

# **The Impact of Climate Change on Consumer Food Behaviours: Expert Engagement**

## **1. Background and objectives**

- 1.1 To ensure access to the most recent evidence and specialist thinking, the Food Standards Agency (FSA) has input from independent experts in Scientific Advisory Committees. The Advisory Committee for Social Science (ACSS) provides input on social science's contributions to the FSA's objectives. It does so primarily through working groups, including the recently created working group on climate change and consumer behaviour which will advise on how consumer behaviour may change due to climate change.
- 1.2 This project was commissioned to provide the ACSS working group with a clear picture of the possible areas of change that climate change concerns could provoke in consumer behaviour. It aimed to shape future research and objectives, as well as to focus the working group's attention on the greatest value-added areas of research. Ipsos MORI and ADAS worked closely with the FSA and the ACSS to develop a working research planning document that proposed a staged research programme. This included an online expert elicitation exercise and an expert workshop, with invitations to participate in both sent directly to key experts.
- 1.3 Prior to the elicitation exercise, the FSA drafted an initial framework, mapping climate change relevant behaviours against FSA priority areas. The draft framework was used as the basis upon which to gain experts' views on trends related to climate change and food, and to identify areas of research for the FSA.

## **2. Online expert elicitation**

- 2.1 The survey invitation was sent to 71 contacts and 29 responses were received. These were drawn from a range of sectors, with 25 respondents from academia, 3 from NGOs and one each from the private and public sectors. Respondents were asked to select their areas of expertise as part of the online expert elicitation. They indicated that multiple areas fall under their expertise, with the majority specialising in the adoption of low carbon diets. Meat and dairy reduction and 'Freeganism' had the lowest number of respondents indicating this was their area of expertise.
- 2.2 Respondents were also asked as part of the online expert elicitation to provide a title and abstract for presentation at the workshop in relation to climate change's impact on consumer food-related behaviours.

## **Summary of survey findings on the research questions**

### **3. Climate change and food-relevant consumer behaviour: trends for consideration**

- 3.1 Participants in the online expert elicitation exercise were presented with the draft framework of potential observed trends in consumer food behaviour adopted in response to climate change. The workshop participants were then asked to suggest any relevant additions or clarifications to the framework. Most focused on purchasing preferences, generally with consumers preferring to purchase food with various environmental standards in response to climate change. Some novel additions were suggested such as use of digital tools to help consumers buy more sustainable food. Another area was the need to account for other forms of collective, public provisioning when understanding consumer food behaviour, such as a move towards sustainable food choices in institutions.
- 3.2 Experts also raised broader points around the effect of climate change on food-relevant consumer behaviours. These included acknowledging the interplay between environmental motivations and consumer food behaviours,<sup>1</sup> the impact that the creation of new pathogen and microbes may have and the effects of availability of different food types. In addition, they highlighted some wider contextual factors that should be acknowledged to gain a full understanding of consumer food behaviours in response to climate change concern. These included the need for support to transition to sustainable diets and the role culture, identities, inequality, social norms and misinformation in shaping food behaviour and sustainable diets.

### **4. The impact of climate change and climate action on consumer food behaviours**

- 4.1 Participants were also asked to consider how climate change and/or climate action might impact consumer food behaviours. Responses addressed the various ways in which climate change could affect consumer behaviour
- shifts in consumer diets and what these might look like;
  - shifts in purchasing preferences and what this might look like;
  - behaviours around food waste and food management;
  - and unexpected behavioural shifts.

Some experts also raised issues with the framing of the question or suggested other approaches to understanding the impact of climate change on consumer food behaviours.

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<sup>1</sup> For example, some consumption behaviours are a win-win for animal welfare and climate/environmental concerns while others require trade-offs between motivations.

## 5. Key areas to consider in building a framework of climate-relevant behaviours

- 5.1 Participants felt the framework should consider the co-benefits and wider motivations behind consumer behaviour changes; inclusivity and equality; and consumer context when seeking to understand consumer food-relevant behaviour change in response to climate change concern. Experts also raised the point of communication, information and awareness, however some responses focused on how a framework could be used to support consumers to make informed decisions rather than areas a framework should consider in this theme to build the FSA's understanding of consumer behaviour as impacted by concern over climate change.

## 6. Workshop

- 6.1 The workshop ran on the 18th May 2021, with 38 attendees (6 members of the project team, 5 of the working group, 5 selected presenters and 22 invitees). The first section of the workshop contained presentations from experts on topics relating to climate change's impact on consumer food-related behaviours:
- Dr Christian Reynolds spoke about the feedback loops created by links between food production and climate change, including the influence of consumer perceptions on climate change and what this means for the FSA.
  - Prof Lynn Frewer presented on the need to consider consumers and food safety in the context of climate change, with consumer opinion and perceptions can affect which climate change mitigation actions and innovations are taken forward. She also explored the need to co-produce food innovations and the ramifications for the FSA.
  - Dr Jonathan Beacham presented recent research from the H3 consortium on building an integrative framework to understand how consumption and production overlap and influence each other.
  - Antony Lord discussed the impact of climate change mitigation on safety in food packaging and what the FSA needs to consider in this area going forward.
  - Prof Michael Goodman spoke about the role of edibility and food culture in transitioning to alternative proteins and meat alternatives.
- 6.2 The second section of the workshop focused on mapping climate change relevant behaviours against the FSA priority areas. Dr. Rebecca Gillespie – principal social researcher at the FSA – provided an explanation through a draft framework of the FSA priority areas<sup>2</sup> and how consumer behaviour change in response to climate change may impact the FSA. Attendees

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<sup>2</sup> These being regulating food businesses, ensuring food authenticity and ensuring food safety.

provided feedback and comments on this via Jamboards (an online collaborative tool), focusing on diet change trends, purchasing behaviours, behaviours in the home and eating outside the home.

## 7. Conclusions

- 7.1 The trends identified by the workshop participants with the highest repercussion on FSA priority areas were:
- Adoption of low carbon diets, mainly based on the reduction of meat and dairy products, with a shift towards increased consumption of alternative proteins and meat analogues
  - The avoidance of food waste
  - Increased consumption of alternative packaging or packaging with higher content of recycled materials
  - Increased use of reusable containers in food and drinks
  - Consumption of food with shorter supply chains
  - Increase of food delivery
- 7.2 The behavioural change of a rise in sustainable and low carbon diets was identified as potentially posing risks to food safety and food authenticity. For instance, some novel proteins such as pea protein may raise allergen concerns, which is a key area of interest for the FSA as part of the hypersensitivities work programme. Another potential risk is that consumers may not be able to make informed decisions if complete information on the sustainability aspects of food or its nutritional value are not available or if information is not reliable. Other risks identified refer to the potential fraud in the labelling of products to advertise qualities such as deforestation free, organic, etc. which may have implications for the National Food Crime Unit and the FSA's focus on authenticity in food.
- 7.3 Changes in the materials and the increased reuse of packaging will also have implications for the FSA priority areas. The increased use of recycled plastic poses risks of cumulative/chronic poisoning through trace levels of toxic substances in packaging materials that are in direct contact with food. The increased use of reusable containers (e.g. glass milk bottles) may pose a risk of cross-contamination if containers are not properly cleaned.
- 7.4 Food Safety risks may also arise from an increase in home-grown food (e.g. if it is produced in polluted soils or using insufficiently rotted manure) and from avoidance of food waste (e.g. if food is consumed beyond its expiry date).

## **8. Potential areas for future consideration by the ACSS**

- 8.1 During the workshop, attendees emphasised the need to understand the social context that underpins the choices made by different groups in society. Several high-level future considerations of the ACSS were identified from the discussion and expertise provided in the online exercise and the workshop. Recommendations covered all three of the FSA's priority areas of food safety, food authenticity, and the regulation of food businesses.
- 8.2 Discussions also highlighted the need to examine trends in food packaging and the implications this may have for food safety. Movements towards increased recycling, the effect of the incoming tax on virgin plastics and the application of potentially unsafe recycled materials in food packaging should be examined regarding their potential impact on consumer health.
- 8.3 Future areas of work will be discussed at the next meeting of the climate change and consumer behaviour working group.

## 9. FSA framework

9.1 The table below shows the framework developed by the FSA following the workshop. Relevant behaviours for the FSA which may impact on their priority areas have been shaded in green.

Table 1. Consumer Behavioural Framework and the FSA priority areas

Potential behaviour trends	FSA Priority Areas		
	Food Safety	Food Authenticity	Regulation of Food Businesses
<b>Dietary change</b>			
Vegan and vegetarian diets			
Dairy reduction			
Meat/dairy alternatives e.g. plant-based			
Other novel foods			
Palm oil reduction			
Low carbon diets			
Seasonal produce			
<b>Purchasing behaviours</b>			
'Freeganism'			
Avoiding plastic packaging			
Purchasing grocery/milk delivery and meal			
Using local suppliers and delivery services			
Using digital tools to identify choice			
Purchasing free range/organic			
Purchasing fair trade			
Taking your own containers to refill			
<b>Behaviours in the home</b>			
Avoiding single use plastic in food storage			
Reducing food waste			
Energy efficient cooking practices			
Cooking novel or unfamiliar foodstuffs			
Grow your own			
Keeping livestock e.g. poultry for eggs			
Use of person to person food sharing apps			
<b>Eating outside the home</b>			
Community kitchens			
Low-packaging options/reusable containers			
Sustainable hospitality choices			
Sustainable food choices			