**Terms of Reference – Seafood Nutrition Project**

1. **Background**

Seafood is the main source of animal protein for nearly three billion people globally[[1]](#footnote-2). Seafood also contains key nutrients that can be absent or hard to obtain from other dietary sources, such as omega 3 fatty acids, selenium, magnesium, vitamins e.g., A, B, D, and K[[2]](#footnote-3). Consumption of seafood is linked to improved eye, heart, and brain health in humans[[3]](#footnote-4),[[4]](#footnote-5),[[5]](#footnote-6), and is therefore widely promoted in public health dietary guidance.

In the UK, dietary guidelines are presented in the Eatwell Guide which recommends the consumption of ‘two portions of sustainably sourced fish per week, one of which is oily’ (a portion is 140g uncooked)[[6]](#footnote-7). Despite this guide, wider efforts to promote seafood consumption in the UK and publicly available information on sustainable choices[[7]](#footnote-8), consumption levels have been in decline for over a decade, with consumers only eating half the recommended amount of seafood (1xportion of fish per week)[[8]](#footnote-9).

UK seafood consumption (by volume) focuses on five main species; salmon (farmed), cod, tuna, haddock, and warm water shrimps and prawns, sold across fresh, frozen, ambient (e.g., tinned) and ready to eat (RTE) categories. Overreliance on a limited number of species and some that must be sourced from overseas means the UK imports 81% of the seafood consumed in the UK, with some species linked to high environmental and social footprints[[9]](#footnote-10).

Consumer preferences and diversification will be necessary to reduce the environmental and social footprint of UK seafood consumption but will also be critical to support a doubling of consumption levels to meet nutritional requirements and support projected UK population growth of over 2 million to 69.2 million by mid-2030[[10]](#footnote-11). As the cost-of-living crisis continues to impact consumer spending, how does seafood compare to other animal proteins in terms of affordability, nutritional value, and a comparatively low footprint food choice?

1. **Project Scope**

This report seeks to identify the seafood species with the lowest environmental and social footprint that can support the projected increases in UK seafood consumption levels, to meet the growing population and public health message from the Eatwell Guide. This will be considered in the context of the current cost-of-living crisis, where the economics of seafood swaps will be reflected upon and comparisons will be drawn with other animal proteins across environmental and social footprints, as well as nutritional and economic comparisons. Product prices for the economic comparisons will be averaged from all UK retailers.

1. **Overarching Purposes:**

UK seafood consumption preferences have a high environmental and social footprint and are not delivering the nutritional requirements of the Eatwell Guide. Under the cost-of-living crisis, seafood like many other groceries is experiencing high inflation levels which is further driving consumption levels down.

The purpose of this project is to provide information and clarity on which seafood species (fish, shellfish, seaweed) from wild-caught and farmed sources, can be promoted to consumers as having the lowest environmental and social footprint and can meet the Eatwell Guide nutritional requirements. It will also explore whether these seafood preference changes can deliver on affordability, and whether seafood offers a better all-round option to other animal protein in terms of affordability, nutritional value and footprint.

This project will deliver on a Marine Objective ‘raised awareness of the importance and benefits of sustainable fishing and responsible fish farming, of Tesco’s supply chain amongst its consumers’ under the WWF-Tesco Partnership. It will also add to the scientific evidence base for the role of seafood in the context of the WWF Basket Diets outcome (50:50 animal/plant protein split), which currently focuses on ‘less **and** better meat and dairy’, as opposed to seafood.

Finally, this project will enable the recommendations from the WWF Eating for Net Zero Report to be confidently communicated and enact change at the consumer level. This report details how consumers can meet the Eatwell Guide diet requirements and specifically recommends a ‘83% increase in seafood consumption compared to current consumption levels.

1. **Aims:**

The aims of this project are:

1. To explore how changing and diversifying UK seafood consumption preferences can reduce the environmental and social footprint, support significant increases in consumption levels and may offer a price saving to customers.
2. To explore how consumers swapping animal proteins with seafood may deliver triple benefits on consumption footprint, nutrition, and cost savings.
3. Detail the wide nutritional benefits offered by seafood (fish, shellfish, and seaweed), that are often absent or hard to obtain from other dietary sources e.g., omega 3 fatty acids, selenium, magnesium, vitamins e.g., A, B, D, and K.
4. Identify how current seafood consumer preferences deliver nutritionally against the Eatwell Guide compared to lower footprint species, which will include a review of seafood product portion sizes across all categories (fresh, frozen, ambient, and ready to eat).
5. Explore consumer cost saving opportunities by choosing lower footprint and more nutritional seafood species, and wider advantages of choosing seafood over animal proteins.
6. To support advocacy within the UK seafood industry to improve the environmental and social footprint of seafood to promote an increase in domestic UK seafood consumption.
7. To support advocacy towards retailers and supply chain actors to increase seafood portion sizes, in line with the Eatwell Guide.
8. **Objectives:**

The objectives of this report are:

* Present a comparison of the environmental and social footprint of the UK’s top 10 consumed seafood species (by volume), with species with the lowest footprint (e.g., mussels, small pelagics, seaweed) and extrapolate the footprints if consumption levels were to double to meet the Eatwell Guide recommendations and under population increase projections for mid-2030.
* Present a comparison of the environmental and social footprint of seafood species with other animal proteins.
* Review the nutritional profile of seafood (fish, shellfish, seaweed) from wild-caught and farmed sources using the current top 10 species (by volume) consumed in the UK and lower footprint species. The nutritional profile will consider protein and nutrients that are often absent or harder to obtain from other dietary sources e.g., omega 3 fatty acids, selenium, magnesium, vitamins A, B, D, and K.
* Identify whether there is any nutritional benefit from swapping current seafood preferences to lower footprint species.
* Present a comparison of the nutritional value of seafood and other animal proteins and identify whether there is a nutritional benefit of swapping animal protein to seafood.
* Review of current UK seafood product portion sizes across all categories (fresh, frozen, ambient, ready to eat) to see whether they meet the Eatwell Guide recommendations (140g uncooked).
* Conduct a price comparison review to determine whether there are any cost saving opportunities to customers from choosing lower footprint seafood species that have a better nutritional value compared to current seafood preferences and other animal proteins.
* support advocacy asks to the UK seafood industry of improving environmental and social footprints to result in increased domestic consumption of UK seafood (more UK seafood on UK plates).
* Support advocacy asks to UK retailers and supply chain actors to increase seafood product portion sizes in line with the Eatwell Guide recommendations (140g uncooked).

1. **Focal topics and methodology:**

The priority topics of interest of this report are:

1. Identify how the environmental and social footprint of UK seafood (fish, shellfish, seaweed) consumption can be reduced, whilst meeting public health requirements (Eatwell Guide) and with projected population increases to mid-2030.
2. Using the Risky Seafood Business Report metrics and species data, present the environmental and social footprint of the UK top 10 most consumed seafood species (by volume) and 10 species also consumed and sold in the UK which have the lowest footprint.
3. Extrapolate the environmental and social footprint for these 20 species by doubling current consumption levels and then in line with predicted population level rises to mid-2030.
4. In a colour coded table or graph, compare the environmental and social footprint of the 20 seafood species assessed with key animal proteins.
5. Present the nutritional value of seafood.
6. Review the nutritional value of the 20 seafood species considered in step 1, including both protein and micronutrient levels (e.g., omega 3 fatty acids, selenium, magnesium, vitamins A, B, D, and K).
7. Review current seafood portion sizes across categories (fresh, frozen, ambient, and ready to eat) available in UK retailers and how they deliver against the Eatwell Guide, where a portion is 140g (uncooked). Provide real-life examples of the how consumers would meet the Eatwell Guide recommendations ‘two portions of fish per week, one of which is oily’ (2x140g uncooked) through eating current seafood portions e.g., per week 1x portion of fresh salmon, 2x cans of anchovies, 1x portion of cod.
8. Determine whether there is any nutritional benefit associated with swapping current seafood preferences with lower footprint species and identify how consumers would meet the Eatwell Guide recommendations through these swaps.
9. Determine whether there is any nutritional benefit associated with swapping animal proteins with seafood.
10. Explore the economic advantages to consumers of choosing lower footprint seafood species, which meet nutritional guidelines.
11. Identify the cost savings (if any) to consumers of swapping current seafood preferences with lower footprint seafood species which also deliver high nutritional advantages. Provide this data within a large table or graph.
12. Where possible, identify what the cost changes to consumers would be (if any), if retailers increased seafood portion sizes to meet Eatwell Guide recommendations.
13. Identify the cost savings (if any) of swapping animal protein with low footprint, high nutritional seafood options.
14. **Deliverables:**

The outputs of this project will be:

* A full report including focal topics on how changing and diversifying UK seafood consumption preferences can lower the consumers environmental and social footprint, deliver better nutritionally, and potentially deliver a cost-saving during a cost-of-living crisis. This report may also provide an opportunity to steer consumers away from higher footprint animal proteins, whilst similarly delivering better nutritional value and cost-savings.
* A public facing summary review (no longer than 8-pages of text), to include infographic/table on the best seafood swaps that can reduce the footprint, offer a better nutritional option and deliver a cost saving to UK consumers.

The methods used in this study should be replicable and scalable, such that the baseline data generated in this project can be compared against data gathered in subsequent years and can be adopted and upscaled by wider WWF offices.

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.

1. **Consultant identification**

Interested consultants should **submit a project proposal by 25th May 2023** and clearly outlines 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 sections. The proposal should demonstrate the alignment of this study with the above mentioned Risky and Riskier Business reports. The proposal should also provide a realistic but ambitious timeline, resources allocation on delivering the report, CVs with relevant experience and any applicable charging.

1. **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.

Project Manager: Lief Hendrikz, Sustainable Seafood Officer, WWF-UK

Email: [lhendrikz@wwf.org.uk](mailto:lhendrikz@wwf.org.uk)

1. **Budget and Fee Schedule and Payment:**

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

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

1. **Contracting with WWF-UK:**

It is our preference that an appointed external partner adopts our standards terms and conditions for engaging with us. These are included within the tender documents. Please confirm you are willing to accept these terms. Should you have any amends you wish to make, these will need to be discussed with the WWF-UK legal team.

WWF-UK asks all suppliers to comply with the Supplier Code of Conduct and WWF-UK 3rd Party Expenses Policy. Both documents are enclosed within the tender pack. Please confirm your acceptance of both.

All contracted suppliers are required to register on Panda Purchasing (WWF-UK’s PO and invoice system). Should you be successful in your bid, please confirm you will be willing to register on the system.

1. **Timeframe:**

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

1. FAO. The State of World Fisheries and Aquaculture 2016: Contributing to Food Security and Nutrition for All; FAO: Rome, Italy, 2016; p. 200 [↑](#footnote-ref-2)
2. [Seafood Consumption and Its Contribution to Nutrients Intake among Canadians in 2004 and 2015 - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7823921/) [↑](#footnote-ref-3)
3. [A fish a day, keeps the cardiologist away! – A review of the effect of omega-3 fatty acids in the cardiovascular system - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3712371/) [↑](#footnote-ref-4)
4. [Fish Intake May Affect Brain Structure and Improve Cognitive Ability in Healthy People - PMC (nih.gov)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7103640/) [↑](#footnote-ref-5)
5. [Seafood and health: What you need to know? - PubMed (nih.gov)](https://pubmed.ncbi.nlm.nih.gov/34311902/) [↑](#footnote-ref-6)
6. [Eatwell guide 2016 FINAL MAR29 (publishing.service.gov.uk)](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/528193/Eatwell_guide_colour.pdf) [↑](#footnote-ref-7)
7. [Home | Good Fish Guide (mcsuk.org)](https://www.mcsuk.org/goodfishguide/?gclid=EAIaIQobChMIk_Hh7eT-_QIVBt7tCh1B8QpgEAAYASAAEgIdH_D_BwE) [↑](#footnote-ref-8)
8. [Seafood Consumption (2022 Update) (2).pdf](file:///C:/Users/LHendrikz/Downloads/Seafood%20Consumption%20(2022%20Update)%20(2).pdf) [↑](#footnote-ref-9)
9. [WWF\_Risky\_Seafood\_Business\_Technical\_Report\_2022.pdf](https://www.wwf.org.uk/sites/default/files/2022-08/WWF_Risky_Seafood_Business_Technical_Report_2022.pdf) [↑](#footnote-ref-10)
10. [National population projections - Office for National Statistics](https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2020basedinterim) [↑](#footnote-ref-11)