

Clean Catch

Report for the first meeting of the National Advisory Board – 5 November 2024

In-person at ZSL, London



Overview

- This report details discussions and outcomes of the meeting of the Clean Catch National Advisory Board (NAB) held 5 November 2024, and follow-up discussion and outcomes.
- Meeting aims were:
 - To introduce the new NAB members to each other and to the Clean Catch consortium team (hereon "the team"), confirm the NAB's function and role, and brief members on the Clean Catch programme.
 - For the NAB to advise on the fishery partner selection for Clean Catch's second bycatch mitigation and monitoring trial.
- Comments by NAB members are not attributed.
- Accompanying meeting slides can be found <u>here</u>.

Outcomes

- The NAB agreed the NAB Terms of Reference.
- The NAB **noted** and **discussed** 'For information' items including: policy context, overview of and updates on the Clean Catch programme (communications, codesign, governance, and research and development).
 - The NAB requested that the next Clean Catch newsletter identify which measures on the Bycatch Mitigation Hub have been updated.
- The NAB **discussed** and **provided advice** on the selection of the fishery partner for a new bycatch mitigation/monitoring trial.
 - The NAB requested the team explore the feasibility of adding a fifth "tapestry" option (comprising some combination of two of the four shortlisted fisheries).
 - The NAB agreed to defer making a recommendation at the meeting, pending further information on this potential tapestry approach.

- The NAB agreed to provide this recommendation via an online vote to take place by 29 November 2024 (deadline later extended to 2 December 2024). (With Defra to consider the recommendation and make a final decision on the fishery partner in December 2024.)
- Subsequent to the 5 November meeting, the NAB decided by majority vote to recommend selection of the North Sea Mixed Whitefish Fishery for the new bycatch mitigation/monitoring trial; the fishery received eight out of 14 votes, with two abstentions. The summary of their rationale for this can be found in Appendix 1.

In attendance

| Clean Catch consortium team | NAB members |
|---|--|
| Aadil Siddiqi (ZSL) Al Davies (Arribada Initiative) Allen (Spike) Searle (Cefas) Ben Tutt-Leppard (Arribada Initiative) Brigid Finlayson (Defra) Chantal Lyons (Mindfully Wired) Emma Kelman (Defra) Eva Maher (Cefas) Helen Chadwick (University of Exeter¹) Joanna Murray (Cefas) Katrina Ryan (Mindfully Wired) Milly Oakley (MMOC) Rebecca Austin (ZSL) Stephen Long (ZSL) | Brigid Finlayson (Defra) – NAB Chair Al Kingston (University of St. Andrews) Ali Hood (The Shark Trust) Bernadette Butfield (RSPB) Bianca Cisternino (WDC) Dale Rodmell (EEFPO) David Warwick (Seafish) Mike Roach (standing in for Mike Cohen) (NFFO) Per Berggren (Newcastle University) Rebecca Allen (Seal Research Trust) Rebecca Lyall (Project UK / MSC) Ruth Williams (The Wildlife Trusts) Sharon Livermore (standing in for Russell Leaper) (IFAW) |

Apologies were received from Brendan Godley (University of Exeter), David Stevens (Crystal Sea Fishing), Andrew Pascoe (fisherman), and Emma Plotnek (FITF).

Job titles and affiliations for all NAB members can be found on the <u>Clean Catch</u> website.

¹ Helen Chadwick is currently on secondment to Defra (ending 31 March). The University of Exeter is not a Clean Catch consortium member.

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1. The Bigger Bycatch Picture – Brigid Finlayson (NAB Chair)

Presentation summary:

- Clean Catch sits within a broader programme of work on sensitive marine species bycatch in England and across the UK, and is key to helping to deliver implementation of the Bycatch Mitigation Initiative.
- Work on bycatch feeds into two of the priorities of the Defra Secretary of State, namely nature recovery and protection, boosting Britain's food security, whilst also feeding into ongoing international obligations on bycatch reduction.

In response to questions:

- The UK Cetacean Conservation Strategy noted in the overview of the bycatch programme of work is being developed by the Scottish Government and will be going out to consultation soon. It will identify knowledge gaps and cover various human impacts.
- The "new body" noted in Defra's overview of the bycatch programme of work, which is expected to sit at the centre of England's work on bycatch, has not yet

had its name and scope confirmed. Its intended purpose is to provide a key place for discussion and for eliciting advice from experts, to support development of the implementation plan for the Bycatch Mitigation Initiative (BMI). It would also facilitate sharing of information and knowledge between the devolved administrations, which are each developing their own implementation plan for the BMI.

2. National Advisory Board - Milly Oakley

Presentation summary:

- The Clean Catch consortium team carried out a range of activities earlier in 2024 to gather input from key actors to develop the governance framework for Clean Catch's expansion phase (2024–2026).
- The purpose of the NAB is to provide independent expert advice and guidance on activities relating to delivery of Clean Catch expansion phase objectives, to foster collaboration and facilitate the exchange of knowledge.
- Membership of the NAB has been selected to achieve broad representation across expert groups, geography, and taxa, while avoiding too large a membership.
- An additional eNGO representative from the Seal Research Trust has been added to the NAB, bringing the total number of NAB eNGO seats to five. This to ensure equitable involvement and participation in the NAB meeting and discussions on fishery partner selection. eNGO NAB representation may be reviewed again in future, when the fishery partner has been selected and the scope and focus of the trial is clearer.

In response to questions:

- The NAB will meet (in-person or online) every six months, to provide input to the
 programme at key points. Expert WGs will only be convened and meet as
 needed. NAB members will be kept abreast of programme work regularly via the
 Clean Catch newsletter and social media, and the team is always able to speak
 with members individually.
- At the request of a NAB member, the team will consider making future in-person meetings of the NAB hybrid.

Outcome:

 No issues were raised regarding the NAB Terms of Reference and these were signed off.

3. Clean Catch expansion phase overview - Milly Oakley

Presentation summary:

- In Clean Catch's expansion phase (2024–2026), aims and several objectives remain unchanged, although new objectives include expanding the programme scope in terms of geography and species groups.
- The expansion phase is being delivered by a new consortium team led by
 <u>Arribada Initiative</u> and including MMOC, <u>ZSL</u>, <u>Mindfully Wired</u>, and <u>Cefas</u>, with
 continued strategic oversight and leadership from <u>Defra</u>.

4. Communications update - Chantal Lyons

Presentation summary:

- Communication deliverables in Clean Catch's expansion phase include regular updates to stakeholders, maintaining the Bycatch Mitigation Hub, delivering bycatch best practice guides, and facilitating knowledge exchange in and beyond the UK.
- Activities to date include starting the newsletter, refreshing the website, and a knowledge exchange event involving fishermen supporting Cefas' cetacean bycatch mitigation trial in the Southwest.

In response to questions:

• The review and updates carried out for the Bycatch Mitigation Hub are not systematic, as this would be too resource-intensive. Instead, new findings on bycatch mitigation measures are identified by searching Google Scholar for relevant papers published since the last review (usually around every six months), with Mindfully Wired recommending updates based on new findings and Cefas reviewing these before their implementation.

Outcome:

• The next Clean Catch newsletter will identify which measures on the Bycatch Mitigation Hub have been recently updated.

5. Equitable co-design and engagement - Aadil Siddiqi and Rebecca Austin

Presentation summary:

 The equitable co-design and engagement strand of Clean Catch's work is informed by ZSL's FAIRER programme (its in-house best practice framework).

- Preliminary findings are available from interviews conducted with fishermen in Cornwall in October 2024, which aimed to explore fishermen's understanding of their ability and motivation to support work on bycatch.
- A key finding from interviews was that despite fishermen generally believing sensitive species bycatch to be a problem and being willing to help reduce this, few of them had a clear sense of how to do so or access support for this. Clean Catch has a clear role in addressing this barrier, and a variety of actions to take forward have been identified in the course of the research.
- In the course of the interviews, the fishermen inevitably spoke about commercial discards given their interest in this in addition to sensitive species bycatch.

- Clean Catch is not able to expand its scope to commercial discards, due to the substantial increase in budget this would require.
- Results of the interviews, when fully analysed and published, will clearly separate out findings relating to sensitive species bycatch versus those relating to non-commercial fish bycatch. The team is conscious of the importance of prefacing the term "bycatch" with "wildlife" when speaking to fishermen to avoid confusion with non-commercial fish bycatch.
- Interviewees were self-selecting. Nine fishermen were based in Newlyn, and nine in Mevagissey, and all were skippers.
- Nearly all interviewees had already participated in one or more bycatch
 projects/trials (such as Insight360), with some even having participated in 10 or
 so (although the same four projects/trials came up most commonly). Fishermen
 involved in current or previous projects/trials were not specifically targeted for
 interviews and Clean Catch is keen to also engage fishermen who have not yet
 been involved in such work.

Other comments:

- Various policy workstreams exist for non-commercial fish bycatch already.
- Fishermen have far more regular interactions and experience with noncommercial fish bycatch as opposed to sensitive species bycatch.
- Other bycatch projects involving positive collaboration with fishermen have taken place in Cornwall prior to Clean Catch, such as NEPTUNE.

6. Research and development (R&D) overview - Alasdair Davies

- A range of R&D work is ongoing, including:
 - Development of a Passive Acoustic Reflector (PAR) which has been an exemplar for co-design with fishermen and which is intended to become

- widely available to fishermen as a mitigation measure (note, the Arribada Initiative began development of the PAR prior to becoming a consortium member in Clean Catch's expansion phase).
- The Clean Catch App, developed by Cefas for UK skippers to self-report sensitive species bycatch and for fishermen participating in the Cefas cetacean bycatch mitigation trial.
- Parallel work continues on the separate <u>Insight360 project</u>, which is funded by Defra with the aim of delivering a low-cost Remote Electronic Monitoring (REM) system that can be used on small fishing vessels to collect important data on cetacean and seabird bycatch.
- Ultimately, Clean Catch aims to openly share hardware and software schematics and methodologies for the PAR and Insight360 (although the latter remains a separate project for the time being).
- NAB members were asked to consider how Clean Catch could be more inclusive of the tools that members may be developing or using, and whether any could be used in the second monitoring/mitigation trial.

7. Monitoring and mitigation trials – Joanna Murray

Presentation summary:

- Cefas-led monitoring and mitigation trial work under Clean Catch includes:
 - The Clean Catch App, which will be relaunched soon following changes and further testing with skippers.
 - Working with the Bycatch Monitoring Programme to share information, particularly with regards to seabirds and elasmobranchs which are harder to identify using REM.
 - Acoustic monitoring, to identify any changes to cetacean occurrence and abundance as a result of the cetacean bycatch mitigation trial.
 - Understanding barriers to reporting of bycatch, particularly that of marine mammals.
- Cefas will also lead the new monitoring and mitigation trial with the new fishery partner.

8. Bycatch hotspots review - Stephen Long

- A bycatch hotspots review, UK-wide in focus, is currently underway.
- The review combines available data on fishing effort with that on sensitive species distribution.

- Data from the Bycatch Monitoring Programme is being used in the review.
- Data on fishing effort has been obtained from AIS data for over-15 metre vessels, although this type of data is harder to obtain for under-15 metre vessels. This and species distribution data is patchy, meaning the hotspots review will inevitably have gaps. The review is still expected to produce important knowledge, although this will need to be communicated and interpreted carefully.
- There are disparities in data availability across different species groups, with more data available for seabirds and cetaceans compared to others such as sharks, skates, and rays.
- Qualitative (anecdotal) data from fishermen has not been included in the review, noting that while this type of data has proven and will continue to be useful to Clean Catch, gathering it on the scale needed for this type of review would be too resource-intensive. Murray added that the results of the review would feed into the wider Bycatch Risk Prioritisation Framework being developed for England and can support ground-truthing or identifying where differences in opinion exist on hotspots. The review also has synergies with the work of Marine Beacon, an EU Horizon project which is exploring different modelling approaches.

9. Discussion: New fishery partner for trial – Stephen Long and Joanna Murray

Presentation summary

- Following outreach to the fishing industry and other key actors, and based on a range of criteria, four fisheries have been shortlisted for Clean Catch's second monitoring/mitigation trial (in recognition of the sensitivities around bycatch, fisheries which were not selected for the Clean Catch trial have not been identified in this report).
- The NAB was invited to discuss and indicate their preferred fishery partner.

In response to questions:

- Cefas has a £180,000 cap for delivery of the trial, which does not account for staff time from other consortium members. Exact budget has not yet been confirmed and will also depend on the specifics of the trial, such as technology and equipment. Expected costings are based on previous trials and an assumption of nine participating vessels.
- Specific objectives of the trial will depend on the fishery partner and will be agreed with them. The main aim is to minimise (and where possible eliminate) bycatch, but monitoring would still be needed in some cases.

- Of the suggested fisheries that did not make the shortlist, Cefas has recommended they try out the Clean Catch App.
- Neither the bycatch hotspots review nor the Bycatch Risk Prioritisation
 Framework for England will be completed in time to inform the selection of the fishery.
- Motivations of the shortlisted fisheries to partner with Clean Catch respectively include: achieving MSC certification; data to inform and demonstrate their efforts on bycatch; and reducing pressures on fishermen.
- Whatever fishery is selected, the trial will involve both monitoring and mitigation, but the weighting will differ.
- Due to limitations of scope, Clean Catch is not able to target higher-impact/risk fisheries in parallel to the planned trial; however, programme work on barriers to fishing industry engagement are expected to have wide applicability.
- On the possibility of conducting trials in more than one fishery ("tapestry" option):
 - While some measures (e.g. the Clean Catch App) are low-cost, the more spread out the work, the harder it will be to deliver. The team currently plans to recruit a fishery liaison officer in the community/location of the new trial, although Cefas might be able to utilise its observers.
 - Other significant constraints would be budget, and stretching ZSL's capacity for equitable co-design and engagement across multiple fisheries; with the risk of losing or wasting the motivation and goodwill of multiple fisheries.

Discussion:

- It is surprising that no gillnet fisheries with a seabird bycatch issue were submitted or shortlisted.
- A trial focused on mitigation is the priority.
- It is important to think beyond fisheries management obligations, and to consider Convention on Migratory Species (CMS) obligations and similar ones which could be levers for engagement with industry.
- It could be useful to support the fisheries looking to get monitoring in place, as this would yield more data plus learning on monitoring.
- The secondary benefits of Clean Catch should be considered for fisheries which haven't had engagement with initiatives like Clean Catch before; if Clean Catch is the only option available to them, they should be selected. Shortlisted fisheries with more limited evidence of bycatch are less suitable.
- The Fisheries Management Plans provide another mechanism for some of the shortlisted fisheries to address any bycatch risk.
- Regarding interactions between fisheries and seals:

- Seal depredation² is seen as a big issue in the sector (although fishermen do not commonly use the term "depredation").
- The MMO previously ran a trial on startle technology in the inshore mackerel fishery in Torbay, but the technology is still some way off commercial scale.
- It would be helpful to have empirical research in addition to reports from fishermen.

Outcomes

- The team will conduct scenario modelling to determine what if any "tapestry approaches" combining two of the shortlisted fisheries would be feasible within the constraints of the budget.
- The NAB was not able to make a recommendation at the meeting and will instead provide further input on receipt of the scenario modelling by the team, with the aim of the NAB putting forward a recommendation by 29 November 2024 (see Appendix 1).
- See Appendix 2 for further responses to questions and discussion between the NAB and the Clean Catch team during an additional session held for NAB members on 26 November.

10. Trial updates - Joanna Murray

- Learning from the first phase of the cetacean bycatch mitigation trial (2019–2022) has been used to strengthen the design in the second phase (2024–2025) which recently commenced.
- More skippers are now involved in the trial. A meeting held in February 2024 with skippers to discuss the design of the trial and data collection via the Clean Catch App went well and was "a rare occasion where the fishermen outnumbered the scientists".
- Clean Catch is collaborating with the Bycatch Monitoring Programme to share and jointly analyse REM data, to improve abilities to identify species and taxa, and build up image libraries.
- In addition to the need to further develop protocols and Standard Operating Procedures, practical challenges remain to implementing REM via Insight360 such as how to add a second camera to smaller vessels to improve quality of data.

² Where a predator (e.g. seal or dolphin) takes or bites fish already caught in fishing gear.

- All REM footage obtained is analysed.
- The REM AnchorLab system costs around £7,000 including installation, cameras, cabling, computer system and one year of licensing; however, Cefas would aim to hire in units wherever practical, or use currently owned assets, for cost efficiency.
- Cefas does not use the REM footage it obtains for enforcement, and makes this
 clear to fishermen. However, fishermen in the trial must still report any marine
 mammal bycatch to the MMO as mandated for all UK fishermen as Cefas does
 not report this on their behalf.
- While use of the Clean Catch App is voluntary, Cefas is aware of the risk of duplication across apps and of fatigue with these in the industry.
- The Bycatch Monitoring Programme dataset was combined with data from the first phase of the Cefas pinger trial to create the low, medium, and high bycatch rates in the power analysis for the second phase.

Comments:

• Fishermen are frustrated with the MMO catch app [for under-10 metre vessels in England and Wales, and separate to the Clean Catch App] as it is clunky and duplicates existing reporting processes.

11. Passive Acoustic Reflectors - Alasdair Davies

Presentation summary:

- Early feedback from fishermen was very useful in ruling out what wouldn't work in the design of the Passive Acoustic Reflector (PAR).
- An at-sea robustness trial began in August 2024. Changes will be made to the fabrication of the PAR as a result of knowledge gained.

12. Discussion: Passive Acoustic Reflector (PAR) fishery-independent trial – Helen Chadwick and Stephen Long

- The last few months have been spent refining the methodology for the proposed PAR fishery-independent trial.
- There remains a lack of understanding around the behavioural responses of cetaceans in the wild to PARs, and there may be a mismatch between placement of PARs on the nets versus how cetaceans perceive nets in reality (i.e. they may dive below the visible elements of the net and become entangled in the part of the net they are not aware of).

- A trial focusing instead on cetacean behaviour responses offers huge benefits over the methodology originally proposed to Defra in June 2024.
- There are four options for a trial: 1) Behavioural trial; 2) Peru fishery trial; 3) Acoustic tank experiments; and 4) Fishery practical testing. Options 1 and 2 are more expensive and logistically challenging. The Clean Catch team's preference is currently options 3 and 4.

- The PAR must be made in two parts as the foam reflector works much better when encased. The cause of the breakage of the two units during the robustness trial was improper welding of the two parts.
- No bycatch was observed during the at-sea robustness trial, although the sample size is too small to yield results of this kind.
- The acrylic pearls developed by researchers in Denmark were considered, but the fishermen we work with did not want to try these as they were concerned about practicality.
- A next step could be to explore what modifications could be made to the filament element of the net, for example, barium sulphate contained in tiny tubes running through the net. However, fishermen are reluctant for modifications to this element of the net.

Discussion:

- A recent trial in Iceland by the CIBBRiNA project has indicated that acrylic pearls are practical; although they are expensive as the pearls have to be glued to the net individually.
- Hydrophone arrays and sensor packages/software (for collecting data on cetacean behaviour) can be purchased, although they are not cheap.
- A trial with an offshore fishery with longer nets could yield different results.

13. Meeting wrap-up and close - Brigid Finlayson

AOB

 A NAB member asked if the NAB should agree a range of acceptable mitigation strategies, noting that some mitigation measures depend on displacing predators from certain areas. The Clean Catch team responded that choice of measures would depend on available budget, and that the measure(s) to be tested in the new trial could be behavioural- or practice-based rather than devices.

Appendix 1: NAB summary of rationale for recommending the North Sea Mixed Whitefish Fishery

The anonymous online voting form which NAB members used to vote for their preferred partner option also enabled voters to include a rationale if preferred for their choice.

The summary of the rationales provided with the votes for the North Sea Mixed Whitefish Fishery is as follows:

- There is currently limited knowledge about levels of seabird bycatch in demersal trawl fisheries in the UK; anecdotal and scientific evidence suggests it occurs though the magnitude is not known. This partnership would therefore address a knowledge gap.
- It is an opportunity to address the bycatch of gannets.
- The findings will have wider applications to other demersal trawl fisheries in the UK and North Atlantic.
- The vessel owners have already adopted a proactive approach to addressing bycatch, demonstrating commitment and making them suitable for partnership.
- There are viable mitigation options that have shown promise in similar fisheries elsewhere in the world. This is a helpful starting point given the short timescales of the project/trial and increases the likelihood of a successful outcome.
- The fishery (gear, target and location) differs from those already addressed by Clean Catch and so represents positive expansion of scope. Some indicated that fisheries in the north had previously been overlooked and so this would be a positive step.
- There is an opportunity to collaborate with the Scottish Government.
- If shown to be successful, the mitigation options (e.g. bird scaring lines) could be adopted at scale relatively easily, i.e. there would be no significant barriers such as licensing and cost.
- Of those shortlisted, this fishery best met the criteria.

The summary of the rationales provided with votes for other options is as follows:

- Clean Catch should maintain dialogue with all shortlisted fisheries in the interests of science/industry partnership.
- The fishery experiencing seal interactions warrants further work, as it offers a
 good opportunity to address the issue with applications to other fisheries in the
 UK; especially given that seal depredation is viewed as a significant issue by the
 fishing industry and has meant that static net fisheries are not viable in some
 areas.
- There was concern that a partnership with the fishery experiencing seal interactions could result in the use of acoustic deterrent or harassment devices (ADDs/AHDs) that may have negative environmental impacts (e.g. marine noise pollution, displacement from habitat).
- care should be taken to ensure that the goals of the partnership are aligned with Clean Catch and the UK Government's strategy in relation to bycatch.
- Those in favour of the option that would have involved Clean Catch working with two different fisheries for the trial felt it would result in greater and wider impact.
- Concern was expressed about partnering with a fishery which uses a demersal dredge and so has significant broader environmental impacts aside from bycatch of sensitive species.
- Of the abstentions received in the vote, the accompanying rationales were that:
 - The NAB member in question represented one of the shortlisted fishery partners and therefore they did not feel it was appropriate to cast their vote.
 - The NAB member was not satisfied that there had been enough consideration on what the aims and objectives were or how this new fishery partnership would help achieve UK Government targets for bycatch mitigation. Further, they were concerned about the level of evidenced bycatch in the shortlisted fisheries and hence scalability of mitigation and future impact from the proposed trials.

Appendix 2: Additional discussion on the fishery trial partner selection

Drop-in session for NAB members

An optional online drop-in session was held 12:00–13:30 on 26 November 2024 for NAB members to further discuss and ask questions about the candidate fisheries. In advance of this session and to aid discussion, the Clean Catch consortium team circulated the updated options (including the combination option as per the request of the NAB on 5 November) and its own recommendation and rationale for choice of fishery partner, which can be found at the end of this appendix.

In response to questions:

- Less than 5% of trial costs would be for travel, given the intent to recruit a fishery liaison officer in the locality of the new trial.
- Clean Catch's budget cannot support additional work targeted at higher-risk fisheries that have not yet engaged with Clean Catch; this would require additional funding from Defra.
- The planned co-design approach to the trial necessarily means that it is difficult to predict the outcomes of the trial, including policy impact.
- In addition to members of the fishery itself, co-design of the trial will involve input from the Local Focus Group which will be set up to support the trial, and potentially also an ad-hoc Expert Working Group; however, it is vital that the trial is fisher-led.
- The candidate fisheries are unlikely to be interested in working with Clean Catch on a trial focusing only on monitoring; however, fisheries that are not selected for the trial could make use of the Clean Catch reporting app, particularly as users have access to the data they report through this.
- Other fisheries can access advice on bycatch mitigation via the Clean Catch Bycatch Mitigation Hub and newsletters; Clean Catch will also be developing bycatch best practice guides with the fishing industry in 2025.
- Licencing requirements will be a consideration when selecting the mitigation measure(s) to trial.

Discussion:

- It is more challenging to vote for a fishery without knowing what the specific aims, objectives, and scope of each potential trial would be.
 - The Clean Catch team emphasised that these elements will be codesigned with the chosen fishery, and that this approach will be essential to the successful engagement of the fishery.
- It is useful to consider how representative each fishery is in the national context (e.g. size of the fishery) to assist with decision-making.
- Animal welfare should be a consideration in selecting which mitigation measure(s) to trial, and in any scaling-up of the measure(s) following the trial.

Clean Catch consortium team recommendation and accompanying rationale

The Clean Catch consortium recommendation to Defra is that we partner with the North Sea Mixed Whitefish Fishery (represented by the EEFPO), operating in the Northern North Sea (option 1). The rationale for this recommendation is as follows:

- This would be an expansion in the scope of Clean Catch in terms of the area, gear and bycatch taxa.
- There is fisher reported bycatch of sensitive seabird species (gannets and gulls)
 in the fishery. Although the rate is not known, it is sufficient for the fishers to
 have independently explored mitigation options, suggesting that the bycatch
 rate is non-trivial. Monitoring would therefore offer new insights into the scale of
 this potential issue.
- The fishery has demonstrated an existing appetite/motivation to address seabird bycatch. This was demonstrated by: their proactive communication with the University of St Andrews; their own research into mitigation employed by fisheries elsewhere; and their investment in tori lines (bird-scaring lines) to install on their vessels.
- The number of vessels (8 English vessels; two owners) allows for meaningful trials at a manageable scale.
- There are promising mitigation options (bird scaring devices e.g. tori lines) that are currently not employed in this fishery. This means there is a reasonable likelihood of successfully mitigating bycatch within the lifetime of the trial.
- The timeline of Clean Catch fits with the fishery's intentions. The fishery intends to trial mitigation but has not yet started this, however, they are in a position to progress making it an optimal time to begin an engagement process and develop a co-designed trial
- This subset of 8 vessels is part of a much larger fishery so there is a pathway to impact in terms of applying findings to the wider fishery (either voluntary uptake; or, informing the Scottish's government's regulation of the fishery).
- The fishery operates year-round, so data collection is not limited to a particular season.
- The vessels predominantly operate from a single port (Peterhead), which makes it easier to coordinate engagement/liaison and research. This will ensure strong working relationship with the partner fishery and other local actors.
- We held a preliminary call with representatives of the Scottish Government's
 Marine Directorate. They were supportive of the potential for Clean Catch to
 partner with these vessels operating in Scottish waters. Pending funding there is
 also the potential to subsequently increase the scale of this trial by including
 Scottish vessels.