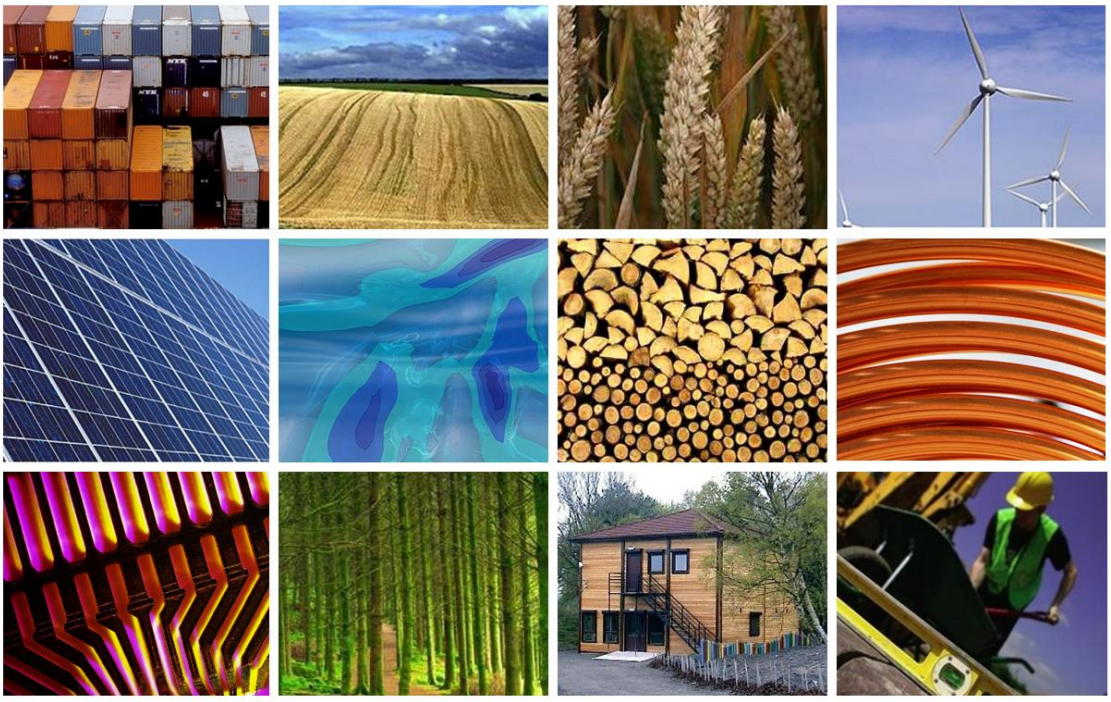
Report to GO-Science, Which? and Sciencewise

# Evaluation of public dialogue on UK food supply challenges and solutions and the role of innovative production technologies and approaches in meeting these

23rd November 2015



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## Abbreviations

| | |
|---|---|
| **AG** | Advisory Group |
| **BBSRC** | Biotechnology and Biological Sciences Research Council |
| **BIS** | Department for Business, Innovation and Skills |
| **Defra** | Department of Environment, Farming and Rural Areas |
| **DoH** | Department of Health |
| **ESRC** | Economic and Social Research Council |
| **FDF** | Food and Drink Federation |
| **FSA** | Food Standards Agency |
| **GCSA** | Government Chief Scientific Advisor |
| **GFS** | Global Food System programme |
| **GM** | Genetically Modified |
| **GMG** | Government Management Group |
| **GO-Science** | Government Office of Science |
| **GPS** | Global Positioning System |
| **NERC** | Natural Environment Research Council |
| **NFU** | National Farmers' Union |
| **NGO** | Non Governmental Organisation |

## EXECUTIVE SUMMARY

This evaluation report on a public dialogue on food supply challenges and potential solutions in the UK has been prepared by URSUS Consulting Ltd on behalf of GO-Science, Which? and Sciencewise[1].

The dialogue process was developed by partners GO-Science (in collaboration with Sciencewise) and the Consumer Association Which? with the following objectives:

**1.** To inform Government decisions about future policy and research priorities on the role of innovative production technologies in the UK food supply, particularly the implementation of the 2013 Agri-Tech Strategy through Agricultural Centres of Innovation and the Global Food Security Programme.

**2.** To explore public and consumer awareness and perspectives of current food supply problems, challenges and opportunities.

**3.** To explore public and consumer attitudes to potential solutions - including types of food production methods, new technologies or other solutions in the context of demand-side approaches, and waste reduction - that could be used to address the challenges of food supply and sustainable intensification.

**4.** For the GO-Science Risk team, the Leadership Council of the Agri-Tech Strategy and the GFS programme to have a more in-depth understanding of:

- Consumer awareness and knowledge of food production methods and new technologies
- How consumers perceive the potential risks and benefits of different technologies
- Explore a small number of innovative technologies and approaches in detail
- How consumers feel about demand side approaches/ solutions to food security challenges
- The wider social elements that determine the conditions of consumer acceptability.

Internally GO-Science was also keen to test approaches with more general application across their engagement strategy, namely:

- The usefulness of public dialogue methodologies for understanding consumer attitudes to risk in relation to the Government Chief Scientific Advisers' annual report on risk; and
- The benefits of working in partnership with an atypical research partner on such a project.

### Dialogue and Evaluation Methodology

The dialogue process was delivered by TNS BMRB and was steered by a Government Management Group (GMG) with representation from Defra, BIS, BBSRC, FSA and DoH and led by GO-Science, and an Advisory Group with representation from the food industry, consumer associations, environmental NGOs and academics led by Which?. The AG was closely involved in the framing of the dialogue and ensuring that it covered low-tech and demand side management, not just high-tech solutions.

The dialogue process ran from October 2014 to July 2015 and involved dialogue events in London, Cardiff and Paisley. In each location, dialogues were run over two consecutive Saturdays in January and February 2015. Participants included 48 individuals who reflected the age, gender, household

[1] Sciencewise is the UK's national centre for public dialogue in policy making involving science and technology issues, and is funded by the Department for Business, Innovation and Skills (BIS). See www.sciencewise-erc.org.uk

income and ethnicity of each location. Over the two days participants were introduced to a wide range of future challenges for the food sector (global food security, climate change and environmental impacts, health and animal welfare) explored through three case studies – wheat, eggs and red meat. They then considered some 20 potential solutions to these challenges ranging from: increasing productivity of crops and animal products; reducing inputs of energy, pesticide, fertiliser and packaging; developing novel protein sources; and demand side management and behavioural change.

TNS BMRB produced a wide range of printed and audio visual stimulus materials including PowerPoint presentations on challenges and case studies, and handouts and wall posters on the potential solutions. A balance of expert opinions was presented to participants through talking heads video contributions from government, industry, academic and NGO experts covering each area. GO-Science and Which? staff provided expertise and answered questions 'in the room'.

The evaluation process ran between October 2014 and November 2015 and involved desk review, event observation, analysis of 48 participant questionnaires and one to one interviews with 12 stakeholders after the final report was disseminated.

**Key Evaluation Findings**

This was a successful small project with potentially wide ranging policy impacts. The balance of the framing and choice of case studies, the quality of stimulus materials, the considerable learning that participants took from dialogue events and the quality of the analysis will make this project a good demonstrator for what can be achieved through public dialogue to manage risk in these research and innovation areas. Participants were genuinely shocked to learn about the sustainability challenges of current consumption and production patterns and many reported during the dialogues themselves, or in follow up telephone interviews with 18 participants 2 months later, that they had changed their behaviour, particularly eating less meat and reducing waste. The main messages from the dialogue were not surprising or newsworthy, but the rich detail on how the public balances risk and benefits, and what underlies these opinions, will be useful in many specific policy areas.

**The impacts of the project** have yet to be fully realised but evaluation interviews suggest that over the next six months (to Spring 2016) impacts will be felt through the following routes:

- **Feeding findings on public attitudes to food system challenges into Defra, GFS, FSA and DoH policies and strategies** - e.g. by widening the current export/growth focus of the 25 Year Plan for Food and Farming to include sustainability and obesity concerns. Which? and GO-Science have already presented findings to Ministers and senior policy makers in Defra, Food Standards Scotland and FSA and will seek out other opportunities to feed in key messages until the end of 2015. Meetings will also be arranged with the Agri-Tech Leadership Council/ Food Research Partnership, Scottish Government (in relation to the Scottish Food and Farming Plan) and Welsh Government.
- **Influencing research and innovation priorities within the GFS Programme and Agricultural Innovation Centre**s (when they are announced). Together these programmes account for more than £100 mn of investment. The dialogue has contributed a much more nuanced understanding of the hierarchy of factors at play when the public is weighing up the risks and benefits of different types of technology;
- **Making the case for the usefulness of well-run public dialogues** in delivering open, balanced, and nuanced opportunities for the public to participate meaningfully in shaping research and

innovation agendas. On the basis of this project the need for public dialogue has become a central plank of the narrative for GO-Science's five year plan; and

- **Providing a legacy of materials and lessons** on how to communicate food sustainability issues in an accessible and engaging way e.g. for FSA and BBSRC dialogue processes and for wider awareness raising of food system challenges.

**Costs, Benefits and Timing**. The total budget for the dialogue and evaluation was £66,000, jointly financed by Sciencewise and Which? In addition the in-kind time contributions made by the AG, GMG and GO-Science and Which? core management team (>150 days in total) and Which? resources for making talking head videos, vox pops of participants and communications effectively doubled this.

Developing accessible and balanced stimulus materials for such a broad but detailed topic area is extremely challenging and, in this case, required significantly more time input from the core management team and GMG than expected. Initially conceived as a six month project, the timeframe proved tight for producing stimulus materials and a final report suitable for wider dissemination. In the future timescales and budgets will need to be more realistic and consider building in budget for specialist technical inputs in dialogue delivery teams or allowing for the time required from commissioning organisations.

The evaluation has highlighted other key lessons with wider implications:

- **Collaborative commissioning** – the novel partnership between a government department and an NGO has worked very well in terms of broadening the framing of the project, harnessing expertise and resources, and spreading the project management burden. Establishing a good working relationship and the enthusiasm and inputs of the core management team have been key elements of success.
- **Two tier governance mechanism** – the combination of an internal cross-government policy group (GMG) and an external Advisory Group has been very effective in ensuring credibility and robustness of the project (particularly in broadening the framing, providing balance and ensuring accuracy of the stimulus materials) and increasing the potential for medium term policy impacts. With more resources and time it would have been useful to bring the two groups together to develop an Impact and Communications Action plan.
- **Providing access to broad and balanced expert voices for all participants**– for this dialogue with its breadth and depth of issues/technologies to be covered and strongly held views of stakeholder on appropriate solutions using talking head videos proved an efficient and cost effective way of getting the same balanced expertise 'in the room' in all 3 locations. Specialists within the commissioning teams were able to deliver presentations and answer questions ensuring that all participants felt their questions had been answered.

# 1. Introduction and Background

## 1.1 Introduction

This evaluation report on a public dialogue on food supply challenges and potential solutions in the UK has been prepared by URSUS Consulting Ltd for the Government Office for Science (GO Science), Which? and Sciencewise[2].

## 1.2 Context

The food supply chain is facing unprecedented challenges prompting a re-examination of how food is produced in the UK and globally. Global population is forecast to exceed 9 billion by 2050, leading to a higher demand for food and putting further pressure on finite resources. The food system already faces multiple environmental (water, pollution, waste, climate and biodiversity), health (obesity, food safety), animal welfare and security issues. Future climate change will exacerbate these issues and put additional pressure on world food supplies.

These sustainability issues are well known to Government, the food industry, researchers and NGOs in the food sector through recent in-depth studies including: the Foresight report on the Future of Food and Farming's 'Top 100 questions for agriculture' (Pretty et al, 2010); and the Environment and Rural Affairs Select Committee's inquiry in to food security (July 2014). A number of government and industry initiatives are seeking to address the challenges:

- The Global Food Security (GFS) programme which has a 5-year interdisciplinary programme to address the resilience of the UK food system in a global context and deliver at least a £14 million research programme designed by BBSRC, ESRC, NERC, Defra and FSA (see list of abbreviations);
- Defra, BIS and DFID's Agri-tech strategy (2013) which sets out how government and industry will build on the strengths of the UK agri-food sector and identify technical opportunities for breakthroughs in nutrition, genetics, informatics, satellite imaging, remote sensing, meteorology, precision farming and low impact agriculture;
- Agricultural Centres for Innovation programme which will deliver £90 million of government funded research from late 2015; and
- Initiatives such as Defra's Green Food Project.

Nevertheless recent work by NGOs - such as Which?'s 'Future of Food: Giving Consumers a Say' report (April 2013) which covers their work with citizens' juries around the UK and explored the public's attitudes to food and the Food Ethic Council's Food Justice Report (2010) - show that consumers are poorly informed about food and found that most consumers were unaware of sustainability issues and that many people are disconnected from food production.
In parallel the Government Chief Scientific Advisor's (GCSA) first annual report on risk and innovation looked at the importance of understanding the factors which make innovative technologies more or less acceptable to the public. Previous studies on agri-tech had mainly been quantitative and explored fairly broad technologies and found that attitudes mainly came down to how people weigh up the risks and benefits. The benefits of having a more in depth and analytical insight into people's underlying values and thought processes was recognised as a necessary – but so far missing – input to shaping multi-million pound research and innovation strategies in the sector.

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The challenge in the food sector is that the potential solutions are so diverse and it is first necessary to educate the public about the breadth of challenges that the food system faces so that they can get beyond entrenched views on single technologies - such as GM - which have tended to be viewed as entirely good or entirely bad.

This dialogue was therefore developed in partnership by GO-Science (with support from Sciencewise) and Which? to bridge the gaps between government initiatives looking at global and UK food security challenges, the restricted understanding of consumers regarding the different approaches that are possible, and limited consumer input into policy. The partnership commissioning approach offered an unusually wide opportunity to inform:

- Government and academic food systems research through the Global Food Security programme;
- Industry led research through the Agri-Tech Leadership council and the Centres for Agricultural Innovation; and
- NGO led research and communications campaigns by Which? and others.

During the course of the project new policy opportunities have also arisen to feed into including the government's manifesto commitment to develop a 25 year Plan for Food and Farming (expected in early 2016), the Department of Health's Obesity Strategy and the FSA's food security work. The extent to which these policy impacts have been reached is discussed in Section 8.

## 1.3 Dialogue Objectives

The key objectives for the public dialogue were:

- To inform Government decisions about future policy and research priorities on the role of innovative production technologies in the UK food supply, particularly the implementation of the 2013 Agri-Tech Strategy through Agricultural Centres of Innovation and the Global Food Security Programme.
- To explore public and consumer awareness and perspectives of current food supply problems, challenges and opportunities.
- To explore public and consumer attitudes to potential solutions (including: types of food production methods, new technologies or other solutions in the context of demand-side approaches, and waste reduction) that could be used to address the challenges of food supply and sustainable intensification.
- For the GO-Science Risk team, the Leadership Council of the Agri-Tech Strategy and the GFS programme to have a more in-depth understanding of:
    - Consumer awareness and knowledge of food production methods and new technologies
    - How consumers perceive the potential risks and benefits of different technologies
    - Explore a small number of innovative technologies and approaches in detail
    - How consumers feel about demand side approaches/ solutions to food security challenges
    - The wider social elements that determine the conditions of consumer acceptability.

Internally GO-Science were also keen to test approaches with more general application across their engagement strategy, namely:

- The usefulness of public dialogue methodologies for understanding consumer attitudes to risk in relation to the GCSA's annual report on risk; and
- The benefits of working in partnership with an atypical research partner on such a project.

# 2. The Public Dialogue

## 2.1 Governance

Before the delivery and evaluation contractors were appointed a two tier governance mechanism was set up by GO-Science and Which? (see Annex A for membership).

- A Government Management Group (GMG) chaired by GO-Science met first in July 2014 and included Defra, Food Standards Agency (FSA), Biotechnology and Biological Sciences Research Council (BBSRC), Department for Business, Innovation and Skills (BIS) and Department of Health. The group met again in December 2014 to finalise the choice of case studies and to suggest sources for the stimulus materials, talking heads videos and suggest the range of food system solutions to be covered in the dialogues. A final meeting in May 2015 reviewed an early version of the final dialogue report and agreed how the report should be launched post-election.
- An external Advisory Group (AG) was set up and chaired by Which? and included about 12 core members with the intention of meeting up to 4 times over the project. The first meeting agreed the broad scope of the project and identified key challenges in the food system. The second meeting (October 2014) refined the choice of case studies and the broad dialogue event designs. The third meeting (held electronically) reviewed the first draft of stimulus materials. A fourth meeting took the form of individual telephone briefings by the Which? and GO-Science to share the key findings.

The process was delivered by a core project management team comprising GO-Science, Which? TNS BMRB (the dialogue contractors), Sciencewise and URSUS Consulting (the evaluator). This group met first in October 2014 and then fortnightly, or as needed, face to face or by telephone until April. The group took a significant role in developing stimulus materials and talking heads videos.

## 2.2 Framing of the dialogue

During the scoping phase it was agreed that in order to cover the breadth and depth of sustainability issues and range of potential solutions from hi-tech to low tech and demand side management the dialogue should be framed around a handful of food group case studies. The criteria for selecting case studies were that they were:

- Important in UK agricultural production;
- Representative of common food types that participants would be familiar with;
- Illustrative of challenges across the food system including food security, affordability, environmental impact (climate change, water, pesticides and fertilisers, biodiversity etc.), human health and animal welfare issues;
- Illustrative of a variety of potential solutions from efficiency improvements, technological innovation to consumer behavioural change. Technological solutions should be close to market or already in use outside the UK; and
- Not covered by other public dialogue processes**.**

After much discussion three case studies were selected as follows:

1. Wheat - covering both human and animal feed illustrating climate change, environmental impact (fertilisers, pesticides and insecticides, water use, waste in the supply chain), security (price volatility), and human health challenges.
2. Poultry for meat (not including laying hens) illustrating challenges related to environmental impact, feed supply, food safety, animal welfare and dominance of a few producers;

3. Red meat (with a focus on beef) illustrating challenges associated with climate and Greenhouse Gas emissions, water use, grains grown for feed, use of antibiotics and complex supply chains.

The initial ITT for the delivery of the dialogue called for 4-6 food production technologies to be considered from hi-tech to demand side management. Technological solutions were largely identified from the Innovate UK Catalyst Sustainable Agriculture and Food Platform research projects, Farming Futures and WRAP websites and up to 6 technologies were considered for each case study which could be categorised as:

- Increasing productivity of crops and animal products (e.g. GPS and robotic weeding, GM and biotechnology, mechanically separated meat etc.);
- Reducing inputs of energy, pesticide, fertiliser and packaging (e.g. precision farming, alternative pesticides/insecticides, shelf life indicators and packaging innovations etc.);
- Developing novel protein sources for both animals and humans (e.g. insects, lab reared meat);
- Behavioural change – meat free days, buying different cuts, better quality, labelling etc.
- After long debate it was agreed that Genetically Modified (GM) food and crops would be included for completeness but in a way which would not distort the discussion at the expense of other technologies.

## 2.3 Methodology

### Literature Review and Development of stimulus materials

Following a literature and website review the delivery contractors produced a long list of seven potential case study areas, whittled down to four by the GMG and AG and then finally to three (chicken, red meat and wheat). A wide variety of stimulus material including PowerPoint, video, handouts and posters was produced. Materials went through at least four rounds of review between late December and mid-January with a focus on content.

| Stimulus Materials Days 1 and 2 | |
|---|---|
| PowerPoint:<br>• Overall challenges to food system<br>• Challenges in three case study areas<br><br>Handouts:<br>• Biographies on the talking heads video contributors<br>• Regulation in the food sector<br>Carousel Materials:<br>• Solutions for 3 case study areas (hi-tech to behavioral change) | Videos:<br>• Aspects of food production in the UK: contributors included NFU, Sainsbury's, Food and Drink Federation and Food Ethics Council<br>• Overall challenges – Tim Benton, Government Food security champion<br><br>• Priority challenges: NFU, FSA, Sainsbury's, FDF, Soil Association, Ethics Council |

### Pilot testing of Materials

Two pilot meetings each of 6-7 public participants were held on 7 January 2015 for cognitive testing of the materials (PowerPoints, case studies, solutions and one video) with sampling to reflect a mix of demographic and socio-economic characteristics to reflect London and the surrounding areas segmented into two groups (ABC1 and C2DE). Participants received an incentive payment of £30 to cover their expenses. Sessions were observed by GO-Science, Which? and the evaluator from an observation suite.

### Stakeholder engagement

Stakeholder engagement has been mainly through the AG and GMG with a few additional stakeholders involved in recording talking heads videos.

### Public dialogue events

Three sets of PD events in London, Cardiff and Paisley were held over two consecutive Saturdays in each location during January and February 2015. Each set of events involved:

- Day 1 (full day – 10-5.15) which explored attitudes to food and shopping habits (based on a homework task), a quiz on food production and challenges, talking heads videos on the UK food system (15 mins) and food system challenges (15 mins) and introduction to the challenges in 3 case study areas (chicken, meat and wheat) each presented by a member of the core management team (GO-Science and Which?). Breakout sessions explored issues in greater depth and individual views were recorded in participant workbooks. A final session presented a range of potential solutions (15 mins), a homework task and an informal evaluation exercise. Any questions that the team were unable to answer on Day 1 were collated and shared with the GMG and AG and answers presented during the recap session on Day 2.
- Day 2 (reconvened full day – 10-5) reviewed homework tasks and how the participants had thought about or changed their behaviour in relation to food purchasing and consumption. Sessions then reviewed reactions to talking heads videos on potential solutions and carousel sessions explored reactions to potential solutions for each of the three case studies. Finally a planning session allowed participants working in groups to produce action plans for preferred solutions and assign responsibilities between government, farmers, industry, retailers and consumers.

The aim was to recruit 18 participants in each location (for a target of 16 on the day, 48 in total) to reflect age, gender, gross household income, employment and education levels, and ethnic mix of each area, with a maximum quota for those with particular dietary requirements (vegetarian, vegan, halal and allergies). In practice, a total of 49 participants attended throughout. Those working in the food industry or with very strong views about food/science were excluded.

### Post Dialogue activities

Two months after the dialogue events Which? and TNS BRMB arranged follow up interviews with all those who had consented to be re-contacted through a short telephone interview. The purpose of this was to explore participants' reflections on the challenges, solutions and action plans after they had time to think about them more (and to do so in an everyday setting) as well as establishing whether any changes in purchasing behaviour that had been seen between the two days of the dialogue had been sustained. 18 interviews were carried out.

### Final Reporting and Dissemination

The draft final report – an account and analysis of what was said at the workshops - was first circulated in Mid-April 2015 and went through many iterations before being finally signed off by GOcience and Which? in mid-July. The report was published on 6th August 2015 and disseminated at the gov.uk[3], Which?[4] and Sciencewise[5] websites.

[3] www.gov.uk/government/publications/food-system-challenges-public-dialogue
[4] http://www.which.co.uk/documents/pdf/food-system-challenges---public-dialogue-on-food-system-challenges-and-possible-solutions-411910.pdf
[5] http://www.sciencewise-erc.org.uk/cms/uk-food-system-challenges-and-the-role-of-innovative-production-technologies-and-other-approaches-in-meeting-these/

# 3. Evaluation

## 3.1 Aims

The aim of the evaluation is to provide an independent assessment of the public dialogue's credibility and its effectiveness against its objectives, including an assessment of its impacts. The evaluation started in autumn 2014 and has run alongside the dialogue project. The following sections reflect data collection and assessment between October 2014 and September 2015 to answer the following evaluation questions:

- Objectives: has the dialogue met its objectives?
- Good practice: has the dialogue met the Sciencewise principles of good practice?
- Satisfaction: have those involved been satisfied with the dialogue?
- Governance: how successful has the governance of the project been, including the role of OGs, key providers groups and the Sciencewise support role?
- Impact: what difference or impact has the dialogue made?
- Costs/Benefits: what was the balance overall of the costs and benefits of the dialogue?
- Credibility: was the dialogue process seen by OG members as suitable and sufficiently credible for them to use the results with confidence?
- Lessons: what are the lessons for the future (what worked well and less well, and more widely)?

## 3.2 Methodology

### Document Review

Comments on the content and presentation of project documents were submitted to the core project management team and delivery team by email or in person including:

- Framing and stimulus materials during four draft iterations and the pilot materials;
- Event design including comments on preliminary design of events, the recruitment brief and pre-event tasks; and
- Project outputs including the interim presentation of findings, outline of the final report and numerous drafts of the final report and appendices.

### Observation

The evaluators directly observed a variety of events and meetings including:

- Two GMG and one AG meeting;
- Four public dialogue events (pilot and 2 days in London and one in Cardiff);
- Face to face and teleconference meetings with the delivery team/GOS and Which?
- A Sciencewise wash-up meeting in November 2015.

### Questionnaires and informal evaluation with participants

- Informal evaluation at the end of Day 1 events in London and Cardiff asked 32 participants to rate: How useful they had found the day in making them think about how their food is produced? And whether they felt better informed about the challenges for future production of red meat, chicken and wheat in the UK? Answers were ranked from not at all, through moderately to very much.

- Written evaluation questionnaires were completed by 49 public participants at the end of Day 2 events in London, Cardiff and Paisley (100% response rate). The summary results are shown in Annex B.

### One to one Interviews

Stakeholder interviews were conducted at key points through the dialogue.

- Informal baseline interviews around the GMG and AG meetings established the policy context and aspirations for the dialogue events.
- About 15 informal public participant interviews were carried out in the margins of the public events themselves.
- 10 interviews were carried out with members of the GMG, AG and core management group during June and July 2015. Interviews focused on: how the project had met its objectives; emerging impacts (expected and unexpected) on their organisations' policies and processes for communication; the robustness of the methodology; and the role and effectiveness of governance arrangements.

# 4. Objectives

*Has the dialogue met its objectives?*

## 4.1 Framing of objectives

The original dialogue objectives were debated between the GMG, AG and at the core project management team inception meeting. They were expanded from those in the original ITT to include the first objective which gives the dialogue a tighter policy focus on the Agri-Tech Strategy, Global Food Security programme and Centres of Agricultural Innovation. The final objective was expanded to identify Defra, BIS and GFS as the policy audience.

In addition the initial focus on 'the public' was widened to include 'the public and consumers' in Objectives 2, 3 and 4. This had the effect of shifting the framing from a citizens' dialogue to a much greater focus on consumers which was then reflected in the dialogue design, the recruitment brief for participants (all of whom were expected to be solely or jointly responsible for the family grocery shop) and in the pre-workshop task which focused food shopping habits.

The agreed objectives are the following:

- To inform Government decisions about future policy and research priorities on the role of innovative production technologies in the UK food supply, particularly the implementation of the 2013 Agri-Tech Strategy through Agricultural Centres of Innovation and the Global Food Security Programme.
- To explore public and consumer awareness and perspectives of current food supply problems, challenges and opportunities.
- To explore public and consumer attitudes to potential solutions (including: types of food production methods, new technologies or other solutions in the context of demand-side approaches, and waste reduction) that could be used to address the challenges of food supply and sustainable intensification.
- For the GO-Science Risk team, the Leadership Council of the Agri-Tech Strategy and the GFS programme to have a more in-depth understanding of:
    - Consumer awareness and knowledge of food production methods and new technologies
    - How consumers perceive the potential risks and benefits of different technologies
    - Explore a small number of innovative technologies and approaches in detail
    - How consumers feel about demand side approaches/ solutions to food security challenges
    - The wider social elements that determine the conditions of consumer acceptability.

Table 4.1 shows how different elements of the process were designed to meet the four objectives.

Overall the commissioners were satisfied that the dialogue had remained focused on the objectives and had very largely been successful in meeting them.

**Table 4.1 Objectives in different Process Elements**

| Process elements | Specific Objectives | Fit to overall objectives |
|---|---|---|
| Literature review | • To develop stimulus materials based on a sound understanding of previous research on consumer attitudes to and understanding of issues and challenges in the food system | 2, 3 |
| Management Group and AG meetings | • To get buy in and engagement of stakeholders and policy makers<br>• To agree 3-4 case studies which would provide participants with a way into the food challenge issues<br>• To identify a range of solutions and sources of information which would include demand management through innovative technologies of interest to government and industry<br>• To identify experts for talking heads videos.<br>• Review key messages and inform policy and research agendas | 1, 4 |
| Round 1 and 2 public dialogues | • Explore consumers' awareness, understandings and concerns about the sustainability of Britain's food supply – and how these play out in the food choices they make;<br>• Understand consumers' awareness and attitudes toward current and future food production and consumption, including new food technologies;<br>• Deliver insight into consumers' priorities and expectations concerning Government initiatives to safeguard food supply including both demand side (e.g. changing consumer behaviours and shaping consumer choices) and supply side (e.g. novel food technologies). | 2, 3, 4 |
| Follow up interviews | • To understand how far participating in the dialogues has and may continue to change participants' behavior. | 3 |
| Post dissemination events | • To disseminate findings to a wider policy, business, academic and NGO audience | 1, 4 |

## 4.2 Participant understanding of objectives

The purpose and objectives of the workshops were made clear from a number of perspectives, including the initial recruitment, joining instructions and during the introductions to the workshops. At the first event objectives were presented without PowerPoints but, based on participant feedback at the end of Day 1, were subsequently presented more clearly with a supporting PowerPoint. Participants then certainly understood the objectives more clearly and had a better understanding of how the results would be used. The roles and interests of sponsoring organisations and the role and composition of advisory group and Government management group were also clarified.

The route to get participant's thoughts on whose role it was to deliver the different solutions and supporting activities was through co-created Action Plans for tackling food system challenges with roles and responsibilities assigned to different actors. This worked best for events in Cardiff and Paisley where the importance of the Action Plans was made clear from Day 1 and resulting Action Plans were much more comprehensive. These could have been more tightly connected to feeding back to policy makers.

By the end of Day 2, all but one participant (46 out of 47 who answered the question) agreed that they understood the objectives of the workshops (74% strongly agreed and 14% tended to agree).

## 4.3 Achievement of specific objectives

**1. To inform Government decisions about future policy and research priorities on the role of innovative production technologies in the UK food supply, particularly the implementation of the 2013 Agri-Tech Strategy through Agricultural Centres of Innovation and the Global Food Security Programme.**

It is too early to judge how far this objective will be met (see section 8). The route by which Government and BBSRC will feed the dialogue findings into the named strategies is not yet entirely clear, partly because of the General Election in May 2015 (including purdah at the time of drafting the final report) and the publication since May 2015 of major policy announcements including a 25 year Food and Farming plan. Defra participants were confident that the work will inform the GFS programme, Agri-Tech strategy and Agricultural Centres of Innovation, but that the impact on the latter two will necessarily be subtle since these are industry-led processes in which government's role is to be responsive and reactive to what industry puts forwards. The Food and Drink Federation (FDF) reports that they hope that the findings will help inform and broaden the scope of the Agri-Tech strategy and innovation centre. The BBSRC notes that while the work reinforces quite a lot that is already known about consumer awareness of sustainability issues the findings on consumer preferences for different solutions will feed into the GFS programme and is likely to influence further research on specific technologies.

**2. Explore consumers' awareness, understandings and concerns about the sustainability of Britain's food supply – and how these play out in the food choices they make**.

This objective has been well met. The key messages emerging were that most participants knew very little about food production techniques and the sustainability issues – other than health and quality – associated with them. They were particularly shocked by environmental and animal welfare issues and that they did not already know more. Policy makers interviewed agree that the sections on consumer awareness were useful and informative and that "*the results resonated: not massively new but offered more depth and insight on the subject".* For the FSA "*There were certainly interesting outcomes which will sit alongside our own research reinforcing consumers' limited understanding about the issues; but if you get them interested they might take action*".

For Defra the work provided some interesting insights in areas of policy relevance such as global food security issues, and the ethics of importing embedded water from water scarce countries, and particularly revealed strongly held underlying values and indications of where behaviour may or may not change (see later in this report for examples).

**3. Understand consumers' awareness and attitudes towards current and future food production and consumption, including new food technologies**

This objective has been well met. Those interviewed amongst the MGM and AG felt that some useful insights had been provided because the dialogues and reporting covered a broad range of technologies with the opportunity to discuss them in some depth. Most of those interviewed took the message that once participants learnt more about the issues they were very engaged. They were prepared to engage with technological solutions – and in terms of technologies there was very little that was totally off limits - but caveated this with the need for further proof that a particular technology was really needed, that it would benefit society or the environment rather than corporate profits, and that safety risks would be monitored. Participants tended to reach for behavioural change – such as reducing their meat consumption, buying less and wasting less – over which they have agency. In terms of more technical solutions they were happiest with those that seemed the most 'natural' (e.g. using natural predators rather than GM crops or pesticides). One slight weakness of the final dialogue report was that the concept of 'naturalness' was not really delved into and drawn out enough.

**4. For the GO-Science Risk team, the Leadership Council of the Agri-Tech Strategy and the GFS programme to have a more in-depth understanding of: Consumer awareness and knowledge**

**of food production methods and new technologies; How consumers perceive the potential risks and benefits of different technologies; Explore a small number of innovative technologies and approaches in detail; How consumers feel about demand side approaches/ solutions to food security challenges; and the wider social elements that determine the conditions of consumer acceptability.**

This objective has been well met. The dialogue showed that participants considered that every party in the food system has a role to play in affecting change. This included: themselves as consumers in reducing waste and making better choices; farmers, manufacturers and retailers in providing good choices at affordable prices; and government as regulators. A role for an independent body or consumer champion was also identified to look at all sustainability issues in the round. Those interviewed in the GMG and AG tended to echo the sentiment that *"[this is] generally a positive report highlighting some new key messages and reinforcing other messages we would like the food industry to hear*" (NGO, AGM member).

## 4.4 GO-Science Internal Objectives

**Testing the usefulness of Public Dialogue methodologies for understanding consumer attitudes to risk in relation to the GCSA's annual report on risk**

This objective has been well met. GO-Science is pleased with the balance of the report and that it reflected an honest dialogue process with the public which was able to explore beneath surface attitudes to understand the hierarchy of factors that make technologies more or less acceptable. The quality of the report is considered to have raised the profile of PD in the Science and Innovation space and will be important in making the case for public engagement in the face of budget pressures.

**Testing the benefits of working in partnership with an atypical research partner on such a project**.

This objective has also been well met. Both GO-Science and Which? have found the partnership very fruitful and recognise the complementary skills, expertise and contacts that the other has brought to the project and the wider opportunities for policy impact. The role of Sciencewise in providing the framework for them to work together is appreciated. The resulting strong project management was recognised by other stakeholders. Both partners are looking for opportunities to work together on future projects.

**Lessons**

- Clarity about the dialogue objectives and the process for feeding into policy processes – e.g. through co-production of action plans – helps to increase the public's belief that their inputs will have an impact on policy making.
- Achievement of policy objectives in future could be further enhanced by developing policy action and communications plans after the final report is available.

# 5. Good practice

This section presents the evaluation findings on the design and delivery of the dialogue process and whether it has met good practice principles including:

- The choice of locations was clear and representation was of a scale and mix for results to be generalizable;
- The workshops were well designed so that the design flowed and there was sufficient time for deliberation;
- The stimulus materials presented were balanced, accessible and engaging enough for the participants to act as informed citizens;
- The facilitator team was professional, well briefed, consistent and unbiased and enabled all participants to make an active contribution; and
- Specialists were involved to provide information and trust in the process.

### 1.The choice of locations was clear and representation was of a scale and mix for results to be generalizable

This principle was well met. The rationale for choice of locations was clear, reflecting the OG criteria of geographic spread (Wales, Scotland and England) and also reflecting the locations of Which?'s previous Citizen Juries. The number and mix of participants shown in Table 5.1 was similar to the

**Table 5.1 Participants in the two day dialogue events**

| Participants: Scale and representativeness | | London | Cardiff | Paisley |
|---|---|---|---|---|
| **Age** | 18-25 | 3 | 3 | 3 |
| | 26-35 | 3 | 3 | 3 |
| | 36-49 | 4 | 4 | 4 |
| | 50-65 | 4 | 4 | 4 |
| | 65 + | 2 | 2 | 2 |
| **Gender** | Male | 8 | 8 | 7 |
| | Female | 8 | 8 | 9 |
| **Social grade** | ABC1 (range of SEG represented) | 9 | 8 | 9 |
| | C2DE (range of SEG represented) | 7 | 8 | 7 |
| **Educational qualifications** | No formal qualifications | 2 | 2 | 2 |
| | GCSE equivalent | 4 | 4 | 4 |
| | 'A' level equivalent | 5 | 5 | 5 |
| | Degree or professional level qualification | 5 | 5 | 5 |
| **Status** | Single (no children) x 4 | 4 | 3 | 3 |
| | Couple (no children) x 4 | 2 | 4 | 3 |
| | Parents with dependent children (mix of single/couple) x 5 | 6 | 5 | 5 |
| | Empty nester (mix of single/couple) x 5 | 4 | 4 | 5 |
| **Rurality** | Urban / Suburban | 8 | 10 | 10 |
| | Rural | 8 | 6 | 6 |
| **BME** | BME | 6 | 3 | 2 |

recruitment brief with 49 attending both Day 1 and Day 2 across the three locations. 51 participants attended on Day 1 but one dropped out at the outset because they had not been informed about the filming, and one dropped out after Day 1 for family reasons. The recruitment mix was similar to the brief except for the number of BME participants which was below the target (11 compared to 17 in the recruitment brief). The mix of urban/suburban and rural residents was similar with slightly more rural in London (although the findings suggested that groups in Cardiff and Paisley, although with fewer rural residents appeared to have a better understanding of farming and rural sustainability issues). From contributions observed and one to one conversations, it was clear that a range of class, attitudes to food, and knowledge about food and science was represented.

Out of 49 respondents all but one tended or strongly agreed that recruitment was well-handled. One London participant reported that "*The bit about distribution of images was not made clear*" but others reported that instructions had been clear.

**Lessons:**

- Ensure that participants are aware of filming and receive filming release forms in advance to avoid wasteful drop out on the day. This could also easily have been managed by ensuring that cameras were set up so that individuals who did not wish to be filmed were not in shot.

### 2. The workshops were well designed so that the design flowed and there was sufficient time for deliberation

Within the budget and the 2 days available for each dialogue event it was always going to be a challenge to cover all the material and allow adequate time for discussion. It was partly for this reason that the number of case studies was reduced from 4 to 3. As one AG member noted there was still "*an awful lot of ground to cover in 2 days*" but this was unavoidable if the objectives were to be fully met. The design of the two days assumed that participants would be interested and capable of taking on big subject areas and a lot of detail, and for the vast majority of participants this turned out to be the case.

The external pilot sessions were useful in allowing the core management team and evaluator to observe how the materials were received and understood and reinforced many of the points about streamlining, simplifying and clarifying the stimulus materials made by AG, GMG and sponsors. They also demonstrated how participants became easily engaged in the subject and eager to discuss the issues.

Day 1 in London proved quite challenging in terms of timekeeping. Despite a long day (10-5.15) some sessions were rushed and this was reflected in the comments of participants (see box below). The warm up tasks could perhaps have been made more of (pre-task and quiz). The design was tweaked for subsequent events to help it flow better, with less time allocated to participants recording in their individual workbooks and more time for structured group and paired conversations and feedback to plenary, which allowed the lead facilitators to probe underlying attitudes more. Reconvening only a week later allowed participants to absorb introductory information and complete a homework task to reinforce and build on understanding. While not all participants had done homework most had spent time thinking about the issues. In all three locations a significant majority had thought about and reported that they had actually changed their consumption behaviour: the short elapsed time between sessions helped maintain momentum.

After the London sessions Day 2 was also re-designed to allow more time to be spent on solutions and producing action plans and less on recapping from Day 1 and revisiting prioritisation of challenges. Techniques such as the carousel worked particularly well for dealing with a large number of solutions. More structure was also provided by grouping the solutions by technological and behavioural approaches and providing more guidance for the Action Plans.

The amount of time available for discussions was the only area where participants expressed some dissatisfaction in all three locations: Overall 42% did not agree that there was enough time to discuss the issues. This was most marked in London (50%) and Paisley (56%). Timings appeared to work better in Cardiff (where only 23% disagreed). One participant commented "*I feel that 3 days rather than 2 would have been better as it was rushed*" and this may have been true if there had been budget to reconvene a smaller number of participants for a third event to prepare Action Plans. However, this would not have been possible within the budget and it is not clear that all participants would have wanted to commit more time.

- *"Not enough time, but due to time constraints I understand"*
- *"Last task was too rushed"*
- *"Last session too rushed"*
- *"Variable" could have done with a bit more time"*
- *"I found certain aspects when people had strong views were rushed and other areas which weren't as relevant had more time spent"*
- *"Some sessions did seem rushed"*
- *"Too rushed for complex issues"*
- *"Some of it seemed a little rushed. More time needed on solutions and actions"*

**Lessons:**

- If more resources had been available a full internal pilot of Day 1 might have helped in ironing out timing issues. Continuity between facilitators across locations would also have helped.

It would have been really useful to be able to spend more time on the Action Plans. Some participants found this task frustratingly rushed.

### 3. The stimulus materials presented were balanced, accessible and engaging enough for the participants to act as informed citizens

A great deal of time and effort went into designing events which would be balanced and unbiased and in preparing a balanced set of stimulus materials which covered all issues in sufficient detail for participants to feel informed.

Stakeholders fed into the development of stimulus materials in a number of ways. The GMG fed in the views of government departments and research organisations to ensure that the materials were accurate and reflected the range of research interests and information sources. The AG ensured that the scope was broad, and the materials and points of view were unbiased. Which? and the delivery contractors ensured that materials were presented in a format which was accessible and interesting to participants. Very tight time frames meant that the stimulus materials for Day 1 had not been fully polished in terms of language, visuals and audio for the first event (London) but were amended for the subsequent events.

The stimulus materials on the three case study challenges were well received and provoked a lot of discussion and questions. Solutions materials (carousel posters and handouts) were really visual, clear and easily understood. Material appropriately drew on numerous published sources and

Which's? materials from its previous Citizen's Panel. Handouts included further references on each topic so that participants could carry out their own research if they were interested, and some did. Despite many iterations of the stimulus materials and far more time required from the MGM, AG and commissioners than initially anticipated the general view seems to be that *"[we're] happy with the materials that went out: a good set in the end"* (GMG member). Both GMG and AG members interviewed stressed that the materials could be useful for a number of other awareness raising and dialogue processes.

The vast majority of participants (88%, 43 out of 49) also found that the stimulus materials on the food challenges were balanced. A very small minority (2) tended to disagree remarking *"Not so sure about fairness and balance"* and *"thought bias towards challenges"* while 4 were unsure. Several suggested they would have been interested in covering more case studies *("Not all foods were covered e.g. fish"* or *"Not enough information").* Solutions stimulus materials were also very well received with 90% of participants (43 out of 49) feeling the information on solutions was fair and balanced. A small handful disagreed (2) feeling that "*there could be more solutions presented"* and *"Needed more info on water solutions*".

There was widespread agreement (94% - 46 out of 49) that information provided was sufficient and relevant to enable them to contribute to the discussion. Informal discussions highlighted how much most people felt they were learning on both days and the vast majority found the level of detail fine – only a very small number reported they experienced *"information overload*" or that they had been *"crammed with information"*. The materials are now being used in another dialogue commissioned by the FSA (see Section 8).

**Lessons:**

- Realistic timing and resources are required for the production of stimulus materials.
    - The depth and breadth of the topic and lack of resources within the delivery team for materials development meant that GO-Science and Which? had to invest far more time in preparing materials than they originally expected (effectively a full time equivalent during the month before the events).
    - It is easy to underestimate the time needed to get inputs from stakeholders (particularly multiple government departments). But it is really important to allow time for checking so that the materials are defendable and ensure credibility.
- The two pilot groups in London for cognitive testing of stimulus materials were an additional and valuable step in the process. Given the breadth and complexity of issues covered the pilots proved helpful in ensuring materials were accessible, comprehensive and balanced.
- The informatics and visuals on challenges (such as a swimming pool of water and every third slice of bread wasted and intensive chicken rearing) really resonated with participants and were the most quoted take-away learnings from the two days.
- The talking heads videos on the solutions were also well received, particularly on Day 2, helped by a continuity in contributors between Days 1 and 2 and a better understanding by participants of the range of organisations represented and their viewpoints.

### 3. The facilitator team was professional, well briefed, consistent and unbiased and enabled all participants to make an active contribution

A team of two facilitators ran each event and were responsible for recording and notetaking for a table of 8-9 participants each. Discussions were captured on flip charts and audio recording for

transcription. Each table also had 1 or 2 'experts' (GO-Science, Which? and in Wales a government representative) to answer technical questions and present materials.

Facilitators allowed participants to shape the conversations, but kept them within the boundaries of the workshop. Given the wide range of issues and large number of topics facilitators needed to have a good understanding of the issues so that they could energetically probe responses. The team members who had been involved in the design of the process were able to do this but we observed that other facilitators were mainly reading from a script.

Participants were treated equally and were kept motivated, interested and committed. All participants were given space to contribute, and every effort was made to prevent individuals dominating discussions. Facilitators managed groups successfully so that everyone felt they were able to contribute, despite a few challenges (such as a dominant character in one group and a few participants with limited English). Groups were initially segmented by socio-economic education levels but facilitators were flexible in mixing up groups and changing report back techniques to prevent one individual dominating and dampening others' enthusiasm.

As a result participants were unanimous (49 out of 49) in finding the facilitation in all locations independent, professional and effective. All participants (49 out of 49) also felt that they had been able to contribute their views and have their say.

**Lessons**:

- Workbooks allowed those who were less confident in speaking in larger groups to still make their input, but required a lot of time.
- Working in pairs and more structured reporting back to plenary helped to prevent an individual dominating and going off task.
- The lack of continuity in the facilitation team between locations made it difficult for all facilitators to accumulate enough subject knowledge to ask probing questions. This was a challenge for the facilitators but does not seem to have been an issue for participants.

### 4.Specialists were involved to provide information and trust in the process

Generally public dialogue projects would be expected to have independent specialists in the room on both days to provide participants with an opportunity to learn more about the topic and ask clarification questions. Considerable efforts were made by both GO-Science and Which? to recruit GMG/AG members or academics from local universities, however, it proved very difficult within the timeframe, the breadth and depth of technical knowledge needed and across three locations to recruit specialists able to cover the range of issues from a neutral perspective. The GMG and AG therefore agreed that having different experts in different meetings could have a major distorting impact on the dialogues.

Specialist input was therefore provided through video presentations by a range of specialists and the presence of the core management team. Each of the workshops had at least two team specialists from GO-Science and Which? and a government food and farming representative in Wales. GO-Science/Which? made clear and succinct presentations on what the two organisations hoped to get out of the dialogues and also presented the three case study challenges. They also answered questions of clarification raised by participants and, when necessary, followed through so that queries could be answered on Day 2. This was a substantial time commitment from the team.

In addition three sets of talking heads videos helped set the context for each section of the dialogues and provided a range of views and perspectives on: the key challenges facing the food system; the priorities to be addressed; the range of potential solutions and their pros and cons. In our view the talking heads videos contributors were more fully representative of the wide ranging views from central government, industry (farmers, processors and supermarkets), research organisations and NGOs covering environmental, health, safety and ethics concerns than could ever have been possible having 'experts' in the room. All individuals approached to record videos were very enthusiastic and no one refused.

At the first event (London) the participants did not have access to profiles of the contributors in advance and were initially suspicious about the motivations of those presenting talking heads videos. Once biopic material was presented alongside the videos in Cardiff and Paisley, the participants were much less sceptical. Across all three events the overwhelming majority (92%, 45 out of 49) felt they were easily able to get their questions answered, 2 strongly or tended to disagree and 2 were unsure.

**Lessons:**

- The collaboration between government and an NGO resulted in a very knowledgeable core management team who were able to provide specialist inputs which were balanced, unbiased and consistent for all three events. The fact that the majority of participants felt they got their questions answered easily is an endorsement of this approach.
- Talking heads videos provided a good mix of specialist voices in the room and better balance than would have been possible with a few local specialists. It is important that participants understand who these voices represent from the outset.
- GO-Science and Which? would have appreciated clarity and timely guidance from Sciencewise on whether this approach to providing specialist input complied with its principles.
- Follow through on participant questions between the two days was very much appreciated by participants.

### 5. Organisation and venue

Participants received advance information, workshop materials including individual workbooks were available on tables and handouts were delivered promptly, and flip charts paper and post-it notes were ready to use. All conversations were recorded and transcribed and quotes used extensively in the dialogue report.

The room and materials set up, food and event management (no name badges, problems with permissions for filming) was surprisingly poor for Day 1 in London. However, lessons were learnt and at subsequent events rooms were of appropriate size, healthy and fresh food (appropriate to the subject of the dialogue) was provided, and audio-visuals etc. were fully polished.

**Lessons:**

- With a crowded agenda and just 2 facilitators one large room proved more workable than two separate rooms in terms of moving people from groups to plenary and managing timekeeping.
- Rooms, flipcharts, name badges and audio-visuals need to be set up and checked well in advance.
- Refreshments provided, particularly for dialogues around food and sustainability issues, need to be fresh, healthy and with lots of vegetarian choices.

# 6. Satisfaction

Have those involved been satisfied with the dialogue process?

## 6.1 Public participants

An overwhelming 98% (46 out of 47 who answered) were satisfied with the two events they took part in. Typical comments by participants about their overall feelings about the event are shown in the word cloud, with words used most frequently shown in larger text. Most people found the events interesting, informative and enjoyable.

The events also met the Sciencewise good practice principles that those involved in the process are enabled to increase their knowledge and understanding of the subject under discussion. Most participants were surprised and shocked by the information they learnt on Day 1 and became very engaged and motivated. By the end of Day 1 many had started to think very differently about the food system and their role in it.

The informal evaluation exercises at the end of Day 1 in London and Cardiff found that 30 out of 32 participants considered that they were a lot better informed about the challenges for future production of red meat, chicken and wheat in the UK. Only 1 participant already felt well informed, while 1 felt they were moderately better informed by the end of Day 1. Day 1 evaluation also found that 30 out of 32 had found it very useful to think about how their food is produced.


The feeling that they had learnt a lot – much of it genuinely shocking to them - was confirmed by informal discussions with participants throughout the 2 days. The people from GO-Science and Which? who took part and those who viewed the video of participants' journeys found it very moving. "*A great project, it really had a big impact on me personally and I've actually changed my own behaviour*" (GO-Science).

At the beginning of Day 2 people were asked to group themselves according to the impact of the previous session and we observed that:

- About a third had changed how they thought and their behaviour;
- About half had changed how they thought, but not yet their behaviour; and
- About one sixth had not changed how they thought or acted about food sustainability.

By the end of Day 2 almost all participants (96%, 45 out of 47) strongly or tended to agree that they had learnt something new by the end of the two day sessions. Take away areas that were particularly noted included:

- Use of water and antibiotics;
- Scale of food waste and waste management;
- That we eat too much meat;
- Intensity/scale of resources and environmental damage caused by beef production; and
- The impact of everything we eat and the effect it has on the environment.

This positive feeling of having learnt something useful was also evidenced by the Action Plans produced in all 3 locations on Day 2. All plans tended to highlight the important role of education about sustainability impacts and the need for awareness campaigns on behaviour change, particularly to reduce meat consumption and waste.

This focus on behaviour change appears to have been sustained amongst the 18 participants who participated in the post dialogue follow up interviews. The majority self-assessed that their earlier change in attitudes and behaviours regarding food purchases had been sustained and they were confident that they would continue. Typically, participants were buying less meat and had reduced the amount of waste they created. While participants said that they had not changed their food purchasing behaviour as much as they expected, primarily due to habit, they said they were now more engaged with environmental issues, they were planning meals to avoid waste and were buying only what they needed.

There was a strongly held view that the challenges to the food system can only be addressed if all the parties – farmers, manufacturers, retailers, caterers, Government and consumers - play their part. The need to raise awareness about the challenges to the food system amongst consumers was an essential requirement.

**Lessons:**

- A combination of a baseline quiz, self-grouping on Day 2 according to change of attitudes, the talking heads videos and follow up interviews were all very useful in demonstrating to participants themselves and to policy makers how quickly they'd become engaged with the issues and solutions.
- Follow up 2 months later was particularly useful in understanding what messages participants had taken from the workshops, what had particularly resonated and the actions that people reported they had felt empowered to take.

## 6.2 Satisfaction amongst policy makers

The box below highlights the comments made by interviewees from the GMG and AG about their overall satisfaction with the dialogue process. Those that had been closely involved recognised that there had been some challenges in terms of timeframe, delivery contractor resources and the additional efforts required from the core management group and GMG/AG members to produce robust and balanced stimulus materials and to finalise the report. However, there was resounding agreement that the project had been ambitious, enjoyable, really well run and produced valuable results which need to be listened to by government and industry.

**Stakeholder views on satisfaction with the process**

- *"Collaborative, made the right compromises, good well run dialogue". (GMG member)*
- *"Really enjoyed it. A really good piece of work to be engaged with early on". (GMG member)*
- *"Ambitious, worthwhile, [hopefully] scaleable: Difficult at times – went through some sticky times with the contractor but got there in the end; Pretty ambitious in trying to get to materials which could present the breadth of issues in a balanced way but this was achieved; and challenge is how could we make more of this and take it to scale – is it just a question of putting in more money to do it [e.g. Day 1] on a larger scale?". (AG Member)*
- *"A very good piece of work". (AG member)*
- *"Great that Which? had the resources to do this research – there are always things to be learnt from talking in depth to the public". (AG Member)*
- *"Really valuable piece of research which needs to be listened to and responded to by government". (AG member)*
- *"Very good, sound and well-managed". (GMG Member)*
- *"Should be useful work, good for GOS and Which? for doing it". (AG member)*
- *"Very helpful to have this research as consumer input is generally forgotten and focus on more technological solutions". (AG Member)*
- *"Biggest benefits in the detail of insights rather than the headlines". (GMG member)*
- *"Really pleased with the follow up interviews, very helpful". (GMG member)*
- *"Well done, well run methodology". (GMG member)*
- *"Process went really well and was really interesting". (AG member)*

# 7. Governance

How successful has the governance of the project been, including the role of oversight groups and the Sciencewise support role?

The GMG was an effective mechanism for ensuring input from other relevant government departments. Defra and FSA were particularly active amongst the GMG in advising on the framing of the dialogue, the selection of case study topics, providing sources of information for stimulus materials and reviewing them for accuracy and relevance. GMG members will also have a key role in taking the messages from the dialogue back into their organisations and ensuring that they have the desired policy impact.

The Advisory Group was made up of a good balance of high level external stakeholders drawn from academic, industry and NGO sectors with expertise in food systems (representing consumer interests, welfare, health and environmental concerns). There was a real attempt through the AG group and talking heads videos to involve key industry figures such as the chair of Agri-Tech Leadership board (Judith Batchelor) and the Food and Drink Federation and balance them with sustainability champions such as Professor Tim Benton the Global Food Security champion. The AG was particularly active in the early stages in broadening the framing of the dialogue (to include demand side management and low tech solutions) which was subsequently more balanced than it would otherwise have been. The AG also played a key role in ensuring materials used were appropriately comprehensive, balanced and neutral and comprehensible to a lay audience. Five AG members also contributed their time to appear as talking heads videos in the video stimulus materials for Days 1 and 2 providing a balance of views on identifying challenges, priorities and solutions for the PD events. However, as the project has extended 6 months beyond the original end date of March it has proved more difficult to maintain high levels of engagement.

The support of Sciencewise in shaping the dialogue and providing the financial framework to bring the two partners together and preparing the ITT and appointing contractors was appreciated by both commissioning agencies.

**Stakeholder Views on Governance**

- *"A good idea to try and work cross-government to cover all possible policy interests and seems to have worked pretty well". (GMG member)*
- *"[Core management] team has done a great job in trying to draw in all interests". (GMG)*
- *"Well managed by the team: we were slightly freer to voice policy tensions". (GMG Member).*
- *"I feel they listened to what I and other AG members said so it was worthwhile". (AG Member)*
- *"I feel the AG was able to influence the solutions considered in favour of the non hi-tech solutions". (AG member)*
- *Simply bringing together the GMG has been useful – creating interest for taking issues forward" (Commissioner)*

**Lessons:**

- It has been useful for a topic with such cross-departmental interest (health, farming, safety, research) and that was potentially contentious (e.g. inclusion of GM) to have a two tier governance approach.

- A two tier approach does not appear to have been divisive as it allowed all the government departments with an interest to be involved and got more people around the table without becoming unmanageable. It also allowed them to voice any concerns in the pre and post-General Election context.
- AG members interviewed were satisfied that they had been listened to and had an impact on the shape of the dialogue.
- It might have been useful to bring the GMG and AG together for a final meeting when the report had been finalised and prior to publication to discuss outcomes and potential policy impacts.
- It may also have been useful for the commissioners to have had more bilateral meetings with individuals e.g. by GO-Science taking responsibility for a few AG member and Which? meeting with individual government departments. This would, however, have required additional time inputs.

# 8. Impact

What difference or impact has the dialogue made?

As noted in sections 4 (objectives) and 6 (satisfaction) the project has been successful in engaging public participants in food system challenges and solutions and generating outcomes that policy makers are expected to find useful.

## 8.1 Participants

In all three locations the majority 91% (42 out of 46) felt confident that their views will be taken into account in improving food sustainability (*"I hope so as we made some strong arguments")*. A small minority were not so sure, with one London participant reporting he was extremely doubtful the dialogue process would make any difference *("too many vested interests in government and food producers/super markets"*), while in Cardiff three felt it would only make a difference with really good feedback *("Only if results/actions are fed back"*).

Across all three locations the majority 87% (41 out of 47 who responded) appeared convinced of the value of public dialogues and 89% (42 out of 47) thought it more likely they would now get involved in these types of dialogues in the future. The one person who was strongly sceptical of the usefulness of this and other dialogue processes was also sceptical about whether government and industry really listen to the public anyway.

In follow up questions:

- 81% (39 out of 48 respondents) were interested in knowing more about how discussions and their recommendations would influence policy;
- 79% (38 out of 48 respondents) were prepared to be re-contacted for a short follow up interview (and 18 actually took part in follow ups); and
- Two thirds (32 out of 48) would like to receive other information from Sciencewise, including possible opportunities to be involved in other topics of dialogue.

## 8.2 Policy Impact

Since GO-Science does not have the policy lead in this area, the impacts of the research on government policy will be mainly delivered through other GMG and AG members. The final report has been shared through the GMG and the key findings have been presented by GO-Science and Which? to Ministers and Directors in key departments (see below).

As noted in previous sections, the headline outcomes from the research were not very surprising or newsworthy, but the report is widely seen as providing a very sound evidence base which tells a strong narrative: the public is initially disconnected from food production; but easily becomes engaged and willing to find solutions to the challenges as they learn about them; individuals are often willing to change their behaviour; and do not discard all technological solutions out of hand; but are prepared to consider each on the basis of its risks and benefits in a nuanced way. Each of the GMG and AMG members interviewed also took more specific messages – none of them apparently incompatible – which they consider will shape their policies, research agendas or campaigning in the future. Table 8.1 summarises how the project is impacting on different policy processes.

The impacts of the project have yet to be delivered but interviewees suggest that this is an important report that will begin to have significant impacts over the six months to spring 2016 through the following routes:

- Feeding findings on public attitudes to food system challenges into Defra, GFS, FSA and Department of Health policies and strategies - e.g. by widening the current export/growth focus of the 25 Year Plan for Food and Farming to include sustainability and obesity concerns. Which? and GO-Science team leaders have already held meetings with Defra, FSA and Food Standards Scotland. During the next 3 months meetings will be held with Agri Tech Leadership Council/ Food Research Partnership. Other opportunities to feed into the 25 year plan will be sought out;
- Influencing research and innovation priorities within the GFS and Agricultural Innovation Centre research programmes (when they are announced) on the basis of a much more nuanced understanding of the hierarchy of factors at play when the public is weighing up the risks and benefits of different types of technology;
- Making the case for the usefulness of well-run public dialogues in delivering open, balanced, and nuanced opportunities for the public to participate meaningfully in shaping research and innovation agendas. On the basis of this dialogue the need for public dialogue has become a central plank of the narrative for GO-Science's five year plan; and
- Providing a legacy of materials and lessons on how to communicate food sustainability issues in an accessible and engaging way.

The timing of the final report was five months delayed compared to the original contract (envisaged for the end of March 2015). Delays were caused both by the election process and the large number of iterations in final drafting, but all interviewees agreed that publishing after the General Election has maximised the report's impact and that the timing is now right for all the key policy processes.

**Stakeholder Comments on potential for impact:**

- *"Pretty good [potential] impact for one research project". (Defra)*
- *"Come back in six months to see how we've actually used the insights". (Defra)*
- *"Definitely a lot of potential impact" (Commissioner)*
- *"Too early to tell whether it will be useful: but this will have nothing to do with the quality of the research, but all to do with political willingness". (AG Member)*
- *"We would like to see insights influence Agricultural Centres of Innovation" (Industry)*
- *"We would like the organisations that it was designed to inform – Defra, BIS and Agri-Tech to respond to it. Really hope that it makes a difference to conversations in organisations and departments and feeds into the 25 year Plan for Food and Farming during the consultation stage – widening the framing from a narrow focus on growth, exports and jobs to sustainability and food security". (AG Member)*

**Stakeholder comments on timeliness**

- *"The launch is timely in that all departments are currently putting together their CSR bids but on the downside they may now be too busy to read it and take the findings on board". (BBSRC)*
- *"It would have been interesting to have more time to have sight of the talking heads videos [to see what their messages would be]" (GMG member).*
- *"Having the report pre-election would not have made any difference to its impact". (GMG member)*
- *"Has come at a useful time and positive that it landed with a new government interested in new ideas". (GMG member)*
- *"We would not have been able to do anything with it in purdah and have seen previous perfectly good reports disappear without trace because of poor timing".*
- *"likely to be slow burn…it's a solid body of evidence that people will come back to" (Commissioner)*

**Table 8.1 Potential policy impact areas, by organisation**

| Policy Audience | Policy area | Potential impact |
|---|---|---|
| Defra | Agri-Tech Strategy | • Inform the Agri Tech Leadership Council (involving industry, Defra and BIS Ministers and academics across the food chain and recently rearranged to incorporate the Food Research Partnership) in identifying areas in the Agri-Tech Strategy where more work will be required or a different comms approach needed to increase acceptability of some technologies to the public.<br>• Judith Batchelar as both chair of the ATLC and the project AG is aware of the findings and key messages.<br>• GO-Science/Which? have fed in through targeted presentations (2 so far to Defra Minister and Head of Food and Farming) on the findings and implications. More meetings will be planned after the CSR announcements |
| | Agricultural Centres of Innovation | • Results are likely to support early stages of development for the centres once they are established (late 2015) & help inform their work programmes. |
| | 25 Year Plan for Food and Farming | • Defra will feed in findings internally<br>• Which? meeting with Defra Minister on sustainability and obesity issues during the public consultation phase (Sept 2015)<br>• Which? sharing findings with Defra Director Food and Farming<br>• Which?, GO-Science and Sciencewise to coordinate inputs through follow up with members of GMG |
| | Sustainability Metrics | • Highlights the need, strongly supported by industry, for robust sustainability metrics and infographics ("labelling which interrupts habits") e.g. on carbon foot printing or water foot printing. |
| | Internal Structures | • Wider lessons on the use of public dialogue expected to feed into Defra discussions on what structures are needed for the food sector |
| BBSRC | Agricultural and Food Strategy Team | • Will be widely read and taken into account in developing CSR bid and forward strategy |
| | External | • Agricultural and Food Strategy Advisory Panel (of academics and food industry research users) |
| | Global Food Security Programme | • Setting up infrastructure of 600 public who can be drawn on for opinions and dialogues.<br>• Using stimulus and materials to inform a public dialogue with the John Innes Centre<br>• Using Tim Benton video for another dialogue<br>• Hope to use specific materials in other dialogues (such as insects as animal feed). |
| FSA | Food Futures Summit Feb, 2016 | • Used as a building block for a Sciencewise co-funded dialogue using mixed methods to inform a large stakeholder conference in early 2016 covering food system sustainability issues.<br>• GO-Science presented implications and lessons from this dialogue |
| | Internal | • Share key messages with Campylobacter, food supply chain fraud and other teams.<br>• Share lessons on how to communicate about food issues and risk more generally.<br>• Work with message about the role of an independent watch dog. |
| BIS | Funders forum | • GO-Science reflections on wider lessons on how public dialogue methodology can feed into public policy and strategic approach to risk management within the research and innovation agenda. |
| | GO-Science | • Public Engagement is established as a core part of the GO-Science narrative for next 5 years in delivering science advice to Government (July 2015) |
| DoH | Obesity Strategy | • Which? feeding in findings through a meeting with Ministers |

## 8.3 Dissemination of Results

The report of the findings of the project has been disseminated through the government[6], Which?[7] and Sciencewise[8] websites. The annex to the report includes all the written stimulus materials. The report is also available at AG member (Food Ethics Council[9] and Eating Better[10]) sites.

Which? also commissioned a film crew to make two short vox pop videos on the process and participant journey in London and Scotland and has been shown at meetings with policy makers and will then be available at Which? website. The video is a very useful output since it documents the whole process and participant journey over 2 days in two locations. The evaluation showed that 90% (44 out of 49 respondents) were unworried by the film crew or observers and many were happy to record individual interviews.

Both Which? and GO-Science sought media coverage when the report was published, including briefing BBC journalists, but the findings were considered more slow burn than broadcast newsworthy. Table 8.2 summarises other dissemination activities including presentations, Which? conversation, tweets and blogs. The stimulus materials (overheads, solutions and talking heads videos) also have real legacy value and are already being used in other BBSRC dialogues. It has been suggested that they could also be used for wider awareness raising initiatives "*it would be fantastic to scale up the Day 1 using these materials to reach a much wider audience – something like the Wales National programme*". The key messages taken by AG members have also been shared through blogs to industry, Government and NGO target audiences.

**Table 8.2. Dissemination of key messages and materials**

| Organisation | Dissemination activities |
|---|---|
| GO-Science | Reports published at website 6/8/2015 and referenced by Sir Mark Walport, GCSA in his speech to the EFSA in Milan (Autumn 2015).<br>Presentations of findings to Defra, FSA, BIS Funders' Forum and BBSRC |
| Which? | Launched on website as part of a Which? Food and Drink Conversation on What does the Future Hold for our Food? And Event videos will be hosted on Which? website<br>Implications presented to Ministers and Directors in Defra, DoH, Food Standards Scotland Board<br>Future presentations to Scottish Government (for their Food and Farming Strategy) and Welsh Government planned<br>Lessons shared through membership of dialogue steering groups for FSA and Wellcome Trust |
| BBSRC | Circulating the full report internally with a covering email highlighting some findings |
| FSA | Signposting key findings to different departments internally |
| Defra | Key messages to be shared internally with the Food and Farming team in Defra.<br>Insights to be distilled into shorter papers for the relevant evidence teams. |
| Food Ethics council | Blog on the importance of involving the public in food decision making to Ethics Council Network of 4,000 individuals, MPs, business, NGO and government staff interested in food issues.<br>Which? invited to edit a guest blog or present the results to a business dinner. |
| Eating better Initiative | Blog on the public prioritising eating less meat to the Eating Better Alliance of 50+ science organisations and NGOs.<br>Twitter and report in newsletter to a wider audience of people interested in a sustainable and healthy diet and international development. |

[6] www.gov.uk/government/publications/food-system-challenges-public-dialogue
[7] http://www.which.co.uk/documents/pdf/food-system-challenges---public-dialogue-on-food-system-challenges-and-possible-solutions-411910.pdf
[8] http://www.sciencewise-erc.org.uk/cms/uk-food-system-challenges-and-the-role-of-innovative-production-technologies-and-other-approaches-in-meeting-these/
[9] http://www.foodethicscouncil.org/blog/97/19/65-million-Secretaries-of-State-for-Food/
[10] http://www.eating-better.org/blog/86/Public-prioritise-eating-less-meat-to-tackle-food-system-challenges.html

**Lessons:**

- The methodology, mix of participants, quality of stimulus materials and talking head video contributions and analysis of the final report have all been important in ensuring that this small project will have a large impact.
- The large number of organisations involved through the GMG and AG and the government/NGO partnership have been really important in widening the potential policy influence.
- The energy and enthusiasm of the project partners – Which? and GO-Science – in promoting the report, its messages and the concept of public dialogue in complex policy areas has been a key factor in the success of the project.
- An Impact Plan and a Communications Plan would have been helpful in minimising the time spent on final reporting and making sure opportunities for involving Ministers in a launch were not missed. An Impact Plan would still be useful in helping GO-Science, Which? and Sciencewise identify opportunities for holding Round Table discussions with Defra to see how the work can be taken forward.
- For projects designed to influence multiple policy processes, the evaluation would require a much longer time frame to evaluate the actual impacts.

# 9. Costs/Benefits

*What was the balance overall of the costs and benefits of the dialogue?*

## 9.1 Costs

### Financial costs

The total value of the contract was £60,000 for the public dialogue itself and £6,000 for the independent evaluation. In addition video production and communications support were provided through Which?'s in-house teams. Total costs were split 50:50 between the commissioning partners GO-Science (supported by Sciencewise) and Which? This budget was towards the low end of the Sciencewise range but was delivered on budget, with no overspend.

The resources allocated seem small in relation to the scope and number of outcomes which included: a wealth of stimulus materials (full colour handouts, posters, work books); some 10 talking head videos; two 2 hour pilot tests for stimulus materials; two full-day public dialogue events in each of three locations with 49 participants; and 2 short vox pop videos documenting the participant's journey in London and Paisley; and 18 follow up interviews with participants. Many of the materials are already being used to inform other dialogues and we understand that some of the public participants were invited to participate in an FSA dialogue, although this did not eventually happen'.

In financial terms the project has therefore clearly delivered very good Value for Money. However, the budget was clearly very tight for the delivery contractors and appears to have required some compromises in terms of a small delivery team without the depth to ensure continuity between facilitators in different locations or in finalising the report.

### Inputs in kind

A large contributing factor to the success of the project was the contributions in kind through:

- **the GMG** – with 3-4 of its most active members involved in all meetings, review of stimulus materials and channelling comments from their colleagues, review of final report and dissemination of the findings within their organisations. Less active members attended a few meetings and reviewed materials and the final report. We estimate this at about 18 person days in total.
- **the AG** – with the most active members attending 2 actual and 2 virtual meetings, making suggestions for case studies, reviewing stimulus materials, recording talking heads videos and disseminating the final report and its findings. Three members put in significant time (estimated at 4 days each) while others were only involved in the early stages in shaping the methodology or in reading outputs. Again we estimate total time inputs by the AG at about 18 person days.
- **GO-Science and Which?** both made significant time inputs to framing the dialogue, preparing stimulus materials, helping film talking head videos, attending all dialogue events as experts, following through on queries between events and reviewing numerous iterations of the final report. (Which? events team also filmed 2 videos, and arranged media coverage as part of their financial inputs). Between the two organisations this was equivalent to about ¾ of a FTE between September 2014 and May 2015 or about 120 days of input.

In kind contributions greatly exceeded what most contributors interviewed (commissioners, GMG and AG) had anticipated. However, all those interviewed felt it was a worthwhile investment to get materials right and to produce a high quality report. Certainly without these inputs the dialogue

would not have been the success it has been. All those interviewed felt that their inputs had been valued and that their organisation will get out far more than they have put in to the process**.**

## 9.2 Benefits

We consider that the project has provided real value for money in terms of the financial costs for the outcomes produced. As noted by a number of respondents a more quantitative approach may have given a larger sample size for the cost but would not have provided the richness of reflection and insights that have been identified as useful to policy makers. It would also not have produced the legacy of stimulus materials and videos which can now be made available for other research and awareness raising exercises.

As noted in Section 8 the impacts of the project in terms of influencing policy will only be seen over the next six months. Even then it will be difficult to quantify and monetarise the overall benefits without further study of the messages that have been taken and how they have fed through into research programmes and strategies.

However, in the longer term the insights from this project – together with those from other ongoing dialogues such as the GFS, FSA and Wellcome Trust initiatives - have the ability to influence research programmes worth more than a hundred million pounds including BBSRC's GFS (worth at least £14 million) and the Centres for Agricultural Innovation (£90 million of government investment). This may mean that some areas of research which have little public support (such as laboratory-reared meat) are not pursued (unless there are other clear non-food benefits to the research), and that more resource is put into other near-to-market technologies which are seen as more acceptable, or into lower or no-cost demand side management solutions (such as reducing red meat consumption, less wasteful shopping habits, shelf life labelling or 'disruptive' consumer labelling systems). These low tech solutions would also have wider benefits such as improving health, reducing costs to the NHS, and reducing waste disposal costs.

Ultimately this project could feed into identifying opportunities to increase the success of the UK agri-food industry, of which the entire supply chain from agriculture to final retailing and catering, is already estimated to contribute £96 billion to the UK economy (of which £18 billion was exported in 2012) or 7% of gross value added[11].

Outputs from the research can also help to feed into the UK's contribution to help meeting UN Sustainable Development Goals (SDGs) between 2015 and 2030, and particularly the second goal which is to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. Many of the individual targets associated with this goal are closely related to challenges and solutions covered by this dialogue including ensuring that food production systems are able to adapt to climate change.

**Lessons:**

- For a dialogue of this nature it is important to ensure that either the delivery contractors have the resources to include appropriate technical expertise in their team or that it is clear from the outset that substantial time and knowledge inputs will be required from the commissioners and stakeholders. The latter approach can work well but the trade-offs between contractor costs and time inputs from sponsor needs to be clear and reflected in realistic timelines.
- Fully evaluating the impacts of such broad based policy relevant dialogues would be a valuable exercise but requires a longer time frame and more resources than available through the current evaluation contract.

[11] BIS, Defra, DFID, UK strategy for agricultural technologies: executive summary, Updated 24 December 2013

# 10. Credibility

***Was the dialogue process seen by OG members as suitable and sufficiently credible for them to use the results with confidence?***

### Overall views

The commissioners of this project were very clear that the objectives of the work could not have been achieved using quantitative methods which could not have handled the range and depth of issues and would not have moved the body of evidence on in terms of understanding the underlying values which shape consumers' awareness and preferences for solutions. Both GO-Science and Which? were pleased with the resulting public dialogue process, the quality of debate within the groups and the analysis provided in the final report. *"The way the report came together was a good attestation of how public dialogue can feed into public policy making on risk management*" (GO-Science). Both organisations would use public dialogue again, and feel that they have learnt enough about the process to achieve this without Sciencewise support

Policy audiences in Defra, BBSRC and FSA are accustomed to commissioning a mix of qualitative and quantitative research and are positive about deliberative dialogue approaches[12] with Sciencewise. The policy audience represented by the GMG found the methodology for this project robust and credible. The view of one interviewee was typical "*the pieces of value [from this project] are not so much the headlines but in getting underneath the initial response to the fundamentals*". This could only have been gleaned through a deliberative process which brought all participants up to a shared level of understanding of the issues and then explored the hierarchy of factors underlying their attitudes to different technologies. Building on this project and other food sector dialogues (Wellcome Trust initiative) FSA has recently commissioned its own follow on public dialogue project on food futures.

### Underlying factors

The partnership between Which? and GO-Science is a novel feature for Sciencewise projects and has been every effective in increasing credibility of the process and framing for Government, stakeholders and the participating public.

The AG, GMG and core management team were closely involved in scoping the methodology, choice of locations and design of the dialogue events. Social scientists with experience of dialogue processes were included in both groups. The delivery contractor selection process was rigorous and involved several members of the GMG. The role of Sciencewise at this early framing and contracting stage was appreciated by both commissioners. Both the GMG and AG were comfortable with the delivery contractor's track record in running successful dialogues and their ability to report analytically.

From the point of view of NGOs and academics on the AG the credibility of the process was enhanced by: suitably broad and balanced stimulus materials; achieving a broad spread of contributors to the talking heads videos so that all views could be represented; and ensuring that a

[12] Defra has recent experience of the Sciencewise supported UKNEA public dialogue process; FSA has prior experience of citizens' forums (iTracking) and of reconvening focus groups; GFS is currently running a large scale citizen panel.

broader range of solutions (including demand side management and low-tech) were considered than would have been the case without their involvement.

Specific elements of the methodology that were particularly valued include: splitting the content over two sessions so that participants had time to absorb information but with a short call back time so that no momentum was lost; homework tasks and exercises to demonstrate to participants the journey they had come on; follow up interviews with a selection of participants two months later which further demonstrated the lasting impact of participating; the two videos made by Which? to highlight what participants had taken from the process; the partnership approach between government and an NGO.

**Stakeholder views on the credibility and robustness of the process**

- *"This was a fairly standard Sciencewise model of reconvened meetings and stimulus materials which is now relatively well recognised and received across government. (GMG member)*
- *"The farming/food manufacturing industry will quiz the results because of the sample size [49] but it was in the right ballpark and since the conclusions ring true it will be seen as robust and they will believe in the process and representativeness". (GMG member)*
- *"Reconvened groups, talking heads videos to provide balance, review of materials and how it was handled all seem very robust". (GMG member)*
- *"Would like to think that it will be widely viewed as robust". (AG member)*
- *"Industry will accept the small group methodology". (AG member, industry)*
- *"The process of and view of the materials gave us confidence in the process". (AG member)*
- *"[shows that] people can engage in a really helpful, thoughtful way so actually we should just do more of this". (AG member)*
- *"Perhaps a shame that participants were framed as consumers rather than public or active citizens – understandable why it was but may lead to criticism from some NGOs". (GMG member)"The follow up interviews 2 months later were really valuable in providing evidence that information that works with values can lead to behaviour change (waste, red meat reduction, water)". (GMG member)"Really glad we did the follow up – it showed that this was really something that participants had thought about and changed their behaviour as a result". (core management team)*

# 11. Conclusions and Lessons

**What are the lessons for the future (what worked well and less well, and more widely)?**

This was a successful small project with potentially wide ranging policy impacts. The balance of the framing, quality of stimulus materials, dialogue events and underlying analysis will make this project a good demonstrator for what can be achieved through public dialogue to manage risk in the research and innovation area. Largely as a result of the tight budget and significant in-kind time contributions of commissioners, AG and GMG group members, and the delivery contractors, this project represents very good value for money with a useful set of legacy materials.

The evaluation has highlighted the following lessons with wider implications:

**Collaborative commissioning** – the unusual partnership between a government department and an NGO has worked very well in terms of broadening the framing of the project, harnessing expertise and resources, and spreading the project management burden. Establishing a good working relationship and the enthusiasm and time committed by the core management team has been a key element of success.

**Two tier governance mechanism** – the combination of an internal cross-government policy group (GMG) and an external Advisory Group has been very effective in ensuring credibility and robustness of the project (particularly in framing and providing balance) and increasing its potential for medium term policy impact. With more resources and time it would have been useful to bring the two groups together or further develop bilateral relationships with the commissioners to maintain momentum within the AG.

**Stimulus Materials** – developing accessible and balanced stimulus materials for a broad but detailed dialogue is extremely challenging and resources and time need to be built into project design either by ensuring the necessary expertise within the delivery contractor team, or recognising the time and effort that will be required from commissioning organisations up front.

**Balance and specialist input** – where very broad and balanced specialist input is needed at events then talking head video presentations can be very useful in bringing a breadth of voices into the dialogues. For participants to appreciate they are being exposed to the full range of views it is important to make clear from the outset: who has been involved in designing the project (AG/GMG members): and the profiles and point of view of individual contributors. Specialists within the commissioning team need to be able to make sure that participants' queries are answered.

**Timing** – it is important to be realistic about timeframes/resource needs for producing stimulus materials, running dialogues (to allow continuity in different locations) and for producing final reports suitable for wider dissemination. Flexibility to time the launch to maximise potential policy impacts is also very important.

**Impact** – it is too early to judge the impact of the project, which will not be clear until several policy processes beyond the control of the commissioners are completed. However, the impacts could be significant in relation to the cost of the project and it would be a useful exercise for BIS/Sciencewise to explore the impacts in more detail in 6 months, outside the remit of the current evaluation.

# Annex A: Members of Oversight Groups

## Advisory Group

| | |
|---|---|
| Sue Davies | Which? (Chair, co-sponsor) |
| Judith Batchelar | Sainsbury's and Chair Agri-Tech Leadership Council (industry) |
| Andrew Kuyk | Food and Drink Federation (industry) |
| Melanie Leech | Food and Drink Federation |
| Barbara Gallani | Food and Drink Federation |
| Daniel Start | Sciencewise |
| James Tweed | Sciencewise |
| Dan Crossley | Food Ethics Council (NGO) |
| Tim Lang | City University (academic) |
| Charles Godfray | Oxford University (academic) |
| Andrew Opie | British Retail Consortium |
| Tara Garnett | Food Climate Research Network |
| Robert Doubleday | Cambridge University (academic) |
| Sue Dibbs | Eating Better Initiative (NGO) |
| Michael Edbury | GO-Science, BIS – (co-sponsor, secretariat) |
| Jack Wardle | GO-Science, BIS – (co-sponsor, secretariat) |

## Government Management Group

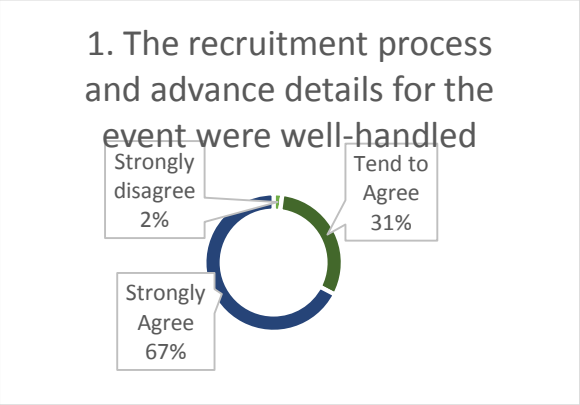
| | |
|---|---|
| Robert Bradburne | Defra |
| Kieron Stanley | Defra |
| Thomas Powell | Defra |
| Sean Ryan | Defra |
| Gordon Friend | Defra |
| Alec Weir | Department for Business, Innovation and Skills (BIS) |
| John Holmes | Department for Business, Innovation and Skills (BIS) |
| Joanna Disson | Food Standards Agency (FSA) |
| Kevin Naylor | Department of Health (DoH) |
| Patrick Middleton | Biotechnology and Biological Sciences Research Council (BBSRC) |
| Bhunnoo Riaz, | Global Food Security Programme (GFS) |
| Michael Edbury | GOS, BIS – (co-sponsor, secretariat) |
| Jack Wardle | GOS, BIS – (co-sponsor, secretariat) |

## Annex B: Participant Feedback on Workshops

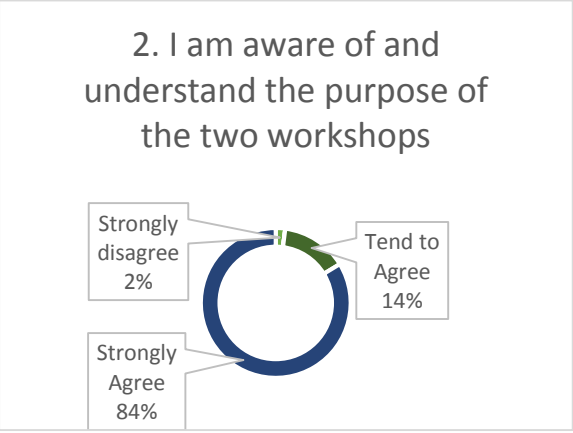
**DIALOGUE EVENTS EVALUATION SUMMARY: London (24th and 31st Jan, contractor offices), Cardiff (7th and 14th Feb, hotel) and Paisley (14th and 21st Feb, hotel)**

**SUMMARY**

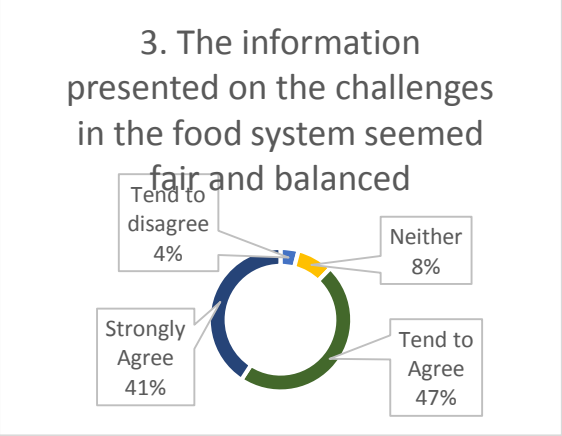
In each location 10.00-5.15 pm x 2 consecutive Saturdays.
Recruitment of 18 in each location (54) for a target audience of 48. 51 turned up on day 1, 50 completed Day 1 and 49 completed Day 2. All completed evaluation forms.
Total £140/participant reward payment made in two stages at the end of each day.
NB: 2 participants did not complete all questions, 1 misread the questionnaire and answered "strongly disagree" to all questions (followed up by email and changed to "strongly agree" by evaluator). 1 in Paisley only completed half the questionnaire, tended to or strongly disagreed with most questions and did not provide contact details for follow up responses are included as given.



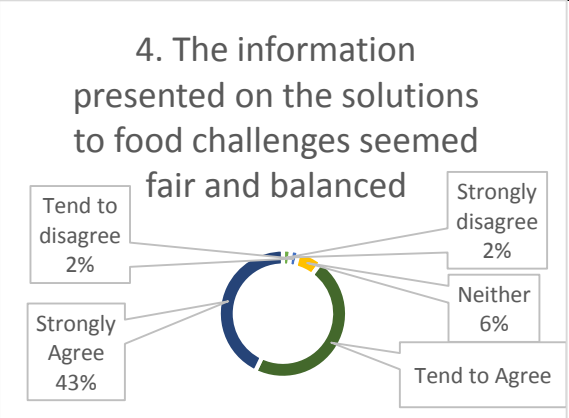
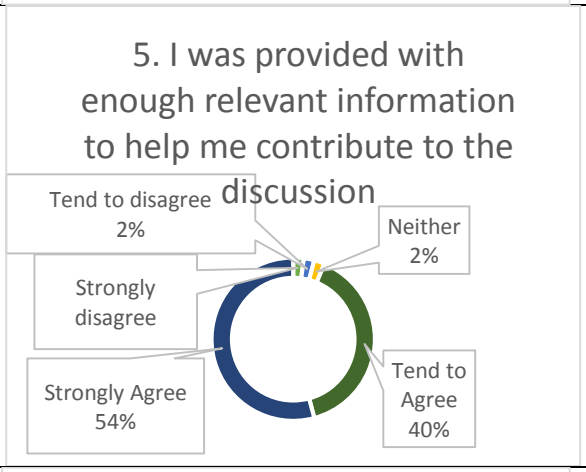
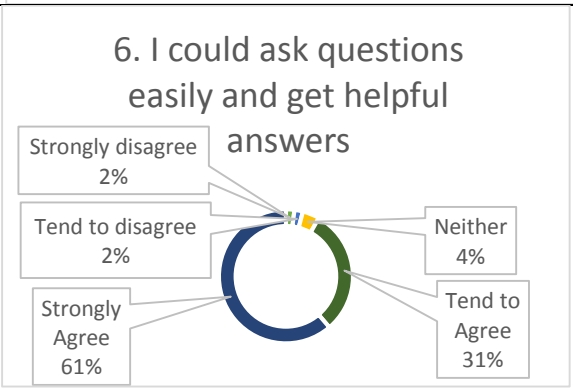
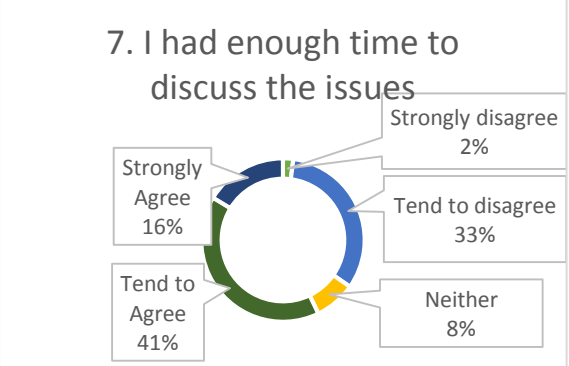

Out of 49 respondents all but one tended or strongly agreed that recruitment was well-handled. One participant in London dropped out on the first day because they had not been informed that the event would be filmed, however, with over-recruitment this still meant 48 participants completed both Days across the 3 locations. One London participant reported that *"The bit about distribution of images was not made clear"* but others reported *"Clear instructions"* and *"very clear communication"*.




All participants appeared to understand the purpose of the workshop after the introduction to Day 2 in London was made much clearer (not very clear on Day 1). The same introduction was then used in all subsequent events. This covered project objectives, roles and interests of sponsoring organisations and the role and composition of advisory group and Government management group. It also highlighted that participants would be expected to help co-create actions plans at the end of Day 2.




88% (43 out of 49) agreed that stimulus information on the food challenges was balanced. A very small minority (2) tended to disagree remarking "*Not so sure about fairness and balance"* and *"thought bias towards challenges"* while 4 were unsure and wondered about the breadth of coverage *(e.g. "Not all foods were covered e.g. fish")* or quantity *("Not enough information").* Some participants in London were sceptical about some of the facts presented but there was little scepticism in Cardiff and Paisley after the team had been able to double check and provide further explanation of a few key figures such as the 30% of food wasted.

| | |
|---|---|
|  | Solutions stimulus materials were well received with 90% (43 out of 49) feeling the information on solutions was fair and balanced. A small handful disagreed (2) (*"No, could be more solutions presented"* and *"Needed more info on water solutions")* or were unsure. |
|  | There was widespread agreement (92% - 45 out of 49) that information provided was sufficient and accessible and most were happy and felt they had learnt a great deal. While one participant would have liked more information, comments on the overall event suggested that a few may have experienced "*information overload*" or that they had been "*crammed with information*". |
|  | 92% (45 out of 49) felt they were easily able to get their questions answered. 2 strongly or tended to disagree and another 2 were unsure. |
|  | This was the area of greatest disagreement in all three locations: Overall 42% did not agree that there was enough time. This was most marked in London (50%) and Paisley (56%). Timings appeared to work better in Cardiff (only 23% disagreed). Specific comments made by participants included:<br>*"Not enough time, but due to time constraints I understand"*<br>*"last task was too rushed"*<br>*"sometimes, but last session too rushed"*<br>*"variable" could have done with a bit more time"*<br>*"I found certain aspects when people had strong views were rushed and other areas which weren't as relevant had more time spent"*<br>*"some sessions did seem rushed"*<br>*"Too rushed for complex issues"* |

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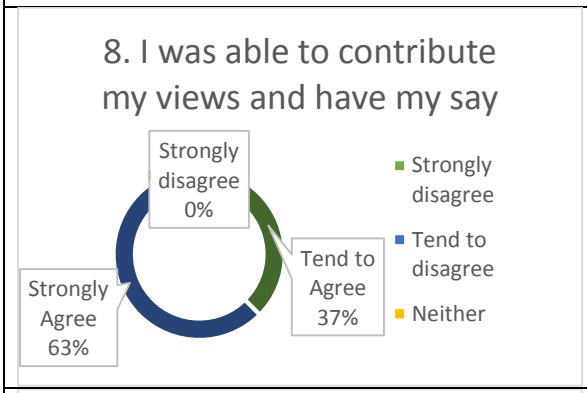
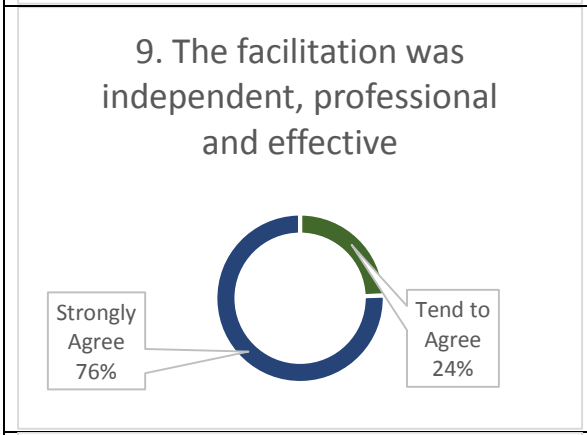
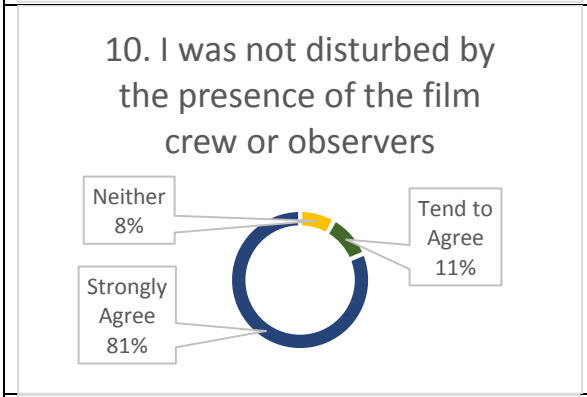
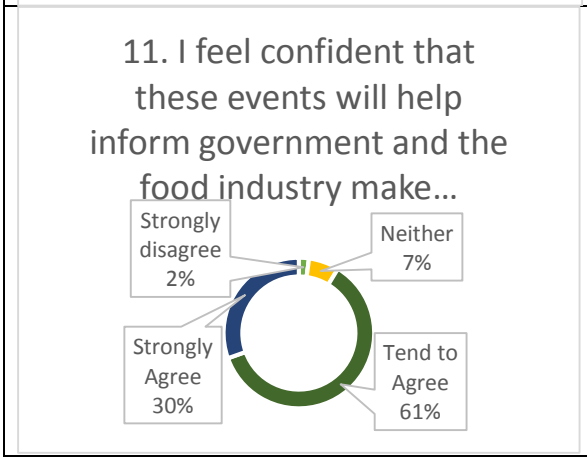
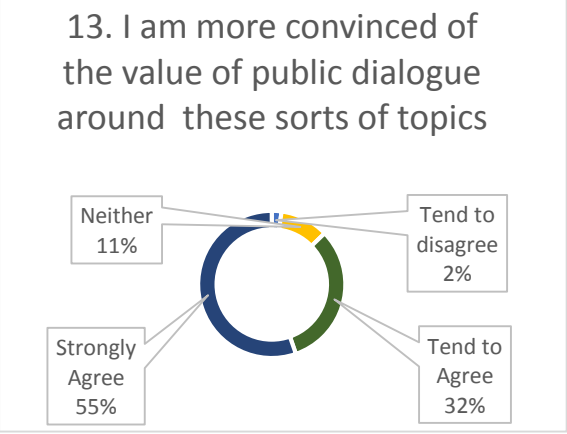
|---|---|
| | *"Some of it seemed a little rushed. More time needed on solutions and actions"*<br>One participant commented " *I feel that 3 days rather than 2 would have been better as it was rushed"* |
|  | All participants (49/49) felt that they were able to contribute their view and have their say.<br>Facilitators managed groups successfully so that everyone felt they were able to contribute, despite a few challenges (dominant character in one group and a very quiet participant with limited English). |
|  | In all three locations there was unanimous agreement on the independent, professional and effective facilitation. *"Andrew was very good at keeping us focussed".* |
|  | 90% (44/49) were not worried by the film crew or observers, while 4 were unsure. The majority of participants were happy to participate in short talking heads videos while only 1 potential participant dropped out because they did not want to be filmed. |
|  | In all three locations the majority 91% (42 out of 46) felt confident that their views will be taken into account in improving food sustainability *("Hope so").*<br>In London one participant was extremely doubtful the DP would make any difference ("*too many vested interests in government and food producers/super markets*"), while in Cardiff 3 appeared unsure reporting "*Only if results/actions are fed back*" and "*I hope so as we made some strong arguments*". |


Almost all participants (96% - 45 out of 47) strongly or tended to agree that they had learnt something new by the end of the two day sessions. This endorsed the informal evaluations on Day 1 in both London and Cardiff where 30/32 considered that they were a lot better informed. Only 1 participant already felt well informed, while 1 felt they were moderately better informed by the end of Day 1. This informal evaluation also found that 30/32 found that it had very useful to think about how food is produced in Day 1.

Take away areas that were particularly noted included:

- *Use of water and antibiotics*
- *Water consumption*
- *Food waste*
- *Waste management etc.*
- *the extent of waste of water and food and that we eat too much meat*
- *Scale of waste, intensity/scale of resources needed to raise beef*
- *Water, waste, eat less meat*
- *The impact of everything we eat and the effect it has on the environment.*
- *Damage to the environment especially from beef production*

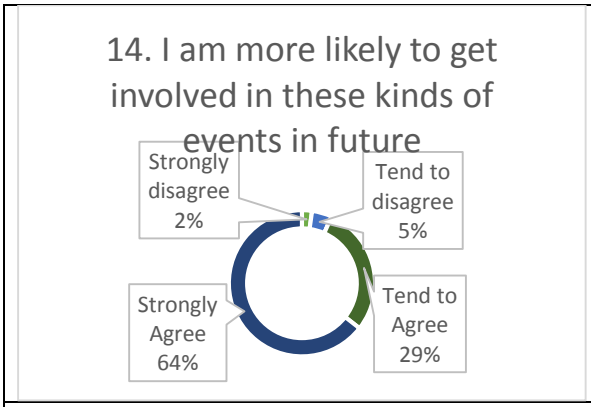
This positive feeling of having learnt something useful was also evidenced by the focus on action plans of all 4 groups (in London – check other locations) on the important role of education about sustainability impacts and awareness campaigns on behaviour change, particularly to reduce meat consumption and waste.



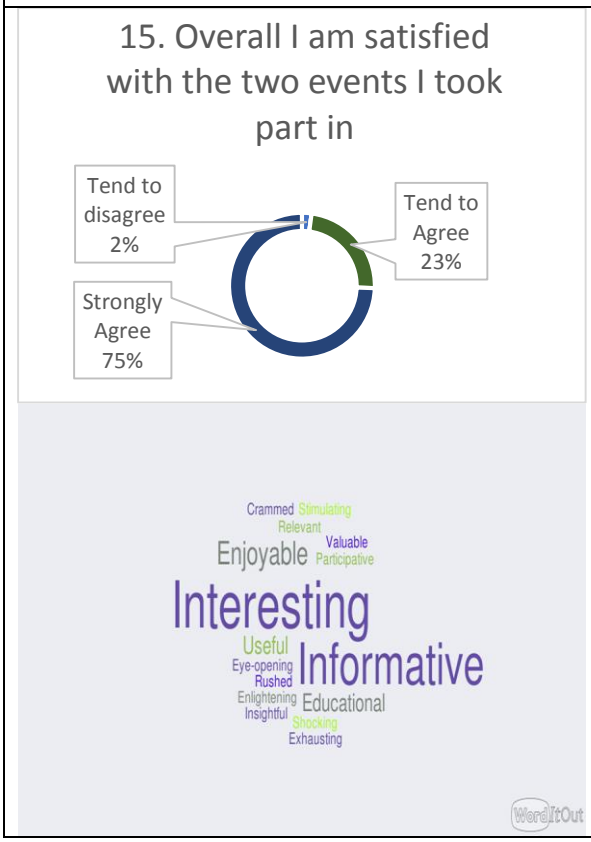

87% (41 out of 47) appeared convinced of the value of public dialogues and 89% (42 out of 47) thought it more likely they would now get involved in these types of dialogues in the future. The 1 person who strongly sceptical of the usefulness of this and other dialogue processes was also sceptical about whether government and industry would really listen anyway.

In follow up questions:

- 81% (39 out of 48 respondents) interested in knowing more about how discussions and their recommendations influence policy




- 79% (38 out of 48) prepared to be re-contacted by evaluator for a short follow up interview
- Two thirds (32 out of 48) would like to receive other information from Sciencewise including possible opportunities to be involved in other topics of dialogue.




An overwhelming 98% (46 out of 47 who answered) were satisfied with the two events they took part in. Typical overall comments about the events are shown in the word cloud.

This was confirmed by informal discussions with participants throughout the 2 days with people reporting that they were learning a lot. On Day 2 in each location people grouped themselves according to:

- Whether they'd change how they thought and their behaviour (London 6):
- 8 that they changed how they thought, but not yet their behaviour (London 8);
- If they had not changed how they thought or acted about food sustainability (London 2).