

UK Scallops: Endangered, Threatened and Protected species research minutes

Meeting Date: 25 August 2020

Location: MS Teams

Attendees	Organisation
AT: Adam Townley	New England Seafoods International
BL: Bill Lart	Seafish
CD: Calum Duncan	Scot LINK
CM: Carrie McMinn	Agri-Food and Biosciences Institute
CP: Claire Pescod	Macduff Shellfish
DD: David Donnan	NatureScot
EW: Elaine Whyte	Community Inshore Fisheries Alliance
FB: Femke de Boer	Scottish White Fish Producers Association
FN: Fiona Nimmo	Poseidon
HS: Hayley Swanlund	WWF-UK
HW: Harry Wick	Northern Ireland Fish Producers Organisation
JP: Jo Pollett	Marine Stewardship Council
JPO: Jim Portus	South West Fish Producers Organisation
KK: Katie Keay	Marine Stewardship Council
LB: Lynda Blackadder	Marine Scotland Science
LL: Lara Leonard	University of York
MF: Mairi Fenton	Heriot-Watt University
MK: Mike Kaiser	Heriot-Watt University
MS: Matt Spencer	Marine Stewardship Council
Observing	
AH: Adam Holland	Queen's University Belfast

Purpose of the meeting

This call was an opportunity to review the recently completed University of York Masters research on scallop dredge fishery interaction with Endangered, Threatened and Protected (ETP) species in the North Sea, West of Scotland and the Irish Sea, and to discuss next steps.

Introduction

KK reviewed the progress of actions from the minutes of the last meeting. BL had shared the ICES elasmobranch work with Bryce Stewart and FN, Annika Clements and FN were working on Northern Ireland Priority Marine Features and FN had reviewed the final ETP list before sharing with LL. The research conducted by LL is the first step in addressing the ETP action in the FIP Action Plan, and industry will need to provide feedback so the best course of action can be determined.

Endangered, Threatened and Protected species presentation

The aim of this research was to assess the level of interaction between scallop vessels and ETP species in the Unit of Assessment (UoA). The research objectives were to identify ETP species present in the UoA, identify the main scallop dredging grounds, conduct a GIS-based risk assessment based on

species distribution and fishing effort maps and conduct a gap analysis to determine if any ETP species had been missed.

LL presented information on the UK scallop fishery from MMO landings data, Bangor University dredge research and Seafish reports; which showed that:

- Between 2015 and 2018 UK scallop vessel numbers decreased overall;
- Between 2015 -2018 scallop landings have decreased in the UK, particularly in the >12m sector;
- In 2018 over 50% of total UK scallop landings were from ICES divisions 4a, 4b, 6a and 7a;
- There have been reductions in landings per unit effort since a peak in 2012;
- Elasmobranchs were caught in both MMO and Bangor University datasets suggesting their presence as bycatch may be quite frequent; and
- the only ETP elasmobranchs captured were starry ray and common skate.

Research process

Fishery footprint

To map spatial footprint of the fishery, LL downloaded >15m vessel VMS data from MMO and Defra. She also obtained non-public VMS data from MMO for vessels >12m. Having both >12m and >15m VMS data allowed her to conduct a more robust hotspot analysis of where the fishing activity was greatest as more vessels could be accounted for. Clusters of these hotspots of fishing activity indicated the main fishing grounds, which she then counted the hotspots per ICES rectangle to show where was the highest fishing intensity. Areas with the largest number of hotspots were initially identified as the areas with most risk of interacting with ETP species, due to the large fishing effort present.

ETP suitability

Using the ETP list developed by the Steering group, LL consulted with industry and the ICES scallop working group to remove some species. Where there was data lacking or no expert opinion for each species presence or absence, she followed a precautionary approach and those species were retained on her ETP list for assessment. These were: Atlantic sturgeon, twaite shad and allis shad. The results of her research and consultation concluded that 19 species were at risk of interacting with the fishery. These were then used in the encounterability assessment.

LL used the depth range of the fishery and the depth range of each ETP species to determine encounterability. This showed that five species were classified as high-risk, on a three-point scale, due to their likelihood of encountering fishing gear, 10 were medium-risk and four were low-risk in terms of encounterability. Three of the five high-risk species were fragile invertebrate species: burrowing sea anemone, ocean quahog and pink sea fan; with the remaining two being Atlantic sturgeon and short-snouted seahorse.

To determine areal overlap, LL obtained species distribution data from National Biodiversity Network (NBN) Atlas. LL used GIS to overlap vessel VMS data with species distribution, but was unable to obtain data for all species in each of the three areas of the Unit of Assessment (UoA). Out of the 19 ETP species taken to assessment, only 17 were considered for areal overlap, as two species of seahorse were data deficient. Results from areal overlap analysis showed that most species were listed as at risk, due to distribution overlap with the fishery. Only two species in the North Sea were

listed as medium-risk, one species in the West of Scotland and one in the Irish Sea. Within the Irish and North Seas, there were several species with 100% of their distribution overlapping with the fishery. Notably, all six elasmobranch species being assessed had 100% overlap with the fishery hotspots, which LL said supported other studies indicating elasmobranch are vulnerable to scallop dredging due to the high likelihood of interacting with the gear.

Regional risk score and most at-risk species

LL used her areal overlap and encounterability risk scores to identify which regions within the Unit of Assessment (UoA) are most likely to have interaction with ETP species and may need to implement an ETP management strategy. The West of Scotland and Irish Sea were the regions in the UoA with the highest risk ETP interaction, with the North Sea deemed less risk. LL presented the results of her risk assessment to show that the following ETP species should be considered most at risk of interaction with scallop vessels:

- North Sea: sturgeon and ocean quahog
- West of Scotland: burrowing sea anemone and ocean quahog
- Irish Sea: sturgeon and ocean quahog

Summary of findings

- There were 19 potential ETP species identified for assessment from the original ETP list FN provided; however, the MMO landings data and Bangor University dredge research showed only starry ray and common skate were caught as bycatch.
- Areal overlap analysis was performed on 17 species, 13 of which were considered high-risk due to high overlap with the VMS data.
- Ocean quahog, burrowing sea anemone and the Atlantic sturgeon were species identified as most-at-risk of interaction with the fishery.
- All six elasmobranchs had 100% of their distributions overlapped with the fishery in either the North Sea and Irish Sea but were not identified as most-at-risk species.
- West of Scotland and Irish Sea were the two areas that will require the most effort to meet SG80 requirement for ETP species in the MSC Standard.

Caveats and limitations

- LL was unable to find data on spawning or nursery grounds for ETP species. LL requested supporting data from The Shark Trust but did not receive a response. The Seahorse Trust also did not have the capacity to support this work but LL suggested it would be worth following up again later in 2020 when they are expected to have more availability.
- Due to the short time frame and the Covid-19 pandemic it was difficult to contact fishermen for their input on the ETP list, so their input is needed in the future.
- Vessels <12m are not required to have VMS so LL was unable to map their fishing effort. LL thought this was of most concern in the North Sea as fishing effort was greatest in that region from <12m and >15m vessel data.
- LL noted that her precautionary approach to the analysis may have caused false positives and given an increased risk score for many species taken forward for analysis.
- A Productivity-Susceptibility Analysis (PSA) was not undertaken due to lack of time and data availability.

Discussion

MK asked whether the encounterability analysis was only based on depth of species and fishery. LL said that she used depth estimation for both the fishery and ETP species after speaking with her mentor, Bryce Stewart and conducting a literature review. MK suggested that modelling habitat suitability would add greater accuracy to this report as depth as an indicator is a crude tool. MK thought that the report could be strengthened if the International Beam Trawl Survey reports were reviewed and incorporated as it would help confirm the ETP species distributions. BL mentioned that there was a paper by Simon Deadman of the Marine Institute in Ireland who mapped ETP distribution using the dataset MK mentioned. MK also noted it was a shame that the Seahorse Trust did not respond to LL's request for information.

LB asked how the VMS hotspots were defined. LL said that GIS would not allow a direct hotspot analysis using the VMS data so she and her supervisor identified areas with the most fishing effort, work out the top 10% of effort by hours fished, and map them onto GIS.

EW stressed the importance of involving fishermen in studies such as these and thought the report could be further strengthened with fisher's data. EW also asked whether LL had been in touch with the Inshore Fisheries Groups (IFGs) in Scotland and LL confirmed she had not. LL said she had spoken with the North East IFCA and contacted Marine Scotland for inshore data as well as using ScotMAP data. LB said that ScotMAP data was slightly outdated for some vessels and Marine Scotland was unfortunately unable to share <12m vessel data with LL due to a report currently being written up by Marine Scotland Science.

HS asked why some elasmobranchs from the original ETP list were not assessed when the report indicated high encounterability with the fishery. LL said she had spoken with the chair of the ICES elasmobranch working group who said which species were unlikely to interact with the fishery. For elasmobranchs that were not discounted, they were analysed for encounterability and overlap with the fishery.

DD asked why horse mussel was not on the ETP list, which LL said was because it would be considered under the habitats section of the MSC Standard. FN suggested that assessing habitat suitability could be a next step to refine the results of areal overlap. FN pointed that considering areal overlap on a scale as large as the ICES area may have caused many species to be considered as high-risk.

FN suggested that the next steps for the Steering Group are to set up a formal process for providing comment on the report, along with identifying habitat suitability for the ETP species. The research should also be reviewed by industry for their agreement on the level of ETP interaction. LL already shared her data with the Secretariat, which will enable the Steering Group to build on the research undertaken so far. A PSA will need to be conducted for each species, which could be undertaken by FN or a Steering Group member.

CM said AFBI held data for Northern Ireland scallop survey data that could be used to support if the report is revisited; something BL added to by making the Steering Group aware that the International Beam Trawl Survey had been used in work like this before..

FN said action 7c was to discuss an ETP log and reporting protocol which was highlighted as being important to start working on at the last meeting (November 2019). CP mentioned that the group had previously discussed elasmobranch reporting and that the Scottish Fisheries Sustainable Accreditation Group (SFSAG) already use a skate and ray guide. CP asked whether vessels in this FIP could also use

the SFSAG guide. FN said a protocol for recording ETP interactions was also being developed for the Round 1 Channel scallop FIP.

LL agreed to make some amendments to the report based on the Steering Group feedback. The Steering Group agreed to provide feedback to LL within a month.

JPO thanked LL for her presentation but cautioned the work may already be dated as a significant new scallop fishery had just begun in the North Sea, on Dogger Bank, so the group need to think about what to do in regards to research of this new stock. FN explained that the lag time in gathering stock and VMS data and makes it difficult to conduct an analysis on the new stock for the imminent future; it is important to consider that fisheries grounds change over time. CP recommended forming a sub-group to focus on the Dogger Bank closure as it was currently being discussed in the SICG and provide updates to the FIP.

Actions

- Secretariat:
 - a) To arrange meetings with IFGs and Marine Scotland
 - b) to follow up with SFSAG to find out if their skate and ray guide can be shared with the group
 - c) To check who on the Steering Group would like to participate in the Dogger Bank scallop sub-group via the SICG
 - d) To share the comment and review documents created by FN to the Steering Group for feedback from LL's report
- FN to draft a feedback template for LL report, which the Secretariat will circulate
- Steering Group to review LL report and provide feedback by the 25th September

Any Other Business

The draft minutes will be circulated in three weeks' time.

Meeting Closes

15.00

Actions Arising		Responsibility
1	Scallop ETP report: <ul style="list-style-type: none"> • Secretariat: <ol style="list-style-type: none"> a) To arrange meetings with IFGs and Marine Scotland b) To follow up with SFSAG to find out whether their skate and ray guide can be shared with the group c) To check who on the Steering Group would like to participate in the Dogger Bank scallop sub-group via the SICG d) To share the comment and review documents created by FN to the Steering Group for feedback from LL's report • Steering Group to review LL report and provide feedback by the 25th September • FN to draft a feedback template for LL report, which the Secretariat will circulate 	<p>Secretariat</p> <p>Steering Group</p> <p>FN</p>