Summary of Research

Department
for Environment
Food & Rural Affairs

BSF reference number: 002

Cost centre code: 10021604

Date: 03/10/2024

██████████████████████████████

██████████████████████████████

Proposed start date: ASAP - October 2024

Proposed end dates: 31 March 2024

The specification must not exceed 10 side of A4.

1. Objectives

1.1 Project Background

The project builds on the previously commissioned, *Increasing consumption of locally landed fish in the UK: Explorative research to inform the development of behavioural interventions*, which explored barriers and drivers to the consumption of UK-produced seafood.

Barriers and drivers identified included low awareness of provenance, prioritisation of price and taste, convenience and lack of cooking skill, unfamiliar look and feel. The authors proposed **two broad intervention areas** in the final scoping report:

1. **Provence labelling intervention**: To create seafood labelling that identifies British provenance, which people can automatically recognise and use to navigate their purchasing choices. Potential foci included either direct or indirect generic 'Buy British' messaging to introduce a concrete appeal to support local communities or, ideally, on the exact location of provenance to also trigger associations with familiarity and freshness. Labelling could also potentially inform customers how a product was sourced, for example, from a fishery under the regime of a UK fisheries management plan (https://www.gov.uk/government/collections/fisheries-management-plans).

2. **Preparation intervention**: Provide cooking hacks to help overcome barriers around expertise and experience in fish preparation. For example, to develop and popularise the 'oven bags' for UK-produced filets specifically, or ready meal options, and/or introduce more UK-produced choices in food delivery boxes.

The current project will aim to test elements of both behavioural interventions to determine whether the chosen intervention will influence behaviours of interest (i.e. increase volume of consumption across a wider variety of UK-produced species, outside of the 'big five') and to further understand and fill evidence gaps.

It is expected that these options will be tested in an **online rather than in-situ context** as a proof of concept and to facilitate testing within the project timelines and budget, without extensive reliance on e.g. retail or processing partners. As such, an aim for the present project is ascertaining feasibility of interventions for further policy development, including regulatory requirements and delivery partner operations, rather than rely on implementing a

new policy environment or ensuring perhaps complicated partnerships for the trial stage to proceed.

Policy Context

Defra has identified an opportunity to boost consumption of UK-produced seafood to help it meet strategic objectives. The strategic objectives met would include:

- **Sustainability**: encouraging more sustainable food choices with a lower carbon footprint.
- **Socio-economics**:
  - Supporting jobs in remote, rural and relatively deprived areas of the UK and increasing industry/supply chain resilience through developing alternative domestic markets.
  - Developing robust supply-chains dedicated to often discarded/low-value British-landed fish would benefit fishers by providing another stream of revenue, but also help British ports due to more consistent landings due to increased demand.
- **Local growth:** To increase wellbeing, heritage and pride in place in maritime areas, by supporting a role in domestic supply and boosting the local economy.
  - Fisheries support a variety of local industries; increased consumption and processing of UK-produced fish could boost employment opportunities in the processing sector due to the necessity for increased processing capacity to support new domestic fish demand. Local restaurants and quayside hospitality businesses can also offer a greater variety of products and hold a unique selling point due to attributes such as the locality of produce as well as its sustainable nature.
- **Consumer health**:
  - Helping to promote consumption in line with government guidelines to eat two portions of seafood, including oily fish, per week.
  - UK consumers do not on average eat the recommended amount of seafood (2 portions per week). Behavioural studies have demonstrated British provenance as a core driver in shaping consumer purchasing choices. Emphasizing UK-produced fish as the sustainable, healthy alternative to other seafood/food options could not only provide financial benefits to the sector and local communities, but also increase public health awareness and destigmatize consumer concerns around pollution and waste in British waters affecting UK seafood quality.
- **Food security:** Facilitating the integration of locally grown and caught seafood to enable a diversification of species and supply sources.
  - Supply-Side security would be bolstered through the development of a new domestic market for UK-produced fish species. Additionally, this would increase and securitize demand for local-sustainable fish species, further

supporting local industry. This would be a good move towards improving economic sustainability and reducing the UK's reliance on imported fish, developing Britain's trading resilience against shocks such as the tariffs on imported Russian produce.

o Provenance labelling is already a part of UK law, with a requirement to state that fish caught at sea within the Northeast Atlantic Ocean zone are labelled as such and/or include a pictogram of the catch area, as well as catch method. Similar labelling regulations extend to farmed fish. The domestic market for UK-produced seafood, and subsequent food security, could be better secured through labelling that is more local and UK-specific. Creating a logo/provenance labelling indicating the body of UK/regional water the fish is caught in and emphasising the UK-production of the fish would likely align with developing multi-national policy-regulations on labelling.

Defra, therefore, will continue to strive toward promoting UK-produced seafood as a healthy, low carbon and sustainable protein source as set out in the Joint Fisheries Statement, and will test behavioural interventions to encourage consumers to eat more British seafood.

Understanding critical behavioural evidence gaps is key in mitigating risks within UK seafood policy. Without employing behavioural insights approaches, domestic demand for UK-landed species is less likely to materialise despite government interventions and promotion. Boosts to supply-side or demand-side security might be absent, resulting in little to no gains for local industry in particular.

This may be because:

o Schemes highlighting British provenance may be less well positioned to overcome consumers' current seafood preferences. Eating habits are difficult to change, especially considering known negative reactions to appearances and taste of some UK-produced species.

o New barriers to domestic consumption of UK-produced fish are being evidenced. Reports of pollution in UK waters are showing up in consumer preferences, but the government's focus on cleaning up the nation's water and coasts could be leveraged.

o There remain legal restrictions on provenance labelling, some related to international subsidy law. Insights into what is behaviourally feasible is vital in effectively targeting the substantial effort required to develop legally acceptable labelling interventions.

1.2 Stakeholders

The primary stakeholder group whose behaviour is of interest is UK public consumers and this group will be the primary target of interventions.

The feasibility of any potential intervention may depend upon the behaviours of retailers as critical messengers/purchasers (depending on the chosen intervention, these could include supermarkets and niche retailers, like fishmongers and farmer markets, processors, distributors and retail suppliers) as well as the UK fishing fleet catching and landing UK species. Behaviour change among these stakeholders will likely depend on a range of social, economic and environmental factors, as well as capacity for change across a range of industries. Behaviour change among these stakeholders, while a concern in any recommendations that arise from this project, is outside of the scope of the designed interventions themselves.

Finally, stakeholders with wider interest and influence on the project will depend on the findings and feasibility of potential interventions, but it is anticipated that potential and recommended interventions would require partnership working with a variety and different streams of stakeholders, including environmental NGOs (eNGOs), Defra and arm's length body (ALB) policy and legal teams, and certification bodies.

- Table 1: Mapping of Stakeholders in UK Seafood Consumption project

Stakeholder	Interest	Influence
ALBs	High	Medium
Retail partners	Medium	Medium
Seafood Processors	High	Medium
Certification bodies	High	High
Seafood distributors	High	Medium
eNGOs	Medium	Low
Legal	Medium	High
Wholesale suppliers	Medium	Medium
UK Public Consumers	Low / Medium	Medium
EU International Trade policy professionals	Medium	High

1.3 High level project objectives

The overarching objective is to undertake online trials of potential interventions, which have been previously recommended for increasing consumption of UK produced seafood. These trials will test which intervention methods are at all effective in increasing behaviours relevant to seafood consumptions, and which may be most effective in doing so. The project will:
- Design interventions to influence a range of outcomes relevant to the key behaviour: consumption of UK-produced seafood.
- Undertake online fieldwork to trial interventions with research participants representative of UK public consumers.
- Provide Defra with a public-facing report of findings and recommendations for interventions to take forward for policy development, as well as further testing for ecological validity and feasibility across stakeholder groups.

- Present and disseminate findings to relevant stakeholders in Defra and ALBs.

2. Project Requirements

2.1 Audience Groups

Findings from the 2023 scoping report suggest that the immediate focus should be on UK public consumers of seafood (i.e. that consume any fish as part of their diet). As the first empirical test of recommended interventions, trials could consider those who are already more engaged and open to trying new species, as they are more likely to be open to behaviour change considering the barriers identified in the scoping report (please see report for further details).

2.2 Theory of Change / Logic Model
2.3
N/A

2.4 Research Questions

1. Are labelling interventions effective in changing outcomes related to consumption of UK caught and landed seafood?
    a. What are the label characteristics that are most effective in changing outcomes and interventions?
        i. Information including provenance, sustainability, UK fleet sourced, landing location, whether the species is covered by an FMP
        ii. Design and visual factors, packaging position, colour, size, font
    b. Which outcomes are influenced by the intervention
        i. Species choice
        ii. Preference to non-UK produced species
        iii. Willingness to Pay or monetised choice outcomes
        iv. Attitudes and perceptions
        v. Manipulation checks (i.e. attention to awareness of label)

2. Are cooking hacks effective in changing outcomes related to consumption of UK caught and landed seafood?
    a. What are the hacks most effective in changing outcomes and interventions?
        i. Filleting, cuisine/meal type, recipe guidance
    b. Which outcomes are influenced by the intervention?
        i. Species choice
        ii. Preference compared to non-UK species
        iii. Willingness to Pay or monetised choice outcomes
        iv. Attitudes and perceptions, including perceived ease of preparation

v. Manipulation checks (i.e. awareness of fish/species, convenience, pre-preparation)

3. Based on findings from interventions (1 and 2), what are recommendations for further research and what do we expect potential impacts to be on UK seafood market?

2.5 Proposed Methodology

Proposals for the testing of both project interventions outlined in the project background and research questions are welcome within the scope of the project timescales.

Proposals from the supplier should outline an appropriate methodology but the research is expected to test for causality, the impact of interventions, consumer choice, followed by supplementary measures of outcomes relevant to this behaviour and manipulation checks. It is expected that this research will therefore apply controlled experiments or randomised control trials.

For potential impacts of interventions on monetised outcomes, there are range of possible options, including economic choice experiment approaches or post-intervention follow up questions around willingness to pay for products.

Where possible, methods should vary manipulations within a single trial or experiment to compare their effects. Where this is not possible suggestions for comparison of intervention characteristics are welcome within the scope of this project, or where appropriate, indications of where these may require further research. We welcome proposals from the supplier that allow effective manipulation of different intervention characteristics in a single trial or comparison of effectiveness across trials (for example, an assessment of effect sizes).

It is expected all trials will use suitable statistical testing to compare outcomes between groups or conditions.

2.6 Interventions to design or test

It is expected that the project would undertake some design and empirical testing of the detail of interventions using online methods. Broad recommendations for interventions were delivered as part of the 2023 scoping report and we expect these to form the basis for interventions. Proposals are welcome from the supplier on specific interventions to design and test, although we expect the research questions and proposed methodology (sections 2.4 and 2.5 above to influence these).

The supplier is invited to consider the most appropriate and ecologically valid mode of intervention and manipulation, with consideration to designing a realistic online shopping environment, payment and use of monetary incentives.

2.7 Outcomes to measure

A range of outcomes have been specified in section 2.5 above as part of the research questions. The core outcome of interest is the frequency or probability of a choice to buy or consume UK-sourced or landed fish.

1. Core outcomes
   a. Purchase choice of UK-sourced of landed species. This is likely to be measured as the frequency or probability of purchase choice compared either to control interventions or within an intervention compared to control non-UK or "big 5" species
2. Contextual outcomes (to understand broader impacts and build models of behaviour change)
   a. Willingness to pay
   b. Attitudes and perceptions toward UK-sourced and landed seafood
   c. Behavioural intentions
   d. Individual differences, social characteristics and demographics
3. Methodological outcomes
   a. Manipulation checks
   b. Attention and awareness of intervention characteristics

2.8 Outputs and deliverables

- Report and supplementary data in Microsoft and Open Office Document format
- Findings in slide deck format for dissemination presented to Defra evidence and policy team members and internal stakeholders
- All report outputs to be publishable alongside accessible formats (internal Defra guidance to be provided)

3. Project Management

3.1 Timings

Table of proposed timeline below:

TASK:	Sep	Oct	Nov	Dec	Jan	Feb	Mar
			2024			**2025**	
Research Specification and proposal							
Project design							

Field Work			🟦	🟦			
Analysis					🟦		
Reporting						🟦	🟦

3.2 Budget

There is a maximum budget of £114,900 for this work

4. Sustainability and Social Value

4.1 Sustainability considerations

Only interventions that promote the consumption of sustainability-produced seafood should be pursued. Where sustainability may not be assured, is highly uncertain, interventions should not be pursued. The contractor will have access to Defra specialists in marine science, economics, and social science to help inform decisions on what interventions would promote sustainable consumption and which ones might not.

4.2 Social value considerations

Research for the Office for National Statistics (ONS) shows that people in the most-deprived areas of the UK are less likely to report very good health than those in the least-deprived areas. With the known health benefits of consuming various types of seafood, collecting demographic data so as to be able to draw conclusions on the health benefits of the tested interventions for this socio-economic group would be helpful. Where possible, links to food security for this group should be noted. Such considerations may also apply to other groups (e.g. minority ethnic groups) and benefits of interventions for these groups should also be identified.

Supplier name: Verian Group UK Ltd.
Date: 18/10/2024

The proposal must not exceed 10 sides of A4.

V2 responses following a post-submission meeting with Defra

Defra requested that we consider applying a DCE for RQ2 in place of an RCT, so the results of the two experiments would be equivalent. We agreed this was possible and set out that there might be some limitations in choices of product types and interventions. We have reviewed costs and are happy to commit to carrying out either of the following for the originally quoted cost of £114,617 (ex VAT):

- One DCE (RQ1) with N = 1,200 respondents and one RCT (RQ2) with N = 2,000
- Two DCEs (one each for RQ1-2), each with N = 1,200

Defra also asked for clarification on the following points:

1. The draft final report would be sent to Defra for review in the week commencing 3rd March 2025, and this could be treated as an additional milestone for the purposes of timeline monitoring. If Defra need more time for the review process, then we will work with them to deliver an earlier version, which may mean leaving some elements (e.g., the executive summary) for later rounds of review.

2. We can confirm that the review of the trial protocol would include review and sign-off of the full questionnaire.

3. The expected length of interview for each experiment is 10 minutes. In our experience, online panellists are well-practised respondents and tend to complete surveys quickly, so this will not unduly limit the number of questions we can include. We do not recommend extending the interview length to 15 minutes, as this may result in a drop-off in response quality to later measures as it is longer than panellists are accustomed to.

1. Proposed Methodology

1.1 Summary

The ITT sets out two overarching research questions:

RQ1: Are provenance labelling interventions effective in changing outcomes related to consumption of UK-caught and landed seafood?

RQ2: Are cooking hacks (or preparation interventions) effective in changing outcomes related to consumption of UK-caught and landed seafood.

We propose to carry out two online experiments, one to answer each research question.

To answer RQ1, we will carry out a discrete choice experiment (DCE) in which N = 1,200 participants make a series of choices between alternative fish products that differ in several ways, including provenance labelling. The DCE will provide evidence on the marginal effect of different types or characteristics of provenance labelling on the likelihood of consumers buying any given UK-landed or sourced fish product. This experiment can address at least three variants of provenance labels, and potentially more depending on the other attributes varied between the products.

To answer RQ2, we will carry out a randomised controlled trial (RCT) in which N = 2,000 participants are shown a UK-landed or sourced fish product and asked how likely they would be to purchase it. The key comparison will be between trial groups, which will vary in the preparation intervention applied to product. The control group would feature no preparation intervention, while three intervention groups would each feature a different intervention or bundle of interventions.

For both experiments, we would recruit samples of UK consumers of seafood from an online panel.

1.2 Detail

Discrete choice experiment on provenance labelling interventions (RQ1)

The first step will be to agree the provenance labels to be tested in this experiment and their design. The labels could vary in content (e.g., just provenance information vs. calls to action or messaging focusing on environmental impacts), or in formatting, or a mixture of the two. We would begin with a scoping discussion with you immediately following the project's inception in order to decide what features of the labels you are most interested in testing. Then, we can mock-up a long-list of up to 15 labels, based on principles of behavioural design (e.g. we can design labels that differ in content, such as a provenance or sustainability label; or the same label with different formats, such as colour, wording, different ways of indicating the same provenance). We will then work with you to choose a shortlist of labels for testing and refine them further.

We propose to apply a discrete choice experiment (DCE) design to test the effects of the agreed candidate labels on consumer purchase preferences. DCEs explore how people trade

different attributes of a product against one another to see whether and how much each of those attributes matters. For example, how important provenance labelling is compared to price or species of fish.

DCEs are the most widely used technique for exploring multifaceted consumer preferences and establishing willingness to pay. The methodology relies on a within-subjects comparison in which each participant provides their own baseline or control to which interventions are compared. A major advantage of DCEs is how well they can predict real-world behaviour, e.g., for [uptake of medical treatment](#) or in our own [DCE study of Covid-19 vaccine uptake](#).

The DCE will consist of a series of choices between alternative fish products. To give context to the choices we are asking participants to make, we suggest beginning with a simple vignette. For example, they are shopping in the supermarket for a fish meal they will cook at home for 4 people. We will agree with you what characteristics of the fish products ought to vary, but have assumed that they will include provenance, whether/how provenance is labelled, price, and species of fish. There are different ways to structure these as attributes depending on the evidence statements you would like to make, and we will agree the structure with you in the design period.

DCEs rely on careful construction of choice sets. Once we have agreed how the products and labels are to be varied, we will build the DCE questionnaire using an established tool for doing so, such as [Sawtooth Software](#) or [Support.CES](#).

The main output of the DCE is a statistical model describing the odds of someone purchasing a given fish product. We can use this model to estimate and report on any of the following:

- The impact of labelling characteristics on the likelihood of purchase (whether it is 'statistically significant' and the scale of the impact)
- The extent to which a label improves willingness to pay for a UK-sourced or landed fish product
- The proportion of consumers we would expect to purchase any set of UK-sourced or landed species against a plausible set of alternatives (e.g., big 5).

After the DCE, participants will fill out a short questionnaire to provide supplementary outcomes, both contextual and methodological. These would include:

- Attitudes and perceptions towards UK-sourced and landed seafood
- Further probing for relevant concerns, e.g., on water cleanliness
- Any important behavioural intention measures not already covered by the DCE (e.g., for a choice outside the vignette context, such as at a restaurant)
- Individual differences, social characteristics, and demographics
- Questions probing awareness of and attention to the provenance labels, as well as how well participants understand them

- Questions relevant to mechanisms in the logic models in the scoping report; if helpful we could organise these according to a behavioural framework such as COM-B
- Questions about real seafood consumption and openness to trying new species, to see if those most open differ in their DCE responses to those who are less open

In addition to the main statistical model for the DCE, we will report descriptive statistics for all supplementary outcomes. We can also provide crossbreaks for specified demographic sub-groups (e.g., those in more deprived areas). We have costed for a sample size of N = 1,200. DCEs typically do not require large samples, so the main rationale for this sample size is to provide reasonable precision on descriptive statistics.

Randomised controlled trial testing preparation interventions (RQ2)

We propose to carry out an online randomised controlled trial (RCT) to test the effect of different preparation interventions on the likelihood of someone buying UK-sourced or landed fish. We will first randomise participants into groups, each featuring a different intervention (or none, in the case of the control group). We will show participants a UK-sourced or landed fish product that is on offer where they are shopping, and ask them how likely they would be to purchase it. As with the labelling DCE, we would provide context by beginning with a short vignette outlining why the participant is shopping for fish.

The sole difference between the groups would be the intervention. In the control group, the product would include no preparation intervention. This could be an uncooked whole fish. Alternatively, as fish are commonly sold in supermarkets as packaged fillets, you may want this to be the control, rather than an intervention. If the interventions feature essentially whole meals, then in order to offer a fair comparison you would want to include equivalent (unprepared) ingredients in the control

Every other group would see a product featuring an intervention or a bundle of interventions. We would design the interventions to be tested with you at the project's inception, starting from the recommendations in the 2023 scoping report. As an example, we could have the following groups:

1. Uncooked fillet + ingredients for cooking and sides
2. Uncooked fillet + ingredients for cooking and sides, and a recipe card
3. An oven bag containing everything needed to cook the fish and ingredients for sides
4. A ready meal containing the fish and all sides ready to heat up

The main outcome will be a Likert score questionnaire measure of purchase intention (i.e., likelihood to purchase) for the UK-sourced or landed product. We can compare this measure using a generalised linear regression model (a flexible alternative to ANOVA that easily handles different response distributions) with pairwise comparisons between the groups.

In addition, we will ask all participants to fill out a short questionnaire to provide supplementary outcomes, both contextual and methodological. These would include:

- Attitudes and perceptions towards UK-sourced and landed seafood

- Further probing for relevant concerns, e.g., on water cleanliness
- Questionnaire measures of willingness to pay for the intervention products, if useful
- Individual differences, social characteristics, and demographics
- Questions probing whether participants attended to or understood the interventions (e.g., how oven bags work)
- Questions relevant to mechanisms in the logic models in the scoping report; if helpful we could organise these according to a behavioural framework such as COM-B
- Questions about real seafood consumption and openness to trying new species, to see if those most open differ were more sensitive to the intervention than those who are less open

In addition to the statistical comparisons on the main outcome, we will report descriptive statistics for all supplementary outcomes. We can also provide crossbreaks for specified demographic sub-groups (e.g., those in more deprived areas).

We have costed for a sample size of N = 2,000, which is sufficient for a four-group RCT that is conventionally powered to detect any effect size > 0.22. This assumes we compare every trial group to every other group and carry out a Bonferroni adjustment for those comparisons (per best practice).

Target audience & sampling (both RQs)
The target audience for the labels is consumers of seafood in the UK general public. We would therefore screen out anyone who does not eat seafood. Additionally, since the focus of the study is on shopping behaviour, we would also suggest excluding anyone who has not bought uncooked seafood in the last 2 years. We have costed for and expect to recruit to both criteria, but if recruitment proves challenging, we can explore dropping the latter criterion and using sensitivity analyses to explore whether/how this impacts headline results. We do not recommend attempting to screen on openness to trying new species as asking this question within the context of a short online experiment risks cueing subsequent responses and biasing the study's results.

We will recruit the sample for each experiment from our partner panel provider, Cint. To ensure the achieved samples are demographically representative of the target population, we will apply recruitment quotas on key characteristics: age group crossed with gender, region of residence, and an indicator of wealth or socioeconomic status that we agree with you. We have assumed the quota targets would be drawn from estimates for the general population to maximise generalisability but can review alternatives if we find evidence that the population profile of seafood consumers differs greatly from that of the general public.

When using online panel samples, it is important to take steps to identify bots or low-quality responses and exclude them. We will begin each experiment with an attention check to screen these responses out and will also examine the data to identify and exclude speeders and straight-liners.

2. Deliverables

2.1 Project outputs

We will produce the following **final deliverables**:

- A publishable **final report** (including a supplementary appendix containing a technical description of the methods and relevant additional statistics), describing the methods and relaying the findings of both experiments. The report will be shared in Microsoft and Open Office Document formats.
- A **slide deck** format summary of the study and its findings for dissemination presented to Defra evidence and policy team members and internal stakeholders.

All final deliverables will be provided in accessible formats, following internal Defra guidance.

In addition, we will draft a trial protocol setting out the design for each experiment, for review by Defra. Sign off on these protocols will serve as the first milestone.

3. Timelines

3.1 Timings

We will agree a detailed timeline with you at the inception meeting, to ensure everyone is clear on timings and actions for which they are responsible. At this point we anticipate the following, with fieldwork commencing in December 2024 and final reporting in March 2025:
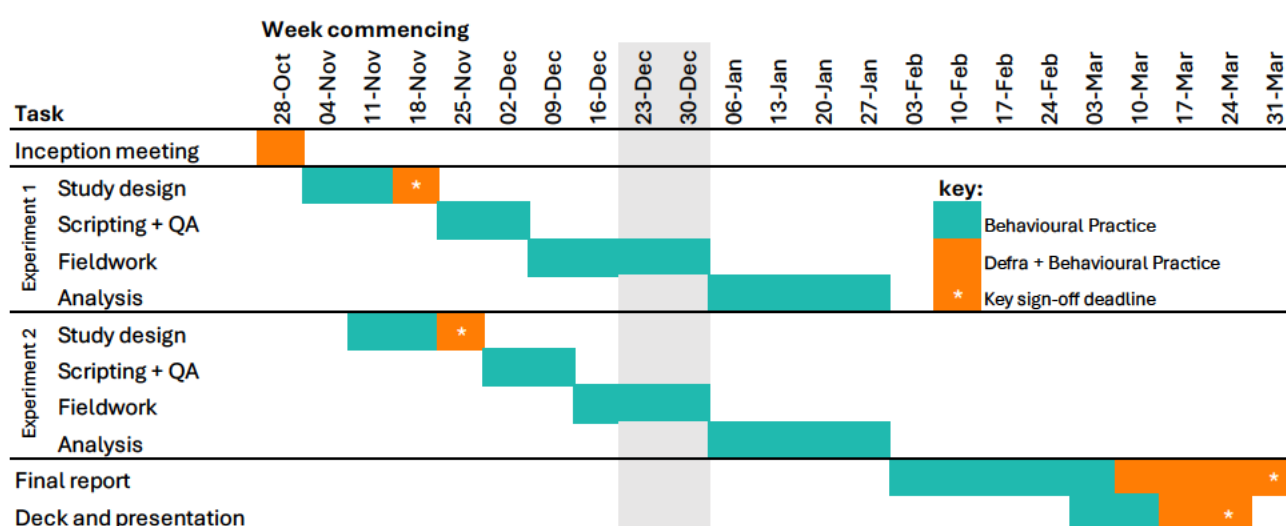
Timings need to allow for review and revision of project materials and outputs, so we will monitor delivery of milestones carefully. The immediate risk would be a delay in sign-off of the design materials preventing us from entering fieldwork before the period around Christmas, which would create large delays to the start of analysis that would be difficult to catch up. `

Version 0.1 May 2024

4.1 Arrangements

Proposed staff and roles

███
██
█████████

██
███
██
███
██████████████████████████████████

██
███████████████████████████████████████
███
███
███
███

███
██
██
██
█████████████████████████████

██
███

███████████████████████

██
███
██████████

███
███
██

Shi and Rupert will keep a close eye on the project plans for each experiment to ensure that activities are completed on time. Should either of them become aware of any issues with timeliness, they will discuss solutions with James and communicate these to you immediately to agree how to minimise impacts on milestones.

Quality Assurance

James will be accountable for quality and timeliness of delivery. He will oversee the processes outlined above and will review all materials and outputs before these are sent to you. James will also oversee the final reporting process, ensuring drafts are of the highest quality, considering comments made at review and working with the team to ensure these are addressed appropriately and in line with agreed timings. James will also be the first point of escalation for any issues that require his consideration, followed by Natalie Gold (Head of Trials in the Behavioural Practice).

4.2 Risks

Our risk management strategy aligns with ISO 27001 and involves a 5-step process of identifying, assessing and classifying potential risks, before planning and implementing mitigation measures.

Below we set out the main risks for this project. We will prepare a full risk register at project inception, which will be revisited and, if necessary, updated each week. Shi and Rupert will share the updated risk register with their weekly update on progress, highlighting any changes for your attention along with suggested mitigation where relevant.

Project risk	Likelihood / Impact	Description and mitigating action
Study findings do not generalise	**Medium / Medium**	The RCT uses a self-report measure of purchase intention, which sometimes yield greater effect sizes in a 'clean' online environment than the intervention would in real life. This is also true to an extent of the DCE, but less so as more complexity is preserved. We will report results cautiously as giving a likely upper bound on real effect sizes, supplemented by evidence from the post-task questionnaires on whether the interventions acted by the mechanisms expected.
Challenges recruiting sample	**Low/ Medium**	We do not anticipate recruitment issues as our panel is accustomed to recruiting to quotas and we have allowed 3-4 weeks to fill them. We will agree any eligibility/screener criteria with you as part of the experimental design (and we will provide evidence to support our assumptions for incidence

rates for each in the population). If the incidence rate of people meeting our criteria is low, we will consider amending the criteria for the second experiment. In the event of an unforeseen problem, we would agree remedial calibration and sensitivity analyses with you.

Challenges meeting timeline / staffing contingency	**Low/ High**	Timings are tight and the final report needs to be delivered by the end of March (following several rounds of review). Our project timeline avoids delivery challenges around Christmas as we propose to conduct fieldwork then, reducing risk of delays. We also have two project teams who can cover for each other and will apply established management processes to ensure delivery goes to plan and personnel can be replaced at short notice should this be needed. We have assumed a kick off in w/c October 28th in the gantt, to leave time for contracting, but we would also be available to start a week earlier.

5. Costs

5.1 Cost overview

The total cost is £114,617, of which £93,390 covers staff time and £21,227 covers direct costs (scripting, sample, and access to specialised software for designing and analysing the results of the DCE, all ex. VAT). For a breakdown by experiment, see below.

5.2 Cost breakdown

Staff costs		Behavioural Practice					
	Person	JT	RR	VK	SZ	YY	**total**
	Staff grade	SD	RM	SRE	RM	RE	.
	Day rate	£1,415	£920	£770	£920	£770	.
Research question 1: DCE							
Study + intervention design		6	8	6			
Scripting + QA		0.25	0.5	2			
Fieldwork management		0.25	0.5	0.5			
Analysis		1	1	1			
Research question 2: RCT							
Study + intervention design		6			8	6	
Scripting + QA		0.25			0.5	2	
Fieldwork management		0.25			0.5	0.5	
Analysis		1			2	1	

Both

Report drafting	4	5	1	3	1	
Report revisions	1	1	0.5	1	0.5	
Deck + presentation	1.5	1.5	1	1.5	1	
Meetings / PM	2.5	4	1.5	4	1.5	
Days total	**24**	**21.5**	**13.5**	**20.5**	**13.5**	
Time cost total	**£33,960**	**£19,780**	**£10,395**	**£18,860**	**£10,395**	**£93,390**

Direct costs

Sample + incentives (DCE; N = 1,200)	£3,780
Scripting + data processing (DCE)	£3,245
Sample + incentives (RCT; N = 2,000)	£6,300
Scripting + data processing (RCT)	£3,245
DCE design & analysis software	£4,657
Direct cost total	**£21,227**
Costs total	**£114,617**

5.3 Cost assumptions

- Two separate online experiments with separate scripts
- Total sample size: for the DCE – N = 1,200 participants; and for the RCT – N = 2,000 participants, all recruited from an online panel
- Screeners excluding potential participants who don't eat fish or haven't shopped for it in the last 2 years.
- General population sample quotas on age band within gender, region, and a binary indicator of wealth or socioeconomic status
- Deliverables as listed in Section 2, with up to 3 rounds of Defra review for each

5.4 Invoicing schedule

Milestone	Date	%	Amount (exc. VAT)
Experiment design (delivery of trial protocols)	02/12/2024	30	£34,385.10
Completion of fieldwork/data collection	06/01/2025	40	£45,846.80
Sign-off on Final Report	31/03/2025	30	£34,385.10

The Contracting Authority: Defra., 2 Marsham Street, London, SW1P 4DF.

The Contractor: Verian Group UK Ltd., whose offices are at 4 Millbank, London, England, SW1P 3JA

This Order Form is for the provision of the Call-Off Deliverables and dated **[01/11/2024]**. It is issued under the Behavioural Science Call-off Framework Agreement with **Verian Group UK Ltd.** reference [C24629) for the provision of '**A project testing the use of behavioural interventions in promoting the consumption of UK-sources fish in the UK'.**

On agreement of the Proposal, this Order Form should be uploaded to Atamis and signed by Defra Group Commercial and the supplier. When completed and executed by both Parties, this forms a Call-Off Contract.

Call-off Contract incorporated terms: The following documents are incorporated into this Call-Off Contract. If the documents conflict, the following order of precedence applies:

1. Defra's Behavioural Science Call-off Framework Terms and Conditions
2. Specification
3. Proposal

No other Supplier terms are part of the Call-Off Contract. That includes any terms added to this Order Form or presented at the time of delivery.

Call-off contract start date: 04/11/2024

Call-off contract expiry date: 31/03/2025
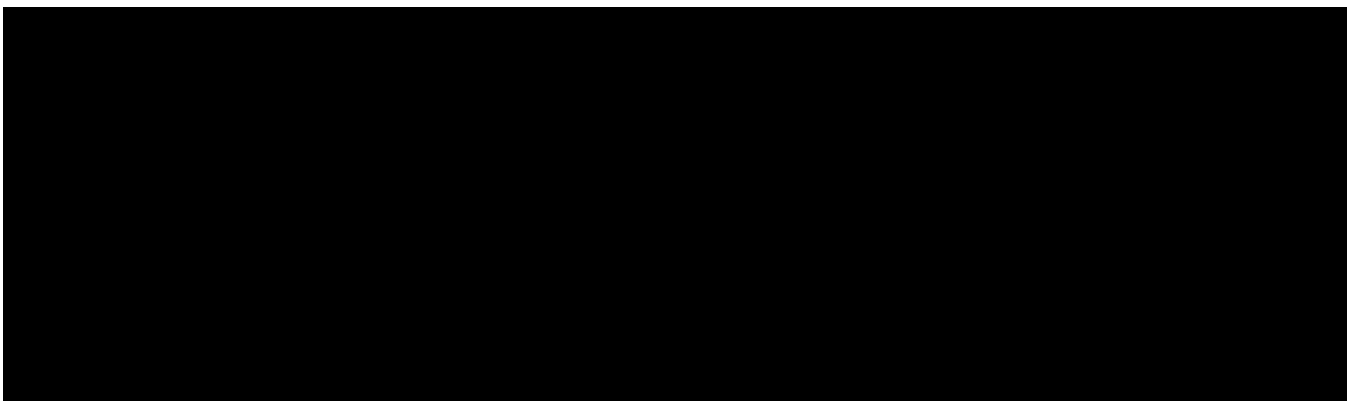
Please return this form to the Framework Mangers via behavioural.insights@defra.gov.uk for signatures from Defra group Commercial and the Supplier.