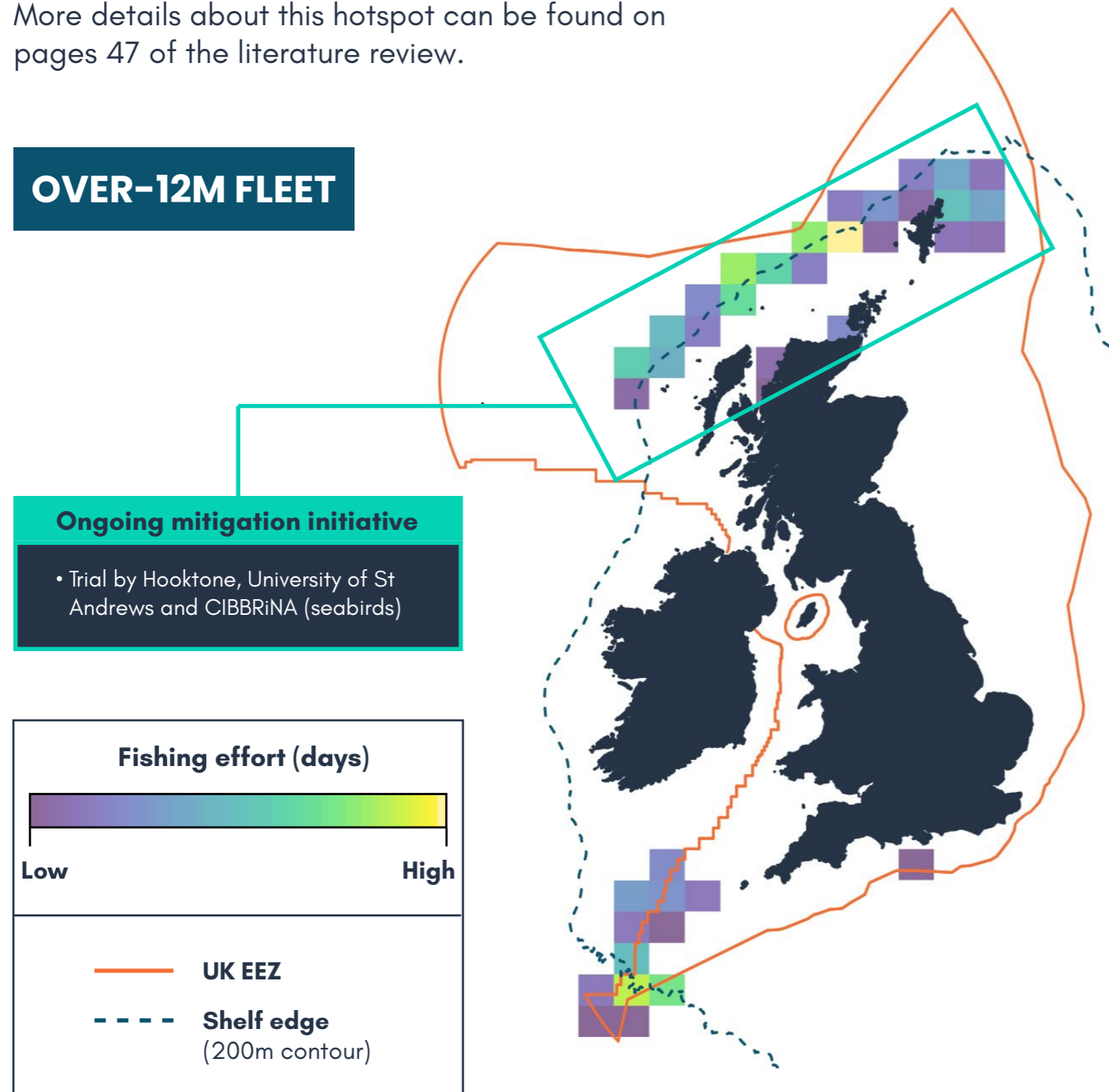







— UK EEZ

# LONGLINE FISHERY HOTSPOTS

More details about this hotspot can be found on pages 47 of the literature review.

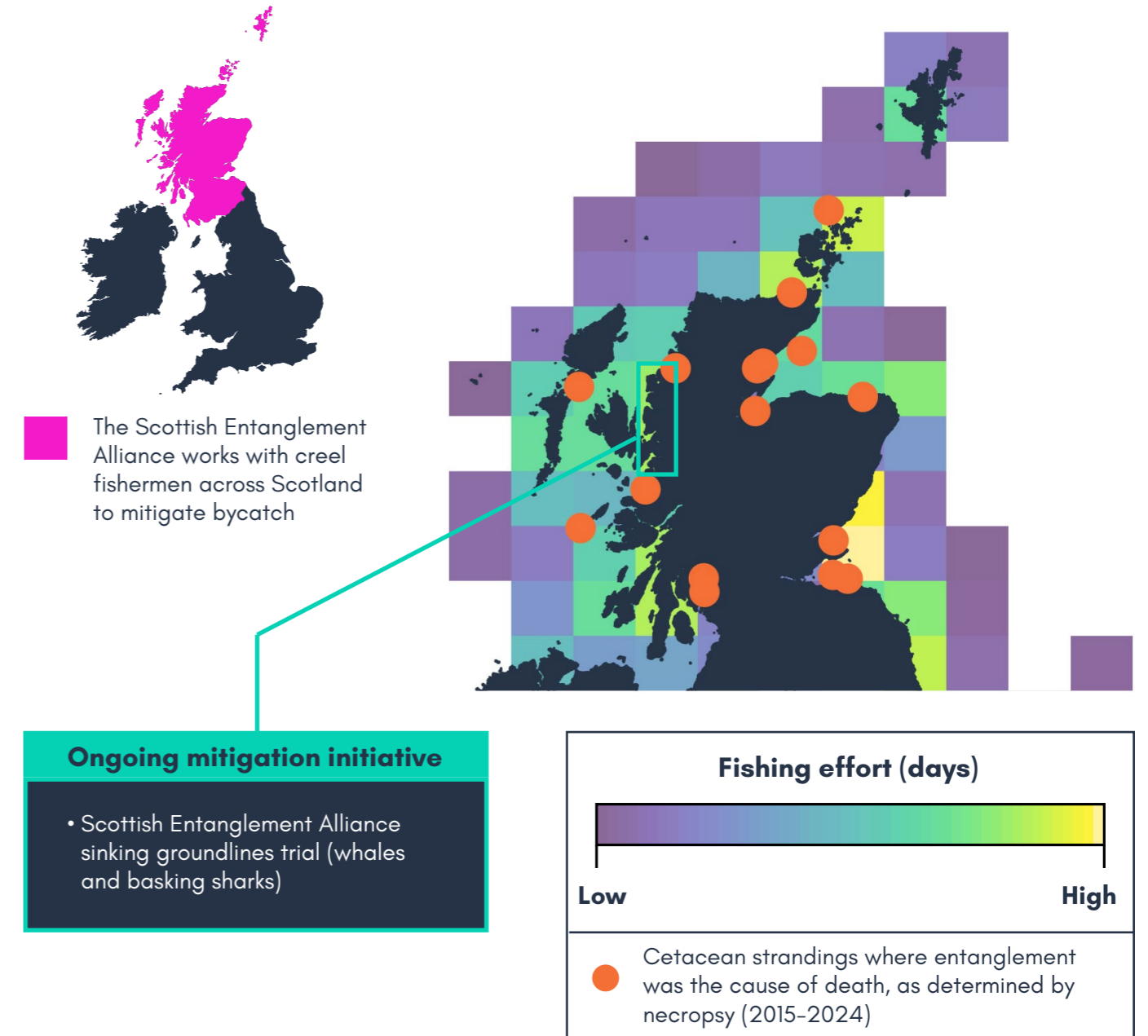
## OVER-12M FLEET



Species groups affected		 	 
Species most affected	<ul style="list-style-type: none"> <li>• Northern fulmar</li> <li>• Gannet</li> </ul>	n/a	n/a

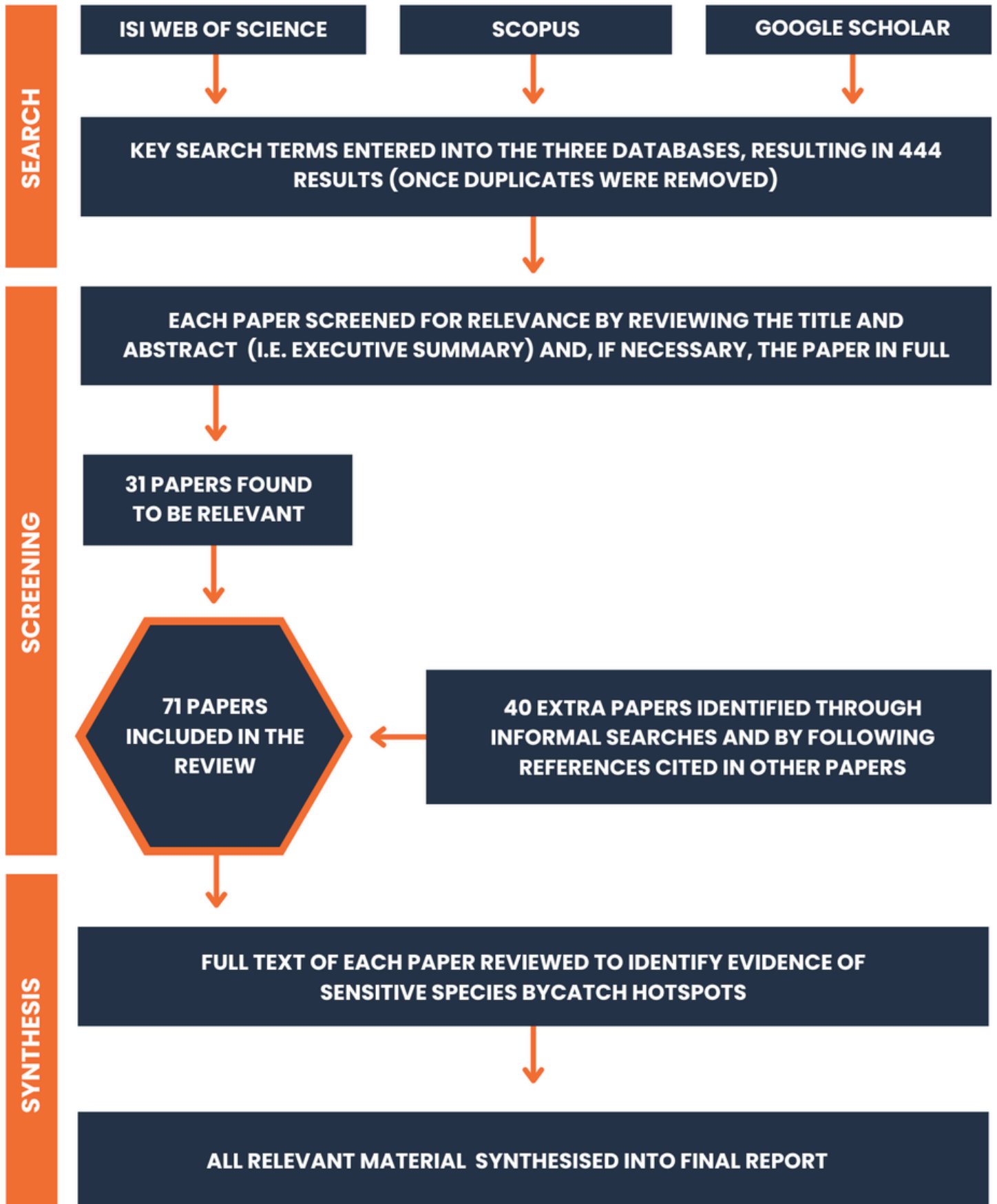
# CREEL (POT) FISHERY HOTSPOTS

More details about this hotspot can be found on pages 47 of the literature review.



Species groups affected		 	 
Species most affected	n/a	<ul style="list-style-type: none"> <li>• Minke whale</li> <li>• Humpback whale</li> </ul>	<ul style="list-style-type: none"> <li>• Basking shark</li> </ul>

# SECTION 3: HOW DID WE CONDUCT THE LITERATURE REVIEW?



## SECTION 4: ONGOING INITIATIVES TO ADDRESS HOTSPOTS

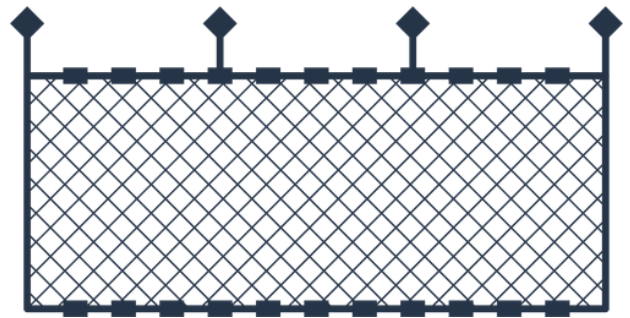


A range of trials and mandated use of mitigation measures are ongoing in UK waters, in different fisheries and focusing on different sensitive marine species. The information in this section – which is additional to the report – is up to date as of June 2026, but check the Clean Catch website for updates.

### STATIC NETS (UNDER-12 METRE FLEET)

#### Clean Catch pinger trial – Dolphins and porpoises

Work began on this trial in late 2019, after small-scale Cornish fishermen and the Cornwall Wildlife Trust approached Cefas following cases of common dolphin and harbour porpoise becoming entangled in gillnets.



As part of Clean Catch, Cefas has been working with a cohort of skippers since to trial the feasibility and effectiveness of pingers. These devices emit sound at specific frequencies to alert cetaceans to fishing gear.

Following a hiatus in 2022 and logistical needs such as obtaining licences for skippers to test the pingers, final results from the trial are due to be published at the end of 2026.

Go to the [Bycatch Mitigation Hub](#) for more information on [pingers](#).

## CIBBRiNA pearl trial – Dolphins and porpoises

Europe-wide project **CIBBRiNA** is focusing one of its case studies on static net fisheries in the waters of the southwest of the UK, where it is about to trial “pearls”. These small acrylic glass pearls, attached in rows to fishing nets, are designed to passively reflect echolocations from porpoises and dolphins to alert them to fishing gear.

The pearls have already shown promise in tests and full trials carried out elsewhere in Europe and further afield, and do not appear to affect catches of target fish.

Clean Catch is preparing to trial pearls in parallel to CIBBRiNA.



Go to the [Bycatch Mitigation Hub](#) for more information on [pearls](#).

## Cornwall Bycatch Project - seabirds

The **Cornwall Bycatch Project**, led by Cornwall Inshore Fisheries and Conservation Authority (CIFCA) in collaboration with the RSPB and Natural England, tested the efficacy of ‘looming-eye’ buoys and predator-shaped kites in deterring seabirds from gillnets. The trial was conducted between 2021 and 2023, focusing on reducing seabird bycatch – particularly that of divers, grebes, and guillemots – in Fal Bay and St Austell Bay.



Go to the [Bycatch Mitigation Hub](#) for more information on the [looming-eyes buoy](#) and [predator-shaped kites](#).

## Co-designed byelaw for the Filey Bay salmon and sea trout fishery – Seabirds

The historic Filey Bay salmon and sea trout static net fishery overlaps with a protected seabird colony on the Yorkshire coast.

In response to high levels of bycatch, the Environment Agency, Natural England, and the Royal Society for the Protection of Birds (RSPB) worked collaboratively with the Filey Bay netsmen to introduce a voluntary Code of Conduct in 2009 which set out new requirements for bycatch handling and net deployment.

The following year, these rules evolved into mandatory byelaws that banned overnight netting, required constant net attendance, and introduced fishery-led gear innovations and other measures.

The byelaws, combined with a gradual phasing-out of fishery licenses, resulted in a 85% fall in seabird bycatch, and with 60% of bycaught birds being released alive.

## STATIC NETS (OVER-12 METRE FLEET)

### Mandatory use of pingers

Pingers are devices which are fixed to nets and emit warning sounds that can be detected by echolocating cetaceans. Since 2005, their use has been **legally required in UK waters** for over-12 metre vessels which fish in the Celtic Sea and Channel or in the North Sea (for the latter region, where the fishing net mesh size is larger than 220mm or the total net length is under 400m).

A recent analysis of Bycatch Monitoring Programme (BMP) data collected between 2008 and 2023 from across the UK found that the use of pingers was associated with a 77% reduction in bycatch of harbour porpoise bycatch and a 33% reduction for that of common dolphin.

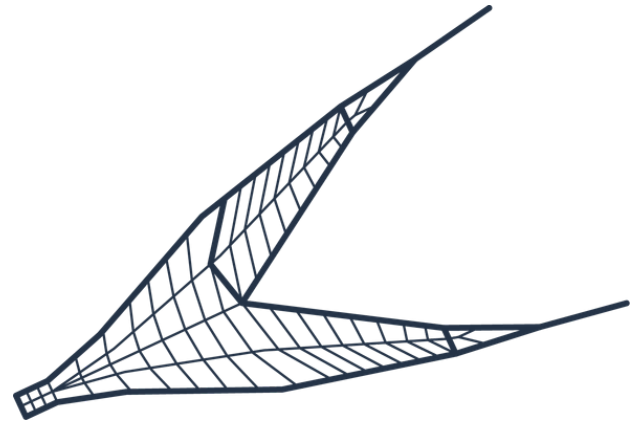
However, pingers come with various economic and ecological drawbacks, including upfront and maintenance costs, and the risk of driving cetaceans such as porpoises out of key foraging grounds. There are also cases of pingers having a “dinner bell” effect and attracting seals, which may themselves become bycatch.



## TRAWLS (OVER-12 METRE FLEET)

### Clean Catch EEFPPO North Sea trial – Seabirds

Clean Catch and the **Eastern England Fish Producer's Organisation** (EEFPO) partnered up in 2025 to run a fully co-designed seabird bycatch monitoring and mitigation trial in the North Sea.



The early stages of the trial have centred on dialogue with vessel owners and skippers and a monitoring phase using BMP observers, REM, and self-reporting to gather baseline data on seabird interactions.

The mitigation phase, involving seabird scaring lines, is due to commence, with interim results expected by the end of 2026. As well as contributing to knowledge of seabird bycatch mitigation, Clean Catch and the EEFPO hope that the process of designing the trial will serve as an example of collaboration that can be drawn on by sustainability and co-management initiatives across the UK.

Go to the [Bycatch Mitigation Hub](#) page for more information on the design of and results to date for **bird-scaring lines**.



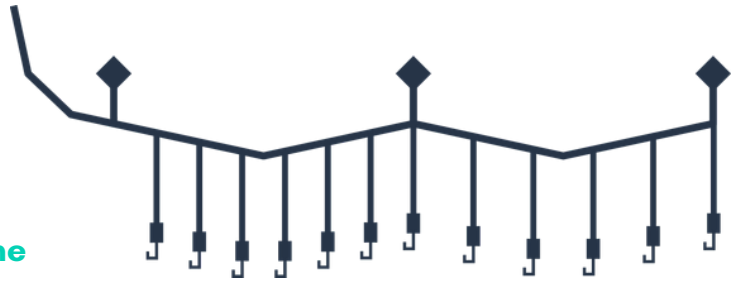
## LONGLINES

### Bycatch Monitoring Programme and CIBBRiNA - Seabirds

Through the **Bycatch Monitoring Programme** and more recently CIBBRiNA, researchers from the University of St Andrews are collaborating with the Aberdeen Fish Producer's Organisation, the Eastern England Fish Producers' Organisation, and Hooktone Ltd to co-design bird-scaring lines which are lighter than previous versions and are more suited to the specifics of the fishery. Modified float ropes designed to improve line sink rates are also being tested.

Online and in-person conversations and meetings have been held in key fishing hubs in Scotland and Spain as part of the co-design process, and trials have been running since 2024.

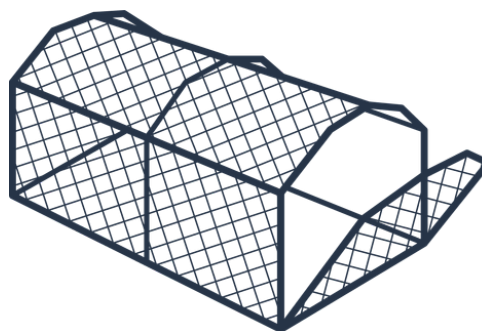
The trials are mainly being conducted over summer and early autumn when bycatch rates are highest, with the aim of amassing enough data by 2027 to reliably assess the efficacy of the modified measures.



## CREELS (POTS)

### Scottish Entanglement Alliance - Whales and basking sharks

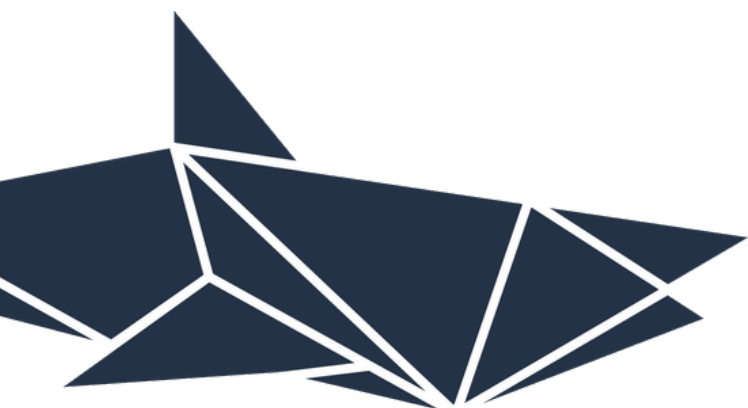
A partnership between the fishing industry, government, environmental groups, and researchers in Scotland, the **Scottish Entanglement Alliance** (SEA) works to: improve understanding of entanglements of marine megafauna including whales and basking sharks; build capacity for responding to entanglements; and develop and promote ways to reduce the risk of entanglements.



Traditional groundlines are considered a major risk factor for entanglements in the creel fishery. Groundline is the rope that connects a string of creels (pots). As it is often made of buoyant material, it can rise to form loops in the water column which entrap large marine animals.

The SEA is currently trialling 'sinking groundlines' in the Nephrops and crab inshore creel fisheries around the Inner Sound area of Scotland's west coast. Made of weightier material, the sinking groundlines were found in an initial trial to be as practical as traditional groundline, or even more practical for some fishermen.

Go to the [Bycatch Mitigation Hub](#) for more information on the design and results to date for sinking groundline.



The initiatives above are part of a broader mosaic of work within the UK to monitor and mitigate bycatch. Find a comprehensive list of past and ongoing initiatives in [Defra's evidence stocktake](#).

# READ THE FULL REVIEW: [BIT.LY/4GQEZ94](https://bit.ly/4GQEZ94)

Long, S., Williams, R.S., Tutt-Leppard, B., Chadwick, H. and Yesson, C. (2026) Systematic review of bycatch hotspots for sensitive species of marine mammals, seabirds and elasmobranchs in the UK. A Clean Catch report for Defra. Zoological Society of London (ZSL). London, UK. 72pp



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## Clean Catch