



**Clean Catch**

*Joint Action on Sensitive Species Bycatch*

# Clean Catch

Combining a stakeholder-led approach and technological innovation to support evidence-based management

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Department  
for Environment  
Food & Rural Affairs



Centre for Environment  
Fisheries & Aquaculture  
Science

**ARRIBADA**  
 *initiative*

**ZSL**  
Institute  
of Zoology



# WHAT IS CLEAN CATCH

## » A COLLABORATIVE RESEARCH PROGRAMME

Through co-designed research, dialogue and knowledge exchange, Clean Catch aims to contribute to improving the monitoring and mitigation of bycatch of marine mammals, seabirds, sharks, skates and rays.

## » CONSORTIUM OF PARTNERS

Expansion phase of Clean Catch: Cefas, Arribada Initiative, Zoological Society London, Mindfully Wired Communications.



# PROGRAMME OVERVIEW

 Equitable co-design (ZSL – Conservation & Policy)

 Research & development (Arribada Initiative)

 Science and Knowledge transfer (ZSL – IoZ)

 Monitoring and mitigation trials (Cefas)

 Communications (Mindfully Wired)



# MONITORING AND MITIGATION TRIALS

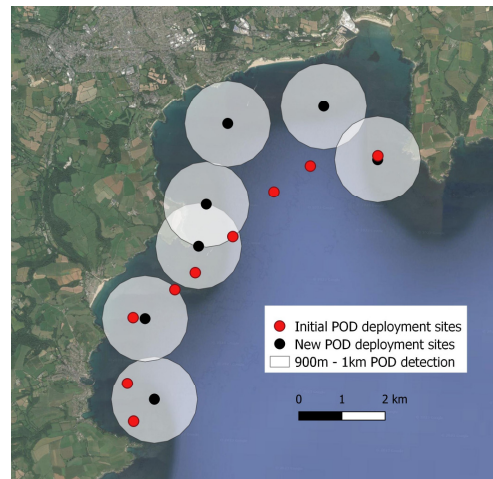
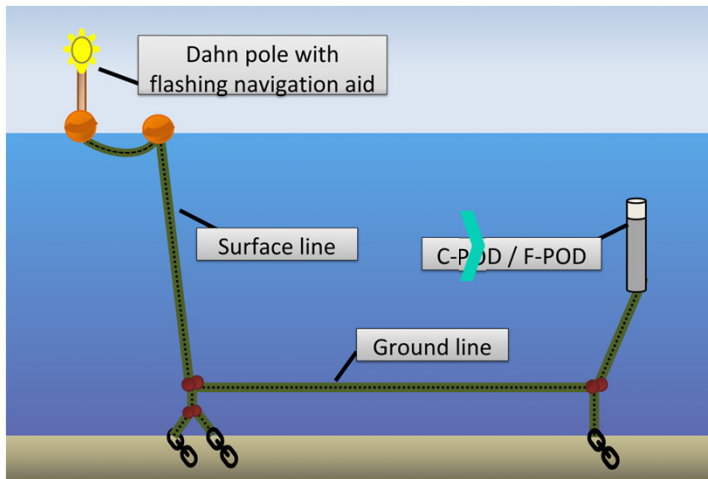
## PHASE 1: AREA OF FOCUS

- » Overlap of porpoise distribution and static net effort in the UK.
- » Reports of increasing harbour porpoise bycatch from fishers in SW.
- » Need for a solution requested by fishers with support from local eNGO.



# MONITORING

- Skipper self-reporting app “Clean Catch app”
- Remote electronic monitoring
- Population monitoring using passive acoustics

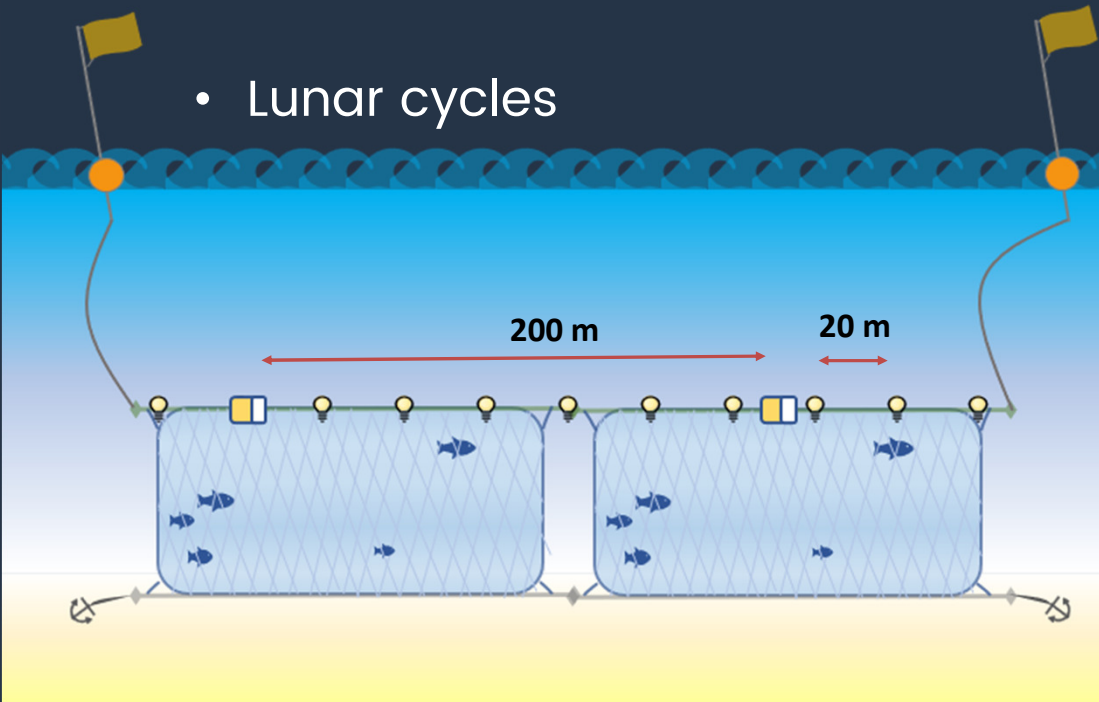


The screenshot shows the "Clean Catch UK" app interface. At the top, there is a menu icon and the text "Clean Catch UK". Below this, there is a section for "Wildlife Bycatch (all fisheries)" with an illustration of birds. The main content area is titled "TIME AND PLACE" and contains a log entry for a "Shoot" on "Thu, 04 May". The entry includes "Shoot Start Location 52° 32.1166" and "Shoot Finish Location 52° 32.1166". Below the log entry, there is a "Shot Depth (m)" field. To the right of the log entry, there are several buttons for recording bycatch: "RECORD BYCATCH FOR NETS", "RECORD BYCATCH FOR HAND / LONG LINES", "RECORD BYCATCH FOR TRAWL / BEAM", "RECORD BYCATCH FOR TRAPS", "RECORD BYCATCH FOR DREDGER", and "RECORD BYCATCH FOR OTHER". At the bottom of the log entry, there is a "NEXT" button. The Cefas logo is visible in the bottom right corner of the app interface.



# MITIGATION TRIAL: PHASE 1

- Five treatments plus control
- Paired nets
- Lunar cycles
- 3 vessels down to 2 vessels
- Dec 2019– Jan 2022
- Clean Catch app & REM

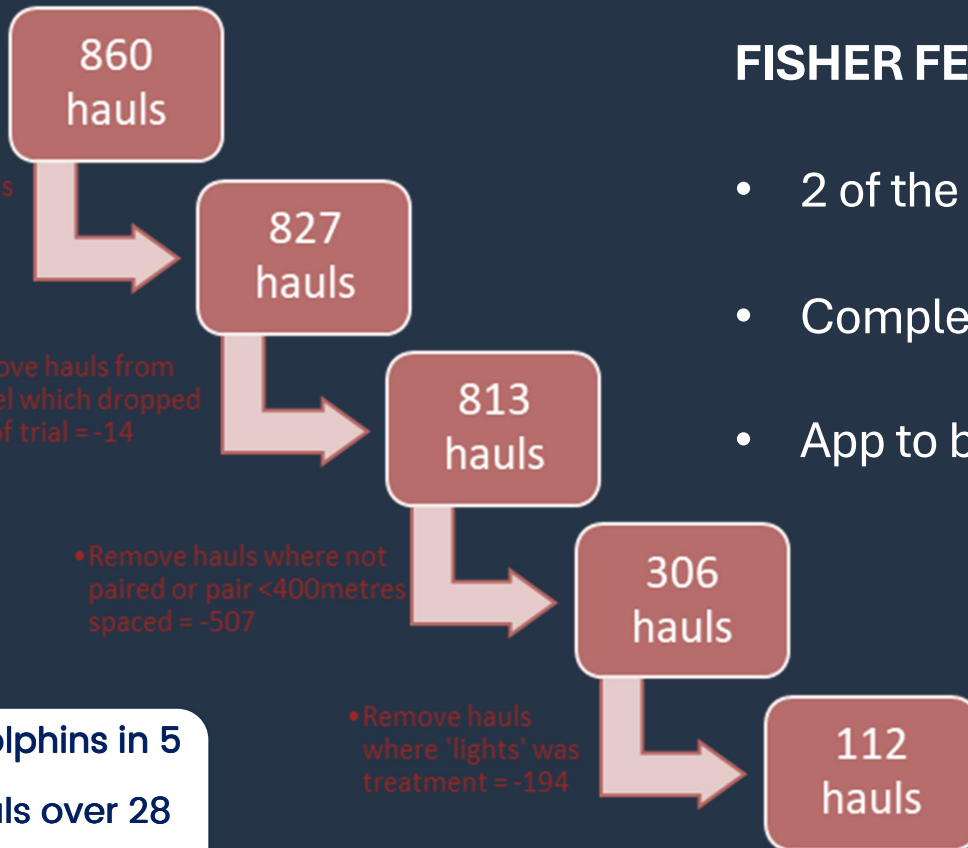


# STOCKTAKE: PHASE 1



## FISHER FEEDBACK

- 2 of the 3 technologies not practical
- Complex experimental design
- App to be improved for use at sea



9 dolphins in 5 hauls over 28 months

Image: Wayne Rostant

# SIMPLIFIED APPROACH



Test 1 device: Fishtek Porpoise and Dolphin Deterrent 'Banana Pinger' based on practicality



Focus the trial on fisheries with higher levels of bycatch – work with the BMP to identify the gears and areas at higher risk of bycatch.




Increase the number of skippers in the trial and the areas they fish







# UPDATED TRIAL DESIGN

Power analysis: Best case scenario (high baseline bycatch rate & 8 participating skippers) estimated that we would achieve sufficient statistical power to assess the effectiveness of banana pingers within 1 year.

 Test Banana pinger only on vessels using bottom-set tangle nets and gill nets in inshore fisheries

 9 skippers fishing in three areas were recruited as areas at potentially higher risk of dolphin bycatch

 A 'paired' net design is used, one net with pingers attached (alarmed net) and one net as a control, of similar length and fished simultaneously.





# NEXT STEPS



Collaboration with the BMP

- share and jointly analyse REM data from participating vessels
- build image reference libraries, understand challenges/limitations of identifying different taxa.



2<sup>nd</sup> Fishery partner in early stages of engagement





# Thank You.

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Clean  
Catch