



Clean Catch UK

JOINT ACTION TO REDUCE WILDLIFE BYCATCH



ANNUAL REPORT
APRIL 2020 – MARCH 2021

BACKGROUND

Clean Catch UK is a collaborative research programme, where scientists and fishermen work together to monitor and help reduce the accidental capture of wildlife by commercial fishing vessels.

The seas around the UK are complex underwater ecosystems. These waters provide essential habitats for a number of protected, endangered and threatened species of wildlife, such as marine mammals (whales, dolphins, porpoises and seals), seabirds and some species of elasmobranchs (sharks, skates and rays). Unfortunately, this wildlife can be hard for fishers to avoid and can become entangled in fishing gear, ending up as accidental catch - or 'bycatch'. Globally, bycatch is one of the greatest threats to many sensitive marine species. Reducing bycatch offers benefits to fishers as dealing with bycatch on vessels can be distressing, labour-intensive, time-consuming and costly.

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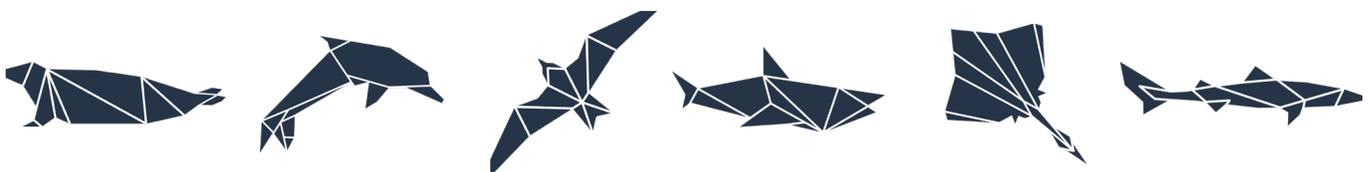
Clean Catch is working to improve bycatch monitoring, and aspires to reduce bycatch of:

- › **Cetaceans** - whales, dolphins and porpoises, such as harbour porpoise and common dolphin
- › **Elasmobranchs** - sharks, skates and rays such as porbeagle, thresher, blue skate, spurdog and angelshark
- › **Seabirds** - many species including gannets, fulmars, guillemots and cormorants
- › **Pinnipeds** - seals, such as the grey seal and common seal

The UK Government has committed to minimise and, where possible, eliminate bycatch of sensitive marine species through:

- › The Fisheries Act 2020
- › Technical conservation measures
- › The UK Marine Strategy
- › Bycatch Plans of Action
- › International collaboration

Clean Catch UK is developing solutions to better monitor and reduce the bycatch of wildlife in UK commercial fisheries. This work is in support of the UK Governments commitments to minimise and, where possible, eliminate sensitive species bycatch, through a stakeholder-led approach.



One of the greatest challenges to conserving and managing sensitive marine species is that often relatively little is known about them. This makes it difficult to know the full impact that bycatch can have on wildlife populations. Clean Catch UK is collecting data that will help uncover how some species are distributed, how they behave, and their life histories, as well as recording the overlap in space and time of fisheries and wildlife, accidental capture and post-release survival rates.

The programme is initially focusing on the Celtic Sea (ICES Division 7e-j). The Celtic Sea coastal shelf waters utilised by South-west fisheries are considered an area of ecological importance for a wide diversity of marine wildlife and therefore the risk of bycatch within this region is of significant management and conservation concern. Clean Catch UK places fishermen at the heart of planning, developing and implementing new data collection and monitoring measures, allowing mitigation actions to be targeted to have the most beneficial impact, and achieve buy-in from the outset on how best to reduce bycatch.

IMPACT OF THE PANDEMIC

Inevitably, the coronavirus pandemic impacted the vision of Clean Catch UK in 2020-21. The pandemic brought hardship and uncertainty to the Cornish fishing communities with whom Clean Catch UK is engaged, which posed challenges to collaborative efforts. Additionally, for five months between April and September 2020, suspension of all fieldwork meant that Cefas staff were unable to travel and engage directly with fishers. Despite a brief respite, from November 2020 to March 2021 a further six months of travel, engagement, and fieldwork activities were extremely curtailed. Nevertheless, much has been achieved in the past year through new ways of working, remote data collection and preparing for fieldwork in 2021-22.



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HIGHLIGHTS

Past 12 months: Highlights of April 2020 – March 2021

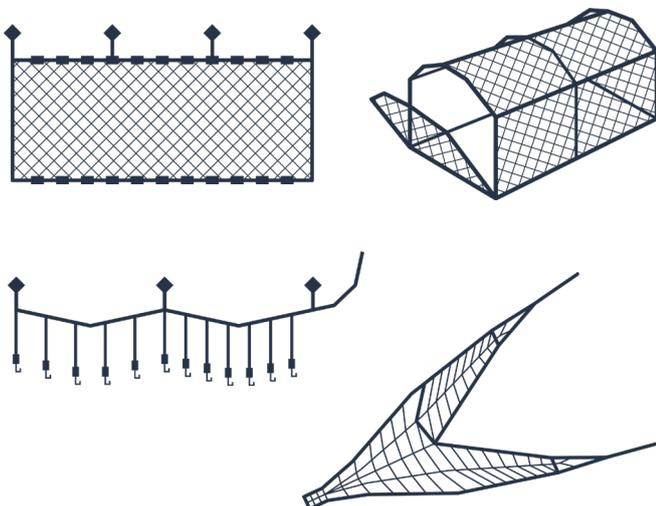


1. LAUNCH OF THE CLEAN CATCH UK WEBSITE

Throughout 2020, the Clean Catch UK team developed the content, look and feel of the [Clean Catch UK website](#). **Launched in December 2020**, the purpose of the website is to foster awareness of Clean Catch UK and guide stakeholders through the different aspects of the programme in an engaging manner.

2. DEVELOPMENT OF THE BYCATCH MITIGATION HUB

A recommendation of the [Hauling Up Solutions Workshop](#) in 2019 was to develop a bycatch mitigation *digital hub* or *toolbox*, to collate and share the current range of mitigation options and how well they have performed in trials and in practice. This provides a solid evidence base for decision making. Although originally envisioned for solely cetaceans, **throughout 2020/21** the Clean Catch UK team have created a hub for the three main groups of wildlife bycatch relevant to UK fisheries: marine mammals, elasmobranchs and seabirds. To be **launched in May 2021**, the hub organises and shares information on mitigation options by species and gear in a digestible format, helping the fishing industry and other stakeholders from non-scientific backgrounds to identify the most relevant options as well as learn about new innovations.



3. SELF-REPORTING BYCATCH APP FOR FISHERMEN

Co-developed with fishers and scientists throughout 2020, the Clean Catch UK app was **launched in February 2021** – an intuitive, interactive tool to enable commercial fishers at sea to self-report their total catch information and any unintentional capture of vulnerable wildlife species, putting fishers at the heart of the monitoring process.

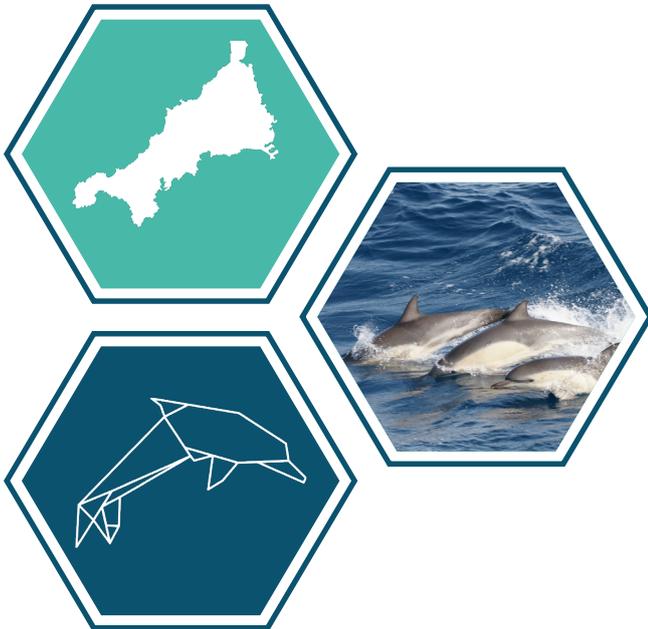


4. PRODUCTION OF TWO CLEAN CATCH FILMS

With the pandemic curtailing direct engagement, new ways to engage fishers with the Clean Catch UK programme had to be found. Two innovative short films were produced and **launched in March 2021** on the Clean Catch UK's [dedicated YouTube channel](#). The [first film](#) summarises and promotes the Clean Catch UK programme, outlining how the data gathered by the new app will be used. The [second film](#) acts as a tutorial, introducing new fishers recruited during the pandemic to the bycatch monitoring programme and explaining how to use the app.

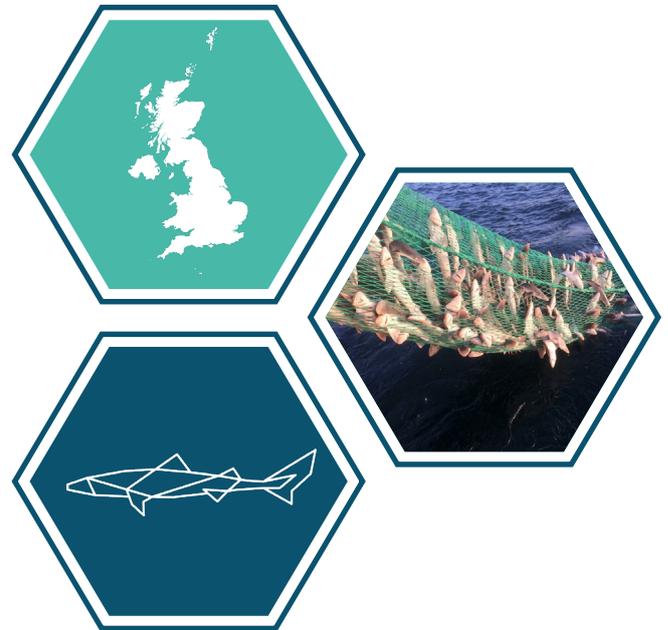
5. EXPANSION OF THE SKIPPERS' SELF-REPORTING WILDLIFE BYCATCH MONITORING PROGRAMME

As the pandemic took hold in the UK, six skippers from South Cornwall's inshore net fishery were actively engaged in the Clean Catch UK self-reporting cetacean bycatch monitoring programme. Despite the pandemic, the monitoring programme has successfully expanded both within and beyond this fishery, and across wildlife species. A further four fishermen from the inshore net fishery joined the programme, as well as two additional vessels from the ring net fishery, including the installation of an Electronic Monitoring (EM) system on one vessel. **By March 2021**, twelve skippers were using the Clean Catch UK app, self-reporting all accidental capture of wildlife species, verified by four EM systems.



6. EXPANSION OF THE SPURDOG BYCATCH MANAGEMENT PROGRAMME

Since November 2016, this programme has been delivering the most complete understanding of spurdog bycatch and discard survival in the Celtic Sea. The programme is led by industry and involves near real-time self-reporting, and its outputs will inform future spatial management measures. **In March 2021**, the programme expanded from seven to thirteen vessels, increasing coverage and data collection.



7. CONTINUATION OF THE CETACEAN BYCATCH MITIGATION STUDY

Through the pandemic, the fishermen of Mevagissey collected data on whether pingers and/or lights are practical, robust and effective at reducing bycatch of common dolphin and harbour porpoise. Whilst fishing as usual, each vessel deployed 'paired' nets, featuring one net with a mitigation device and one as a control, testing each modification over one lunar cycle.



8. UK BYCATCH FOCUS GROUP MEETING REPORT

In July 2020 a technical meeting of the former UK Bycatch Focus Group (the precursor to the Clean Catch UK National Steering Group) was held to discuss the participatory approach of the cetacean bycatch mitigation study with stakeholders, as well as to address concerns raised around both the approach and experimental design. Feedback from these constructive discussions was used in finalising the report of the experimental design of the study, **submitted in August 2020**. A number of key outcomes were agreed to be considered by the Local Focus Group in future work to reduce bycatch in Cornish fisheries, captured in the report of the meeting, **submitted in November 2020**.



9. CLEAN CATCH UK NATIONAL STEERING GROUP MEETINGS

The inaugural meeting of the Clean Catch UK National Steering Group (NSG) was in **November 2020**. This meeting introduced members to the programme, and NSG members shared key monitoring and mitigation priorities for cetaceans, elasmobranchs and seabirds. The second meeting was held shortly after in **December 2020**, to refine the NSG's priorities and share knowledge about bycatch mitigation measures to help shape the Clean Catch UK Bycatch Mitigation Hub. Both meetings were attended by over 30 participants.

10. ELECTRONIC MONITORING ANALYSIS

By March 2021, the Cefas EM analysis team had reviewed the EM footage & data from 3 Cornish inshore (<10m) vessels, fishing static nets. For the period October 2019 to December 2020, 836 hauls from 293 fishing trips had been recorded. 100% of the footage was reviewed for cetacean bycatch for the whole period. For the period March to December 2020, other megafauna bycatch was included in the analysis, at a 100% sampling rate, with a 20% sampling rate for seabird bycatch.

11. RISK OF WILDLIFE BYCATCH REVIEW

In **March 2021**, the Clean Catch UK team reviewed the risk of bycatch to groups of protected, endangered and threatened species of marine wildlife, by fisheries operating in the South-west of the UK, in context of the economic importance of the fishery. **In the summer of 2021**, this review will be visualised in an infographic for stakeholders and used by the Clean Catch UK Regional Working Group to inform the delegation of priority species and fisheries in Bycatch Reduction Plans.

12. PASSIVE ACOUSTIC REFLECTOR TANK TRIALS

Co-designed with fishermen from the Local Focus Group, a prototype Passive Acoustic Reflector (a novel mitigation technology) underwent **successful tank trials in October 2020**. When an echolocating cetacean emits a 'click', the Passive Acoustic Reflector resonates and transmits back an echo, hopefully alerting the cetacean to the presence of the net. The Clean Catch UK Passive Acoustic Reflector prototype is significantly more 'reflective' than standard headline floats used on static nets.

PLANNED ACTIVITIES

Planned activities for the next 12 months

**LAUNCH OF
THE BYCATCH
MITIGATION
HUB**

**FIRST REGIONAL
WORKING GROUP
MEETING**

**NEXT STEPS
FOR THE
CETACEAN
BYCATCH
MITIGATION
STUDY**

**LOCAL
FOCUS GROUPS
MEETINGS**

**EXPANSION
OF THE SKIPPERS'
SELF-REPORTING
BYCATCH
MONITORING
PROGRAMME**

**BUILD A
DATABASE
FOR THE APP
AND ELECTRONIC
MONITORING
DATA**

**CELTIC SEA
SHARK,
SKATE & RAY
SURVEY**

**FURTHER
PASSIVE
ACOUSTIC
REFLECTOR
STUDY**

**DISSECTING
NATURE'S GIANTS
LIVE EVENT**

**SPATIAL-
TEMPORAL
MAPPING OF
WILDLIFE BYCATCH
IN THE SOUTH-
WEST**



1. LAUNCH OF THE BYCATCH MITIGATION HUB

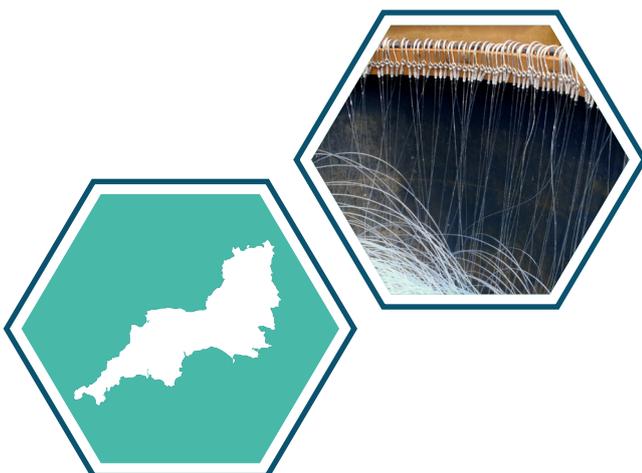
Review of the Bycatch Mitigation Hub by the **National Steering Group in April 2021**, with a public facing **launch in May 2021**.

2. NEXT STEPS FOR THE CETACEAN BYCATCH MITIGATION STUDY

From May 2021, the self-reported and EM data from the cetacean bycatch mitigation study collected over the past year will be compiled, validated and evaluated. This will inform the next steps of the study design from **June 2021**, including an increased number of participating vessels and the deployment of an acoustic array, consisting of 10 C-POD passive acoustic recorders.

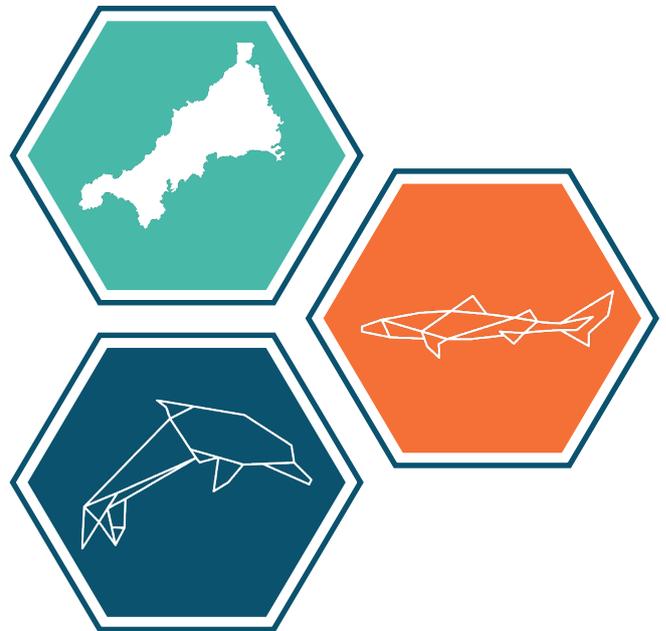
3. FIRST REGIONAL WORKING GROUP MEETING

The Regional Working Group will be convened for the first time in **Autumn 2021** to begin formulating a Bycatch Reduction Plan for priority species of wildlife in the South-west of the UK.



4. LOCAL FOCUS GROUPS MEETINGS

The Local Focus Groups for cetacean and spurdog bycatch will be reconvened and will meet on at least two occasions **from June 2021**.



5. EXPANSION OF THE SKIPPERS' SELF-REPORTING BYCATCH MONITORING PROGRAMME

From May 2021, the two strands of bycatch self-reporting (the inshore Cornish static net and ring net fisheries, and the offshore net fishery for spurdog bycatch) will be consolidated into one monitoring programme, all using the Clean Catch UK app. This will be expanded from the existing 25 to 30+ vessels, across four Cornish fisheries – inshore static net, offshore static net, ring-net and trawl. An increased number of EM systems and automated Vessel Monitoring Systems (aVMS) will be deployed to validate the self-reports.

6. BUILD A DATABASE FOR THE APP & ELECTRONIC MONITORING DATA

The successful uptake of the skippers' self-reporting bycatch monitoring programme is generating large datasets through the use of the app, EM and aVMS. **From June 2021**, a new database will be built to hold and easily cross-reference these data for validation and evaluation.



7. CELTIC SEA SHARK, SKATE & RAY SURVEY

Commencement of the Celtic Sea Shark, Skate & Ray Abundance Survey **from June 2021**, including an acoustic tracking array deployed around the Isles of Scilly.

8. FURTHER PASSIVE ACOUSTIC REFLECTOR STUDY

The prototype Passive Acoustic Reflector will be developed during further tank trials and manufactured in preparation for sea trials **from July 2021**.

9. SPATIAL-TEMPORAL MAPPING OF WILDLIFE BYCATCH IN THE SOUTH-WEST

Visualisation of the Clean Catch UK datasets to provide a spatial and temporal understanding of the relative abundance, level and risk of wildlife bycatch in the Celtic Sea, to inform Bycatch Reduction Plans.

10. DISSECTING NATURE'S GIANTS LIVE EVENT

An event, both in-person and remote, in the style of "Inside Nature's Giants", involving the dissection of cetaceans, sharks, turtles and tuna, to take place **from September 2021**. This event will actively engage a wide range of Government, science, fisheries, and conservation stakeholders to highlight wildlife bycatch in South-west fisheries, and how the Clean Catch UK programme is tackling it.



TIMELINE OF MILESTONES

PAST

- › **July 2020** - UK Bycatch Focus Group meeting
- › **August 2020** - Submission of report on the experimental design of cetacean bycatch mitigation study
- › **October 2020** - Successful tank trials of a passive acoustic reflector
- › **November 2020** - Submission of the UK Bycatch Focus Group meeting report
- › **December 2020** - Launch of the Clean Catch UK website
- › **February 2021** - Launch of the Clean Catch UK app
- › **March 2021** - Launch of the Clean Catch UK YouTube channel and videos | Twelve skippers using the app | Spurdog Bycatch Management Programme expanded | Review of the risk of bycatch in South-west fisheries

FUTURE

- › **April 2021** - Review of the Bycatch Mitigation Hub by the National Steering Group
- › **May 2021** - Compile and evaluate the data from the cetacean bycatch mitigation study | Launch of the Bycatch Mitigation Hub | Consolidation of the skippers' self-reporting bycatch monitoring programme
- › **June 2021** - Next steps for the study design of the cetacean bycatch mitigation study | Meeting of the Local Focus Group | Construction of a new database for the skippers' self-reporting bycatch monitoring programme | Commencement of the Celtic Sea Shark, Skate & Ray Abundance Survey
- › **July 2021** - Sea trials of a Passive Acoustic Reflector
- › **September 2021** - "Inside Nature's Giants" style event
- › **October 2021** - First meeting of the Regional Working Group



Project partners



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