

Minutes for Environmental sub-group meeting

Meeting Date: 17th November 2022

Location: Online

Attendees	Organisation
AC: Annika Clements	Ulster Wildlife Fund
BL: Bill Lart	Seafish
CD: Calum Duncan	Scotlink
CP: Claire Pescod	Macduff Shellfish
EW: Elaine Whyte	Creel Fishermen's Association
FN: Fiona Nimmo	Poseidon
GB: Giles Bartlett	Whitby Seafoods
JP: Jo Pollett	Marine Stewardship Council
LB: Lisa Bennett	Marine Stewardship Council
MF: Mairi Fenton	Herriot-Watt University
MK: Michael Kaiser	Herriot-Watt University
RW: Rob Whiteley	Natural England

Purpose of the meeting

This meeting was an opportunity for MF to provide an update on her PhD research on the impacts of scallop dredging, and for the group to discuss progress with the wheelhouse guide designs. The group also discussed the Clean Catch app, and FN provided an interim review of the creel alternative measures report in relation to whale interactions.

Agenda Item 1: Dredge impact research update – Mairi Fenton

MF provided an update of her PhD research project focussed on modelling habitat impacts of scallop dredging around the UK. MF said the main limitation of the study was low resolution data, and she hoped to get access to high resolution data from Marine Scotland soon. MF conducted an initial assessment for each of the pre-determined 'sensitive' habitats (15 types), and a map was created showing the mean swept area ratio from occurrence records of the habitat and aggregated Vessel Monitoring System (VMS) data from 2015-2018. The maps can then show the overlap of fishing activity with those sensitive habitats.

Less sensitive habitats ('commonly encountered habitats') were also considered in the study by using Relative Benthic Status (RBS) which uses fishing effort, depletion rate and recovery rate to determine a score for the state of the habitat. MF said due to data limitations, this has been done at C-square level for now which is approximately 15km² (9 miles²).

Relative benthic status

MF created a map which shows RBS for the whole of the UK against mean swept area ratio using data from 2015 to 2020. The map, and associated histogram, shows areas that are more impacted by scallop dredging than others, those being: circalittoral coarse sediment, circalittoral sand, offshore circalittoral coarse sediment and offshore circalittoral sand. MF said she needs to determine the best way to include rocky habitats, as they have longer recovery rates than sedimentary habitats, so it may be better to include them in the sensitive habitats analysis.

Regional assessments

MF has created a map for each ICES area, and included data of fishing activity records which also contain VME records, and the RBS score for each sea square. These maps can be used to help identify 'hotspots' where it may be interesting to model different potential management measures. The maps can also be filtered to only show the areas in the region with RBS <0.8 (more impacted areas) and to include those areas with vulnerable marine ecosystems (VMEs), to again highlight areas which could be a focus for modelling different management measures.

Further considerations include: only having access to low resolution VMS data (currently), not having a record of every VME occurrence, records being skewed by survey efforts linked to fishing area, the implications from the updated MSC Standard, and needing to compare the RBS results to the Bangor University benthic impact tool which was recently released. There are also no data currently available for <12m vessels.

Next steps

MF needs to consider the best approach to analyse impacts on rocky habitats, and wants to now model different management scenarios, for example what is the impact on habitat when there is an overall reduction in fishing effort or if marginally fished areas are removed. She also wants to focus on providing more detail on the 'hotspots' identified in the regional assessment maps, and raised the possibility of comparing this work to the JNCC BH3 assessment.

Discussion

CP said this information will help provide the evidence base for the Steering Group to start thinking about the potential management options for this fishery. CP said that the Dogger Bank Special Area of Conservation (SAC) closures must have been implemented after the date that the VMS fishing data was collected that MF has used in the maps. It could be misleading by suggesting that fishing is occurring in a closed area, which it isn't, so it's important to relay that information accurately. MF agreed and suggested she could possibly highlight those closed areas that have come in since the date the fishing activity was collected with a different colour.

MF confirmed that the database she used, EMODNet, captures all the information that Marine Scotland would have used for their work on MPAs and Priority Marine Features. CD asked if fan mussels or ocean quahog were included in the sensitive habitat list, and MF explained that those species come under Endangered, Threatened and Protected (ETP) species. CD commented that he remains concerned about what the distribution of these features should be without fishing pressure, and importance of having an informed decision on what the acceptable impact is. CD asked how rocky habitat is defined; if it contains boulder-type habitat then he believes it should be considered sensitive habitat. MF acknowledged the lack of granularity in the data and that she needs to think about how to include habitats like cobbly areas for example, and also how the wording of the new Marine Stewardship Council (MSC) Standard might influence this work. CD explained that as before he was wanting to be clear to the steering group about where Scotlink's policy position lies, (including a presumption against trawling and dredging in a significant part of the inshore area (previously minuted)) and that they have some concerns about how the FIP process assesses scoring against performance indicators based on modelling work.

MK said it's important to think about what this information tells us in relation to the fishery moving towards the MSC process and how this information potentially informs a management strategy for the fishery. MK proposed the possibility of initially excluding the sea areas from the MSC process where there is uncertainty in the information around VMEs and sensitive habitats, with the expectation to bring them in at a later point in time when better data is available. However, FN said from a Principle 2 perspective, the assessment would consider the impact of the gear type across the management area of the fishery, so any areas where there may be a probable impact could not just be left out of the assessment.

RW said Natural England have their own internal habitat sensitivity tool which they intend to compare with BH3 and RBS, and RW can feed that information in to MFs project also. RW asked if Lauren Parkhouse from Devon & Severn IFCA was going to provide iVMS data for that area, which JP will follow up, although this data may not be directly relevant for MF's work as it is from the Channel.

Inshore vessels

EW said a lot of her vessels are <12m in length, and she has concerns that there may be management measures brought in for the inshore area where there is (incorrectly) thought to be limited fishing, due to the lack of available iVMS data. She asked how management measures were being discussed alongside other management bodies who are looking at technical measures and closures, and explained that some changes are being brought in quickly. There can also be an imbalance in management measures due to imbalanced survey effort i.e. where more surveys are taking place, more management measures are brought in, and this can have socioeconomic and market impacts.

CP asked EW how to ensure the right information is collected and fed into this research so there are no 'quick wins' in the inshore space. EW said Communities Inshore Fisheries Alliance (CIFA) are collecting that type of data for the upcoming PMF work with Marine Scotland, so there may be an overlap with this work with regards to information gathering and technical measures. CP said at a meeting she, JP and GB had with Jim Watson at Marine Scotland, they discussed that any management measures that come out of the FIP process should be fed back through the Fisheries Management and Conservation Group (FMAC). CP mentioned that the West Coast Regional Inshore Fisheries Group (IFG) chair is also the chair for the Nephrops West of Scotland regional management group, so there is good overlap there with the IFG.

Next steps

FN said it would be very useful to look into those areas where VMEs overlap with areas of <0.8 on the RBS scale. It will also be important to further discuss ETP species like ocean quahog and fan mussel and where these species should be considered in the new MSC Standard, and the group should pick this up at a future meeting. MF said one of her tasks was to look at mapping the possible distribution of ETP species which fall within the benthic space. MK would like the group to discuss which management scenarios would be useful or MF to look into, to help inform management strategies into the future.

Actions from Item 1:

1. MF to
 - consider highlighting the areas closed to fishing (e.g. Dogger Bank SAC) that have been implemented since the data were collected, so it is clear no fishing has taken place in those areas since their designation
 - consider looking into areas where VMEs overlap with areas scoring <0.8 on the RBS scale
2. RW to share any work completed using Natural England's internal habitat sensitivity tool with MF
3. Secretariat to
 - follow up with Lauren Parkhouse at Devon & Severn IFCA to investigate the possibility of using their iVMS data for any relevant work within the FIP
 - note FNs comment about discussing how ocean quahog and fan mussels are considered in the new MSC Standard at a future meeting
 - follow up with EW to ensure information and data collected by CIFA for PMF work with Marine Scotland is fed back into the Steering Group
4. MK and MF to follow up with the Secretariat on how to discuss potential management measures to model i.e through a questionnaire or similar
5. EW to consult with local fishermen to understand the impacts of MFs research on inshore fisheries in Scottish waters

Agenda Item 2: ETP reporting tools*Clean Catch app*

LB updated that Stuart Hetherington is no longer working on the Clean Catch App (CCA) as he has left Cefas. The role has been taken on by Silvia Rodriguez-Climent. The last update from Stuart suggested that recent user testing highlighted further issues which need to be resolved before the app would be ready for field tests, and this would probably not be until December at the earliest. LB asked the group whether they were happy to continue to wait for the app updates to be completed, or whether to consider pursuing other options such as the excel-based log sheet that FN created as either an interim measure or a permanent way to proceed.

*Discussion**Clean catch app and BATMap*

CP said that Macduff were still available to trial the CCA on their vessels when it is ready and that it would likely be a lot of work to change to a new method when so much work has already gone into the CCA. CP suggested setting an arbitrary deadline, like summer of 2023, to wait for the CCA to launch.

JP said the two ETP performance indicators for this FIP are still scoring below SG60, and the FIP is behind target due to the delays in deciding on a method (an app) and the time taken to develop the software. JP said it was important to consider how long the group is prepared to wait for the CCA, and also mentioned an app designed by Scottish Fishermen's Organisation called BATMap, which is predominantly focussed on bycatch avoidance, but may be able to be expanded to include ETP species.

EW said her members had made enquiries about joining the BATMap scheme but it mostly is used by larger boats at the moment, and Paul Macdonald is the person to contact about it.

CP asked what the SFSAG solution to this ETP performance indicator is, JP explained they have a recommendation that they need to investigate the implementation of a self sampling scheme to collect information on ETP interactions. JP said the Secretariat had a discussion with Jennifer Mouat and she agreed that due to the vessels overlap, the FIP and SFSAG could work on a common solution, although this FIP has a timeline associated with the action, whereas it is a recommendation from the CAB for SFSAG. LH asked how long the group has been waiting for the CCA to be developed and JP said it has been over a year. The app is already being used in the South West, however there have been issues updating the software for use with dredge or trawl gear. The Steering Group all agreed the CCA is the preferred option but it's important the group continue to push this as a priority.

Remote electronic monitoring

RW asked if there had been remote electronic monitoring (REM) work to cross reference any on-board recordings of ETP species. JP said not yet, however if there was a funding opportunity then that is something the group could look at. CP said their fishermen did trial some cameras in the past and would be willing to do it again alongside the CCA, although their vessels do not work inside 12 nautical miles. RW mentioned Project360 which uses artificial intelligence and voice recognition, and discussed how using these apps can help promote a positive image for the fishery. CP mentioned that in the recent Crab Management Symposium, Marine Scotland discussed using cameras on vessels, and suggested contacting them to get an update. FN said for scallops, Marine Scotland Science have drafted a bycatch report which covered ETP interactions and allows comparison of fishing dredge gear with their scientific dredge gear, which could provide another route of quantitative data. CD said he thought over 90% of scallop vessels in Scotland have REM fitted, so if data can be shared that might be useful and that MCS, WWF and RSPB recently collaborated on the TransparentSea report on REM, which he will send to RW as requested.

Actions from Item 2:

1. Secretariat to
 - continue working with Cefas and the Clean Catch app and ensure we are up kept up to date of any new information on when the app may be ready for testing
 - contact Marine Scotland for any upcoming projects on remote electronic monitoring
 - contact Paul Macdonald at BATMap to discuss the possibility of adding ETP species to their app design
2. CD to share REM consultation report with RW

Agenda Item 3: Wheelhouse guides

LB updated that the Secretariat had met with Danny Poulding from Shark Trust recently to discuss the ETP list for the Round 2 FIPs. Danny reviewed the lists that were compiled through the MSc students and Steering Group input and added additional species which FN agreed were relevant to the FIPs. Shark Trust have created a new type of Fisheries Advisory (single page ID/information guide) for the Western Fish Producers Organisation (WFPO) which has similar requirements for ETP reporting. The new Advisories are more picture based and clearly show key information for the relevant ETP species

such as recording requirements, whether the species can be retained and in which areas. The Advisories will be made into a poster to go up in the wheelhouses of the WFPO vessels. LB asked if this idea was of interest to the group as the template was already made up, and may be quite simple as a way of prioritising the list of ETP species for these FIPs. These Round 2 FIPs have a large number of ETP species (50+), so the list needs to be prioritised, and then a poster could be created with the 'highest priority' species which fishermen could stick in their wheelhouse. LB suggested the posters could be regional to account for the different ETP priority species in each region and the other species which are not on the poster could then go into the wheelhouse pocket guide which has been previously discussed.

Discussion

AC said this work is timely as DAERA have committed to produce an elasmobranch strategy by the end of 2023. As part of that process, DAERA have recently undertaken a formal review of the 'Priority Species List' which includes species that require conservation action because of their decline, rarity and importance in an all-Ireland and UK context (not just elasmobranchs); the final priority list has not yet been published. In regards to the elasmobranch strategy, this process should be finishing in March 2023 which will help to highlight priority species in Northern Ireland, and where the overlap might be with certain fisheries. This could help identify ETP species that may interact with the Project UK fisheries. AC reiterated her offer to assist with prioritising the ETP species list to further progress this body of work.

LH asked how the Fisheries Advisories account for crew with different languages as a lot of them may not have English as a first language. LB said the new Advisories from Shark Trust have focussed on pictures rather than words for that reason, and LH and LB discussed the use of QR codes as part of the Advisories, which could provide a translation into different languages.

Actions from Item 3:

1. AC to share information from DAERA priority species review with the Secretariat, when available.
2. Secretariat to
 - share the ETP species lists with the group for prioritisation so next steps with Advisories/Wheelhouse guide can be progressed.
 - consider QR codes when supporting the design of any Wheelhouse guide or Fisheries Advisory posters.

Agenda Item 4: Creel alternative measures report

Following the last sub-group meeting, BL shared the review of alternative measures (RAM) report for the *Nephrops* creel fishery, and FN was asked to provide feedback on the level of whale interactions documented in the report. FN updated that the Scottish Entanglement Alliance (SEA) have published a range of reports and guidance on reducing entanglement risk, but also of understanding the impacts and interactions with marine animal entanglement in the Scottish creel fishery (one in 2020, one in 2021).

Scottish Entanglement Alliance report

The SEA website contains a Good Practice Guide which clearly lays out what the procedures should be and what should be recorded in the case of an entanglement. FN asked that the industry representatives on the Steering Group check with their creel members whether this guidance is something that is known by fishermen, or whether there is anything the Steering Group can do to help support the distribution of that information. FN went through the SEA 2021 report, emphasising that the report estimates that 95% of entanglement cases are unreported, and that it is essential to expand the amount and quality of data collected on entanglements. For a Principle 2 assessor, an area of concern is that the report states the extent of entanglement events in Scottish waters may be sufficient to impact at a local population level, which is a concern for the population recovery trajectories of minke and humpback whales.

Creel review of alternative measures report

In the creel RAM report, BL indicated that occurrence of minke whale entanglement was estimated at 30 whales per annum based on the 2018-2019 period, and mortality equating to 24.6 fatalities per annum for Scottish waters. This is 2.2% of the estimated population of 695 minke whales for the west coast of Scotland. There is no agreed number of 'unacceptable' levels of removal, although as an example, the Agreement of the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS) have stated that anthropogenic removal above 1.7% of the population estimate (for harbour porpoise) is unacceptable. Therefore, the population estimate is clearly a very important factor, and FN looked further into where the number of 695 was taken from. The population data came from the SCANS-III aerial and shipboard surveys report, specifically areas 'G' (410 individuals) and 'I' (285 individuals) which correlates to the west coast of Scotland, where the SEA report found areas of co-location in terms of creel fleets and minke whale distribution (west coast of Scotland). However, these data are defined by the survey work, not the overall distribution of the species. FN referred to the 2019 Joint Nature Conservation Committee (JNCC) 'Conservation status assessment for the species' report on minke whales, which provides a population estimate of 12,340 individuals. This number means the 24.6 fatalities from entanglement in creel gear equates to 0.2% of the population.

FN summarised that using population sizes is important in estimating what the level of entanglement interaction is, and the case may be less severe than suggested by the SEA report, but welcomed more input or current data on this topic. Importantly, if there are estimated to be 30 whale interactions per year in Scottish waters, then the fishery needs some tool to record those.

Benchmarking and Tracking tool (BMT)

FN said the Benchmarking and Tracking tool for the creel fishery shows a score of SG60-79 for all ETP performance indicators. By the end of Year 4 (April 2023) the score for PI 2.3.3 Information was expected to change to SG80 based on the data recording of any incidental encounters of ETP species. Although the information provided in the SEA report may be useful to improve PI 2.3.3, FN suggested that the fishery may need to undertake some self-reporting of ETP interactions for that score to increase.

Discussion

CD asked if FN could share the information for her review of the creel alternative measures report and whale interactions with Steering Group.

Actions from Item 4:

1. EW to ask her members if they know of, or use, the SEA website for information on entanglement procedures
2. FN to share the relevant information (e.g. slides, JNCC report, SEA report) regarding the creel alternative measures report and whale interactions

Any Other Business

N/A

Meeting Closes

Actions Arising	Responsibility
Mairi Fenton to: <ol style="list-style-type: none"> 1. Consider highlighting the areas closed to fishing (e.g. Dogger Bank SAC) that have been implemented since the data were collected, so it is clear no fishing has taken place in those areas since their designation 2. Consider looking into areas where VMEs overlap with areas scoring <0.8 on the RBS scale 	MF
RW to share any work completed using Natural England's internal habitat sensitivity tool with MF	RW
Secretariat to: <ol style="list-style-type: none"> 1. Follow up with Lauren Parkhouse at Devon & Severn IFCA to investigate the possibility of using their iVMS data for any relevant work within the FIP 2. Note FN's comment about discussing how ocean quahog and fan mussels are considered in the new MSC Standard at a future meeting 3. Continue working with Cefas and the Clean Catch app and ensure we are up to date of any new information on when the app may be ready for testing 4. Contact Marine Scotland for any upcoming projects on remote electronic monitoring 5. Contact Paul Macdonald at BATMap to discuss the possibility of adding ETP species to their app design 6. Share the ETP species lists with the group for prioritisation so next steps with Advisories/Wheelhouse guide can be progressed. 	Secretariat

<ul style="list-style-type: none"> 7. Consider QR codes when supporting the design of any Wheelhouse guide or Fisheries Advisory posters 8. Follow up with EW to ensure information and data collected by CIFA for PMF work with Marine Scotland is fed back into the Steering Group 	
MK and MF to follow up with the Secretariat on how to discuss potential management measures to model i.e through a questionnaire or similar	MK/MF
EW to consult with local fishermen to understand the impacts of MFs research on inshore fisheries in Scottish waters	EW
CD to share REM consultation report with RW	CD
AC to share information from DAERA priority species review with the Secretariat, when available.	AC