TERMS OF REFERENCE

ETP Bycatch Reduction in UK Seafood Supply Chains - Innovations & Next Steps

Overarching Purpose

This project seeks to inform UK food business on available and developing bycatch reduction measures that can be implemented in sourcing fisheries to reduce the incidence of endangered, threatened, and protected species (ETP) bycatch in the UK seafood supply chain. It also seeks to act as a resource for other stakeholders, including governments and catching sectors, to support and encourage the uptake of bycatch reduction policies and innovations, including the use of Remote Electronic Monitoring (REM) with cameras, for example by providing funding, encouraging trials, or supporting implementation. There will be a call to action for governments to further support the industry with mitigation initiatives and lowering the barriers which constrain the industry in driving positive changes.

Background

Seafood is the primary source of animal protein for 3.3 billion people around the world and provides employment to 58.5 million people, acting as an important component of global nutrition, food security and livelihoods[1]. However, fishing activities are the biggest contributor to biodiversity decline in our oceans[2], compromising marine ecosystems if left unchecked. Biodiversity is essential to the functioning of oceans, and a healthy ocean is critical for the health of other natural systems, human health and rights, food security and tackling climate change. Therefore, it is vital we protect our oceans and the biodiversity they are home to.

One of the most prevalent ways that fishing threatens biodiversity is through bycatch of species caught unintentionally when targeting another species. Of particular concern to marine biodiversity is the incidental bycatch of endangered, threatened or protected (ETP) marine species such as sharks and rays, marine mammals, turtles, and seabirds. It is estimated that both aquaculture and fishing activities associated with the UK's seafood demand has directly impacted at least **253** ETP species[3] around the world, primarily through bycatch. Taking account of overlapping natural ranges with fishing and aquaculture activities, the number of species at risk of impacts rises to 528[4]. While progress has been made in some fisheries, ETP bycatch remains a major issue in most wild-capture fisheries globally. ETP bycatch is typically poorly documented, if at all, in existing monitoring and reporting programmes. It is evident that much more needs to be done to ensure the impacts of the UK's seafood supply chains on ETP and other vulnerable species are minimised as a key element of the necessary shift to sustainable fisheries.

Substantial effort has been applied worldwide to bycatch reduction research of non-target marine species by utilising different fishing technologies, fishing gears, and techniques[5]. Innovations can range

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[1] FAO State of World Fisheries and Aquaculture, 2022: https://www.fao.org/publications/sofia/2022/en/

[2] Booth_et_al_2021_Bycatch_levies_could.pdf

[3] Risky Seafood Business: A comprehensive analysis of the Global Footprint of UK's seafood Consumption Technical Report 2022: WWF_Risky_Seafood_Business_Technical_Report_2022.pdf

[4] Risky Seafood Business: A comprehensive analysis of the Global Footprint of UK's seafood Consumption Technical Report 2022: WWF_Risky_Seafood_Business_Technical_Report_2022.pdf

[5] Jenkins, L.D. *et al*. (2023) Uptake of proven bycatch reduction fishing gear: perceived best practices and the role of affective change readiness. ICES Journal of Marine Science (Uptake of proven bycatch reduction fishing gear: perceived best practices and the role of affective change readiness | ICES Journal of Marine Science | Oxford Academic (oup.com)

from targeted solutions, such as the use of circle hooks to reduce turtle bycatch in pelagic longline tuna fisheries or cameras and lights on fishing gear to provide visibility and improve catch precision, to broader solutions such as the use of Remote Electronic Monitoring (REM) that uses cameras on vessels. There are however several important barriers that are preventing the increased uptake of technological and practical innovations to reduce bycatch in fisheries. These barriers include, but are not limited to, implementation costs, lack of incentives (policy and market), lack of urgency and lack of knowledge sharing. Therefore, further collaboration is needed to increase awareness of trials and implementation of mitigation techniques to reduce or eliminate ETP bycatch for the UK's seafood supply chains. This includes outlining estimated costs and resources for implementation, and where innovations are being actively deployed.

There is an urgent need to understand how the uptake of technological innovations in fisheries can be increased to reduce bycatch of ETP species. Reducing bycatch incidences is in the interest of businesses, governments, consumers, and the catching sector itself; urgent collective action among these stakeholders is essential to minimising and eventually eliminating the impacts of the fishing activities on ETP and other vulnerable species.[6]

Project Scope

This report will focus on technological innovations with the aim of reducing incidental ETP bycatch in source fisheries supplying the UK's seafood market. It should focus on those supply chains identified in the Risky Seafood Business reports that have been evaluated as medium or high risk for impacts to Endangered, Threatened and Protected (ETP) and other vulnerable species.

Aims

In accordance with the overarching purpose, the aims of this project are:

1. To provide further rationale for why we need to reduce ETP species bycatch and why this concerns UK businesses, governments and catching sectors, emphasising that reducing bycatch should ultimately be viewed as a condition of doing business, i.e. the report should clearly outline the UK's obligations to reduce bycatch as part of it membership to any national and international agreements / treaties etc, and how bycatch mitigation is an important component of certification.
2. To collate information on available and developing technological innovations to reduce bycatch of ETP species in fisheries that are relevant to the UK seafood supply chain.
3. To inform UK food business actions to meet the WWF Basket, WWF UK Global Footprint and Seafood Jurisdictional Initiative objectives for bycatch, with the overall goal of 100% of seafood from sustainable sources by 2030.
4. To inform UK/international governments, UK/international catching sectors, and businesses on innovations available and promote further roll-out to reduce the UK ETP bycatch in our local and international seafood supply chains.
5. To provide further information to support WWF's call for Remote Electronic Monitoring (REM) with on-board cameras to support monitoring and compliance.

Objectives

The objectives of this report are:

[6] Pinn, E. (2023) Porpoises, by-catch and the 'pinger' conundrum (wiley.com)

1. To update the ETP bycatch situation in the UK seafood supply chain based on the methods and findings of the WWF Risky Seafood report and explain why we care;
2. To conduct a high-level investigation of technological bycatch reduction innovations already implemented and under development in UK seafood supply chain source fisheries in scope.
3. To evaluate the costs to implementing or supporting development of these innovations, who would pay and receive these costs at different stage of development/implementation of innovation.
4. To identify the overall barriers (financial, policy, etc.) to greater adoption of innovations in fisheries in scope.
5. To provide recommendations to UK governments and food businesses for supporting the uptake of innovations in fisheries.
6. To provide recommendations to catching sectors for increasing the uptake of innovations.

Focal topics and methodology

The priority topics of interest of this report are:

1. Data collection on technological bycatch reduction innovations across fisheries in scope.
2. Estimation of costs and practicalities of implementation or supporting development of innovations.
3. A summary table which includes the information in points 1 and 2.
4. 8-10 case studies on select innovations (e.g. Smartsnap, pingers, passive acoustic reflectors, Insight360, SharkGuard, etc).

All focal topics may be fulfilled through literature reviews, searching of public reports, interviews with fishers, producer organisations and/or technology providers, and any other methods to meet the aims and objectives of this project.

Deliverables

The outputs of this study will be:

1. A full report which provides a high-level summary of technological bycatch reduction innovations gear and practices implemented and under development in UK seafood supply chain source fisheries in scope; estimation of costs and practicalities of innovations.
2. A public facing executive summary (no more than 2 pages of text) with appropriate graphics, will also be produced.

The consultant will deliver a report of sufficient quality and depth so that the aims and objectives of the project are answered.

The consultant will provide, within the final report, a full description of the data and the date on which it was collected. Any uncertainties/limitations surrounding the accuracy of the data should also be highlighted. The final report and the data will be owned by WWF-UK but attributed to the contractor.

Consultant Identification

Interested consultants should **submit a project proposal by 21st January 2024** and clearly outline the proposed methodologies and how they meet all objectives listed in the 'Objective' section and that covers all the priority topics in the 'focal topics & methodology' section. The proposal should also

provide a realistic but ambitious timeline, resources allocation on delivering the report, CVs with relevant experience and any applicable charging.

Selection of consultant
Selection of consultant will be based on a set of criteria including background and experience, understanding of the topic, methodology and value for money.

Project Management
The project will be managed professionally and ensure timely completion of the deliverables.
Communication with WWF-UK will be regular and include in-person and/or remote (e.g., email, telephone, Zoom, etc.) communications as required. At a minimum, a biweekly verbal update will be anticipated and there to be a presentation of interim findings/project updates. If a need is identified for *ad hoc* meeting(s), then this will be arranged between WWF-UK and the consultant. Meetings (telecoms) may be required with other consultants who are undertaking similar work in the WWF network; this will be advised as the projects progress.

Coordinated by the Project manager, an internal WWF working group will be set up to provide guidance throughout the production of the report.

Delivery of final report: The report is anticipated to be delivered within 3 months upon the contract is granted to the successful contractor(s).

Budget, fee schedule and payment:

Up to £12,000 (including VAT and expenses) and the proposals should include total cost.

	Payment
Submission of the draft report	50%
Acceptance of the final and summary report	50%

Contracting with WWF-UK

WWF-UK would prefer to contract these services using the attached standard terms and conditions. Your response should indicate your acceptance of these terms or include details of any alternatives that you would propose.

Date: 11th December 2023

Commissioned by: WWF-UK, Living Planet Centre, Brewery Road, Woking, GU21 4LL

Contact person: Eilidh Milligan, Seafood Sustainability Officer, WWF-UK
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