Making sense of UPFs: a public dialogue

Technical Appendix

Hopkins Van Mil

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Food Standards Agency
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Image: Postcode Films, Participants reviewing stimulus, Workshop 5, Liverpool

Appendix A: Oversight group members

Oversight group	
Dame Theresa Marteau (Chair)	Professor and Director of the Behaviour and Health Research Unit, University of Cambridge
Michelle Patel	Deputy Director, Analysis and Insights, Food Standards Agency
Tazeem Bhatia	Interim Chief Nutritionist and Deputy Director, Department Health and Social Care
Lucy Foster	Agri-food Science Lead, Department for Environment Food and Rural Affairs
Anne Ferguson-Smith	Professor and Chief Executive Officer, BBSRC
Ciarán Forde	Professor of Sensory Science and Eating Behaviour, Wageningen University and Research
Ortwin Renn	Retired Professor, University of Stuttgart
John Mathers	Professor of Human Nutrition, Newcastle University
Bob Doherty	Professor of Marketing, University of York
Julie Lovegrove	Professor of Human Nutrition, University of Reading
Anna Taylor	Executive Director, The Food Foundation
Dan Crossley	Executive Director, Food Ethics Council
Dan Clarke	Healthy and Sustainable Diets Manager, IGD
Kate Halliwell	Chief Scientific Officer, The Food and Drink Federation

Appendix B: Register of interests at March 2026

Oversight Group (OG) members			
Name	**Role**	**Dialogue role**	**Persons/organisation with whom/which I have official dealings and/or private interests. Includes any links in the last five years to the food industry, NGOs or other stakeholder organisations, for example where you have acted as an advisor**
Marteau	Professor, University of Cambridge	Chair OG	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Michelle Patel	Deputy Director, Analysis and Insight, Food Standards Agency	OG member	In 2019 and 2020 I served on the advisory board of TIGTech, a WEF funded initiative to explore consumer views and values around food technology (expenses only) I am an employee of the Food Standards Agency (FSA) (paid)
Tazeem Bhatia	Director, Department of Health and	OG member	In the last five years I have worked only for the NHS, Public Health England and DHSC.
Dr Lucy Foster	Agri-Food Science Lead, Defra	OG member	In my role as agri-food lead for Defra I have links with industry and academia and NGOs in an official capacity – and carry out engagement with stakeholders as part of my defra role as a strategic lead on R&D and innovation. I have not given any talks, received grants or payment for any activities outside my defra role. In 2018/19 I co-authored a technical book on food authenticity (DNA Techniques to Verify Food Authenticity: Applications in Food Fraud, Royal Society of Chemistry 2019).
Professor Anne Ferguson-Smith	Professor and CEO, BBSRC	OG member	Fellow of the Royal Society; Fellow of the Academy of Medical Sciences; Unpaid Advisor - President of the Genomics Society – The University of Cambridge (recently stepped down); Unpaid Advisor – Arthur Balfour Professor of Genetics, The University of Cambridge; Personal Capacity – Daughter is doing a PHD at The University of East Anglia Talks given are unpaid and part of the roles undertaken at the time.
Professor Julie Lovegrove	Professor, University of Reading	OG member	Deputy Chair of UK Scientific Advisory Committee of Nutrition (SACN); Member of the Medical Research Council (MRC) Population and Systems Medicine Group (PSMB); Trustee on Academy of Nutritional
Professor Ciaran Forde	Professor Sensory Science and Eating Behaviour, Wageningen University	OG member	I have acted as an Advisor on scientific committee's for the following organisations; Kerry Health and Nutrition Institute (2018-22) and the Scientific Committee of Lesaffre (2024-present). I am a member of the Institute for the Advancement of Food and Nutritional Science (IAFNS) Scientific Committee on Non-nutritive sweeteners (2021-present). I have received reimbursements for scientific presentations from Kerry Taste and Nutrition, Pepsico, United States Department of Agriculture (USDA), General Mills, British Physiology Society, AB Mauri, Institute for the Advancement of Food and Nutritional Science (IAFNS), GB Foods, ILSI-SEA, Institute for Food Technologists (IFT), European Federation of Food Science and Technology (EFFOST) Nestle Nutrition Institute, Ferrero (Somartec), Mondelez, The Association for Chemosensory Sciences (AChemS), European Chemosensory Research Organisation (ECRO), International Glutamate Technical Committee (IGTC), the Society for the Study of Ingestive Behaviour (SSIB), Elsevier, the Norwegian Technology Platform, Ajinomoto, Beijing Academy of Agriculture and Forestry Sciences (BAAFS), British Nutrition Society, World Sugar Research Organisation, and the Northern Irish Dairy Council. My past and present research receives financial support from the Dutch Public-private partnerships scheme, TKI Top Sector Agri-Food program (the Netherlands).
Professor John Mathers	Professor of Human Nutrition, Newcastle University	OG member	British Nutrition Foundation – a charity that exists to promote health and wellbeing and prevent diet-related ill health through evidence-based nutrition science. Member of Board of Trustees of World Cancer Research Fund (WCRF UK).
Professor Bob Doherty	York	OG member	I was a board trustee at the Fairtrade Foundation from 2017-2023 (2 terms). This was a voluntary position.
Professor Ortwin Renn	Professor, University of Stuttgart	OG member	Chairing a Roundtable with stakeholders from agriculture, food and food processing
Anna Taylor	Executive Director, Food Foundation	OG member	I lead an NGO and work with many other NGOs. I speak to the food industry frequently but accept no funding from them.
Dan Crossley	Executive Director, Food Ethics Council	OG member	Current Food Ethics Council Business Forum members are: AIC Services; Bettys & Taylors; CGW Foodtech Ltd; Compleat Food Group; Co-operative Food Eastbrook Farm; FDF (Food and Drink Federation); McDonalds UK & Ireland; Sainsbury's; West Country Milk; Yeo Valley. These are publicly available on our website. Over the past five years, other companies that have been Business Forum members include Marks & Spencer, Coca Cola, Tesco, Caffè Nero, COOK,Greggs plc and Quorn.
Nicki Whiteman	Interim CEO, Bite Back	OG member	Paid work - Impact on Urban Health - Consultant
Lizzy McHugh	Healthy and Sustainable Diets Manager, IGD	OG member	Currently employed by IGD social impact as which is funded by IGD commercial insight, which provides data and insights to the food and drink industry. Within IGD social impact we work with the food and drink industry, NGOs and government to make healthy sustainable diets easier and more accessible to all.Previously been employed by Pepsico and Avara Foods.
Kate Halliwell	Chief Scientific Officer, The Food and Drink Federation	OG member	Full time employment by the Food and Drink Federation since 2011
Dan Clarke	Health and Sustainable Diets	OG member	Holland & Barrett, Huel

UPF Public Dialogue Project Team			
Name	Role	UKRI UPF Public	Persons/organisation with whom/which I have official dealings and/or private interests. Includes any links in the last five years to the food industry, NGOs or other stakeholder organisations, for example where you have acted as an advisor
Ashleigh Sladen	Senior Programme Manager, BBSRC-UI	Project Manage	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Claire Colenutt	Senior Programme Manager, BBSRC-UI	Project Manage	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Riaz Bhunnoo	Associate Director, BBSRC-UKRI Global	Senior Respons	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Diane Beddoes	Senior Adviser, Sciencewise	Project team	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Philippa Lang	Public Engagement Programme Manag	member	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Sophie Watson	Principal Social Science Research Officer, Food Standards Agency	Project team member	Previously worked at Savanta (market research agency) over 3 years ago as a Senior Consultant to design and deliver market research for various clients in private sector – these clients included Deliveroo, Cargill, Warburtons and Burger King. I left this role in September 2021.
Henrietta Hopkins	Director, Hopkins Van Mil	Lead	Hopkins Van Mil: Henrietta Hopkins, Kate Furber, Hally Ingram, Suzannah Kinsella and Sophie Frankpitt, Steve Handley (as a subcontractor to HVM) or MEL Research have worked in some or all of the following projects related to the UPF Public Dialogue: What Matters in Environmental Science, a public dialogue for the Natural Environment Research Council (NERC); The Land of Plenty, public dialogue commissioned by WWF on using land well to produce food, restore nature, promote biodiversity; The Food Conversation commissioned by The Food Farming & Countryside Commission; The National Food Strategy public dialogue commissioned by DEFRA, Sciencewise and the Independent Reviewer Henry Dimbleby
Sophie Reid (Shaw)	Senior Associate, Hopkins Van Mil	Contract team	Food, Farming & Countryside Commission; Alexandra Rose Charity; WWF; POWeR network, Uni of Oxford; Which?, Defra (National Food Strategy); Food Standards Agency; Shift; Pecan; Southwark Council; Greater London Authority
Steven Handley	Research Director, M.E.L Research	Contract team	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Ruth Gosling	Associate Director, M.E.L Research	Contract team	I confirm that there are no existing/potential conflict of interest situations which I wish to declare to the Oversight Group Secretariat
Anna Macgillivray	Director, URSUS Consulting	Evaluation Contractor (lead)	UKRI Sciencewise and Defra – evaluation of the public dialogue to inform the National Food Strategy. Oversight group and specialist contributors included individuals and organisations from across the food sector. Food, Farming and Countryside Commission, National Food Conversation, 2023-4. Dialogue small group facilitator for waves of engagement in Cambridge, Kent, South London and Scotland. Specialist contributors included individuals and organisations from across the food sector in discussions about environment and climate change, food poverty and fairness, UPFs and health. Aid Environment (Dutch NGO) funded by Norad and Packard Foundation, 2019, 2020, 2021. Evaluation of programmes to reduce tropical deforestation and encourage uptake of sustainable soy and beef production (Amazon), and sustainable palmoil production (Indonesia). Make My Money Matter (UK NGO), 2022, Evaluation of programme to encourage shift in pension sector to sustainable net zero sectors including out of food sector companies without net zero deforestation policies.
Hilary Livesey	Senior Consultant, URSUS Consulting	Evaluator	UKRI Sciencewise and Defra – evaluation of the public dialogue to inform the National Food Strategy. Oversight group and specialist contributors included individuals and organisations from across the food sector. Make My Money Matter (UK NGO), 2022, Evaluation of programme to encourage shift in pension sector to sustainable net zero sectors including out of food sector companies without net zero

Appendix C: Scoping of the dialogue

In the scoping phase of the dialogue a number of activities were conducted to inform the design of the public dialogue. These are described below and include the key findings from each activity.

Topic Review

HVM conducted a Rapid Topic Review in January 2025 with the aim of collating available, recent and quality evidence on UPFs, to identify:

- Potential framing and questions around the topic for participants in the dialogue
- Gaps in evidence on public attitudes, where the dialogue (including the national survey) could add value
- Potential speakers and resources for use in the dialogue
- Implications of the current methodological/ taxonomical debate on UPFs for the dialogue design.

The review covered definitions, scientific debate, political and media context, consumption patterns, benefits, risks and trade-offs, as well as existing public attitudes research on UPFs (and also HFSS foods) and policy intervention case studies/ proposals. HVM reviewed 31 sources from across academia, government/ parliament, civil society and industry. These were selected through suggestions from Project Team and OG members, plus a wider search and snowball sampling. Summary findings from the Topic Review are shared in section 3 of this interim report.

The review of 31 source documents from academia, government/ parliament, civil society and industry[1] led to the following summary findings:

1. The barriers to healthy eating are seen as systemic and structural, caused by a food environment that encourages reliance on unhealthy foods due to their availability, price and marketing/ promotion.

2. UPFs make up a large percentage of UK diets (including children's diets) and evidence shows a correlation between UPF consumption and harms to health.

3. There is mixed evidence on the link between UPF consumption and lower socioeconomic class; some evidence suggests consumption is higher for lowest income, other evidence suggests it is high across all income brackets.

4. There is little understanding of the mechanisms by which UPFs harm health. Plausible theories are beginning to be tested, with some nascent evidence. Some suggest the correlation is due to confounding factors or the significant overlap between UPF and HFSS. More research on causal mechanisms and elements of UPFs like emulsifiers and artificial sweeteners is called for.

[1] Hopkins Van Mil *Public Dialogue on UPFs: Topic Review* (January 2025)

5. The usefulness of the most common classification of UPFs (Nova) is debated, especially for identifying UPFs for regulatory purposes, which it was not designed for. In the UK, dietary policy is designed to reduce consumption of HFSS. There is debate over whether existing evidence warrants action based on the 'precautionary principle', especially given the inconvenience and cost of dietary change away from UPFs. The recent House of Lords Food, Diet and Obesity Committee called for greater policy intervention around an existing HFSS framework, and further research on UPFs.

6. Other countries around the world have started incorporating UPF-targeting policies into their dietary policy, including dietary advice, warning labels, marketing restrictions and taxation.

7. UPFs have caught the public attention and are a significant concern to many. There has been limited public dialogue on the subject specifically, but participants in two recent deliberations on the food system called for greater government interventions to:

    - Reduce UPF consumption (through taxation and restrictions in public institutions, for example).
    - Regulate UPFs to restrict their use.

    Some saw a future (in the next 5-10 years) where UPFs are not part of UK diets.

8. There is considerably less research and public debate about the environmental impact of UPFs. A significant area of debate and trade-off here is about the place of plant-based foods (many of which are ultra-processed) in the drive for net zero.

The Topic Review showed that there are multiple systems of classifying foods by their processing level; the most well-known and commonly used is NOVA, developed in 2009 by Prof. Carlos Monteiro and colleagues as a research tool. NOVA was the only system which met the Scientific Advisory Committee on Nutrition's (SACN) criteria for selection in its 2023 position statement on processed foods and health, due to its precedence in use and applicability to UK.

A 2023 roundtable on UPFs convened by Government Office for Science, called for establishing sub-categories of UPF foods with different nutritional characteristics, to inform future policy.

Nationally representative survey

The full survey findings report is available here. The survey was conducted by M·E·L Research, having been co-designed with HVM, the Project Team and taking on board the advice of the OG. The survey design was informed by the Topic Review findings, with care taken to avoid repeating consumer surveys and trackers which have already provided a rich seam of information on public attitudes. The survey was designed to ask questions before and after sharing the description of UPFs used throughout the dialogue to gain unprompted and prompted views on the topic.

Survey fieldwork ran between 26th February and 12th March 2025, with 2,000 responses completed. The survey was undertaken using an online panel. The design of the online survey enabled it to be accessed by both mobile and desktop devices. The average survey completion time was 12 minutes. During fieldwork, the responses from participants were checked and removed if their response took under

3 minutes to complete and/ or if the respondent used random characters/ numbers to complete open-ended questions. This is a key indicator of response quality (i.e. engagement with the survey subject matter).

During the data collection, the composition of the survey sample was controlled using quotas. These quotas were set based on the following characteristics, with targets set using 2021 Census data for England, Wales, Scotland and Northern Ireland:

- Age (5x age bands)
- Gender
- Socio-economic group (SEG)
- Geographic region

The overall Wales and N.I targets were boosted to ensure a minimum of 100 survey responses were collected in these nations. After the completion of fieldwork, the profile of the cleaned data set was reviewed by these variables. To correct some minor under- and over-representation, weights were applied by gender, age, SEG and region. This weighting process ensures that the resulting data set is fully representative of the population of the UK. The final sample size of 2000 has a maximum sampling error of +/-2.2 at a 95% level of confidence.

The following is a summary of findings around key themes.

The survey demonstrated clearly that there is confusion and no consistency amongst the population about what UPFs are. There is also a lack of certainty, mirroring the uncertainty in the available evidence, including the public dialogue findings, on their impacts.

Food accessibility and choices

Fresh fruit and vegetables are cited by 92% of the population as the food types which are in easy reach of their homes. However, this leaves 8% of the UK who do not have ready access to these foods. Biscuits, crisps and sweets are almost as accessible as fruit and vegetables, while three quarters have takeaway (78%) or fast-food options (76%) easily accessible from where they live.

Nine in ten people are satisfied with the range of foods available within easy access of their home. Those who are dissatisfied with the food that is accessible from their homes say that this is due to a lack of choices in food shopping or hospitality outlets.

Consumer behaviour and packaging information

Two in five people (41%) always look at packaging information when considering a new food product, 47% sometimes do, while one in eight (12%) rarely or never do. Those aged 25-34 years, in the AB social group, and individuals from minoritised ethnic groups are more likely to always check packaging information. Conversely, those in C2 and DE groups, identifying as White, male, or aged 55-74 are least likely to engage with packaging information.

Awareness and pros and cons of UPFs

Before seeing the terminology used to describe UPFs in the survey, 71% of respondents state that they have heard the term “ultra-processed foods”. A lack of awareness of this term peaks among those aged 18-24, the C2 and DE socio-economic groups and those who identify as Asian.

When asked to describe UPFs in their own words 38% did not, or could not, provide a response.

Respondents were asked to state in their own words the benefits of UPFs. In response 28% said they were not sure there are any benefits and 17% said there were no benefits. The most commonly identified benefits of UPFs are seen as being:

- The relative low cost of these foods (19%) and
- Product longevity (18%).

That UPFs are easy and quick to prepare, cook and eat was seen as a benefit by 13%, and convenience was cited as a benefit by 12% of the population.

43% of all respondents said that they saw “general negative health impacts” of UPFs as being a significant concern. They also raised used the following terms to identify concerns: non-natural ingredients (18%), addictive properties (12%), and links with obesity (8%). The most words most commonly used terms to describe UPFs were unhealthy (52%), artificial (42%), unnatural (28%), and convenient (28%).

When selecting from a list of possible descriptors of UPFs the most commonly associated words with UPFs are "unhealthy" (52%) and "artificial" (42%). The taste and pleasure aspects often associated with UPFs did not come through strongly when using the terminology UPF, and only 6% related UPFs to the term “junk food”.

Key information sources

The most common sources of information about UPFs respondents had encountered in the month before completing the survey were news articles (40%), social media (24%), and discussions with friends or family (20%). The messages that respondents recall about UPFs are nearly four times more likely to have been negative (61%) rather than positive (16%) in nature.

Trusted sources of information on UPFs

The top four most trusted sources of information about UPFs by the population are:

- Healthcare professionals/ GPs (53%)
- The NHS (52%)
- Scientists/ universities (45%)
- Government (38%)

Food/ health bloggers/ influencers (trusted by 11%) and social media (trusted by 8%) are the least trusted. There is also a lack of trust expressed in the food industry (13%), and the big supermarkets (12%) in particular.

59% of the UK population would like to find out more about UPFs (particularly younger adults, those in ABC1C2 socioeconomic groups, those with children and Asian/ Black ethnicities).

Among these sections of the population seeking further information, the most common areas include:

- Detail on which foods are and are not defined as ultra-processed (53%) and
- The evidence base regarding potential health impacts (52%).

The future

In thinking about the diet of the future:

- Three quarters of people in the UK (76%) would like to eat less ultra-processed food, with six in ten (61%) actively trying to do so.
- Four in five (83%) of those with children under 18 would like to reduce the amount of ultra-processed food their children eat. However, barriers to doing so are suggested by the fact that 58% of parents state it is difficult to identify healthy food choices for their children.
- When considering children specifically, just under three quarters (73%) of people in the UK believe that UPFs should not be marketed to children.

In the context of these ambitions respondents disagreed about whether the food industry cares about providing healthy choices. Equal proportions agree and disagree that this is the case.

There is strong support for improving food labelling, with 81% in support of labelling of potentially harmful foods and 85% in support of labelling to indicate the level of processing.

When considering possible additional food regulation, public sentiment is not clear given that a majority simultaneously support both regulation based on the precautionary principle - and regulation that is fully evidence based.

These survey findings influenced how the dialogue was designed to ensure that participants could unpack and prioritise those areas on which public views are not clear. They have also informed how the participants progress through the dialogue to explore and prioritise the research they feel is needed to fill current evidence gaps.

Design workshop

HVM held a Design Workshop involving 16 stakeholders who came together in-person in March 2025 to gather wider perspectives to inform the design process. We discussed:

- Ways of describing UPFs
- Pitfalls in language on UPFs
- Testing the design approach
- Exploring potential speakers
- Potential stimulus for an exploration of the topic e.g., case studies, a research map, essential information such as an explanation of the food system.

Findings included the need to build iteratively from where people are, starting with food and moving into discussions on UPFs.

Focussed discussion groups

Participants were recruited to join 1.5 hour discussions through existing community groups and networks:

- 11 Young people joined through Voyage Youth in Hackney, East London, this group met in person at Voyage Youth's centre.
- 9 people who are time-poor joined from a variety of sources across the UK including parent, driver/ cab driver and shift-worker networks, the group met online.
- 11 people with weight-related health conditions were engaged through weight and diet networks in Hertfordshire, they met in-person at the charity Coffee and Coping's offices.

The intention in running these groups was to understand how UPFs fit into the lives of people with specific food needs, and to give an early indication of people's understanding of UPFs. Involving specific people in a separate strand of work was helpful to the design process given the potential 'shaming' aspect of discussions around UPFs and healthy/ unhealthy diets. The following is a summary of the key points raised in these discussions:

Messages from our focussed groups

Time Poor

1. We're all **trying to do our best**, most want to give a good diet to our families. There's a lot of judgment
2. Appreciate that life is busy, fast-paced. **Cooking from scratch takes time**, these lives are busy with family life and work life thrown into the mix
3. It's **cheaper** to eat something quick and convenient than make a meal from scratch – decisions aren't always the choice we'd want to make. Sometimes it's a means to an end, going to McDonalds means eating something rather than nothing
4. **Not everyone is confident in cooking** from scratch, there's a lot of self-judgment about not being good at cooking, not everyone has been brought up with cooking from scratch, or just cooking a certain type of food
5. You **lose control of what children are eating** as they get older
6. Food is **not just about nutrition**, it's also about bonding, coming together, comfort food, having a shared moment with others over a cup of tea and a biscuit – that can be a precious time after school
7. There's a lot of **pressure to be body conscious** – we want our kids to grow up with balance, rather than continuing the cycle of guilt about eating

Young people

1. All **young people aren't the same**, some will eat these foods, some won't, you can't make assumptions
2. Consider different minorities and **ethnicities** when you're thinking about what needs to happen about UPFs
3. **Cost of living** is a crisis that's affecting us as much as anyone
4. There is an **inter-generational barrier**, some of our parents can't relate to our experiences, they are so different from when they were growing up.
5. There is a **lack of alternatives** (to UPFs) – it's what's around us
6. **Advertising is targeted** at us – there isn't 'healthy food' or non-processed food that's advertised towards us
7. There are clear cases of **addiction**, as bad as any other addiction
8. There should be more teaching on this in **school** – there is some, but it's like a special class – not everyday lessons
9. Some kids aren't at all interested in environmental impacts, some are, we **all have our own views** just like older people

Weight-related health conditions

1. We're all here for different reasons, we all have different diets, we're just **trying to do our best** for our own health and for our kid's health
2. We shouldn't sleepwalk into bad eating habits because industry tells us to. It's more about **profits than our health**
3. We want to know:
   a. About how UPFs might affect our health and what's in them
   b. What sort of research is being done in this area? To know what gaps need filling
   c. What is being done about it? Do medical professionals know about how to treat people who have health conditions like ours because of weight?

The discussions have informed the design process and allowed us early insights from those with lived experience of the issues. The dialogue filmmaker, Postcode Films, is filming interviews with two of the attendees from each of these groups. These lived experience film clips will be shown to public dialogue participants to inform their deliberations.

Appendix D: Recruitment specification

This recruitment specification is focused on the recruitment of 147 participants reflecting a broad demographic. Our workshop groups will be as follows:

Wave 1 – 42 total participants
1. 21 people from Northern Ireland
2. 21 people from Scotland

Wave 2 – 42 total participants
3. 21 people from the South West of England
4. 21 people from Wales

Wave 3 – 63 total participants
5. 21 people from London
6. 21 people from the North East of England
7. 21 people from the North West of England

These groups will broadly reflect the UK population in terms of age, gender, life stage, social grade, household income, geography and ethnicity. We will be gaining informed consent from participants in terms which comply with Data Protection Act 2018 - the UK's implementation of the General Data Protection Regulation (GDPR). Data shared between HVM and our recruitment agency Acumen fieldwork will be password protected at all times. HVM is registered as a data controller with the Information Commissioner's Office no: Z2969274.

Participants are required to take part in all the activities listed below for which a payment of £415 per participant has been allocated. In addition HVM will arrange and pay for travel and overnight accommodation (as required) for the in-person workshops.

Participant payment schedule:

- Online context webinar - £35
- 3 x online workshops - £50 per workshop
- After in person workshops - £230

Please note support will be provided for participants who need either equipment or data to take part, they will not be excluded for not having access to a laptop, tablet or insecure/ no internet connection.

The following summarises the commitment participants will be making. All online events workshops are online using Zoom.

In-person workshops will be held in the following locations over a Friday evening and Saturday:

- Scotland – Kirkcaldy
- Northern Ireland – West Belfast
- Wales – Swansea
- South West England – Taunton
- North West England – Liverpool

- North East England – Middlesbrough
- London – London Borough of Newham

Activity	Dates
Optional tech support session for all participants	7th April, 8th April 2025
Wave 1 participants – 42 in total from Northern Ireland (21) and Scotland (21) **iThoughts recruiting**	
Online context webinar 1.5 hours	14th April 2025
Workshop One: Grounding the Topic – 2.5 hours online	24th April 2025
Workshop Two: The impacts of UPFs – 2.5 hours online	6th May 2025
Workshop Three: UK policy levers and action – 2.5 hours online	20th May 2025
Workshops Four and Five: in person 3 hours Friday evening and 6 hours Saturday Locations: Kirkcaldy (Scotland group) and West Belfast (Northern Ireland group)	30th-31st May 2025
Wave 2 participants – 42 in total from Wales (21) and South West England (21) **iThoughts recruiting Wales** **Acumen recruiting South West**	
Online context webinar for Wave Two (Wales and South West England)	15th April 2025
Workshop One: Grounding the Topic for Wave Two – 3 hours online	28th April 2025
Workshop Two: The impacts of UPFs for Wave Two – 3 hours online	8th May 2025
Workshop Three: UK policy levers and action for Wave Two – 3 hours online	22nd May 2025
Workshops Four and Five: in person 3 hours Friday evening and 6 hours Saturday Locations: Swansea (Wales group) and Taunton (South West England group)	6-7th June 2025
Wave 3 participants – 63 in total from North East England (21), North West England (21) and London (21) **iThoughts recruiting NW England and London** **Acumen recruiting NE England**	

Online context webinar for Wave Three (North East England, North West England and London)	16th April 2025
Workshop One: Grounding the Topic for Wave Three – 3 hours online	30th April 2025
Workshop Two: The impacts of UPFs for Wave Three – 3 hours online	15th May 2025
Workshop Three: UK policy levers and action for Wave Three – 3 hours online	27th May 2025
Workshops Four and Five: in person 3 hours Friday evening and 6 hours Saturday Locations: Middlesbrough (North East group) and Liverpool (North West group)	13-14th June 2025
Workshops Four and Five: in person 3 hours Friday evening and 6 hours Saturday Location: Newham (London group)	20-21st June 2025

3. Screener to include:

Criteria for 147 participants	*Target – a broad diversity of UK demographics*
Gender	Appropriately balanced mix of people who identify as male / female / non-binary.
Age	Good age distribution across age groups from every adult life stage from 18 upwards. The sample should be somewhat boosted for 18-25 year olds and 65-85 year olds.
Life stage	A broad range of life stages from students, young professionals, raising young children to empty nesters and those who are retired
Minoritised ethnic groups	A boosted sample so that for each group of 21 participants 6 are from minoritised ethnic groups above current census data (acknowledging this will be more achievable in some geographic locations than others). Asian, Asian British - ideally 2 Black, Black British, Caribbean or African - ideally 2 Mixed or Multiple ethnicities - ideally 2

	Other ethnic group - ideally 1
Disabled people	A boosted sample so that for each group of 21 participants a min of 3 participants are disabled people.
Those with a long-term health condition	A boosted sample so that for each group of 21 participants a min of 4 are people with experience of a long-term health condition.
Number of dependents	A boosted sample for families with a larger number of dependents
Current working status and type	A range of people who are employed (part-time/ fulltime/ self-employed) and unemployed, plus those who are retired.
Social Grade	Mix of AB (3 participants) C1C2 (7 participants) DE (11 participants) for each group of 21 people
Household income	A balance from across socio-economic groups, but weighted (at least 5 participants in each group of 21 participants) for those in vulnerable financial circumstances.
Geographic location	Scotland group – should be recruited from within a 30-mile radius of Kirkcaldy Northern Ireland group – should be recruited from within a 30-mile radius of West Belfast Wales group – should be recruited from within a 30-mile radius of Swansea South West England group – should be recruited from within a 30-mile radius of Taunton North West England group – should be recruited from within a 30 mile radius of Liverpool North East England group – should be recruited from within a 30-mile radius of Middlesbrough London group – should be recruited from within the London Borough of Newham.

	The whole cohort should include those from rural, urban, suburban and coastal areas (as appropriate depending on location).
Experience of market research/ dialogue	Should not have taken part in a public deliberation/ Citizens' Jury/ Citizens' Assembly or public dialogue in the last 3 years, particularly those run by HVM including the: • The Food Conversation (Food, Farming & Countryside Commission) • Land of Plenty (WWF) • National Food Strategy (DEFRA/ Sciencewise)
Attitudes to UPFs	How concerned are you about how what you/ your family eats impacts your/ your family's health? How concerned are you about how what you/ your family eats impacts the environment? How much time do you generally spend cooking on a daily basis? Are you primarily responsible for feeding your family?

Important note: please **do not** recruit friendship pairs or use snowballing techniques.

Appendix E: Specialists

Eighteen specialists provided information and evidence to dialogue participants in the online and in-person workshops. They also answered questions in formal Q&A sessions and informally during breaks and in small group sessions.

- Prof. Alan Renwick, UCL: How to listen and hear in public dialogue
- Riaz Bhunnoo, BBSRC: The range of research funded by UKRI
- Dr. Tracey Duncombe, University of Reading: How research connects with policy
- Dr. Christian Reynolds, Centre for Food Policy, City St. Georges, University of London: The (industrialised) food system
- Dr. Yanaina Chavez-Ulgade: Centre for Food Policy, City St. Georges, University of London: Food processing and UPFs
- Mhairi Brown, Head of Food Futures, Food, Farming & Countryside Commission: UPFs and health
- Rob Percival, Head of Policy, The Soil Association: UPFs and environment
- Dan Crossley, Executive Director, Food Ethics Council: Food environments and power in the food system
- Prof Robin May, Chief Scientific Adviser/ Michelle Patel, Deputy Director, Analysis & Insight and Adam Hardgrave, Senior Scientific Officer FSA: Food regulation and standards.
- Kate Halliwell, Chief Scientific Officer, Food & Drink Federation: How industry responds to food regulation and standards

A presentation was given on UPFs in context in each of the in-person workshop locations:

- **Kirkcaldy**: Dr. Lauren Carters-White, Lecturer in Public Health, University of Stirling
- **West Belfast**: Dr. Alysha Thompson, Research Fellow, School of Biological Sciences, Queen's University Belfast
- **Swansea**: Dr. Jennifer Gatzemeier, Lecturer in Psychology, School of Health and Social Care, University of Swansea
- **Taunton**: Dr. Annika Flynn, Senior Research Associate, School of Psychological Science, University of Bristol
- **Middlesbrough**: Alex Young, Food Partnership Coordinator Middlesbrough Environment City
- **Liverpool**: Dr. Jenna Cummings, Healthy Psychologist, University of Liverpool;
- **Newham**: Prof. Christina Vogel, Director of the Centre for Food Policy, Professor of Food Policy, City St George's, University of London
- **All locations:** Dr Stella Peace, Executive Director of Healthy Living and Agriculture, Innovate UK, UKRI on research funding related to food policy

Appendix F: Sample speaker briefing

Making sense of UPFs: a public dialogue

Speaker briefing

This briefing contains:

1. Contact information
2. About the public dialogue
    a. What is public dialogue?
    b. What is the purpose of this public dialogue?
    c. How are we describing UPFs?
    d. What will dialogue participants be doing?
3. Overall speaker briefing
    a. Accessibility
    b. Your slides: template and sharing them in advance
    c. Your Q&A with participants
    d. Informants and advocates
    e. Transparency
4. Specific presentation briefing

1. Contact information

Thank you for agreeing to act as a specialist presenter for the Making Sense of UPFs public dialogue. Please read the information contained in this briefing carefully as it provides essential information on providing information and evidence to the dialogue participants.

If you have any questions about the content of your presentation and for guidance on presenting to dialogue participants please contact Henrietta Hopkins henrietta@hopkinsvanmil.co.uk and Sophie Reid sophie-r@hopkinsvanmil.co.uk at Hopkins Van Mil who are the co-leads on the design and facilitation of the dialogue. Please also send your draft slides to this team (see slide sharing).

For questions about the logistics on speaking at the public dialogue workshops please contact Mattie Carter, HVM's Research Assistant mattie@hopkinsvanmil.co.uk.

2. About the public dialogue

2a) What is public dialogue?

A public dialogue is a method for gaining an in-depth insight into citizens' views, concerns and aspirations on complex, and often controversial, issues.

As defined in the Sciencewise Guiding Principles, public dialogue is a process during which people from across society interact with scientists, researchers, stakeholders and policy makers to deliberate on issues relevant to future policy decisions.

Public dialogue enables constructive conversations amongst diverse groups of citizens on topics which are often complex or controversial. The process provides an in depth insight into what people think and feel about a subject, it also shines a light on why people respond in the way that they do to the issues.

Public dialogue can be used to help formulate and test policy options in the early stage of development. It can also provide evidence on what assurances and safeguards members of the public expect if a policy area is to be taken forward. This improved understanding helps policy makers to mitigate potential risks, and take forward policy options with valuable insight into citizens' views and opinions.

2b) What is the purpose of this public dialogue?

The purpose of this *Making sense of UPFs* public dialogue is to inform UKRI research agendas on UPFs. In doing so it will:

- Produce quantitative information on public attitudes and knowledge of UPFs via a representative survey
- Develop understanding of participants' knowledge and attitudes on UPF using deliberative and dialogic approaches
- Explore participants' expectations of public health messaging, food marketing and regulation within the food system
- What are their information needs and who do they trust to provide information to them?
- Prioritise/ map and explore research gaps, areas of uncertainty

2c) How are UPFs described in the dialogue?

Exact definitions of UPFs vary, but for the purpose of this public dialogue we are asking participants to think about UPFs as foods for which all of the following apply:

- tend to include more than 5 ingredients AND
- include ingredients which wouldn't be found in a domestic kitchen AND
- are made from substances derived from other foods AND
- include additives.

Participants will be told in workshop the following:

Some advantages of UPFs generally include enhanced taste, reduced cost, and longer shelf life. But there is growing evidence that some UPFs are associated with poorer health. The science is still unclear about whether these health impacts are due to the ingredients used e.g. high use of saturated fat, salt and sugar, additives, the manufacturing processes used, or the fact that they might replace healthy patterns of eating.

2d) What will dialogue participants be doing?

In the *Making sense of UPFs* public dialogue, participants will be working together from mid-April until late June in 7 locations across the UK. 147 participants will take part in the following set of workshops in which they will deliberate on the issues informed by information and evidence. We have highlighted the workshop you would contribute to:

- Webinar, 1.5hrs online: an introduction to the public dialogue and to the topic including:
    - Which organisations are involved in the dialogue
    - How are participants involved, and why this is valuable
    - An initial introduction to the food system
    - What is research in the context and how does it fit within UKRI research agendas?
    - How research leads to policy impacts.

- Workshop 1, 2.5hrs online: an introduction to the food system:
    - The food system: actors involved, activities and processes within the system, connections between them
    - Information on the topic: situating UPFs within healthy/ unhealthy diets, HFSS overlap and priority; setting out the debate

- Workshop 2, 2.5hrs online: health and environment
    - Impacts on health and environment
    - Power and the system – UPFs
    - Introducing case studies: alternative proteins; snacks e.g., crisps; bread

- Workshop 3, 2.5hrs online: regulation and research
    - How foods are regulated at the moment (novel foods, UK approach to risk assessment, additives, NPM and HFSS)
    - Industry voice on how regulation impacts on what is done within industry
    - What further policy has been suggested - why/ why not implemented?

- Workshop 4, 3hrs in-person: Reflecting on UPFs in-situ
    - Fieldtrip to local high street
    - Local speaker – UPFs in context
    - A meal and reflection on the process so far

- Workshop 5, 6hrs in-person: Culminating sessions bringing all the thinking together.

We would like you to speak for **no more than 10 minutes** at Workshop 2 on 6th/8th/15th May. The session is online using Zoom. Further details on speaker times and content are in the briefing for specific workshop sessions at the end of this document. Alongside this briefing document, we will also arrange a speaker briefing call held on Zoom with you so that we can discuss the contents of this brief. This will be arranged with you in the coming week.

3. The speaker brief

3a) Accessibility

As the dialogue participants will include people with a range of educational attainment, including those with no educational qualifications, and those who may have not heard about the topic before please:

- Explain things as simply as possible
- Avoid using acronyms and do not use jargon

- If you cannot avoid using complex terminology, please explain it to the participants clearly
- Do not assume that the audience has any prior knowledge of the subject you are presenting on
- Do use PowerPoint (or similar) slides as this gives participants a simple way of focusing on your key points.

Some dialogue participants have hearing loss. Please speak clearly and slowly into your computer microphone on Zoom and ensure your mouth is visible on screen.

3b) Your slides

Please use the template we have shared with you for your slides. We are providing a template for transparency, clarity, and consistency. In the slide template we are asking you to please:

- Create a presentation slide pack that addresses the specific brief and questions set out for your presentation in this brief.
- Introduce yourself to participants.
- Please state declarations of interest, as discussed with Henrietta Hopkins, in the slide in the template created for this purpose. For transparency it is important that this is clear to participants.
- Start your slides with a list of the key points that you are going to cover.
- Structure your presentation so that it covers the detail required on each of these points in order.
- Please do not try to cover too much information in each slide, 1 minute per slide and a maximum of 10 slides is a useful rough guide.
- Do use bullet points and visuals, but remember that participants will be reviewing the slides after the session, so images with no contextual text are unhelpful.
- Illustrate your points with examples where you can.
- Take into account the information being presented by other specialists in your session (see page 8 for the summary of speakers/ presentations for the workshop you are speaking at)
- Do not present information as fact where the evidence is uncertain or disputed
- Stick to the information in your slides when presenting without introducing new information
- End your presentation with the same slide you began with to recap your key points
- Be aware that your presentations will be recorded, and that your slides and a video of the presentation will be made available to public dialogue participants to review again after the session

All speaker slides **must be reviewed** at least ten days before the presentation is made. To enable this, please upload your draft slides to this folder Speaker slides for review by 5pm on **25th April.** If you have any issues with the shared folder please email the draft slides to sophie-r@hopkinsvanmil.co.uk, who is also available if you have any questions or need help putting the slides together by the deadline. We cannot allow speakers whose slides we have not reviewed to present, so please do ensure the slides are uploaded promptly. The slides will be reviewed so we can take the opportunity to bring to your attention any material which does not appear to be relevant to your brief, is not easy to understand, or which might be considered

biased. We will confirm in advance of your presentation if we think any of the slides need adjustment and agree with you the final presentation.

When speaking please stick to time, we will have to stop any speakers that go beyond the allotted time so as to give our dialogue participants enough time to ask questions and to deliberate on what they have heard in each session.

3c) Your Q&A with dialogue participants

After listening to the presentations from you and other speakers, dialogue participants will discuss what they have heard in their small groups. This will be followed by a Q&A session and a participant from each of the small groups will ask you and the other speakers the most important questions identified by their group. The Lead Facilitators (either Henrietta Hopkins or Sophie Reid depending on Wave), will facilitate this Q&A session to ensure that all speakers get an equal opportunity to respond to the questions and to keep the session to time.

It is important to note that some participants may lack confidence, so please respond positively to any question you receive. When answering questions, try to make your answers clear and concise, and if you do not know the answer to a question, please say so. We will make it clear to participants that any questions that aren't answered in the workshop will be answered off-line and the answers shared with them in their dedicated online space.

3d. Informants and advocates

Dialogue participants will hear a variety of evidence in order to reach informed recommendations and conclusions on research agendas related to UPFs. There are two types of speakers as set out in the table below. Your role in this dialogue is to be **an informant.**

Role	During the presentation	During the Q&A
Informant	Will explain the range of views, options and opinions that exist on the topic(s) being covered in their presentation. We aim to provide a range of information and views on the topic to the dialogue participants. We will do this partly by selecting speakers with diverse perspectives, but also asking those speakers to explain the reasonable range of views/ options that exist. It is important that speakers confine their presentations to descriptive information rather	Some questions may have straightforwardly factual answers. Where this is not the case, this should be explained, as far as possible, using the range of opinions that exist. Where the evidence is uncertain, speakers will provide an answer which references the uncertainty.

	than any value-laden claims. They will describe the world rather than judge it.	
Advocates	Will present their personal opinion, or, where relevant, the opinion of the organisation they are there to represent. In presenting their opinion they will not share points that are factually inaccurate. Advocates are invited to make a case for a particular position without misrepresenting the facts or otherwise misleading their audience. Hearing these arguments can be useful to dialogue participants, although the process is also designed so that participants use their own values and knowledge to weigh the evidence they are given.	Some questions may have straightforwardly factual answers. Speakers will respond to these with a clear fact. Where this is not the case the answers can reflect a personal opinion, or, where relevant, the opinion of the organisation speakers are there to represent. Again, in presenting opinions speakers will not give answers that are factually inaccurate.

3e) Transparency

We anticipate there being significant interest in this public dialogue. It is important therefore that it is fully transparent. For these reasons we will:

- Ask you to complete a declaration of interest form and state any interest which might be perceived to be a conflict (e.g. in relation to research funding or relationships) in your slide deck
- Upload the speaker presentations to the Sciencewise and Hopkins Van Mil websites; and
- Make speakers' presentation slides available in pdf form when we publish the public dialogue report.
- We may also publish the outline agendas for each workshop session and an example of this speaker briefing.

If you have any concerns or questions about these plans please raise them with Henrietta Hopkins, Lead Facilitator.

Appendix G: UPF challenge areas

Before attending the final in-person workshops participants were asked to share what they think the big challenges or problems are that more research about UPFs could help solve. They were asked to think about:

- What matters to you about UPFs?
- What don't we know yet?
- What do we need to know about UPFs to make decisions?

Making healthy decisions

- Effectiveness of behaviour change initiatives like changes to labelling
- Best ways to raise public awareness
- Research into the specific barriers to healthy decisions including in the formulation of UPFs
- The role of the food industry in supporting healthy decisions
- Research into the addictive nature of UPFs, to what extent are the products inherently encouraging unhealthy decisions

Healthy products

- Research into which types of UPF are bad or ok for health
- How UPFs can be made healthier
- Alternative food sources to UPF
- How foods can be reduced in salt and sugar without introducing worse outcomes
- How to keep food fresh for longer without preservatives, stabilisers or additives

Mental ill health/ neurological effects

- Long-term effects of UPFs on mental health
- Specific effects of UPFs on mental health at key life stages e.g. puberty, menopause
- Effect of UPFs on child development
- Links between UPF and neurodiversity
- Relationship between appetite and mental health

Health inequalities/societal burden of ill health

- Cost to health services and welfare system from high UPF consumption
- Affordability and availability of UPFs in relation to other foods
- Other lifestyle factors that might drive apparent links between UPF and bad health outcomes
- Relationship between UPF consumption and income

Diet-related ill health

- Long-term effects of UPFs on physical health
- Relationship between UPF and appetite regulation
- Long-term effects of UPFs on different populations, including those with specific health conditions

- Health effects of UPF packaging
- Understanding UPF role in the global rise of diet-related diseases like obesity, diabetes, and heart disease
- UPF effect on gut health
- Harm of specific ingredients or combinations of ingredients e.g. emulsifiers, artificial sweeteners, preservatives, other additives
- Harm of specific processing methods

Environmental harms

- Environmental effects of UPFs including long term effects
- Environmental effects of UPF packaging
- Research into which types of UPF are bad or ok for environment

Appendix H: prioritised research topics

Each of the three small groups in each location produced a list of 5 or 6 research priorities for UPFs. These are shared in full below. They were drawn from a much longer list of between 33-57 research areas in each location which were identified during the course of the last workshop. These are discussed in Part two of this report.

Location	Research Priority	Why?
Kirkcaldy		
	1. Making non-UPF products cheaper **2.** Looking at the relationship between increase in UPF consumption and pressure on the NHS **3.** Making UPFs an accessible concept to all, including refining a definition; look at social media and the power of influencing and misinformation **4.** Clarity around the health impacts of specific additives, using randomised control trials to do so **5.** Having a Global outlook: why are UPF consumption rates so much higher in the UK and US?	**1.** Financial vulnerability increases UPF consumption **2.** We need to safeguard services, the NHS supports more than physical health **3.** To stop the consumer from being excluded, confined or manipulated for profit **4.** To find out how UPFs impact health, including hormones **5.** We need behavioural studies, so that we can learn from other countries and come together to tackle this big challenge
	1. The impact of UPF consumption on the NHS **2.** Proper labelling of foods and how the public assimilate food labelling **3.** The chemical impact of specific ingredients or processes	**1.** We need specific evidence to support government policy development and free up NHS resources for other things **2.** To maximise the impact we have on behaviour change, so people are better informed when making choices **3.** They may be detrimental to mental health and wellbeing, for example, decreasing microbiome, or overstimulating cortisones

	4. Potential active addictive properties that stimulate overeating	**4.** To have tests for repeated use and resilience
West Belfast		
	1. Understand what people are eating and why, for example is it lifestyle, advertising etc.? **2.** Babies and children – how diet shapes the future **3.** Investigate the link between diet, UPFs and illness **4.** Test food additives, for example sweeteners, to the same degree we test medicine **5.** Develop digital tools for ingredient transparency, for example an app scanning for ingredients	**1.** To help us understand how UPFs fit into modern, time-poor lifestyles and identify what other factors need changing to enable the public to make more informed choices **2.** Understanding how early-life eating habits influence brain development and long-term health can drive cultural change and provide breakthroughs in supporting healthier future generations **3.** To take the pressure off the NHS and promote a healthier population- this benefits both individuals and the wider UK workforce **4.** To ensure the safety of commonly used additives and understand their role in UPF consumption **5.** To make food information easily accessible, encourage manufacturer and supermarket transparency and empower consumers to make informed decisions through convenient digital means
	1. The impact of UPFs on the increase in illnesses, diseases and disorders **2.** The impact of different foods on the gut and wider health **3.** Does knowledge change behaviour?	**1.** To understand more about the long-term impacts, for example earlier death, dementia, ill-health, because having high certainty, scientific evidence about this will change what we eat **2.** So we can understand the impact of what we eat on Chrones disease and IBS and energy levels to help break the viscous cycle of being too tired to cook, so reaching for UPFs **3.** This will help us understand better the role of education, having information in schools about what to eat. We need cumulative research on this

	4. Babies and young children 5. Taxes and the impacts they have on UPF or fresh food consumption	4. How does what they eat and what their parents eat impact future health? 5. For information tools, we need to know if this would be corporate or personal tax
	1. Why have diseases/ disorders increased? 2. Research individual additives in clinical, long-term drug trials 3. Research into labelling/ categorising items with warnings around health, for example the NOVA scale 4. Case studies on how people use or need UPFs, specifically with an economically deprived focus, and whether they can be modified with increased fibre, vitamins etc.	1. This shapes the future of the NHS and helps us to understand how to treat our ageing population. If we know the links, we can prevent further illnesses for healthier lives. Prevention is better than treatment. 2. So that we might gain a more in-depth knowledge. Data is vital for people to choose if they want to eat those products 3. To help people understand and make decisions 4. Everyone needs access to good, nutritious, affordable food. Case studies may show that UPFs have an important place in society
Swansea		
	1. Long term tracking and research with global collaboration 2. Are there healthier ways to produce UPFs? • Research into the impacts of UPFs on mental health, including neonatal 3. Mental health and the addictiveness of UPFs	1. We need a broad view. Definitive proof should be the aim, but not our trigger to act; we need more impact at a lower cost 2. We need to check combinations of additives, then we can measure the impacts on the changes in health 3. For future generation's health, healthy minds and bodies, children's health 4. Rates are increasing, so we need to dig into causation here and measure if changes to the additives decrease incidence of mental health issues

	4. UPFs and obesity **5.** How much influence do the 'big 4' have on policy makers	**5.** We must understand consumption and its impact on different socioeconomic groups to reduce the burden on the NHS **6.** Understand how much power they hold in competition rules, transparency, corruption, policy/ decision makers and any conflict of interest
	1. Global collaboration on research and planning research together **2.** Using AI and technology: a) for research, for example large scale studies and b) to raise awareness of research, using social platforms in a positive way **3.** Research into environmental impacts of UPFs including packaging and production methods **4.** Research with immediate short-term impacts for society and communities, for example allotments, other local food production initiatives, school education, return of small food shops to the high street **5.** Is there a causal relationship between mental ill health and UPF consumption?	**1.** We can learn from other countries that are doing well in this area already **2.** Faster, unbiased research results can collect so much data, use for prediction and modelling scenarios to raise awareness faster **3.** We could make UPFs more sustainable, reduce their environmental impacts, have less waste and pollution, fewer factories **4.** To make healthy foods more accessible/ available to more people to instigate behaviour change **5.** Because it could help a lot of people
	1. What is the neurological impact of UPFs on the brain; does it cause/ contribute to the rise of autism, ADHD and addiction? **2.** Research into the consumption of UPFs, health and wellbeing from in utero to death, including child	**1.** It affects family lives; addiction can be damaging, negative impacts on development, mental, emotional, physical wellbeing. It feels like an abuse **2.** To encourage good habits for health from the start

	development in babies and young adults **3.** What influence the 'big 4' companies have on government policies and how to make them accountable to fund UPF research **4.** Research into how immigration influences eating habits in communities, for example first migrant diet and traditions **5.** Looking back and looking forwards in both diets and environment. Why were people and environments healthier in the past and what will happen in 40 years if there's no change?	**3.** They can give money for research and limit their power, control of food, production markets and government policies **4.** The rising population in the UK may have an impact on diet and UPF research **5.** We need to have a healthy planet for future generations. We all want to live as long as we can
Taunton		
	1. International comparisons about UPF consumption and cultural influences (including other countries' research and what their governments do) **2.** How best to educate children, including the effect/ effectiveness of social media **3.** What is the role of farmers in society, can this be increased? **4.** Understand the long-term effects on mental and physical health, including neonatal diet **5.** What could help reduce waste? Are there other ways to make fresh food last longer?	**1.** We can learn more quickly and get further in our understanding, as time is not on our side **2.** Children are key enablers of change and where habits are formed; social media is on such a large scale **3.** They play a key, underpinning role as producers of food **4.** There has been an increase in health conditions; looking at the effects over a longer period gives us stronger evidence **5.** Waste is a reason people buy UPFs and a massive issue across the whole food system
	1. Understanding the role of food in schools and the best	**1.** In order to feed the next generation, overcome current bad habits in the UK,

	way to educate children about healthy foods	understand how children influence household food practices and consumption, we need to understand the best way to educate them about food and see them cook better food, while parents learn too
	2. How UPFs may influence health in the long term	**2.** We need to be clear about trends and patterns, understand how different groups may be affected over time; this would enable better health insights and messages and gives us more than a snapshot for added insight
	3. How to make healthy food cheaper/ UPFs more expensive	**3.** It may help tip the balance, help us arrive at policies like whether to subsidise farmers to produce more locally, may enable the development of inNovations (e.g. wonky fruit) for cheaper food and less waste and could suggest community initiatives/ practices to reduce costs and improve the availability of good food in local areas
	4. If healthy/ unhealthy foods were similar prices would people buy healthier food?	**4.** It's important to understand the motivations for buying different foods, for example cost, taste, addiction, convenience, time. What are the impacts of promotions in food purchases? How do people weigh up the health benefits/ costs?
	5. How can we build a trustworthy body of evidence about UPFs?	**5.** Without it we can't take effective policy action, trust requires transparency of findings at every stage, so we can act gradually as the evidence base improves and new evidence surfaces
	1. Establish an agreed definition of UPFs **2.** More research on the effects of UPFs on physical and	**1.** To prevent excuses for inaction and use as a foundation for research, regulation and labelling

	mental health, including the benefits of reducing them 3. What approaches best promote education on UPFs and their impact on health across society: schools, online, medical professionals? 4. How to best drive change in industry: regulation? Taxation? Use examples that have worked 5. How to make healthy food more affordable, accessible and attractive to everyone	2. Mental health is increasing and a correlation has been established 3. If we start education young, we have a new phenomenon 4. Money and vested interests are preventing change 5. So there is a level playing field and we can change health outcomes.
Middlesborough		
	1. Research to make UPFs healthier and healthy food cheaper to create better alternatives to UPFs 2. It's a global problem that needs a global solution with international collaborative research and learning from those who have done well 3. Research into the addictive nature of UPFs, their role as comfort food and the effects of isolation on what we eat 4. How to effectively steer young people away from UPFs- using all the tools available, for example social media, influencers 5. How to set up community hubs so that they are effective and can achieve desired outcomes for health, the environment and society	1. So there is genuinely a choice, at an accessible price on healthy foods 2. It will give us quicker results and we can replicate the research; we can learn from what's gone well in other countries 3. We just don't know and we need to know, including on associated weight gain to help address obesity 4. What if we do all this research and nothing changes or no one listens and nothing is different for the next generation 5. It will have long-term impacts on communities and society; it addresses a number of cultural and social issues

	1. Long-term effects of UPFs at different stages of our lives from cradle to grave 2. How to make healthy food cheaper 3. Cohort studies on people consuming UPFs and those consuming healthy foods 4. Research with young people to understand what would work to steer them away from UPFs 5. Research into the mental health impacts of UPFs, including addiction, comfort eating, neurological conditions	1. To build the evidence base for the next generation and use that to understand the impact of UPFs at different stages in our lives 2. People will only change if they can afford to 3. We need to understand attitudes and motivations if we are going to help people 4. Real change will come about if we engage the next generation in the process 5. To reverse the tack of increasing poor mental health is very important for society
Liverpool		
	1. What education on UPFs would be effective, including information on food labels? 2. Understanding definitively whether there is a link between UPF and health outcomes and why, for example specific additives 3. Understanding the effect of UPFs in diet during pregnancy and health outcomes for baby 4. The impact of UPFs on the gut 5. Are there 'good' and 'bad' UPFs?	1. If you can explain it, you can break the cycle 2. It will drive what action the government takes and what industry would need to do from there; people would know where the actual risks are, not just make assumptions 3. People's diets have changed so much and we don't know much about the effects in pregnancy 4. Gut health affects other areas of health, like mood, skin, the brain 5. UPFs are such a big part of our diets, so understanding what a better choice is is crucial; are all additives bad, for example?

	1. What are the effects of UPFs on pregnancy through to early years development? 2. What are the long-term mental and physical health impacts of high UPF consumption? 3. What is current knowledge of UPFs and what would successful education and signposting look like? 4. Why are UPFs cheaper than whole foods and how do we make whole foods more affordable? 5. What are the effects of poverty/ socioeconomic factors on UPF consumption?	1. The start of life impacts all later life stages 2. To address the concerns of later life stages 3. To empower the general public with knowledge; knowledge is power 4. People make decisions based on cost 5. To empower people to make choices; affordability is a big concern
	1. How does high levels of UPF consumption affect children and young people as they grow up/transition through different life stages? 2. Is there a causal link between high levels of UPF consumption and serious health conditions, including gut health? 3. More research into the socio-economic context of UPF consumption 4. Understanding public perceptions of the NOVA classification and how it can be adapted to be more informative to everyone 5. More research to understand what people understand about UPFs currently	1. We care about the future 2. To reduce the pressure on the NHS, our health is the most precious thing 3. UPF consumption is a societal issue, so must be looked at in the context of the state of society 4. It's currently not accessible to the consumer 5. There is a general lack of understanding, before changing things we need to understand what the current reality is
Newham		
	1. Include vulnerable members of society in research (those	1. More disadvantaged communities have less access/ opportunities to purchase

	in poverty or suffering from mental ill health) and make sure sampling is diverse and reflects the population	healthy food, so affordability is more of a barrier. Those in more restricted food environments are most vulnerable to impacts of UPFs, so research should focus are creating tailored solutions to help specific populations
	2. More research on how to change behaviour	**2.** We need to understand what draws/ influences behaviour, the WHY, otherwise policy decisions may be based on false assumptions
	3. Are UPFs bad or not for your health; do we need to prove causation before policy change?	**3.** This needs to be answered first, before wasting resources elsewhere. This relates to questions about why threshold for evidence is so high, a lesson learnt from others. It changes the responsibility to corporations to do research to prove UPFs aren't bad, so shifts the power, they have the money to do the research
	4. Genetic research, particularly on the impacts of UPFs on ethnic minority communities and culture	**4.** There needs to be a deep dive to tailor interventions and prevention going forward for these communities. Understanding differences in how UPFs effect different genetics, culture, blood group etc. is so important
	5. Improve accessibility, affordability and availability of healthy foods through legislation and regulation. What research can influence changes in how this is feasible and how to reduce junk food in shops?	**5.** It feels relevant in Newham, the food environment is limited, very junk food orientated- access to healthy food outlets is limited. The importance of equality in context: opportunity and availability so that everyone has the chance to make healthy choices.
	6. Alternative farming method of UPFs- less harmful to the environment	**6.** We need our planet to survive for anything else to happen and be sustainable
	1. Research into the barriers to people having a better diet: affordability, accessibility and addiction	**1.** It impacts on some people's health and wellbeing and therefore has an impact on everyone's (mental) health and wellbeing, which has an economic cost to society

	2. Research to show the correlation between UPFs and poor mental and physical health in children and adults 3. International comparative research to understand how other countries have reduced UPFs and learn from them 4. Research into UPFs and the environment, including microplastics, food waste, fossil fuels, soil degradation. 5. Social research into behaviour change, for example, for young people, specific communities, involving vulnerable people, involving us as experts in food	2. Fundamentally, this is where all other questions flow from 3. This will help us find out how we can do better than we are doing now as a society. To find out if it is feasible to feed the nation without UPFs. 4. We scream a lot about climate change, but UPFs are creeping up and we aren't doing anything about it 5. Understanding at a fundamental level the impacts on different people and communities. It is important to listen to us
	1. Longitudinal studies on children's home environment, socialisation, development and UPF consumption 2. Relationship between genetics, epigenetics, race and impact of UPFs on health, such as diabetes, heart disease, obesity and mental health 3. Research into cultural attitudes and practices towards food and how that impacts diet to inform national guidance 4. The link between accessibility, affordability and agency with UPF consumption 5. The impact of packaging and marketing on UPF consumption	1. Building habits is important and empowering; prevention is better too. 2. We need to interrogate causality, for example genetics, as it may not be UPFs 3. Then we can address different food preparation with culturally sensitive guidance 4. For some there is no option 5. It targets vulnerable groups and uses powerful psychology

Appendix I: Stimulus materials

Apart from the presentations and the participant-led stimulus, materials were shared with participants to inform their deliberations.

1. Summary of what research is and some methods of research

Research is about collecting data to try to answer a question or solve a problem. There are lots of different types of research, which look at a research question from different angles, or by collecting different types of data.

Research about UPFs might include a wide-range of research activities from technical studies about what's in UPFs to explorations of behaviour or public attitudes – and everything in between.

These can be divided loosely into:

- Natural science studies – which focus on understanding the natural world through observation and experimentation
- Social science studies - aim to understand how individuals, groups, and institutions behave, interact, and influence each other

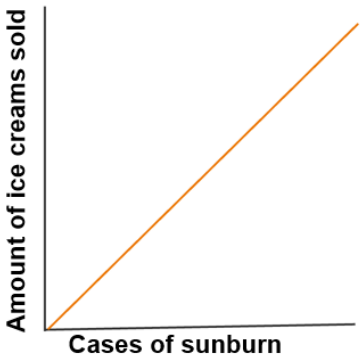
- **Observational studies:** researchers look at whether there are links between aspects of diet and other outcomes (like specific physical or mental health conditions), without changing anything about the diet
- Long-term **epidemiological studies:** researchers look at whether there are links between how whole populations' diets over time have changed and other outcomes (like specific health conditions), without changing anything about those diets
- **Controlled trials:** researchers make specific changes to the diet of the research participants, to look at any changes or effects (like rate of eating, or changes to gut bacteria). In a 'gold standard' Randomised Controlled Trial (RCT) participants are allocated at random to different diets/conditions (e.g. a diet low or high in UPFs).
- **Research and development** research the development of new products or ingredients to fulfil different purposes, such as lasting longer, or having less sugar, saturated fat or salt
- **Ingredient or additive testing** to test what is in foods, or the safety of additives
- **Environmental impact studies** like assessments of environmental impact across the 'lifecycle' of a product, or on specific pieces of land/farms.

Social science studies might include...

- **Ethnographic studies:** researchers immersing themselves in the lives of households or communities using observation and discussion to understand how they work.
- **Diet surveys** looking at how much UPF people in society (and specific groups) eat and how this might have changed over time
- **Surveys, interviews or observation** about people's food purchasing decisions, behaviour and attitudes and views about UPFs
- **Studies** which look at how factors in our food environments like advertising, pricing and packaging affect food purchasing
- **Policy evaluation** of how effective changes to food policy are, or modelling the potential effect of future changes (and also how cost-effective these are)
- **Public dialogue or deliberation** (like this one!) looking at people's attitudes and views about UPF
- **Economic research** exploring food prices and value in the food chain, including how profits are distributed, as well as economic tools like taxation

Correlation versus causation

When two things are correlated, it means as one increases (or decreases), the other increases or decreases at the same rate.



It doesn't necessarily mean that one causes the other.

These two things are correlated, but eating ice cream doesn't cause sunburn, both things are going up because of another factor – the sunny weather!

Case study: alternative proteins

Description/Type of products:

Most vegan cheeses, new generation of 'fake meat' products e.g. sausages, burgers and bacon (i.e. NOT traditional meat alternatives like tofu, seitan or a bean burger)

What makes them ultra-processed?

- Include additives like emulsifiers, preservatives, colours, flavourings and sweeteners, to try to recreate the look, taste or texture of meat
- They are designed to be very appealing and palatable (e.g. soft, high in fat and salt but low in fibre) which makes people more likely to eat more of them

How much do we eat in the UK?

- 2-3% follow a vegan or plant-based diet, and additionally 5-7% follow a vegetarian diet in the UK[1]
- 25% of UK households bought plant-based meat or dairy alternatives more than once in 2023[2]

What do we know about their health or environmental impacts?

- All plant-based meat alternative categories have significantly reduced greenhouse gas emissions and use less water compared to meat[3] . That's because most of the emissions from foods come from growing the raw materials rather than processing, and rearing animals for meat produces lots of emissions
- It may be that not all ultra-processed foods are associated with negative effects on health. Some recent studies show that eating plant-based alternative proteins could be associated with less risk of things like type 2 diabetes, compared to other ultra-processed foods like animal-based foods and artificially- and sugar-sweetened beverages which are associated with higher risk of type 2 diabetes[4].
- These alternative proteins have 18% higher salt content than meat, on average[5]. Diets high in salt are associated with high blood pressure, increasing the risk of heart attacks and strokes

1 YouGov tracker data, 'Dietary choices of Brits (e.g. vegetarian, flexitarian, meat-eater etc)'
2 Kantar's GB Grocery Consumer Panel, 2023
3 Rethinking Plant-Based Meat Alternatives, Food Foundation 2024
4 Dicken, Samuel J. et al (2024) Food consumption by degree of food processing and risk of type 2 diabetes mellitus: a prospective cohort analysis of the European Prospective Investigation into Cancer and Nutrition (EPIC), The Lancet Regional Health – Europe, Vol 46
5 Rethinking Plant-Based Meat Alternatives, Food Foundation 2024

Case study: packaged bread

Description/Type of products:

Packaged sliced white or wholemeal bread, wraps, burger buns or bagels

What makes them ultra-processed?

- Bread is always a processed product, but many breads for sale in the UK are also ultra-processed
- UPF breads contain additives like emulsifiers (e.g. mono- and diglycerides of fatty acids), colours, flavourings and preservatives (e.g. calcium propionate) and processing aids (e.g. enzymes used to prolong softness in bread, or increase its volume)
- The Chorleywood Process is how most breads in the UK are made, which includes high speed mixing, use of large doses of baker's yeast and the inclusion of additives including processing aids. It makes a very soft textured and uniform loaf, very cheaply
- Being sold in plastic doesn't necessarily mean a bread is UPF, as some bakeries might slice and sell their bread in a plastic bag, while some supermarkets might make UPF bread and sell it without plastic packaging on their bakery section shelves
- Being fortified with vitamins also does not by itself mean a bread is UPF, by law most flour in the UK has to be fortified

How much do we eat in the UK?

- Bread is a staple food, bought by the vast majority of UK households[9]
- In the UK we eat 80g of bread per person per day on average, accounting for around 19% of daily energy intake, with men eating more than women[10]

What do we know about their health or environmental impacts?

- Recent research is mixed about whether bread as a sub-category of UPF is associated with negative health impacts, and there might be differences between white and wholegrain ultra-processed breads[11]
- Ultra-processed bread is considerably cheaper than bread which is not ultra-processed (the difference in price can be more than ten times larger for bread that is not ultra-processed)
- Ultra-processed bread is one of the types of products which is ultra-processed but not high in saturated fat, sugar and/or salt (UK policy aims to reduce how much we eat of these types of foods). The overlap between UPFs and foods high in saturated fat, sugar and/or salt has recently been estimated to be 55.6%[12]

9 99.8% of UK households, according to industry body UK Flour Millers quoting a Kantar world panel
10 National Diet and Nutrition Survey, Years 1-9, 2019
11 Ultra-Processed Food Consumption and Risk of Type 2 Diabetes: Three Large Prospective U.S. Cohort Studies. Diabetes Care 2023
12 Overlap between ultra-processed food and food that is high in fat, salt or sugar: analysis of 11 annual waves of the UK National Diet and Nutrition Survey 2008/09-2018/19, BMJ

Case study: savoury and sweet packaged snacks

Description/Type of products:

Packaged crisps, sweets, biscuits, cakes and chocolate

What makes them ultra-processed?

- They have gone through lots of stages of processing, like extrusion, to form different shapes and hydrogenation of the fats used to make them, so they last longer.
- Include additives like sweeteners, colours and flavourings to make them more appealing
- Include additives like preservatives to make them last a long time on supermarket shelves and even once opened
- They are designed to be very appealing and palatable (e.g. soft, high in fat, sugar and salt but low in fibre) which makes people more likely to eat more of them

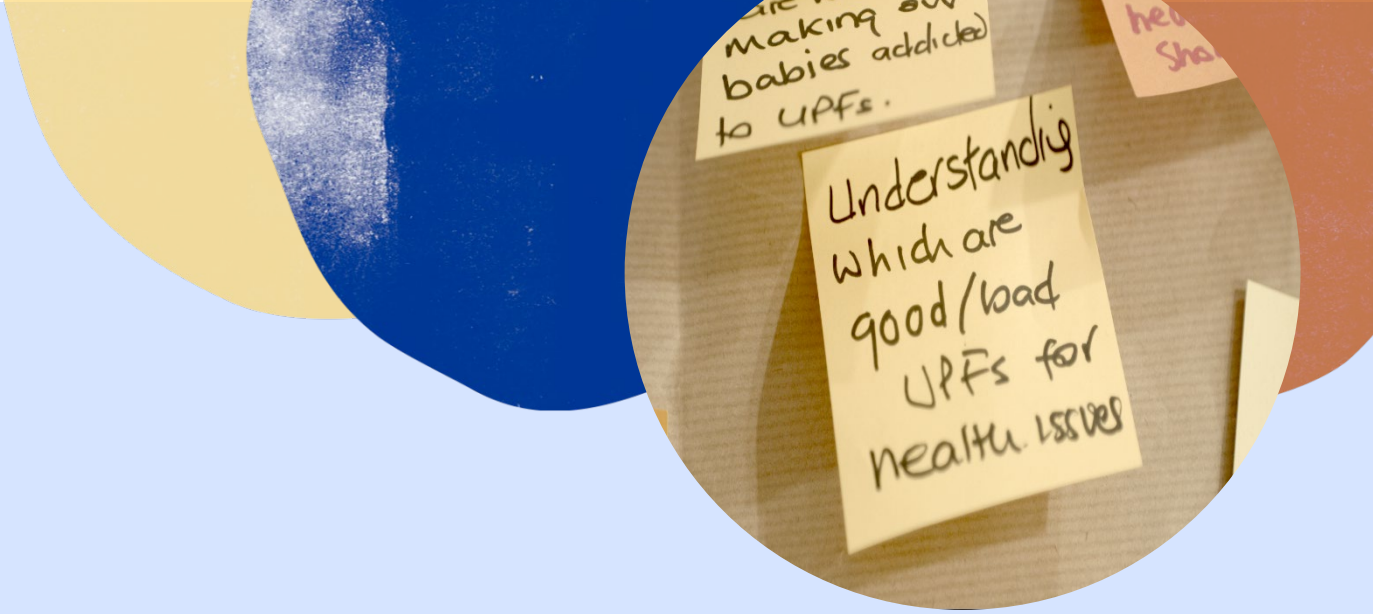
How much do we eat in the UK?

- According to a recent study looking at the snacking habits of 854 people in the UK, 95% of people snacked and snacks made up almost a quarter of their daily energy intake[6]
- Younger people are more likely to snack more often than older people[7]
- One study found that over a quarter of snacks marketed at infants and young children (across 27 European countries including the UK) were ultra-processed and this rose to almost half of 'baby snacks'[8]

What do we know about their health or environmental impacts?

- They are 'discretionary' which means we don't need them for our nutrition – some argue that this means their environmental impact is greater, because the same land/water/raw ingredients could be used for more nutritionally essential foods
- Most packaged snacks are also high in saturated fat, sugar and/or salt. Diets high in saturated fat, sugar and salt are associated with increased risk of obesity, heart disease, type 2 diabetes, and some types of cancer

6 The ZOE PREDICT study. European Journal of Nutrition 2024
7 YouGov Food Study 2022
8 Joint Research Centre at the European Commission. Nutrients 2021



Making sense of UPFs: a public dialogue

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