



Marine  
Management  
Organisation

# Cuttlefish management measures workshop: 15 February 2024

## Meeting notes and outcomes



...ambitious for our seas and coasts

## Version control history

Version	Author	Date and comment
1	Laura Lovett	26/02/2024 first draft v1.0
2	Callum Williams	27/02/2024 first review
3	Laura Lovett	22/03/2024 second draft v2.0
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5	Laura Lovett	11/04/2024 Third draft v3.0
6	Callum Williams	15/04/2024 final review

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## **Rationale and purpose of workshop**

As part of the Channel demersal non-quota species (NQS) fisheries management plan (FMP) published in December 2023, the cuttlefish fishery has been identified as a critical targeted fishery at risk of over exploitation. The FMP outlines proposed short and medium/long-term measures, which include cuttlefish proposals from the FMP: these were to improve science and evidence, consider introducing seasonal closures for trawlers, consider introducing codes of practice, investigating the benefits of underwater structures to cuttlefish (i.e., in spawning), consideration of wider changes such as MPA management and habitat improvements to benefit cuttlefish, establish a channel management group and develop a cuttlefish action plan. Following consultation feedback the measure for the introduction of a cuttlefish MCRS was removed from the proposals due to strong opposition from stakeholders due to uncertain environmental benefit and large socio-economic impacts. To initiate work on the action plan, a workshop was arranged on 15 February 2024, with stakeholders including representatives from the catching sector, fishing associations, producer organisations, environmental non-government organisations, local and national government. The meeting was conducted in a hybrid format; online via Microsoft Teams and in person held at the Greene King - Farmhouse & Innlodge, Portsmouth. A slide pack and meeting agenda was shared with the participants to aid discussions.

The aims of the workshop were to:

- Develop mutual understanding of issues in the cuttlefish fishery.
- Identify wider stakeholders best placed to develop options for potential management.
- Set expectations for working in partnership in the development of the action plan and supporting engagement.
- Identify potential options for consideration as part of the future development of the action plan.
- Confirm next steps for development of the action plan.

## **Attendees**

19 people attended in person with a further 10 online. The workshop was independently facilitated by Wilson Sheriff. Government representatives attended from MMO (Marine Management Organisation), Department for Environment Food & Rural Affairs (Defra), Seafish, Centre for Environment, Fisheries and Aquaculture Science (Cefas), Southern IFCA, Devon and Severn IFCA.

Fisheries representatives attended from Marine Stewardship Council, Blue Marine Foundation, South Coast Fisherman's Council, Lyme Bay Fisherman's CIC, Cornish Fish Producer Organisation, Southwestern Producer Organisation,

Western Fish Producer Organisation, Plymouth Fishing & Seafood Association, Southeast Fisherman's Protection Association, Brixham Trawler Agents, Interfish Ltd, Waterdance Fishing, Brighton & Newhaven Fish Sales and Angling Trust. There were also many individual fishers in attendance.

### **Current Management measures**

Cuttlefish is currently managed through the shared NQS bilateral agreement between the UK and EU where it is included in the total tonnage quota uptake of NQS species. This permits removals by EU vessels in UK waters of 33,000 tonnes and UK vessels in EU waters of 12,300 t. There are no specific current management measures in place for the offshore (6-200 nm) cuttlefish fishery.

There are specific measures targeted at cuttlefish within some IFCA districts (0-6 nm); for instance, Sussex IFCA Shellfish Permit Byelaw restricts the number of traps or pots that can be deployed by any single vessel when targeting cuttlefish to 300 within the Sussex IFC District; Southern IFCA operates a voluntary code of conduct for their cuttlefish fishers. This states that it is best practice for fishers to leave their traps or pots in the sea after the fishing season has ended, allowing for any cuttlefish eggs deposited on the traps to complete gestation and hatch.

Cuttlefish are a data limited species; insufficient evidence is available to make a formal stock assessment to determine maximum sustainable yield (MSY) or a proxy for sustainable harvest level.

### **Defra - Channel Demersal NQS FMP Summary**

Defra presented the key cuttlefish proposals in the FMP, reflections following consultation and the key consultation points raised (see Annex for presentation slides).

The common cuttlefish was identified by stakeholders as a critical targeted fishery at risk of over exploitation. The short life span of cuttlefish needs to be considered as part of a management strategy to promote stock recruitment and maintain population size.

The FMP recommends the following short to medium term ambitions:

Within the first six months of 2024 the government will bring together stakeholders to discuss an action plan to deliver sustainable exploitation of the cuttlefish fishery.

Three early areas for focus were:

- 1) to consider seasonal restrictions.
- 2) introduce handling guidelines for cuttlefish and cuttlefish eggs.

- 3) consider wider changes such as MPA management and habitat improvements to benefit cuttlefish.

Introduction of greater monitoring and data collection in the short term to help inform and consider options for the introduction of management during the implementation phase of the first iteration of the FMP.

- this will gather data on the cuttlefish fishery and the state of the stock.
- test the efficacy of technical measures for conserving the stock.
- research to determine the benefits of underwater structures for promoting cuttlefish egg attachment and survivability.

Defra reflected on the removal of the MCRS following strong consultation feedback due to uncertain environmental benefit and large socio-economic impact. That said, there is a real need to address concerns over the potential over-exploitation of cuttlefish, as potentially evidenced by the declining pot/traps landings in the Eastern Channel since 2018. It was also emphasised that the government has obligations under the Fisheries Act 2020 to meet the precautionary objective and ensure exploitation of marine stocks restores or maintains populations of harvested species above the biomass levels capable of producing MSY.

It was emphasised that there is significant Secretary of State and Minister of State interest due to the economic importance of cuttlefish but also the requirement to meet the objectives of the Fisheries Act 2020. The cuttlefish fishery now has a media profile, Defra are expected to update on progress to ministers and doing nothing is not an option.

Key points following consultation include:

- Significant evidence gaps should be a priority, who should fund these evidence gaps and what data collection options are there.
- Mixed picture with regards to landings as rising and falling across the Channel.
- Concerns of over exploitation and the requirement to use the precautionary approach pending evidence-based measures.
- Mixed response to MCRS, not all against the proposal as there was some support for 10cm or for use in inshore fishery.
- Some support to manage pots and traps differently to trawls.
- Mixed responses on closed seasons due to economic impacts, location or timing due to different seasons, displacement and enforcement issues.

Following the Defra presentation there was an opportunity to discuss, raise concerns, ask questions and make comments.

### ***Subsequent comments raised by attendees:***

- Mixed responses were received; however, it was raised by some attendees that landings from pots/traps had been declining, especially in the eastern channel.
- It was suggested that the declines in a very specific area are coincidental with the Rampion wind farm and considerations need to be made here.
- Further to this it was suggested that there has been increases in areas by the side of the wind farm in the trap fishery in the 5-year period.
- It was requested that the above needs further investigation given concerns that it could lead to unnecessary use of the precautionary objective.
- Another attendee who fishes in the Eastern Channel was also in agreement with the above relating to declines in the pot/trap fishery and increases near the wind farm and stated seeing more cuttlefish than ever to the east of the windfarm.
- A question was raised to whether catches further west (West of the Lizard) had been considered. It was suggested that historically there have been very low catches in the far West of the region, but that there is now a pot fishery in Mounts Bay.
- Concern was raised over protection of cuttlefish leading to a population increase, as it was highlighted that they are voracious predators which have the potential to decimate other commercial species such as crab and lobster.
- It was raised that collating all the data that is available now is not doing nothing. It is making sure that future decisions are based on factual evidence. It was suggested that there is a lot more data and research available being carried out now that requires consideration as part of the action planning process. It was suggested that all the evidence and data that is available should firstly be collated, followed by a further meeting to consider what this tells us and where there might be further gaps.
- It was stated that the pot fishery from Brixham to Poole has shown declines similar to those in the Eastern channel.
- Another stakeholder was in agreement about declines in trap catches, stating that such declines have been observed in Poole Bay. It was suggested that the fishery was only viable due to investment in traps in better times and the increase in price of cuttlefish.



- Concern was expressed around not rushing into measures on cuttlefish and learning lessons from the MCRS issue. The creation of an action plan that everyone can get around, pull resource into and be willing to contribute to sounds like a success factor in the short term. It was suggested that the data gathering exercise will tell a more positive story of an increase in stock and catch per unit effort (CPUE) that is sustainable or even improving.
- A concern was raised about a series of local issues as you go along the coast. It was suggested that you cannot solve local problems with a multi-regional plan as it is a Channel-wide fishery. The use of local tools was suggested to solve localised issues whilst not inhibiting fisheries in other areas which are totally different.

## **Cefas- Current Scientific Evidence**

Cefas outlined current knowledge of the cuttlefish fishery from a science perspective (see Annex for presentation slides).

The common cuttlefish life cycle begins with spawning that occurs between February and July and spreads from West to East. Some cuttlefish can spawn in their first year but the majority spawn at 2 years old. Individuals begin to spawn when water temperature is  $> 9^{\circ}\text{C}$  with an upper threshold of  $20^{\circ}\text{C}$ . They spawn over a maximum of one month and lay their eggs on structures such as seagrass and pots/traps in shallow waters ( $< 10\text{ m}$ ) and die shortly after spawning. There is no larval stage and hatching of cuttlefish is temperature dependent, in waters at  $9^{\circ}\text{C}$  it can take up to 5 months for eggs to develop, 40-45 days at  $20^{\circ}\text{C}$  and 80-90 days at  $15^{\circ}\text{C}$ .

Three stocks of common cuttlefish have been identified in the Bay of Biscay, the Channel and the Southern North Sea. Some genetic differences have been identified between the stocks. However, they are not totally isolated and there is evidence of some transfer between stocks. The common cuttlefish Channel stock (from the East and West Channel) are thought to overwinter in deeper waters of the western channel near the area of Hurds Deep. There is no genetic difference between the stocks in UK and French waters or in their overwintering site. During spawning some remain locally inshore and some move around during spawning, some 35 km or more. There is a high genetic relatedness within the spawning site.

The majority of landings in the English Channel in 2022 were made by the French and UK fleet. The French fleet landed  $\sim 5700\text{ t}$  using mainly otter trawls and the UK fleet 4000 t using mainly beam trawlers. Otter trawls target all sizes of cuttlefish, with peak fishing activity between September and November. Beam trawlers target all sizes including pre-spawn cuttlefish, with peak fishing activity between September and April. Potters target spawning cuttlefish, with peak activity between April and June. International landing statistics for ICES divisions

7d and 7e showed fluctuating landings between 1992 to 2012 indicating a general decline in total landings following a peak in 2004.

Worldwide management measures for cuttlefish were discussed. Spatial closures and restocking were shown to be least effective; gear restrictions reducing bycatch showed some success in trawlers and egg management seemed to be the most successful.

Following the Cefas presentation there was an opportunity to discuss, raise concerns, ask questions and make comments.

### ***Subsequent comments raised by attendees:***

- One attendee suggested that potting was by far the most sustainable approach and should therefore be encouraged over other methods. The cuttlefish should be allowed to reach the spawning grounds, and the potters should be allowed to achieve a good catch. If there's not vast quantities being landed by trawls, the price should be good too. Trawling should only be post spawning. Consideration should be given to species caught as bycatch of cuttlefish trawling and the sustainability of this catch.
- It was stated that there was no genetic difference between English and French stocks – suggests same overwintering ground. It was suggested that this area was in the area of, but not necessarily the Hurd Deep
- It was suggested that there was a likely correlation between water temperatures and cuttle biomass.
- It was stated that the Southern IFCA code of practice includes measures for egg management that involves leaving the traps at sea until all the eggs have hatched.



## **Breakout Session Outputs**

Following the presentations there were three breakout sessions in which current issues, potential management measures and action planning were discussed within three groups (two groups within the in-person meeting and one group online).

### **1. Current Issues**

Attendees were asked to think about and discuss the following questions within their breakout groups:

- a. What are the issues that we need to look to consider in developing the action plan for cuttlefish?
- b. How should these be prioritised?

There were several issues raised surrounding cuttlefish with the main issue being that there's a lack of knowledge, evidence and data regarding the fishery to inform effective management measures. Detailed below are the groups comments and outputs from the breakout session.

#### ***Subsequent comments raised by attendees:***

- Assessments of stock as a whole are required across both the UK and EU.
- Concern was expressed around the resource requirements to collect data and implement measures. A question was raised asking is their people resource, money/budget, sufficient time requirements to be able to build the evidence base required.
- It was suggested that in terms of stock assessment there is a need to look at how the number of cuttlefish caught relates to the weight of landings.
- A question was raised in relation to landings information presented by Cefas, asking whether the fluctuation in landings weight was a result of more cuttlefish being caught (by number) or whether it was due to lower or same number of cuttlefish being caught with a higher average weight. It was suggested that analysis of landings data by the two size grades may assist with this.
- It was suggested that environmental variables have the greatest influence on cuttlefish recruitment and that fishing may only be a secondary factor and may not play a significant role in influencing cuttlefish stocks.

- A question was raised as to whether there is access to EU data and whether this data was reliable, given that they have a large share of catch in UK waters.
- A further question was raised as to whether there is any information on management carried out by the EU, both historically and at present.
- It was suggested that there may be issues identifying the difference between common cuttlefish and elegant cuttlefish. Elegant cuttlefish are much smaller with a max size of 15 cm. There was a concern that these are often recorded as common cuttlefish. Therefore, there is a need to improve identification so that fishers can identify whether they are catching juvenile common cuttlefish or adult elegant cuttlefish.
- In response to the species identification issue a concern was raised relating the difficulty in identification from trawls due to damage and ink and suggested that collecting from trap data may be easier.
- It was suggested that there has been deliberate targeting of small juvenile cuttlefish, as they are easier to catch when they are inshore and aggregating. Identified as a localised issue, where and occurrence of this needs to be understood to further explore impact of issue.
- The impact of fly seining and the potential to overfish cuttlefish stocks was suggested as a potential current issue.
- Concerns were expressed relating to the potential impacts of windfarms, aggregating stock and the impact of electromagnetic frequencies.

## **2. Potential Management measures**

The attendees were asked to think about and discuss the following questions within their breakout groups:

- a. What are the potential options?
- b. What are the pros and cons of the options?

Some potential management options were discussed which included: harmonisation of the IFCA measures between inshore and offshore, effort management such as seasonal closures and pot limits; permit or entitlement schemes; and potential alignment with EU management of cuttlefish. However, these discussions moved away from management options and heavily steered back to the need to develop knowledge, evidence and data gaps identified in the first break out session. Detailed below are the groups comments and outputs from the breakout session.

### ***Comments raised by attendees:***

Concerns were raised by an attendee over the suggestions that more data is required before any action should be taken. This was not in line with the precautionary approach.

- That said, there was a general consensus amongst most attendees that there was not enough data available to make any informed decisions.
- It was therefore suggested that a priority should be to distribute a summary of current evidence and knowledge. It was proposed that knowledge/data already exists which might answer some of the questions and this needed to be shared more widely.
- There is an urgent need to understand what industry is able to contribute to in terms of knowledge and data gaps.
- There was a suggestion that going forward it would be useful to develop suitable metrics that could act as triggers for future protection.
- It was suggested that there is a need to focus on cuttlefish as a whole both east and west EU and UK.
- A closed period was suggested to put some protection in for stocks, while more data is collected – January, February, and March, or maybe just March, to allow fish to get to inshore grounds to spawn.
- A further suggestion of a short seasonal closure and a socio-economic assessment on that scenario could be done now.
- A question was raised on the current management measures in IFCA's relating to pot limits, codes of practice and seasonal closures. There was a need to understand what already exists, whether these measures are effective and whether harmonisation with the offshore would be of benefit.
- It was suggested that the positive impact of effort management may increase biomass as more juveniles mature and only large or mature cuttlefish caught.
- It was stated that the French have seasonal limits on trawls offshore and pot limits inshore and the question was asked whether something similar could be implemented.

### 3. Action Plan

The original intention was for the next session of the workshop to focus on potential management measures. However, following discussions at the workshop it was agreed that time would be better served focussing on answering the following questions:

- a. What are the data and evidence gaps?
- b. What are the questions we need to answer?
- c. Who can lead on this and who else needs to be involved?

#### ***Subsequent comments raised by attendees:***

##### **a. What are the data and evidence gaps?**

The Blue Marine Foundations representative provided a section from their response to the FMP consultation in terms of evidence gaps and are captured in the Annex.

Additional considerations included comments detailed below which were made during the session:

- Further work is required to determine stock size. Currently Cefas are looking at developing a recruitment survey. The short lifespan of cuttlefish means that an understanding of recruitment is very important.
- There is a need for a better breakdown of class size landing data across all the fisheries catching cuttle.
- The need to explore technical measures, at sea trials for gear modifications maybe for beam trawlers, square mesh, different mesh sizes, different cod ends etc.
- Trials using data from people who are already fishing with 100m and 80m mesh, and different cod ends (this data already exists so can be used already).
- More data needed on how small cuttlefish survive interactions with nets. Just because they go through the hole, does not mean they have survived the encounter. Could there be high mortality post interaction? The big issue with this is how to actually go about collecting data and studying this? Could use catch-cameras, bags behind net (although will they die in the bag?).
- Investigate the impact of the Rampion/ offshore windfarms on the local cuttlefish population.
- Gather evidence on the impacts of electromagnetic fields.
- Identify where targeting of small cuttlefish is occurring. Also investigate the composition of these catches due to possible incorrect species identification.

- Assessing impact of migratory fleet, can't just focus on local trawlers from channel. Need to investigate impacts of boats coming from other areas.
- Caution needs to be taken on what data is coming from the market as there is "two sizes" of cuttlefish, size one and size two. Other markets record data as 0.5kg+ and 0-0.5kg.

## **b. What are the questions we need to answer?**

Suggestions made during the workshop included:

1. A literature review of best practice from around the world. How effective has it been? How will it translate to the UK? Would it be viable here?
  - i. ICES Journal of Marine Science published a global review of methods for cuttlefish conservation to reduce fishing mortality and anthropogenic threats to sustainability in 2022.
2. What are the impacts of offshore wind? Electromagnetic fields? Information on this will become increasingly important as offshore wind gets rolled out on a bigger scale.
3. Are species being recorded correctly? Investigation into split between species being landed? Need to disseminate means of identifying differences between species (best practice, workshops, info distribution). This will feed into landing data as well.
4. What is the composition of catches? Are they elegant cuttlefish or just juvenile common cuttlefish?
5. Is it possible to identify where local issues are occurring from evidence gained during FMP engagement and consultation? This is related to the differences seen between positive opinions on stocks seen during the workshop compared to the more mixed opinions on stock health raised during the development phase of the FMP.
6. Are there local areas where cuttlefish catches are declining? Can these be identified?
7. Are there spawning hotspots within the channel or is spawning evenly distributed?
8. Can we get access to EU data?
9. What are the impacts of flyseiners on cuttlefish populations?
10. Measures from other Northern European countries, and how effective these have been? What can we learn?

### **c. Who will be involved?**

Suggestions made during the workshop included:

1. Further stakeholder engagement was suggested, with more involvement from non-sector in the discussion.
2. The potential for industry co-funding a PHD candidate was raised – could look at historical data, work up to present, look into potential future management measures, stock health etc. Person could be involved in the management group also.
3. Look at the measures other European countries have used see how effective they've been. Concerns were raised about whether there was sufficient budget for all the data gaps and, if not how these should be prioritised.
4. The question was raised about who needs to be involved in data collection/working group. It was noted that this will become evident as we get a greater understanding of data gaps and what we actually need to know.
5. What does a collaborative approach to help deliver the action plan look like?

Post workshop a summary was drawn up on the potential evidence commissions which could address current concerns of the cuttlefish fishery, potential management measures and satisfy several evidence gaps identified during the workshop. Details of the potential evidence commissions are provided in the Annex.

### **Actions:**

Gather evidence to inform discussions and reassess issues identified through the FMP development:

- Update landings data – inclusion of 2022-2023 in dataset.
- Landings overlaid with CPUE over a long timeframe.
- Overlay landings / CPUE with drivers and influences – changes to vessel numbers, regulation, infrastructure projects, etc.
- Gather evidence on French/EU management for cuttlefish, past and future. What are/were the drivers? How effective has this been?
  - Expand on global practices – see FMP for work on this.
- Breakdown cuttlefish anecdotal evidence by port location. Localisation of issues.

- Consider how FMP evidence statement can be represented and made more digestible – does this help inform discussion on evidence already gathered.
- Is there an existing landing restriction on cuttle smaller than 100g in UK and EU law?

### **Next steps:**

1. Evaluate, prioritise, and action evidence gaps identified during workshop while still considering the precautionary principle and any measures that may potentially be implemented under this objective.
2. Full literature review to ensure there isn't any replication of existing data and research.
3. Establish what resource is available to deliver these and over what timeframe.
4. Action short term evidence asks.
5. Hold a further meeting / meetings as the action plan develops with the aim of finalising it by the end of June.



## Annex

### Blue Marine

The Blue Marine Foundations representative provided a section from their response to the FMP consultation in terms of evidence gaps. Blue Marine recommends that the following evidence gaps for cuttlefish are included in the final FMP Evidence and Research Plan:

1. Spatial and temporal extent of current exploitation by all gears: reporting of cuttlefish catches including estimated weight in kilograms and associated effort, by geographical area, gear and mesh size, for all vessel length groups.
2. Location and extent of key cuttlefish spawning areas.
3. Size frequency of cuttlefish caught: fisheries independent port sampling and/or on-board data collection sampled proportionally across all gears.
4. Maturity of cuttlefish caught: fisheries independent port sampling and/ or on-board data collection sampled proportionally across all gears.
5. Variation in growth rates and length at maturity in space and time also needs to be understood i.e. both between and within years throughout the English Channel.
6. Understand the effectiveness and environmental impacts of management measures implemented in other countries e.g. Minimum landing size, effort limits, temporal and spatial limits, voluntary codes, egg protection.
7. The socio-economic value of cuttlefish to fleets currently targeting cuttlefish and the potential socio-economic impacts of potential management measures needs to be understood.
8. What are the effects of climate change on the spatiotemporal variation in the distribution and abundance of different cuttlefish life stages.

### Potential Evidence Commissions:

Post workshop the below summary was drawn up on the potential evidence commissions which could address current concerns of the cuttlefish fishery, potential management measures and satisfy several evidence gaps identified during the workshop.

1. Investigate the impact of the Rampion windfarm on the local cuttlefish population. Anecdotal remark that construction of the windfarm led to localised disappearance of cuttlefish. Potential drivers were construction destruction and smothering impact on local ecosystems – habitat degradation and recovery, or impact of EMF/ operational noise as a deterrence for cuttlefish.

- a. Simple checks:
    - i. Test whether anecdotal concerns raised exists either side of the wind farm or whether this is very locally specific. Anecdotally, cuttlefish pot landings are doing well either side of windfarm.
    - ii. Validate this and ground truth by revisiting the area.
  - b. Potential additional evidence to be explored.
    - i. Fish surveys carried out by the windfarm.
    - ii. EMF influences on cephalopods - Natural England are looking at telemetry mapping using acoustic tags and receiver arrays around windfarms. Potential to explore this with other species (i.e. like cuttle) to monitor avoidance behaviours.
    - iii. Does the timelines of this align with the reduction of pot landings.
2. Determine potting effort and trawl effort for cuttlefish – overlay CPUE with landings data.
    - a. Map potential regulatory and external drivers on fishing activities.
  3. Cuttlefish are a voracious predatory species. Look at landings data for other species (locally) when cuttle has had a bumper year. Anecdotally reported that after a good cuttle year, catches for other species decline.
  4. Explore egg laying and habitat suitability mapping for cuttlefish. Overlay sea surface temperature data during the months of February-July for English Channel and Southern North Sea (emerging pot fishery and reported egg laying in SE). Overlay a layer identifying egg laying depths. Variables of suitable egg laying habitats (seagrasses / kelp beds) to identify areas which should support egg laying. Further work to sample these areas during spawning season – determine what proportion of eggs are laid on traps / underwater infrastructure vs natural habitat. Assessing habitat health and link to egg laying/mortality. The FMP has committed to undertaking work on habitat suitability and underwater structures. Definitely a value-added exercise.
  5. Explore evidence from processors. Vessels will provide a market grade for sales notes. This is low resolution data which will determine whether landed cuttle are 1<sup>st</sup> or 2<sup>nd</sup> year individuals. Processors utilise tighter grades. \*Request to industry to source and provide these data on grade sizes and records for processed cuttle.
  6. Explore the efficacy of IFCA measures for stock protection – i.e. spatial restrictions, pot limits.
  7. Cuttlefish tagging project – determine species movement throughout the season. Of benefit to the Southern North Sea FMP which witnessed an increase in cuttle spawning.
    - a. Some research already conducted on this. However, studies from 2013 and on small number of individuals. Did show highly variable movement patterns between individuals (some stayed local, others moved large distances along coastline).

8. Explore cuttlefish potting in Torbay. Historically identified as a key spawning destination. Is this still the case? Does IFCA conservation measures protecting seagrasses contribute to cuttlefish spawning? What impact does de facto protection through fisheries exclusion – i.e. aquaculture, infrastructure – have on cuttlefish spawning opportunities?
9. Determine what sustainable fishing for cuttlefish could look like from an exploitation perspective – is it possible to selectively target 1st year individuals, 2nd year individuals or if both, what level of extraction can be supported?
10. Review the engagement feedback received during the development phase of the FMP to see in which locations fishers were claiming catches had fallen.


## Slide Pack

### 1. Agenda for 15 February 2024 meeting:

Topic	Details	Lead	Timings
1. Introductions	Introduce people in the meeting, Housekeeping.	Facilitator leading introductions.	1 – 1:15 (10 mins)
2. Aim of the meeting and Outcomes of FMP consultation	<ul style="list-style-type: none"> <li>• Brief outline of outcome of FMP/consultation responses (10 mins).</li> <li>• Aims of the meeting inc. legal imperatives e.g Fisheries act, precautionary objective (5 mins)</li> <li>• Introduce one pager (5mins).</li> </ul>	Defra	1:15 -1:25 (20 mins)
3. What are the issues we are trying to fix?	<ul style="list-style-type: none"> <li>• CEFAS – what do we know (10 mins).</li> <li>• Breakout - (15 mins - breakout groups)</li> <li>• Feedback from groups and agree on set of issues (10 mins – facilitator lead)</li> </ul>	Cefas & facilitator, Defra and MMO lead breakout groups	1:25 – 2:00 (35 mins)
4. Open discussion – potential management options – pros and cons	<ul style="list-style-type: none"> <li>• Start with a summary of options from consultation/consultation responses?</li> </ul>	Facilitator led	2:05 – 2:35 (30 mins)
Break			2:35 – 2:50
5. Action planning a. What actions are necessary to appropriately address issues? What are appropriate timeframes for	<p>Themes for actions may include: evidence, engagement and management</p> <ul style="list-style-type: none"> <li>• Defra introduction to set out scope/limitations for developing action plan and timeframes (10 mins),</li> </ul>	Defra & facilitator, Defra and MMO lead breakout groups	2:50 – 4:05 (75 mins)

delivering these actions?	<ul style="list-style-type: none"> <li>Breakout groups (15 mins per theme, 45 mins total),</li> <li>Feedback (facilitator led, 15 mins).</li> </ul>		
6. Action planning Who are the key representatives who need to be involved fix the issue? And how do we want to work together?	<ul style="list-style-type: none"> <li>MMO introduction to set out expectations of working together (5 mins)</li> <li>Breakout groups (10 mins)</li> <li>Feedback (facilitator led, 10 mins)</li> </ul>	MMO & facilitator, Defra and MMO lead breakout groups	4:05 – 4:30 (25 mins)
7.Q&A		Facilitator led Defra/MMO fielding questions	4:30 – 4:40 (10 mins)
8. Wrap up and next steps	<ul style="list-style-type: none"> <li>Summarise key discussion points &amp; next steps.</li> <li>Leaving remarks</li> </ul>	Facilitator, MMO/Defra	4:40 – 4:50 (10 mins)

## 2. Introduction from MMO



### Workshop aims

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**Aims of the workshop:**

1. Develop mutual understanding of issues in the cuttlefish fishery.
2. Identify wider stakeholders best placed to develop options for potential management.
3. Set expectations for working in partnership in the development of the action plan and supporting engagement.
4. Identify potential options for consideration as part of the future development of the action plan.
5. Confirm next steps for development of action plan.

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### 3. Outcomes of the Channel demersal NQS FMP - Defra

## Channel Demersal NQS FMP



### Key cuttlefish proposals

- Improve our science and evidence

#### Short term:

- Establish a Channel management group
- Develop an action plan for the cuttlefish fishery.

#### Medium/Long term:

- Considering measures to protect cuttlefish stocks to promote recruitment

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## Defra reflections



- Strong consultation feedback re MCRS - uncertain environmental benefit & large socio-economic impact. Proposal removed.
- But over-exploitation concerns remain eg declining pot/traps landings in the eastern Channel since 2018.
- Government obligations under the Fisheries Act 2020:
  - precautionary objective;
  - ensure exploitation of marine stocks restores or maintains populations of harvested species above biomass levels capable of producing MSY.
- SoS/MS very interested - aware of economic importance but also duties in the FA2020, now has a media profile and expecting Defra updates on progress.
- Doing nothing not an option.

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## Consultation key points

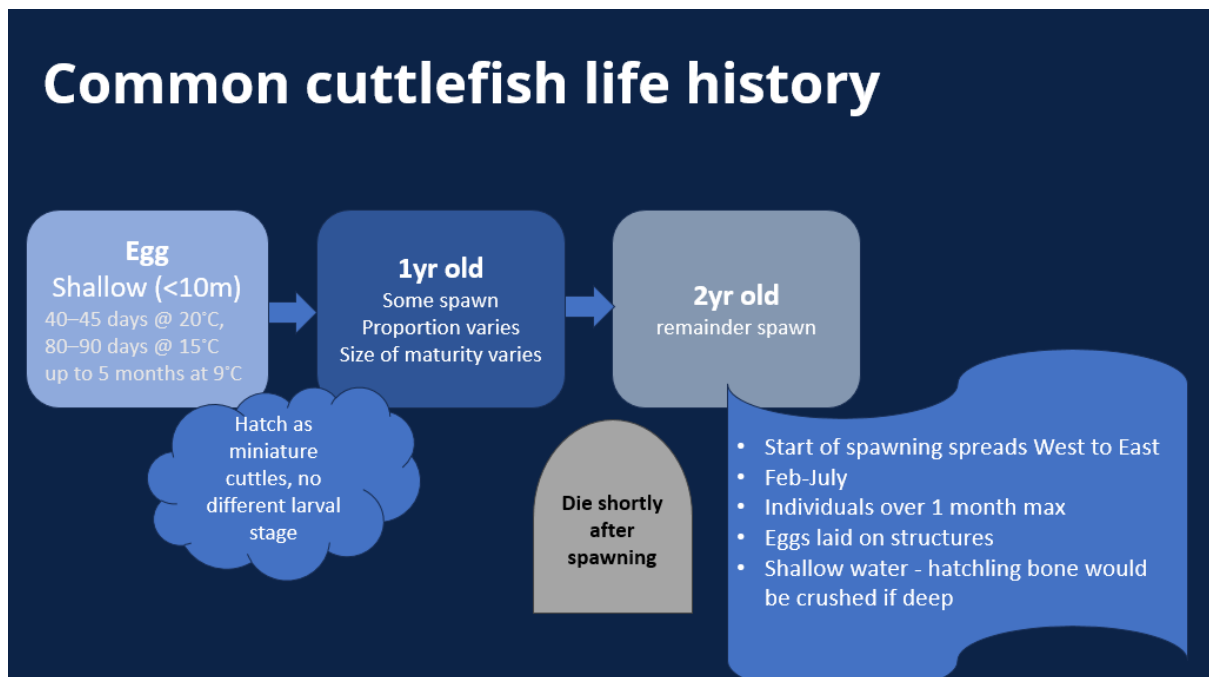


- Significant evidence gaps – should be priority but who funds? What data collection options are there?
- Mixed picture re landings rising/falling across Channel
- Over exploitation concerns - use precautionary approach pending evidence-based measures
- Mixed responses on MCRS (discarding, no environmental benefit but economic impact), but not all against eg support for 10cm, or for use in inshore fishery
- Some support to manage pot/trap and trawl differently eg mesh sizes, effort, Code of Practice
- Mixed responses on closed seasons – economic impacts, location/timing (different seasons), displacement, enforcement,

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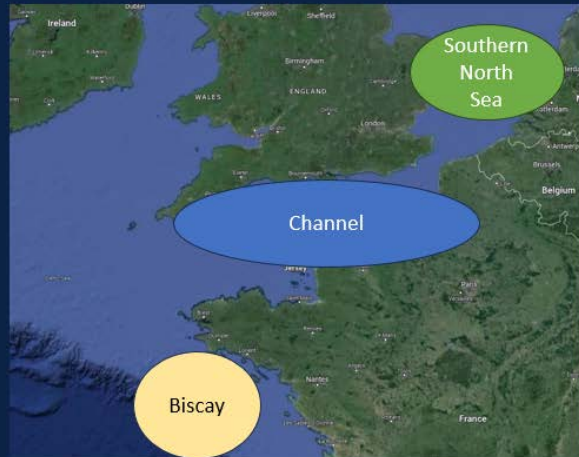
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### 4. CEFAS – What do we know so far.



# Common cuttlefish stock understanding

- Broadly speaking 3 stocks.
- Some genetic difference between them
- But not totally isolated – there is some transfer.



# Common cuttlefish Channel stock

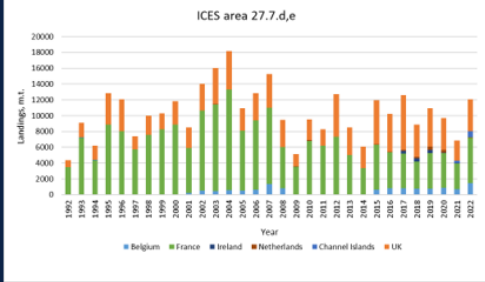
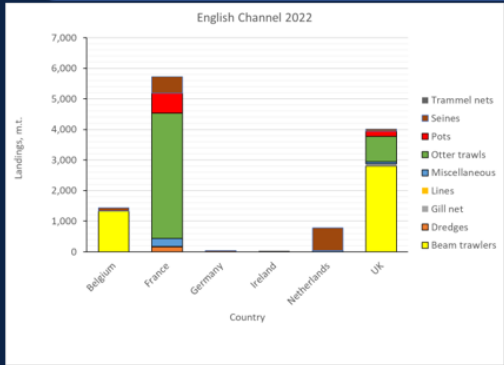
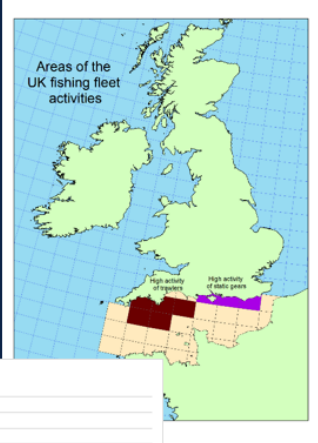
- Common overwintering site for all channel cuttlefish
- Deeper water in Western Channel
- No genetic difference between UK & France coast or in overwintering site
- During spawning, some stay local, some 35km or more
- High genetic relatedness within spawning site





# Common cuttlefish fishery

- Otter trawl, all sizes, peak Sept to Nov
- Beam trawl, all sizes inc pre-spawn, peak Sept to April
- Potters, spawning animals, peak Apr to Jun



# Worldwide management systems

## Spatial closure

- MPA (Vietnam, U.K.) – small MPA not effective for migratory species
- Spawning ground (Australia) – closure of 43% did not help. Boom after full closure!

## Restocking

(Japan) - economically unviable

## Gear

- Bycatch reducing device (Australia) – removing cuttlefish from shrimp catch some success in trawlers

## Egg management

- Salvaging eggs laid on traps and brooding up to hatching (Italy, France) – slow & £££
- Diverting egg laying onto alternative substrates near the trap (France, UK) – worked well with up to 50% eggs laid on attached ropes with increase of catch per trap (that year);
- Deterring egg laying on traps using antifouling tech (Greece) - success, but catch rates went down.
- Habitat restoration (artificial coral reef in Singapore) – cuttlefish moved in small-scale study

## 5. Break out Session 1 – Current issues and Potential Management Options



### Breakout session 1

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What are the issues that we need to look to address for cuttlefish?

How should these be prioritised?

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### Potential Management Options

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What are the potential options?

What are the pros and cons of the options?

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## 6. Break out Session 2 – Action Planning Defra



### Breakout session 2

What actions are necessary to appropriately address issues?

What are appropriate timeframes for doing so?

- Think about Evidence, Engagement, Management as suggested themes for discussion.

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## 7. Break out Session 3 – Action Planning MMO



### Breakout session 3

Who are the key representatives who need to be involved to fix the issues?

How do we want to work together?

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