Evaluation of BBSRC's Bioenergy Public Dialogue

FINAL REPORT

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Collingwood
Environmental
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Executive Summary

BBSRC's Bioenergy Public Dialogue project ran from September 2012 until December 2013. It was co-funded by BBSRC and Sciencewise[1] and was intended to "Allow the diverse perspectives of a range of UK residents, in the area of bioenergy, to be articulated clearly and in public in order that future policies can better reflect these views, concerns and aspirations".

The project also trialled a novel approach to public dialogue which would, it was hoped, develop an ongoing, informed discussion between BBSRC and its research community, the public and other stakeholders, around bioenergy research. Instead of commissioning an independent contractor to run a number of dialogue events over an agreed period of time, BBSRC invited interested institutions and individuals to run their own dialogue events, providing feedback which would be analysed and used to inform BBSRC's policy and decision-making on bioenergy.

Collingwood Environmental Planning (CEP) was appointed in October 2012 to carry out the evaluation of the Bioenergy Public Dialogue. The aims of the evaluation were to assess the effectiveness, impact and value of the dialogue process and more generally to provide information to contribute to developing best practice in public dialogue projects.

The bioenergy dialogue process

BBSRC appointed a Dialogue Coordinator to coordinate project activities including the development of materials. Two different tools were used: a Bioenergy Dialogue Toolkit was produced, based on future scenarios and containing a number of activities and resources; and an existing Democs Game was used in which participants use cards with information to prompt discussion. After a training and pilot session in January 2013, 10 public dialogue events were run between April and September in different locations across England and Wales. 162 public participants were involved and completed feedback forms. The feedback forms were analysed and the Bioenergy Dialogue Final Report published in December 2013.

Figure 1. Timeline for the bioenergy public dialogue

PREPARATION AND DESIGN	September 2012: Recruitment of Dialogue Coordinator
	October 2012 - January 2013: Finalisation of materials and tools
	January 2013: Training and pilot event
	Feb – April 2013: revision of dialogue materials
IMPLEMENTATION	April – September 2013: Public dialogue events
ANALYSIS AND REPORTING	October – November 2013: Analysis of results
	December 2013: Publication of Bioenergy Dialogue Final Report

Governance

Governance was dispersed across BBSRC, with three bodies having a role in monitoring, steering and supporting the process:

- Sustainable Bioenergy Outreach Group

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

- Bioscience for Society Strategy Panel

- Industrial Biotechnology and Bioenergy Strategy Advisory Panel

A small number of external dialogue and public engagement specialists were brought in through a Process Sounding Board. Despite or perhaps because of the existence of multiple governance bodies, there was a lack of clear ownership of the dialogue process. Most bodies met infrequently and all but the PSB had other business to deal with at meetings. Nevertheless, BBSRC participants were generally satisfied that the dialogue was embedded within BBSRC's structures.

The dialogue process: what worked well and less well

The effectiveness of the dialogue was assessed against Sciencewise's principles of good practice for public dialogue2. The first three relate to the context, scope and delivery of the dialogue and are discussed here.

i)   The conditions leading to the dialogue process are conducive to the best outcomes (Context)

What worked well:

- The majority of those involved (decision-makers, event organisers and members of the public) felt clear about the objectives of the events they attended.
- The ongoing nature of the distributed dialogue meant that researchers and event organisers could make events fit with their own programmes. This should become still more effective if the dialogue becomes established and better known.
- The right kinds of resources were provided for people organising dialogue events: support from the Dialogue Coordinator, the Toolkit and some funding for refreshments.

What worked less well:

- Because dialogue events were distributed over time, the way that the findings of the events would be taken into account in decision-making was harder to define, although most of the people interviewed felt that the links could be made.
- The dialogue reached a limited audience, mainly made up of people who were professionally involved in the science or already had an interest; there was little involvement of hard-to-reach groups.
- The governance structures did not meet regularly enough to provide timely oversight and advice.

ii)   The range of issues and policy opinions covered in the dialogue reflects the participants' interests (Scope).

What worked well:

- The majority of the members of the public who participated in the dialogue felt that they had been able to discuss the issues that concerned them.
- Although participants had different opinions about the relevance of the dialogue materials, the majority felt that the materials were relevant to the topic and helped to stimulate discussions.
- Participants generally felt that the dialogue was valuable and it was important that BBSRC should take account of public concerns and interests.

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[2] Sciencewise Expert Resource Centre (2013: 5) *The Government's Approach to Public Dialogue on Science and Technology*. London: Department of Business, Innovation and Skills

What worked less well:

- Some participants and event organisers expressed a concern that the lack of time and depth of discussion meant that members of the public were not in a position to provide the kind of feedback that BBSRC was looking for.
- Given the limited range of participants, the results do not provide information about the views and attitudes of a cross-section of the UK public; they do reflect the attitudes and opinions of a certain sector of the population that is generally more engaged with science issues and with the topic of bioenergy.

iii)   The dialogue process itself represents best practice in design and execution (Delivery).

What worked well:

- Getting researchers to independently organise and run eight events within a period of about six months is a considerable achievement. If the bioenergy dialogue were to continue, it is likely that more researchers and engagement experts would hear about it and want to run events.
- Bioenergy researchers were keen to get involved in the events and their specialist input was appreciated by participants.
- Most members of the public who participated in the dialogue felt that the materials they were given were fair and unbiased.

What worked less well:

- Many of those organising and facilitating dialogue events had little training or experience of dialogue and several reported having difficulty in managing sessions. This meant that the events did not deliver the expected results in terms of views of members of the public on bioenergy.
- Each dialogue event involved one two-hour session. This is considered too little time for members of the public to explore the topic of bioenergy in sufficient depth to be able to give a considered opinion on it. There were comments from both public participants and event organisers that events felt rushed.

Impact of the dialogue

The fourth of Sciencewise's principles of good practice for public dialogue is impact, i.e. the delivery of the desired outcomes. In general it was found that the results of the bioenergy dialogue are valuable for highlighting concerns and priorities that some audiences have regarding bioenergy. However, factors such as the potential for inconsistencies between events run in different locations by different teams, the short time for discussion and some of the characteristics of the people involved (for example, the high level of educational qualifications and involvement with science), mean that these results should be used with care.

What worked well:

- The Bioenergy Dialogue Final Report makes a useful contribution to understanding how dialogue can provide insights into public views about science.

- The results of the dialogue have not been publicised as yet either within or outside BBSRC. BBSRC's Bioscience for Society Strategy Panel has reviewed the report and members felt that it provided a lot of good material. There is potential for wider use of the results of the dialogue when the report is publicised more widely.

- There is likely to be further interest from stakeholder groups when the report is disseminated more widely. One organisation working to provide information on sustainability in farming has been in touch with BBSRC as a result of reading the report.

- People who ran events mentioned many positive impacts for their teams, including better understanding of the role and value of dialogue and increased skills; event organisers were unanimous in saying that they would be willing to participate in this kind of activity in the future.

- Most participants said that they had learnt new things. Over half felt that the results of the dialogue session they attended were valuable and should be taken into account by BBSRC.

What worked less well:

- A number of factors in the way that the distributed dialogue was run mean that the results must be interpreted and used with care. These are: the characteristics of participants, the majority of whom had educational qualifications well above those of the UK population as a whole, were directly or indirectly involved in science activities and were concentrated in two principal age groups (under 30 and over 65 years old); the short sessions which prevented full exploration of issues and concerns; and the lack of recording or reporting of the discussions during the event, which made it hard to interpret some of the participants' feedback.

- There is little evidence that the results of the dialogue events are being used to inform bioenergy research in the institutions where they were held.

- A significant minority of public participants did not feel that they had been able to fully explore the topic of bioenergy and suggested that the results of the activity should not be taken into account in decision-making.

Cost effectiveness

It is difficult to compare the costs of a distributed dialogue like the bioenergy dialogue with a more conventional dialogue where the activities and their costs are well-defined. In a distributed dialogue the costs are distributed between actors (in this case, BBSRC, the institutions hosting dialogues and in some cases the researchers and facilitators who gave up their own time to participate).

One significant and unexpected cost for the bioenergy dialogue was the support provided for the teams running events. The need for the Dialogue Coordinator to dedicate additional time to providing advice and training and in some cases attending events was a significant cost to the project as a whole. It is likely that future distributed dialogues will need to take account of this cost.

It will only be possible to fully assess the cost effectiveness of the project when it becomes clear how the dialogue's findings have been used and the benefits provided (for BBSRC, the researchers who ran events and their institutions and for public participants). This is the key factor in determining the value of the dialogue.

Recommendations for the future

i) The experience of the bioenergy public dialogue suggests that distributed dialogues can be a vehicle for engaging researchers and academic institutions in developing two-way conversations about science with members of the public. In order to build on this interest, BBSRC and other science institutions would need to put structures and mechanisms in place to support researchers and others to organise activities (for example in targeting existing groups that may be willing and able to take part, and planning events to enable sufficient time for participants to digest the information provided and for effective deliberation). At the same time, efforts should be made to develop skills and capacities among organisers so that better results can be achieved in areas such as the recording and reporting of discussions.

ii) The Toolkit and the Democs game used for the bioenergy dialogue were seen as essential tools for those running events. If the bioenergy dialogue is to be continued, BBSRC should

further develop these materials, for example, by adding an introductory presentation, to ensure they are fit for purpose.

iii)   It is important not to underestimate the time and resource needed to support distributed dialogue. While it is expected that the value for money provided by this approach will increase as those delivering dialogue events become more skilled and are able to facilitate richer dialogues, this might need to be accompanied by other changes which will have resource implications, such as making events longer and facilitating the sharing of best practice. It will be important to continue to monitor the benefits of the bioenergy dialogue as these are still emerging and to assess the costs and benefits of future distributed dialogues.

iv)   BBSRC and other institutions running distributed dialogue processes should establish governance structures in which roles and responsibilities are clear and those with a central role in steering and monitor the process have sufficient time and resources to play these roles.

1. Introduction

1.1. BBSRC's Bioenergy Public Dialogue project ran from September 2012 until December 2013. It was co-funded by BBSRC and Sciencewise[3] and was intended to "Allow the diverse perspectives of a range of UK residents, in the area of bioenergy, to be articulated clearly and in public in order that future policies can better reflect these views, concerns and aspirations" (P2120029 Specification – Evaluation of BBSRC's Bioenergy public dialogue project).

1.2. The project also tested a new model of public dialogue which would, it was hoped, develop an ongoing, informed discussion between BBSRC and its research community, the public and other stakeholders, around bioenergy research.

1.3. Collingwood Environmental Planning (CEP) was appointed in October 2012 to carry out the evaluation of the Bioenergy Public Dialogue. CEP produced an Interim Report on the Governance of the Bioenergy Public Dialogue which was published on the BBSRC and Sciencewise's websites in January 2014.

1.4. This report is the Final Report of the Evaluation of BBSRC's Bioenergy Public Dialogue. It covers the following:

  i)   The evaluation aims and approach

  ii) Description of the background to the dialogue and the main dialogue activities (Section 3)

  iii) Evaluation findings in relation to the objectives, context, scope, delivery and impacts of the dialogue (Sections 4 – 7)

  iv) Dialogue costs, benefits and value for money (Section 8)

  v)   Learning and recommendations (Section 9)

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

2. Evaluation Aims and Approach

Aims of the evaluation

2.1.   The aims of the evaluation are to:

- Provide an independent, unbiased evaluation of the project, including assessment of the effectiveness and value of the process, its impact and success;

- Help BBSRC further define the original aim, objectives and expected outcomes/outputs of the project to enable continuing effective evaluation;

- Provide information on developing best practice in public dialogue projects that can both inform the dialogue methodology as it progresses and be used in the future.

2.2.   The evaluation of BBSRC's Bioenergy Public Dialogue looks at three interrelated aspects of the project:

i)   The extent to which the project achieved its own objectives (set out below);

ii)   The degree to which the Sciencewise principles of good practice for public dialogue have been met;

iii)   The effectiveness and value of the process, its impacts and successes.

2.3.   The stated objectives of the Bioenergy Public Dialogue changed slightly between the commissioning of the evaluation *(P2120029 Specification*, op cit) and the start of the public dialogue. This is discussed in Chapter 4. The initial aim of the bioenergy public dialogue was to allow the diverse perspectives of a range of UK residents, in the area of bioenergy, to be articulated clearly and in public in order that future policies can better reflect these views, concerns and aspirations. The objectives of the dialogue were:

- To develop a novel, flexible model for public dialogue that can adapt to the changing science, and to the evaluation and outputs of the engagement activities during the lifetime of the dialogue.

- To use that model of dialogue to engage in an ongoing and evolving conversation between BBSRC, its research community and a range of stakeholders, including members of the public, around bioenergy research, its potential, its application and the issues associated with it.

- To provide a positive experience of dialogue for all those involved so that those people, from members of the public to researchers and policy makers, are better informed when making decisions about bioenergy.

2.4.   Sciencewise has defined five principles of good practice for public dialogue[4]. The principles seek to ensure that:

i)   The conditions leading to the dialogue process are conducive to the best outcomes (Context);

ii)   The range of issues and policy opinions covered in the dialogue reflects the participants' interests (Scope);

iii)   The dialogue process itself represents best practice in design and execution (Delivery);

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[4] Sciencewise Expert Resource Centre (2013: 5) *The Government's Approach to Public Dialogue on Science and Technology*. London: Department of Business, Innovation and Skills.

iv)   The dialogue can deliver the desired outcomes (Impact);

v)   The process is shown to be robust and contributes to learning (Evaluation).

2.5.   This report contributes to the fifth principle of undertaking evaluation. The other four principles are core to the evaluation approach and have been used to structure this report: Chapters 4 – 7 each describe one of the principles and examine the extent to which it has been met in the Bioenergy Public Dialogue.

2.6.   As part of its commitment to provide information on developing best practice in public dialogue projects that can both inform the dialogue methodology as it progresses and be used in the future, the evaluation team has worked closely with BBSRC and Sciencewise. We have participated in a number of meetings to discuss the project, the progress of the evaluation and emerging findings, in order to help BBSRC further define the original aim, objectives and expected outcomes/outputs of the project.

Evaluation approach

2.7.   The evaluation approach focused on the following main areas of activity within the Bioenergy Public Dialogue project:

- Design of the dialogue process;

- Governance of the project, including project management and oversight;

- Preparation and use of materials, including the Bioenergy Dialogue Toolkit of resources and guidelines for dialogue events, the Democs Bioenergy Game and the feedback forms;

- Training and support for people running dialogue events;

- The dialogue events themselves, including events run by external institutions and organisations and those run by BBSRC;

- Outputs of the dialogue.

2.8.   Given the multiple participants and stakeholders involved, efforts have been made to understand the different expectations for the public dialogue and the perception of its results from the perspectives of BBSRC, BBSRC-funded researchers, decision-makers, Sciencewise and others interested in promoting public dialogue on science. Four methods were used to collect evidence for the evaluation:

- Dialogue event and meeting observation;

- Review of minutes and papers of relevant BBSRC strategy groups;

- Interviews with people involved in the Bioenergy Public Dialogue;

- Use of dialogue outputs, i.e. feedback forms.

2.9.   These provide both quantitative and qualitative information about the process itself as well as information about the outcomes and, where available, the longer terms impacts of the project. Evidence was collected from the dialogue events and the project management meetings.

i)   Event and meeting observation

2.10. This was based on a standard observation schedule which covers the first four of the Sciencewise principles of good practice dialogue (see Appendix 1) to ensure consistent recording of key aspects of the activity.

Table 1 shows the dialogue events where direct observation was used to gather data for the evaluation.

The following meetings were attended and observed by members of the evaluation team:

- Project kick-off meeting (December 2012)
- Project Training and Pilot event (January 2013)
- Process Sounding Board meeting (March 2013)
- BBSRC Sustainable Bioenergy Outreach Group (March 2013)

2.11. The meetings attended were all meetings organised by BBSRC. During the period that CEP was researching material for the Interim Report on Governance, the team mistakenly understood that no dialogue events had been organised. When CEP became aware in July 2013 that dialogue events were taking place, it was only possible to arrange for team members to attend the last two events in September. This is recognised as a weakness in the coverage of the evaluation. At one of the BBSRC-organised events (Bath), the BBSRC organiser worked with seven researchers from the University of Bath, who gave the introduction to bioenergy and facilitated the discussion groups. This made it possible to observe how the researchers used the materials, facilitated the dialogue and interacted with members of the public.

2.12. During the events observed, short interviews were conducted with a small number of participants – see (iv) Interviews with people involved in the Bioenergy Public Dialogue below.

Table 1: Dialogue events and data collection method used

Location	Date	Interview with organiser	Observation
Dana Centre, London (BBSRC led)	24 January		Y
University of Nottingham	25 April	Y	
Rothamsted Research	6 June	Y	
Cambridge Union Society	8 June	Y	
Arts Centre Bar, University of Aberystwyth	13 June	Y	
Newcastle University of the Third Age	25 June	Y	
University of Exeter, Falmouth Campus	18 July	Y	
University of Exeter, Exeter campus, University of the Third Age	30 August	Y	
Showroom Café Scientifique, Sheffield	9 September	Y	
Bath Royal Literary and Scientific Institution (BBSRC led)	24 September		Y
STEAM[5], Swindon (BBSRC led)	30 September		Y

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[5] STEAM – Museum of the Great Western Railway, also known as Swindon Steam Railway Museum

ii)   Review of minutes and papers of relevant BBSRC Strategy Panels and groups

2.13. Table 2 shows the meetings held during 2013 when the Bioenergy Public Dialogue was discussed.

Table 2: Meetings of BBSRC Strategy Panels and groups relevant to the Bioenergy Public Dialogue

Meeting date	Summary of discussion
Bioscience for Society (BSS)	
January 2013	Update and information on the pilot event to be held at the end of January
May 2013	Update on progress. Action: Secretariat to circulate Bioenergy Public Dialogue policy briefing
September 2013	Item 6 Public and stakeholder engagement around bioenergy Discussion Paper submitted
January 2014	Discussion of BBSRC engagement around Bioenergy, including discussion of the Bioenergy Public Dialogue Report and BBSRC stakeholder engagement
Industrial Biotechnology and Bioenergy	
May 2013	Review of early draft of the Bioenergy Public Dialogue policy briefing from the London pilot. The Panel expressed concern that questions focussing on trade and economics were included within the questionnaires and suggested that the dialogue should be distilled to only what is relevant to BBSRC. The Panel recognised the importance of engaging with the non-informed public but also considered that BBSRC had a role in informing the public and that dialogue with this public would also be valuable.
Sustainable Bioenergy Outreach Group (BSBOG)	
March 2013	Update on the dialogue. BSBOG were asked to discuss how BBSRC might further support and encourage researchers to take part in the dialogue. There was concern expressed about how audiences might be attracted to attend events.
September 2013	Discussion of public dialogue and stakeholder engagement
Bioenergy Public Dialogue Process Sounding Board (PSB)	
March 2013	The Process Sounding Board was set up to provide a forum for discussion of the process elements of the public dialogue with external experts. The meeting discussed: challenges, materials, reporting and use of results. The meeting also discussed the ToR for the Process Sounding Board.
August 2013	Meeting papers emailed to PSB members and telephone conversations held to discuss changes in the team, measures to increase the number of dialogue events to be held and arrangements for drafting the Final Dialogue report. PSB members endorsed the approach outlined.
December 2013	Draft Bioenergy Dialogue Final Report circulated to PSB members for comment.
Others	
January 2013	Two people attended the Centre Management Board meeting of the Sustainable Bioenergy Centre (BSBEC)
April 2013	The dialogue was also discussed/promoted via a stand at the BBSRC Sustainable Bioenergy Centre (BSBEC) grant holders workshop on 8/9 April.

iii)   Use of dialogue outputs

2.14.   Feedback forms were completed by organisers and/or facilitators and by participants at the end of each dialogue event. In order to reduce the time taken in completing forms, a single Feedback Form, combining information on the results of the events (i.e. the views and opinions of members of the public about bioenergy) and feedback on the dialogue process itself, was used for both public participants (see Appendix 3) and organisers / facilitators (see Appendix 4).

iv)   Interviews with people involved in the Bioenergy Public Dialogue

2.15.   Nine members of the public. The interviews consisted of nine questions and were carried out in breaks and at the end of the Bioenergy Public Dialogue events observed. The public participant interview questions are in Appendix 5.

2.16.   Nine policy and decision-makers: 6 were interviewed between May – June 2013 as part of the data gathering for the Interim Report on Governance. A further 3 people were interviewed between January – February 2014. The interviews carried out for the Governance Report focused primarily on governance issues. The interviews with decision-makers conducted as part of the evidence-gathering for this report covered a wider range of questions, which are shown in Appendix 6.

2.17.   Ten dialogue event organisers and/or facilitators external to BBSRC, covering eight events. Interviews were held by phone / teleconference. There were 26 questions in total covering the following topic areas: objectives, context, process, results and impacts, and conclusions. The event organiser interview questions can be found in Appendix 7.

v)   Feedback from people who were trained but did not organize dialogue events

2.18.   Seven people who attended a training session before the pilot event but did not go on to organise dialogue events were invited to say what they would have needed to have organised an event. Four replied. Their responses have been compared and analysed.

Analysis and reporting

2.19.   To analyse the observation data, the evaluation tables (the tables recording information at events – see Appendix 1) were circulated to members of the evaluation project team and the common points and differences were drawn out. In the case of the pilot event, the findings from the four observers were combined into one set of findings and shared with BBSRC.

2.20.   Feedback forms: the key questions that were of interest were analysed using Excel. Selected statistics are used throughout the report. Written comments were analysed to draw out additional themes. All participants' data is anonymous. Quotes are identified as public participant feedback (PPF) or organiser feedback (EF) and have a number representing the different participants.

2.21.   The interviews were recorded and analysed to assess responses to research questions and to draw out additional themes. The interview data is used throughout the report. All participants' identities are anonymous. In this report the interviews are grouped by type and identified by initials: interviews with policy and decision-makers (PM), with event organisers and facilitators (EO) and with members of the public at dialogue events (PP). Throughout this report quotes are identified with either PM, EO or PP and a number e.g. E05, representing individual participants.

2.22. The feedback received from people who had training in running public dialogue events but did not run events took the form of one- or two-sentence explanations. These have been numbered: TR1 – TR4.

3. Background to the Bioenergy Public Dialogue

Overview of the dialogue process

3.1.   Sciencewise defines public dialogue as:

> *A process during which members of the public interact with scientists, stakeholders (for example, research funders, businesses and pressure groups) and policy makers to deliberate on issues relevant to future policy decisions[6].*

3.2.   Some of the essential features of public dialogue are:

- It should open up discussion with members of the public, allowing them to explore aspirations, concerns and issues related to policy, including ethical and societal issues;

- All participants should be able to speak, question and be questioned by others;

- Information from the dialogue should be fed into policy-making alongside other types of evidence: there must be a 'policy hook'.

3.3.   With the Bioenergy Public Dialogue, BBSRC set out to test a model that would capitalise on the knowledge and enthusiasm of researchers and members of the science community in order to develop ongoing and responsive dialogues with members of the public. The Bioenergy Public Dialogue was intended to differ from a more traditional model of a one-off process organised and facilitated by an external contractor in the following main ways:

- The overall planning and management of the dialogue activities would be done in-house by BBSRC rather than being outsourced to independent dialogue delivery contractors;

- The dialogue process would take place over a longer period of time and include a number of phases, with an opportunity for tools (information and activities) to be revised between phases;

- Dialogue activities would be run mainly by researchers and others working in the field (e.g. science communicators) rather than by external facilitators;

- Dialogue activities could be organised at any point during the project and held anywhere in the country. This would make the dialogue more accessible than a more traditional planned set of activities with a limited number of participants.

3.4.   BBSRC's model of distributed dialogue, shown in Figure 2, indicates the outputs from the dialogue events and activities and how these feed into relevant structures, to 'embed' the dialogue and its results within BBSRC.

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[6] Sciencewise Expert Resource Centre (2013), op cit. p.3

Figure 2: A distributed model for public engagement around bioenergy[7]
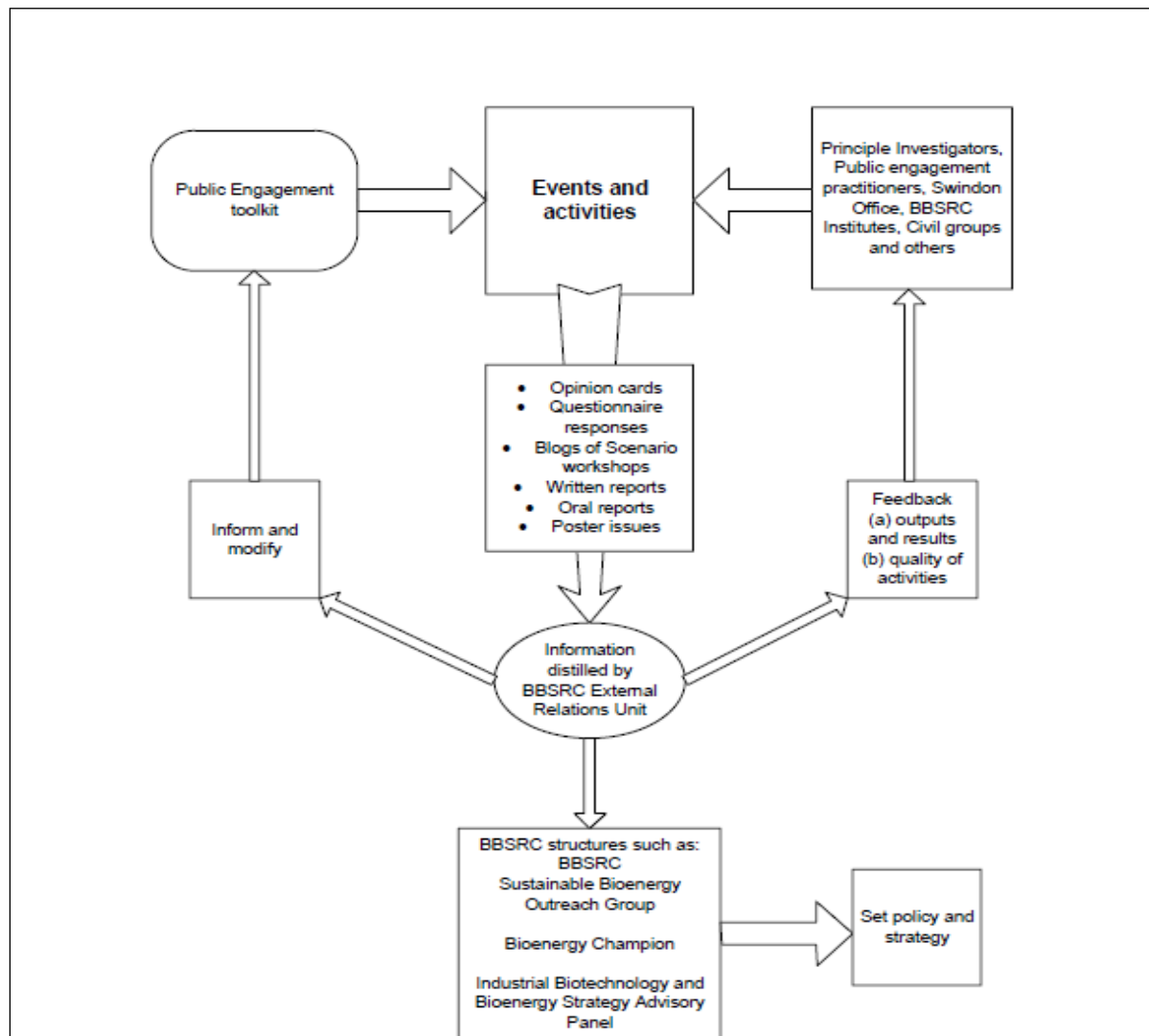
3.5.   There are a number of drivers for BBSRC for using this novel model of dialogue:

Extending impact

3.6.   Extending the breadth of impact. An important driver for distributed dialogue is to increase the influence of the dialogue process and results. By having events in different parts of the country and by involving many different research teams, it was hoped that the dialogue would provide information about the views and concerns of a wide range of people and that, as a result, there would also be greater interest in its results on the part of stakeholders. When asked what they hoped the dialogue would achieve, one decision-maker commented:

> That is one of the purposes of this model of dialogue: to have an activity that will involve many more scientists, interested people and members of public than you would get in a normal dialogue...people taking part in distributed dialogue will have an experience of what dialogue can offer. It will increase the numbers of people seeing the benefit of public dialogue. [PM3]

3.7.   Extending impact over time. BBSRC wanted to maintain a conversation over the long term rather than having a short interaction over a few weeks. The idea was to explore the

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[7] BBSRC (2013) Bioenergy Dialogue Final Report, p 9.

possibility of evolving the materials and discussions so that they build on each other over time, giving richer feedback.

3.8.   Increasing the number of researchers involved. BBSRC thinks dialogue is important and this provided an opportunity to draw in more researchers.

Cost effectiveness

3.9.   Another driver for distributed dialogue is that it could be more cost effective in terms of providing information about the views of a larger number of people, if more events are organised and run by researchers and others acting as facilitators. The researchers are not paid for their involvement, which is seen as part of their research role or an opportunity for professional development. This was clearly a factor that influenced the degree of interest in this new approach, although some specialists pointed out that the distributed dialogue offers different outcomes, which makes direct comparison with other forms of dialogue inappropriate:

> *If you have a big set-piece event, you control who comes and you could say that you have a 'microcosm of the public'. If you are doing distributed dialogue, you have different advantages: the involvement of scientists around country, the possibility that anyone who wants to can be involved. There are different criteria. You aren't comparing like with like. [PM6]*

Impact assessment

3.10. An important driver for others to get involved in this novel model of dialogue is the requirement - coming both from BBSRC and other assessment bodies - for academics and researchers to show the impact of their work. BBSRC has been promoting public engagement in general and public dialogue around specific issues since 1994. The remit of one of BBSRC's advisory panels, Bioscience for Society Strategy Panel – BSS includes guiding BBSRC's communications, public engagement and public dialogue programmes, demonstrating the importance attached to this aspect of research. BBSRC requires funding applicants to prepare a 'Pathways to Impact' statement, which should, among other things, consider broader beneficiaries and the likely impact on them and 'focus on knowledge exchange and impact generation, rather than narrowly focused, end focused or purely for dissemination purposes'. Public dialogue and its results could provide researchers with information relevant to this aspect of their proposals.

3.11. Researchers are under increasing pressure to demonstrate the social relevance of their work. The Research Councils UK (RCUK) are committed to promoting public engagement in science and have funded eight University Catalysts for Public Engagement and a National Co-ordinating Centre for Public Engagement. While public engagement is seen as covering a range of different types of interaction between researchers and members of the public, NCCPE's definition of public engagement (see Box 1) covers many of the key elements of dialogue, including two-way conversations and listening.

3.12. Two of the research institutions that organised dialogue events were University Catalysts (University of Nottingham and University of Exeter). These universities are actively seeking ways of changing how they do research to increase engagement with the public and quickly saw that the Bioenergy Public Dialogue offered an opportunity to explore a different kind of engagement:

> *We're in the middle of changing the way that we do our research so that we are more engaged. This was another opportunity to highlight internally what academics could do to get involved. This is the bigger picture. It was embedding a culture of public engagement within my university. [EO-8]*

> **Box 1**
>
> ***National Co-ordinating Centre for Public Engagement definition of public engagement:***
>
> *Public engagement describes the myriad of ways in which the activity and benefits of higher education and research can be shared with the public. Engagement is by definition a two-way process, involving interaction and listening, with the goal of generating mutual benefit.*
>
> *http://www.publicengagement.ac.uk/what*

3.13. Academics are being required to be aware and demonstrate the relevance of their work to wider societal concerns in different ways. The Higher Education Funding Councils' Research Excellence Framework (REF), bases its assessment of academic institutions, among other things, on evidence of impact, including: "Impacts on, for example, public awareness, attitudes, understanding or behaviour that arose from engaging the public with research."[8]

3.14. The pressure for this kind of evidence is being felt well beyond the catalyst Universities and was mentioned by a number of the other event organisers.

Governance arrangements

3.15. CEP's Interim Evaluation Report 'Evaluation of the Governance of BBSRC's Bioenergy Public Dialogue'[9] (the Governance Report), illustrated how governance of the Bioenergy Public Dialogue has been dispersed across BBSRC, with several different bodies having a role in monitoring, steering and supporting the process. This approach has been taken to embed the dialogue within BBSRC and share responsibility for the process. The dispersal of governance roles and responsibilities across BBSRC is balanced by the strong supporting role of the Project Management Team which has a clear vision for the public dialogue and ownership of the dialogue process. Sciencewise's role has been to make sure that the dialogue met Sciencewise's good practice principles for public dialogue, without limiting innovation and creativity. In this case, given that the distributed dialogue was a significantly different process to those usually covered by the Sciencewise guiding principles, it was accepted that the principles may need to be interpreted more flexibly.

3.16. A significant feature of the Bioenergy Public Dialogue affecting governance is that the dialogue is delivered through an internal project manager supporting people round the country (mainly researchers and university public engagement managers) who come forward to organise events, rather than through external contractors.

3.17. The governance arrangements for the Bioenergy Public Dialogue include the following:

Table 3: Governance bodies for the Bioenergy Public Dialogue

Name	Description	Key function (s)
Project Management Team	Small team (3 people) of 2 permanent staff and one temporary position within BBSRC	• Developing the concept of and designing the approach • Overall ownership of the dialogue process

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[8] HEFCE *et al.* (2011) *Assessment Framework and Guidance on Submissions.* p30

[9] http://www.bbsrc.ac.uk/web/FILES/Reviews/bioenergy-dialogue-interim-report-governance.pdf

Name	Description	Key function (s)
Steering/ Oversight Group	• BBSRC's Sustainable Bioenergy Outreach Group acts as oversight group • Members of the group include academics and representatives of industry, farmers and NGOs. The academics, representatives of industry, farming and NGOs. The majority are academics (See Appendix 2 for full list)The Process Sounding Board (see below) is also seen as part of the oversight of the project.	• Help define parameters and specific questions for the dialogue • Oversee the format and design of materials • Oversee the process and bring in intelligence from their own fields of work.
Internal Advisory Panels	• Bioscience for Society Strategy Panel • Industrial Biotechnology and Bioenergy Strategy Advisory Panel	• Provide advice and input to the public dialogue • Provide advice to BBSRC's Executive on the implications of the findings of the dialogue for policy and research priorities
Process Sounding Board	Meetings held every 4 – 6 months	• Provide advice on theoretical grounding for the dialogue • Advise on the development of the dialogue process.

Activities undertaken as part of the dialogue process

3.18. BBSCRC's Final Report on the Bioenergy Dialogue provides a useful summary of the activities included in the dialogue as shown in Box 2 below:

Box 2

Bioenergy Dialogue project

The project was led by BBSRC's External Relations Unit. A Bioenergy Dialogue Coordinator was employed specifically to coordinate the project. Two groups provided oversight for the dialogue: the BBSRC Sustainable Bioenergy Outreach Group and the Process Sounding Board.

The process

In collaboration with academics, science communicators and the new economics foundation, BBSRC developed a toolkit of resources to be used by BBSRC-funded researchers and other interested groups in the dialogue events. The toolkit included:

- guidelines for running an engagement event
- a set of futures scenarios and associated discussion materials
- a Democs card game.

The main mechanism for the collection of feedback was through feedback forms which aimed to capture:

- Views and opinions of participants
- Demographic information about participants
- Information about the event itself
- Information about the process of the dialogue e.g. how the materials were received Perceptions about what the impacts of the dialogue might be.

The findings

11 public dialogue events were run by researchers and other groups between January and September 2013. 162 participant feedback forms and 35 organiser feedback forms were received.

3.19. The timeline for the dialogue is shown in Figure 3.

Figure 3: Bioenergy Public Dialogue process

September 2012: Project set up

Recruitment of Bioenergy Dialogue Coordinator

October 2012 - January 2013: Development of materials and tools

Finalisation of Bioenergy Dialogue Toolkit & Democs Game

Design of evaluation tools

January 2013: Pilot of design and materials

Training and pilot event at the Dana Centre, London

February - April 2013: Revision of dialogue materials

Analysis of results of pilot event (feedback forms from facilitators and members of the public)

Changes to Bioenergy Dialogue Toolkit presentation and content

April - September 2013: Dialogue events

Continuing promotion of the dialogue materials and support for organisers, including attendance at events

Dialogue events organised by external institutions (8) and BBSRC (2)

October - November 2013: Analysis of results of dialogue events

Analysis of data from members of the public and organisers/facilitators (feedback forms)

November - December 2013: Reporting

Drafting and publication of Bioenergy Dialogue Final Report

Dialogue materials

3.20. Two different sets of material were produced for the dialogue:

- Bioenergy Dialogue Toolkit produced by BBSRC with a science communicator, based on research on future scenarios[10]. The Toolkit contains materials for facilitators to use to get discussions going and to get feedback from participants. The materials include four scenarios which explore what the future might look like if particular decisions are taken regarding the use of bioenergy in the UK, activities for exploring the scenarios using cue cards, scripts and exercises; feedback forms for organisers and participants, and publicity materials;

- Democs game on bioenergy developed by the new economics foundation (nef) and Edinethics. The game uses sets of cards (e.g. about people and situations) to provide information about different aspects of bioenergy and stimulate discussion, Feedback forms for organisers and participants are also provided with the Democs game.

3.21. The Toolkit is intended to be used by researchers or people organising events involving some specialists who can provide information about bioenergy to inform discussion and answer questions that come up during the sessions. The Democs game can be used by people who aren't trained facilitators and who don't have the support of experts at the meetings to clarify information. The Democs game had been completed before the Pilot event in January and was not changed afterwards.

3.22. Dialogue materials are often created as part of the design and delivery process, with stakeholder input and drawing on the content knowledge of scientists and stakeholders and the dialogue / engagement knowledge of a dialogue deliverer. As well as the contribution to the quality of the materials, this stakeholder engagement can also build awareness and buy-in to the process, with implications for the levels of impact of the project. For this project the materials were already virtually complete by the time the project started.

3.23. However, in response to feedback from facilitators, researchers and members of the public at the pilot event, the Toolkit was divided into two sections: (i) guidelines on planning and running a dialogue and (ii) resources for events, including picture cards, scenarios, activities and outline event plans. At the same time, some of the contents were modified, to avoid overplaying the importance of certain types of biofuel which experts felt might be misleading and therefore bias results.

Dialogue events

3.24. Ten dialogue events were held between April – September 2013, plus a pilot event. Table 4 shows the organisers of each event, the number of participants and the tools used.

Table 4: Overview of dialogue events

Location	Organised by	Number of participants	Tools used
Dana Centre, London (Pilot)	BBSRC	30	4 Scenarios Democs

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[10] Dingwall, R., Balmer, B. and Goulden, M. (2011) *BBSRC Sustainable Bioenergy Scenario Tool.*

Nottingham	University of Nottingham	12	Scenarios 2 & 3 Democs
Rothamsted	Rothamsted Research	13	Democs
Cambridge Union Society	University of Cambridge	20	Scenarios 1 & 2
Arts Centre Bar, University of Aberystwyth	University of Aberystwyth	8	Scenarios 1 & 4
Newcastle University of the Third Age	Independent facilitator	5	Democs
University of Exeter, Falmouth Campus	University of Exeter	11	Scenarios 2 & 3
University of Exeter, Exeter campus, University of the Third Age	University of Exeter	18	Scenario 2
Showroom Café Scientifique, Sheffield	University of Sheffield	21	Scenarios 1, 2 & 3
Bath Royal Literary and Scientific Institution	BBSRC	15	Scenarios 1, 2 & 3
STEAM Museum , Swindon	BBSRC	9	Democs
TOTAL		**162**	

3.25. All but one of the events (the dialogue at the STEAM Museum in Swindon) were held in the premises of academic or scientific institutions. The events lasted for between two and two and a half hours. They generally started with a 10 – 15 minute introduction to bioenergy, presented by a researcher from the institution organising the event. The participants then worked in groups of 4 – 8 people, using the scenarios and activities in the Toolkit or working through the steps of the Democs game. There was generally a facilitator or bioenergy specialist in each of the small groups who was able to answer participants' questions and ensure that the activities were carried out as planned. 15 minutes before the end of the session, feedback forms were handed out so that people would have plenty of time to complete them. The facilitator generally explained again why participants were being asked for their input.

3.26. The dialogue events run by BBSRC followed the same format as the other events.

4. Evaluation Findings: Context

4.1.   The following section looks at Context, the first of the Sciencewise guiding principles for public dialogue, and the extent to which the public dialogue followed this principle. This refers to the wider context in which the dialogue process is being undertaken and in the case of events the focus is on the objectives of the dialogue, specifically on the clarity of their expression and their comprehension by all those involved. Context is also about timing (did the dialogue take place early enough to influence policy and link to other developments) and governance. A further key issue of context is how the results of the dialogue process are to be used. Ideally, the findings should be feeding into a clear process of decision-making so that participants know that the time they are spending on the dialogue process will have an influence on a wider process.

4.2.   For the bioenergy public dialogue, key issues of context are the degree to which objectives are clear across a complex process that functions at different levels (centrally-organised events and local dialogues) and is organised and led by different teams and individuals; the challenge of governance; and how the dialogue results are going to be used or the link between dialogue results and decision making.

4.3.   The Sciencewise principles identify a number of aims that public dialogue on science and technology should seek, as far as possible, to achieve. The way that the bioenergy dialogue has addressed these aims is considered below.

Clarity of objectives

4.4.   The stated objectives of the Bioenergy Public Dialogue changed slightly between the commissioning of the evaluation *(P2120029 Specification*, op cit) and the start of the public dialogue, as shown in Table 5 below.

4.5.   The two sets of aims and objectives are fairly similar. Two aspects of the original objectives that do not appear explicitly in the published objectives are:

- The reference to the articulation of '*diverse perspectives'* of '*a range of UK residents'*;

- The description of the model to be tested as one, '*that can adapt to the changing science, and to the evaluation and outputs of the engagement activities during the lifetime of the dialogue*'.

4.6.   The new points mentioned are:

- Communications objectives, including to '*raise awareness within BBSRC'* and '*disseminate our findings to key stakeholders*';

- Clarification that the dialogue would look at '*the science, social implications, and ethics of bioenergy research*'.

4.7.   The 'novel, flexible model of dialogue' referred to in both sets of aims and objectives, is described in section 3.

4.8.   The central objectives of (i) enabling different groups of people to explore issues related to bioenergy and to articulate their perspectives, (ii) ensuring that these perspectives are taken into account in developing strategy and policy on bioenergy and (iii) developing a novel, flexible model public dialogue are generally clear to those involved in the dialogue. These objectives are set out clearly on the dialogue webpage, although they are not included in the Bioenergy Dialogue Toolkit.

Table 5: Evolution of stated aims and objectives of the Bioenergy Public Dialogue

Aims (in ITT)	Aims (published on the dialogue webpage)
• To allow the diverse perspectives of a range of UK residents, in the area of bioenergy, to be articulated clearly and in public in order that future policies can better reflect these views, concerns and aspirations	• To explore with members of the public, their views in regard to bioenergy, and consider those views in our strategy and policy development in bioenergy • To pilot a novel approach to public dialogue, to develop an ongoing, informed discussion between ourselves, our research community, the public and other stakeholders, around bioenergy research
Objectives (in ITT)	**Objectives (published on the dialogue webpage)**
• To develop a novel, flexible model for public dialogue that can adapt to the changing science, and to the evaluation and outputs of the engagement activities during the lifetime of the dialogue • To use that model of dialogue to engage in an ongoing and evolving conversation between BBSRC, its research community and a range of stakeholders, including members of the public, around bioenergy research, its potential, its application and the issues associated with it • To provide a positive experience of dialogue for all those involved so that those people, from members of the public to researchers and decision-makers, are better informed when making decisions about bioenergy	• To facilitate discussions between the BBSRC scientific community involved in bioenergy research and members of the public • To identify public views, concerns and aspirations about the science, social implications, and ethics of bioenergy research • To raise awareness within BBSRC of the needs and views of the public in relation to bioenergy • To inform our strategy and policy setting around bioenergy • To disseminate our findings to key stakeholders, for example, the government • To develop and test a novel, flexible model of dialogue for discussion of complex issues that enables engagement with a large group of people nationwide

4.9. Decision-makers and those involved in the dialogue oversight emphasise the focus of the dialogue on listening to and taking account of the perspectives of members of the public:

> *In BSS we are concerned with trying to make science relevant to members of the public. So quite a lot of our focus is on openness and dialogue. One of the things we want in public dialogue is to make it two-way. [PM-7]*

> *...the purpose is to avoid having a technology that is potentially useful but that is not accepted by the public, it is to try to avoid delivering a technology that is unwanted. [PM-4]*

4.10. The researchers and others who ran dialogue events saw BBSRC's objectives in the bioenergy dialogue as being part of the Research Council's commitment to participative approaches in all areas and to find out people's opinions on bioenergy to contribute to the development of policy in this area.

4.11. The majority of the public participants in the dialogue felt that they understood the purpose of the event, as shown in Figure 4. There were only 5 events where participants disagreed or strongly disagreed with the statement 'I understood the purpose of the event', and in two of these, only one person disagreed or strongly disagreed with the statement. However, in three of the events a significant minority of participants (15%) indicated that they had not understood the purpose of the event.

Figure 4: Public participants' responses to statement: 'I understood the purpose of the event'
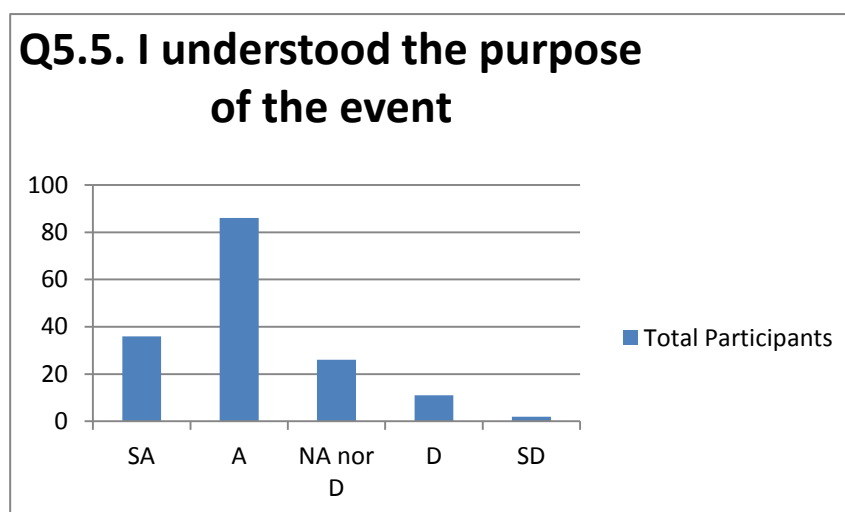
Note: The response options shown on the horizontal axis were: Strongly Agree (SA); Agree (A); Neither Agree nor Disagree (NA nor D); Disagree (D); Strongly Disagree (SD)

Link to public policy

4.12. Sciencewise emphasises that effective dialogue must have a 'policy hook: a clear link to decision- or policy-making[11].

4.13. The risk that a distributed dialogue - taking place at times, at venues and with participants chosen by local organisers - might lose the link with decision-making is partially addressed by the governance arrangements within BBSRC (set out in Table 3 in section 3.17). In particular, BSS's remit includes guiding BBSRC's communications, public engagement and public dialogue programmes. As part of this role, the Panel checks that the results of dialogues have been taken notice of and used[12].

4.14. The policy hook to technical decisions about bioenergy policy or its funding is less clear. The results were published about two months before the interviews. At the time of the interviews, the decision-makers involved did not have any information about how the results of the bioenergy dialogue were being used, partly because BBSRC had taken a decision not to promote the use of the results until the evaluation was complete (see section 7.9).

4.15. One decision-maker felt that it would be possible to explore technical questions through this sort of process but that this had not happened:

> *Looking at the acceptability of different types of bioenergy is something that could usefully be done through this process, but the scenarios would have to be tweaked. [PM9]*

Timing

4.16. As the dispersed dialogue model allows for people to run events over a longer period of time (in this case, over six months) and is intended to be flexible to enable those running events to

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[11] Sciencewise Expert Resource Centre (2013), p 3

[12] BBS' responsibilities are set out on the Strategy Panel's webpage:
http://www.bbsrc.ac.uk/organisation/structures/panels/society/society-index.aspx

respond to different issues that arise over that period, timing was not a significant issue. The results of the dialogue were not intended to inform any specific decision or policy development, but instead to be taken into account more widely. Decision–makers described some of the ways the results might be used:

Academics use information to help set the context. This material might help researchers to shape their research grant applications. If a researcher could find the report, they would benefit by looking at it. Certain things stand out about public concerns. This is more to do with attitudes than the science behind it. [PM7]

Getting people to adopt technology is essential – if people don't feel comfortable with the technologies, they won't accept them. So building that acceptance and listening to what people will and might accept is the key thing. That's why I want to be involved in these areas: I don't want to be working on a technology that is fantastic but that nobody will use, for reasons that we could have found out by listening during the process. I think that is what BBSRC is very keen on as well. [PM9]

4.17. On the other hand, the timing of the dialogue was an extremely important consideration for those running events, because they had to fit events in with their ongoing research activities. As a number of event organisers commented, it would be easier if the dialogue were ongoing, as they would have more time to include dialogue events as part of project activities or within their annual programmes.

4.18. One engagement manager suggested that an ongoing dialogue process would make it possible to include dialogue as an integral part of their research proposals:

I'd be interested in doing more. This was a one-off but if BBSRC or other research councils are going to be doing this kind of thing regularly, I can feed this information into my support for the academic community and I can explain how it works. Academics can then write it into their research proposals so that it is embedded. If we knew that this is going to be a long-term thing, we can embed it. [EO8]

Culture of openness to a range of participants

4.19. In terms of involving a spread of the population, including hard to reach groups, no sampling strategy was adopted. As a result, the profile of participants was not illustrative of the wider population, as shown in the infographic produced for the Final Report (Figure 3). The intention had been to monitor this aspect of the dialogue: PSB members suggested this could be reviewed and remedial action taken if necessary. However, given the time taken before sufficient dialogue events were run, and the changes to the way results were analysed the Sounding Board did not review the sample of participants or suggest how this could be addressed. For the rest of those involved in the management and oversight of the project, the difficulties in getting researchers and others to run events meant that this became the priority.

Figure 5: Profile of Dialogue Participants[13]
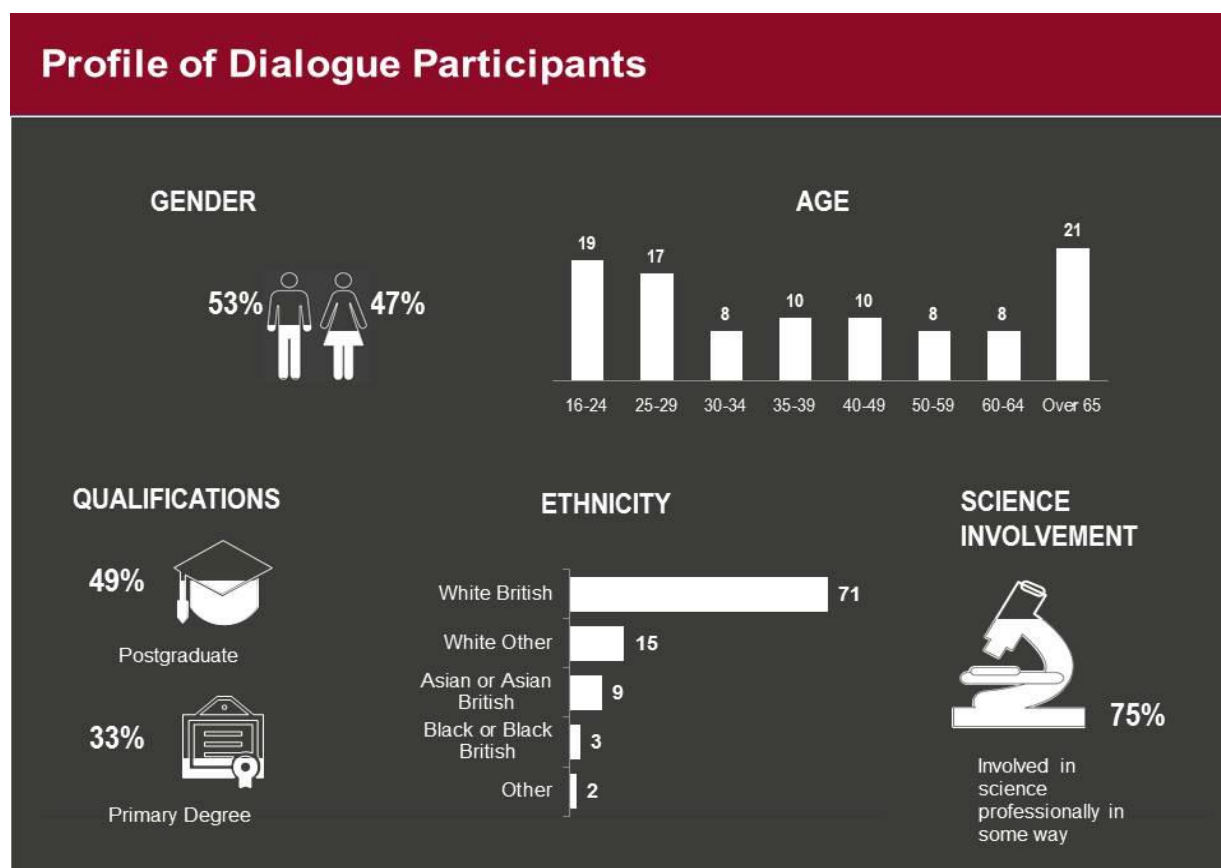
Availability of resources

4.20. The resources allocated for the bioenergy dialogue were used by BBSRC to create a one-year post for a skilled Dialogue Coordinator. Event organisers could also apply for a small amount of funding to support running an event, to provide refreshments for example, if necessary and a few said that they had used this funding.

4.21. The researchers and public engagement managers who ran dialogue events were a valuable resource for the project. Feedback from event organisers as well as from people who had been involved in the training but had not gone on to run events, suggests that there is considerable enthusiasm for engaging with the public about bioenergy.

4.22. While most of the event organisers had previous experience of raising public awareness and engaging the public in discussion through presentations or talks followed by question and answer sessions or through talking with people at science fairs and exhibitions, only one had run this type of dialogue event. The Dialogue Coordinator role was therefore essential to provide support and clarification and to develop dialogue skills.

> *Personally – I like to find out what people are thinking about biofuels. Not sure how much people understand at the outset on biofuels. Like to make people aware – on personal level and as part of the job. [EO3]*

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[13] Entradas, M., Longridge, E., Middleton, P. and Pope, S. (2013) *BBSRC Bioenergy Dialogue: Report on a pilot public dialogue.*

4.23. The Toolkit was an important resource for organising events as it meant that busy researchers who were participating in this alongside their regular academic activities, had most of the materials they needed for the event and this saved time.

> *It was a minimal input on my part, which, to be honest, is why I did it. There was the pack, I had the audience, I had the academic, so job done, that's fine. It was pretty straightforward. Straightforward, but not insignificant. So time-wise, was it value for money? Yes, because it supported what I wanted to do.* [EO8]

4.24. A training session held before the pilot event was seen as a useful resource. Interviewees who attended the training provided said that they benefited by seeing how the events were run and also through gaining practice in the pilot session. This training helped to inspire people to organise events, although organisers also recognised some shortcomings from this event (see sections 6.18 – 6.20).

Governance

Overview

4.25. The governance of the bioenergy dialogue project has been dispersed across BBSRC, with several different bodies having a role in monitoring, steering and supporting the process. This approach has been taken to embed the dialogue within BBSRC and share responsibility for the process. The dispersal of governance roles and responsibilities is balanced by the strong supporting role of the Project Management Team which has a clear vision and ownership of the dialogue process. Sciencewise's role was to support the testing of the new model of flexible dialogue while maintaining the focus on meeting Sciencewise's good practice principles for public dialogue where appropriate - recognising that distributed dialogue was a new approach.

4.26. A significant feature of the Bioenergy Public Dialogue affecting governance was that the dialogue was delivered through an internal project manager supporting people round the country (mainly researchers and public engagement managers) who came forward to organise events, rather than the use of external contractors. BBSRC also ran a number of dialogue events themselves.

4.27. The two bodies that had oversight of the dialogue – the Sustainable Bioenergy Outreach Group (BSBOG) and the PSB – had few meetings during the dialogue period. The PSB only met once (in March 2013, before the start of the dialogue events) although members of the PSB individually were in contact with the Project Team by email and telephone. BSBOG discussed the dialogue at a meeting early in 2013 and at a teleconference in the middle of the year. Individual members of BSBOG engaged actively in looking for ways to increase the number of dialogue activities held, but there is not a clear sense that the oversight groups themselves took ownership of this challenge.

4.28. BBSRC's advisory panels each have a set number of pre-arranged meetings throughout the year and sometimes meetings did not happen at times when the panel could provide useful input: for example, the Industrial Biotechnology and Bioenergy Strategy Advisory Panel meets twice a year: its second meeting in 2013 fell between the end of the dialogue process and the completion of the Report so there was only an update on progress rather than a discussion on the dialogue at that meeting.

Roles and responsibilities

4.29. Some members of those involved in the governance of the dialogue project felt that roles and responsibilities for the dialogue worked well. One decision-maker described these:

There is a clear owner [of project decision-making and management] as required for Sciencewise funding. There is a team of social engagement people supporting the dialogue. The secretariat is good. ' [PM3]

4.30. However, others interviewed were not clear about the ownership of the project. The dispersal of ownership amongst a number of BBSRC bodies meant that while more people were involved in reviewing the development and outputs of the dialogue, they were not necessarily clear about who or which body has the ultimate authority in terms of making sure that the dialogue worked effectively and that its findings were analysed and used.

4.31. The people most closely involved in the dialogue were often well aware of these challenges:

'This approach has the challenge of getting ownership in each of these groups about what the dialogue is and its objectives. We have made a conscious decision to trade a simple governance structure for a more complex one.' [PM5]

Consistency and quality control

4.32. Two of the governance bodies, the PSB and BSS Strategy Advisory Panel were particularly well-placed to consider issues of consistency and quality control, because their membership includes specialists in dialogue and public engagement. Relevant issues discussed by the PSB at its meeting in March 2013 were:

- Ensuring enough events are run to get robust results.

- Including a range of participants across the dialogue events[14].

- Format for reporting back from events.

- Setting the context by explaining why and how the scenarios are being used to explore issues.

4.33. The BSS Strategy Advisory Panel discussed the dialogue at a number of meetings. The BSS Strategy Advisory Panel saw itself as having an important role in checking that the results of the public dialogue were used:

'[BSS] will independently be asking for evidence that the results of the dialogue have been taken notice of and of how it has been used. One of the roles of the Panel is to provide this check.' [PM3]

Governance arrangements and multiple objectives

4.34. While the decision-makers interviewed agreed that the primary aim of the Bioenergy Public Dialogue is to find out about how members of the public see bioenergy, many mentioned other objectives. Some of the additional objectives mentioned were:

- Provide information in order to understand responses to bioenergy and the arguments that influence different groups of people (characterised, for example, by socio-economic status, level of education, age, gender, etc.)

- Use dialogue to test how far different publics would be prepared to go with bioenergy and what considerations influence their views.

- Understand why members of the public think the way they do (whether or not their views are rational or scientifically correct).

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[14] The PSB advised that the issue of representativeness should not be a concern at the start of the process but should be reviewed later.

- Provide good information to educate the public.

4.35. These objectives reflect different perspectives and priorities. The distributed governance model can be a good arrangement for enabling different actors or governance bodies to focus on different objectives. However it is important that these multiple objectives are recognised and accepted, otherwise individuals or groups may feel that their priorities are being ignored and this is likely to lead to tensions and disagreements over methodologies and criteria for taking forward the dialogue. One interviewee commented:

'People in BBSRC and the advisory panels are sensitive about the numbers – we are not talking to a large number of people, but looking at the qualitative aspects, exploring why people think things… This is not a representative sample, we need to make the case for working in this way so that policy makers in BBSRC can see the value in that.' [PM5]

4.36. There are good reasons for keeping the governance arrangements for a distributed dialogue as clear and simple as possible:

- To avoid the risk of confusion over who does what at which point in the process, the duplication of efforts or lack of effectiveness.

- To increase transparency over the implementation of the public dialogue and the way its results are used.

- To increase accountability by making it easier to keep track of what has happened and where decisions have been made.

4.37. The BBSRC project team has not publicised the findings of the dialogue widely yet (see section 7.9). Going forward, it will be important to encourage discussion about the approach taken and the extent to which other objectives can also be achieved through the same process.

Role of event organisers and facilitators in design, delivery and impact

4.38. Whereas in a traditional model of dialogue the contractors running the dialogue events would be closely involved in planning and monitoring the process, in this dialogue organisers and facilitators have only been involved in their individual events. The distributed dialogue model relies on these actors playing a significant role. If this were reflected in their participation in some aspect of the governance of the dialogue, this could be a way of bringing insights from implementation to the bodies responsible for monitoring and advising on the process.

4.39. During the project a number of governance bodies recognised that actually getting people to organise and run dialogue activities was a key threat to the success of the Public Dialogue (e.g. BSBOG, PSB). The Project Team drafted a strategy paper to address these concerns. However, the focus tended to be on how to improve publicity (getting more people to consider running events) rather than on what might motivate or discourage people to get involved.

4.40. Re-thinking this role, to give event organisers a higher profile in the public dialogue, could strengthen the process overall by ensuring that the experience of people on the ground informs decisions on its development and could create opportunities for personal development. While event organisers were not asked specifically about being involved in wider aspects of the dialogue process, all expressed an interest in running dialogue events in the future and at least one said they would like to share best practice [EO1].

4.41. While some input from the Project Team would be needed to set up procedures for event organisers and facilitators become more involved in the governance of the dialogue (for example by making it possible for people to share contact details, information and learning, providing regular updates on developments in the process and inviting comments or feedback on proposals for change), they could be encouraged to work as a self-managing network, to reduce administrative burdens on the Project Team.

Box 3
Summary of findings on context

What worked well:
- The majority of those involved (decision makers, event organisers and members of the public) felt clear about the objectives of the events they attended.
- The ongoing nature of the distributed dialogue meant that researchers and event organisers could make events fit with their own programmes. This should become still more effective if the dialogue becomes established and better known.
- The right kinds of resources were provided for people organising dialogue events: support from the Dialogue Coordinator, the Toolkit and some funding for refreshments.

What worked less well:
- Because dialogue events were distributed over time, it was harder to see how the findings of the events would be taken into account in decision-making, although most of the people interviewed felt that the links could be made.
- The dialogue reached a limited audience, mainly made up of people who were professionally involved in the science or already had an interest; there was little involvement of hard-to-reach groups.
- The governance structures did not meet regularly enough to provide timely oversight and advice.

5. Evaluation Findings: Scope

5.1. This section looks at scope, the second of the Sciencewise principles for public dialogue. Scope refers to the extent to which the dialogue covers the aspirations and concerns of all those involved, including members of the public, scientists and policy-makers; whether the scope of the dialogue is clear and allows consideration of a range of alternatives; whether all participants are clear about what they can and cannot influence; and whether different perspectives are represented

5.2. For the bioenergy dialogue, one of the most important but challenging aspects of context is how to focus on meaningful questions that facilitate discussions around alternatives, within a dispersed dialogue process which is flexible, that is to say, able to adapt to changes without losing its integrity.

Addressing the aspirations and concerns of all participants

5.3. The majority of the members of the public who participated in the dialogue events agreed or strongly agreed with the statement: *I was able to discuss the issues that concern me,* as shown in Figure 6.

Figure 6: Public participants' responses to statement: 'I was able to discuss the issues that concern me'
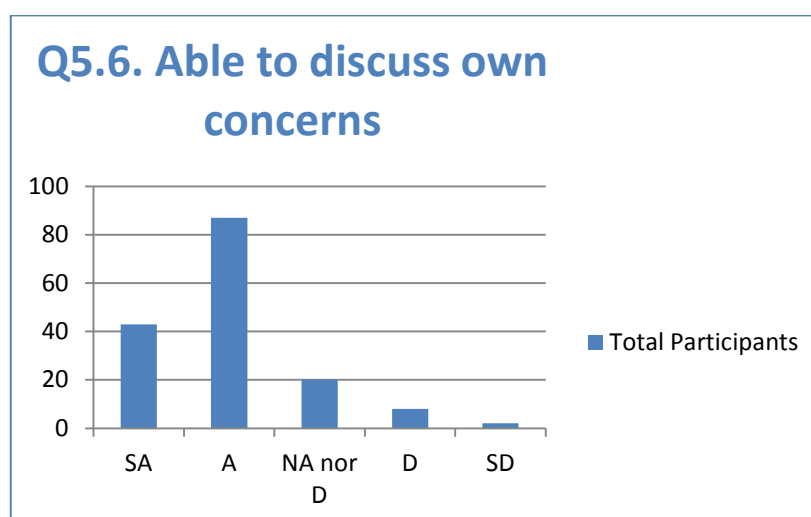
Note: The response options shown on the horizontal axis were: Strongly Agree (SA); Agree (A); Neither Agree nor Disagree (NA nor D); Disagree (D); Strongly Disagree (SD)

5.4. 81.25% of the 160 people who answered this question felt that they had been able to discuss their own concerns, while only 6% said that they hadn't been able to discuss their concerns. Over half of these were from one event during which participants expressed strong criticisms of the methodology, suggesting improvements that should be made in the future including:

> *More time to discuss the main topic. Greater clarity in the discussion question. [PPE-4]*

> *More focus on more restricted topics. [PPE-13]*

5.5. Even participants in this session who said they had been able to discuss their concerns were critical of the approach used, suggesting that the difficulties people encountered in discussing their concerns were mainly related to this one event:

> *Abandon the scenario. No time to properly take it in + much of it dealt with issues other than bioenergy. [PPE-3]*

5.6. Further detail was provided by the short face-to-face interviews conducted at the dialogue events. In response to the question, 'Were all the issues you were interested in discussed in the session?' One interviewee said that the cue cards were helpful but that the scenario was not:

> *The picture cards were good because they focussed discussion and they were more interesting. The scenario didn't help the discussion because it wasn't focused on the topic. [PPB]*

5.7. Several event organisers echoed the view of some participants that the scenarios did not help to focus the discussion on the topic:

> *The dialogue scenarios were too long and not really centred around biofuel – they went off on a tangent. [EO3]*

Clarity about the focus of the dialogue while facilitating discussion of alternatives

5.8. Three quarters of participants (76%) said that they 'understood the purpose of the event' (see Figure 4, section 4.11). When asked to respond to the statement, 'There was enough relevant information for discussion', the majority of public participants (66.25% of those answering this question) agreed or strongly agreed (see Figure 7). The following are some of the comments on the focus of the discussion:

> *We could discuss our opinions, concerns with others and talk about the good and bad points about biofuels. [PPN-7]*

> *Gets you thinking about lots of important issues. [PPR-5]*

Figure 7. Public participants' responses to statement: 'I had enough relevant information for discussion'
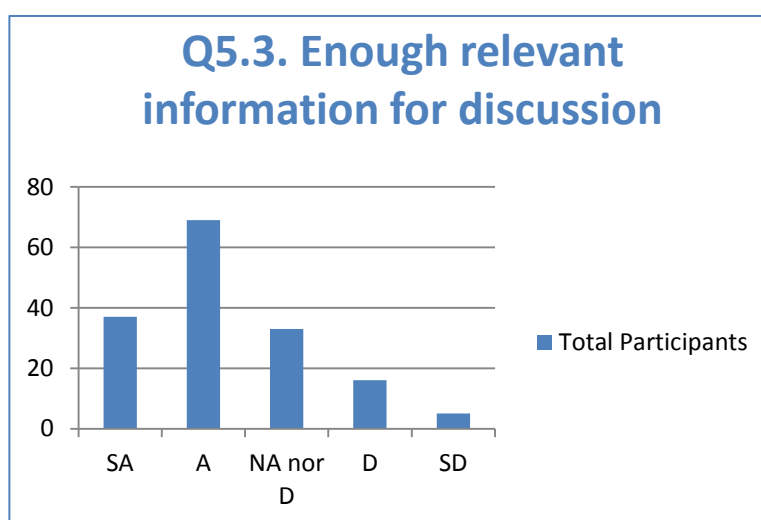
Note: The response options shown on the horizontal axis were: Strongly Agree (SA); Agree (A); Neither Agree nor Disagree (NA nor D); Disagree (D); Strongly Disagree (SD)

5.9. However, some participants disagreed or were not convinced that they had been given relevant information: 20.65% said they didn't know if they had been given relevant information while 13% disagreed with the statement. Those disagreeing were distributed across 7 of the 11 events. Comments by participants who said they had not received relevant information included:

> *Set the context more clearly - to understand what is involved. [PPR-4]*

> *More scenarios / shorter in order participants to come in contact with more aspects/dilemmas and trigger rounded discussions. [PPC-17]*

5.10. For a number of decision-makers, the fact that the scenarios used focused on extreme hypothetical situations rather than real current issues meant that the dialogue discussions were less relevant:

> *I think it would be more beneficial to get people thinking about, more familiar with, the way that the research is going. So slightly more anchored in something that we know might be realistic. [PM9]*

5.11. One participant interviewed during an event said that they would have liked more scientific or technical information on bioenergy, and went on to express a concern that participants had been asked to give their views on bioenergy without having had sufficient information:

> *The event didn't give us the information to be able to form a view about bioenergy, so it wasn't possible for the organisers to find out our views – we don't have views yet. [PPB]*

5.12. Having researchers participating in the small group discussions helped to supplement the information needs of some participants, but even this was not always felt to be sufficient:

> *There could have been more information provided on bioenergy. I felt there was a lack of explanation. Some explanations were provided by the expert in the group, e.g. about GM crops and the possibilities for growing algae in ponds, but it wasn't enough to get a clear idea of the topic. [P-BB3]*

It is impossible to say how well the materials would have met the needs of participants with lower achieved levels of formal education and less engagement with science issues. However, it seems safe to assume that activities that the participants found difficult or confusing would also be difficult for a broader range of participants.

Clarity about the way participants can influence outcomes and how findings will be used

5.13. Many participants expressed their doubts whether BBSRC would take their views into account in decision making. When asked, 'Do you think the results of this event will be used by BBSRC in making decisions about future research and policy in bioenergy?' only one-third of participants said yes, while over half said that they didn't know.

5.14. Participants sometimes found it difficult to understand how their input could influence policy decisions because the work of BBSRC was not familiar to them:

> *I don't really know the impact BBSRC has on research + policy. [PPC-10]*

> *BBSRC is new to me. I would like to see more about the bioenergy dialogue process + to see the output published. [PPC-11]*

5.15. When asked whether they thought that the results of the event should be used by BBSRC, in making decisions about future research and policy, the proportion saying yes increased to over half of participants:

> *Research should try to address people's needs and concerns, so it is vital to listen to what people have to say. [PPEF-4]*

> *It is key that public opinion is taken into account when deciding areas of research that will have a huge impact on societies. If knowledge is kept among researchers, companies and the Government, individuals are powerless on these decisions. [PPC-9]*

5.16. However, there was a difference of opinion between those who felt that public views should always be taken into account and others who argued that people needed to develop a good understanding of the topic before expecting that their opinions would be taken into account:

> *(Should use the results of public dialogue) But I don't know that our responses had much depth as they were constrained by format. [PPA-1]*

> *I think we needed more information about the issues in order to be able to give more evidence-based opinions. But yes, I do think BBSRC should use public opinions to help direct research/funding decisions. [PPS-20]*

5.17. Some decision-makers felt that if the results had looked at specific aspects of bioenergy, this could have been more useful for decision making (see section 4.15 above). One interviewee reflected on this difference between the higher level issues which were the main focus of the dialogue events and the kinds of questions that researchers are asking, for example about how to prioritise different types of bioenergy:

> *I think when we looked at the meeting, there was a dichotomy between the participants and what they were saying about the higher things like poverty and inequality and this sort of thing, and those who were running it who were really looking for what might be the key research questions for the BBSRC. People were saying that there was a bit of a mismatch between those things. [PM7]*

Involving a range and diversity of perspectives

5.18. Involving a range of perspectives in the dialogue is an important principle both in terms of the robustness of the results of the dialogue and from the point of view of social justice.

5.19. From the start of the project, a number of decision-makers were worried about whether it would be possible to involve a range of participants, if the participants were self-selecting. This situation doesn't normally arise for public dialogue projects in which a professional or organisation is contracted to organise the process and events and takes responsibility for recruiting an agreed sample of members of the public. On analysis of the feedback forms, it became clear that the self-selecting sample did not reflect many of the diverse perspectives found in society:

> *Social scientists tend to use the term 'illustrative' for a sample, so you know you're not representing the whole population, but you can make it illustrative of the population. I would have started by going to some of the people I am criticising now to find out what the key issues are. Like a scoping exercise. I might only go to three or four people in key agencies or stakeholders, but that would help me shape what I was going to talk about in the next stage. Then the next step would be to find a better sample. Open meetings will attract a certain type of person, it will be a biased sample. Unfortunately it does have quite an influence on the results. [PM7]*

5.20. Some decision-makers felt that the low numbers and narrow range of perspectives of participants meant that the results were not robust and therefore unusable. But others argued that the dialogue did provide useful results, but that these must be understood as relating to a particular type of educated and engaged public:

> *At the last BSS meeting they were saying that they [the dialogue events] hadn't been as successful as they {presumably BSS] had hoped but there were good elements and that the whole idea of the approach was good. Everybody said there was some good material in the report. Our panel didn't think it was a waste of time. [PM7]*

Box 4
Summary of findings on scope

What worked well:
- The majority of the members of the public who participated in the dialogue felt that they had been able to discuss the issues that concerned them at the events.
- Although participants had different opinions about the relevance of the dialogue materials, the majority felt that the materials were relevant to the topic and helped to stimulate discussions.
- Participants generally felt that the dialogue was valuable and it was important that BBSRC should take account of public concerns and interests.

What worked less well:
- Some participants and event organisers expressed a concern that the lack of time and depth of discussion in the dialogue events meant that members of the public were not in a position to provide the kind of feedback that BBSRC was looking for.
- Given the limited range of participants, the results do not provide information about the views and attitudes of a cross-section of the UK public; they do reflect the attitudes and opinions of a certain sector of the population that is generally more engaged with science issues and with the topic of bioenergy.

6. Evaluation Findings: Delivery

6.1.   The following section looks at Delivery, the third of the Sciencewise guiding principles for public dialogue, and the extent to which the public dialogue followed those principles.

6.2.   Specifically, delivery refers to all aspects of the events: organisation, facilitation and presentation of information. It also refers to the absence of bias, no-one dominating the discussion and the range of expert views presented. For an event to be deliberative the facilitators will ensure that everyone gets a chance to speak, that there is sufficient time for the topics to be discussed fully and that the amount of information given is proportionate to time for discussion. These issues were focussed on when considering delivery together with how public views were recorded and how participants engaged with the dialogue process (i.e. were they asking questions, looking interested etc).

6.3.   The evaluation team only directly observed three of the eleven dialogue events, all of which were BBSRC-led. Much of the information in this section is based on interviews with the people who organised and ran the events and reflects their interpretation of what happened. This has been compared against the feedback forms completed by members of the public for the events being described, in order to provide a different viewpoint. This process has given a more three-dimensional picture of the events.

Outcomes in terms of numbers of events and participants

6.4.   While there was no defined target for the number of events that would be held or the number of public participants to be involved, one of the features that was expected to be an advantage of the distributed dialogue model was that it would involve more people. In the Sciencehorizons dialogue held in 2007, for example, 18 different organisations ran 36 events usually lasting about two hours, involving about 842 people.[15] There was clearly disappointment on the part of BBSRC staff and members of oversight groups with the results: a total of 11 events involving 162 participants.[16]

> *One of the problems was so little data and therefore the value of the information is questionable. What does it say and what can you do with the information? As a study, does it add value? [PM8]*

6.5.   When it became clear that the number of events being organised was lower than expected, efforts were made to encourage researchers to come forward. The Dialogue Coordinator became directly involved in supporting events and attending several, in order to talk through the aims and objectives of the wider dialogue as well as the dialogue activity. On at least one occasion, the Dialogue Coordinator also helped as a facilitator. A second strategy to increase the number of dialogue events was for BBSRC to organise some events directly. In the end the Public Engagement team ran two events (in Bath and Swindon), as well as the pilot event in London.

6.6.   Some of those involved in the oversight of the dialogue project suggested that the low number of people coming forward to organise events was associated with a lack of confidence in the materials. This argument has two main points: on the one hand, it is suggested that people who might have organised events were put off by the materials (which are available on the dialogue website). However, there is no clear evidence for this. The second point is that the time taken to correct the materials after the pilot delayed the start of the promotion of the dialogue:

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[15] Shared Practice (2008) *Evaluation Findings: Evaluation of Sciencehorizons.*

[16] Based on the number of feedback forms received.

> *The project was behind schedule because there wasn't confidence in the materials. So, not started off well. Greater engagement with those with the knowledge at an earlier stage would have been helpful. [PM8]*

6.7. However, it may be that the project planning had been over-optimistic about the time required for processes like this to get going: for researchers to find out about the dialogue, to see how it fits in with their own priorities and to plan for it. Feedback from some researchers who participated in the dialogue training in January 2013 but did not subsequently organise any dialogue events gives some support for this suggestion:

> *In all honesty, I have been so madly busy the last 18 months that what needed to happen for me to do this would have been to have additional time in which to contemplate doing this. [TR1]*

> *I am doing one in Feb this year, our annual programme is planned in advance and although we allow for time to do unplanned events we just couldn't fit it in! [TR4]*

6.8. A member of the Process Sounding Board with many years' experience of designing and running participant events raised this issue of the need to recognise the challenge of motivating people to volunteer to organise dialogue and engagement events, pointing out that:

> *A distributed dialogue involves answering one question that does not arise with large set-piece events: why should anyone bother to organise an event? [Personal communication]*

Project coordination and development

6.9. One of the consequences of the Dialogue Coordinator spending more time on promoting the dialogue and supporting and encouraging researchers to run events was that there was less time to analyse the results being generated. It had originally been anticipated that the Coordinator would do the analysis of the feedback forms and write the final Dialogue Report. However, in June the project team decided in that they would have to outsource the data analysis to an external contractor.

6.10. Subsequently the project team had to make further changes when the Coordinator left BBSRC to take up a new job. The tasks of pulling together the final report and drafting the discussion section were taken on by other team members.

Final dialogue report

6.11. The draft dialogue report was circulated for comment to the Process Sounding Board and the BBSRC Sustainable Bioenergy Outreach Group before publishing. The report was published in December 2013. It was distributed within BBSRC, to organisers and participants and people who attended the training. A short news item was put on the BBSRC website to draw attention to the results.

6.12. The Project Team has also used other opportunities to talk to different forums about the public dialogue, to make people working on bioenergy aware of the dialogue and get them to think about how the results might be relevant to their own work. One member of the Team spoke at the BBSRC Sustainable Bioenergy Centre's Grant holders meeting and had the opportunity to speak informally with a large number of participants.

Dialogue design and planning

6.13. The dialogue was designed and planned at the national level, where the materials were developed, activities designed and the dialogue as a whole was promoted to both decision-makers and to potential event organisers. The dialogue events themselves were generally

delivered at the local level, by universities, research centres and one by a member of Sciencewise's Citizen Panel who works with the University of the Third Age. Three dialogue events were delivered directly by BBSRC (i.e. the national team rather than local organisers). These were the pilot event in London, a dialogue event in Bath and one in Swindon.

6.14. Two past experiences of distributed dialogue (the GM Dialogue in 2003-04 and Sciencehorizons in 2007) sparked a great deal of interest. Over a thousand people attended six regional launch meetings of GM Nation in 2003 and it was estimated that a 675 local meetings were organised across the UK[17.] The Sciencehorizons dialogue saw 18 different organisations run 36 events usually lasting about two hours, which involved about 842 people[18].

6.15. The Bioenergy Public Dialogue was publicised by the Project Team and Dialogue Coordinator, through the project's governance structures, BBSRC's website, an initial training and pilot event and presentations at conferences and meetings. Take up was much slower than expected and the Dialogue project Coordinator had to spend much more time on promoting the project and providing support for people running events than had been planned. The Coordinator participated in four of the eight externally-run events.

6.16. Event organisers reported that their main support from sources other than from BBSRC came from colleagues (researchers, PhD students and academics) who helped as facilitators and provided the scientific input. All interviewees apart from one said that they had received such support. The one interviewee who had no additional support ran an event for a U3A group of six people.

Competence of organisers, specialists and decision-makers involved in dialogue activities

6.17. Of the event organisers interviewed, only one reported having experience of running a similar type of event previously, although all had been involved in science engagement activities. Organising and facilitating dialogue events was more time consuming than most people had expected.

Training for organisers and facilitators

6.18. If the results of the public dialogue are to be credible, the events need to be similar and the results collected in a consistent way across the different locations where activities are held. There is a need for more rigorous training to ensure consistency. While many interviewees appreciated the facilitation advice and support provided by the Dialogue Coordinator, others noted that their teams did not ask for advice or support. While this is a positive attitude which no doubt helps the team to get things done, there is a risk that they may not ask for support when things are going wrong and therefore not address emerging problems. One event organiser who had not attended the training said they had made assumptions about how the materials would work and then had difficulties in using the materials at the event.

6.19. Four of the event organisers interviewed had attended a half-day training session held in London before the pilot event and felt they were able to apply what they had learnt. The training provided a good introduction to dialogue but was not long enough to do more than touch on basic concepts. Those who participated in the training were then asked to facilitate group discussions in the pilot event, so they also got hands on experience. However, further training and feedback from experienced facilitators were needed to enable facilitators to manage challenging groups, as several of the event organisers found. This is illustrated by

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[17] Defra (2004) *The GM Public Debate: Lessons Learned From the Process*

[18] Shared Practice (2008) *Evaluation Findings: Evaluation of Sciencehorizons.*

comments like, '*it was difficult to keep the discussion on track*' [EO2], '*One particular person was against bioenergy and quickly picked up on a topic and articulated his view and so for some time the discussion was dominated by his view*' [EO7], and '*If you have pressure groups, they talk through sound bites and give information which sounds factual but can be flawed. You need to be aware but can't necessarily guard against this.*' [EO5]

6.20. Two organisers who had not attended the training simply read through the instructions that came with the materials in order to organise their events. Several reported difficulties in managing dominant personalities or people who objected to the activities.

6.21. Following the pilot event CEP recommended that mechanisms should be made available to support facilitators and experts in developing their skills. It was felt that the training had only covered basic aspects of running a dialogue event; if no further training was to be offered, alternatives such as mentoring could be explored. It was also felt that further advice and guidance would be needed on the role and contribution of experts.

6.22. The dialogue coordinator provided support with planning events and helped with facilitation on some occasions. This was appreciated by those event organisers who benefitted.

6.23. There is clearly a risk in relying on researchers with little training in or familiarity with engagement and facilitation to lead a dialogue process. A researcher whose experience of public engagement is limited to one-way science communication events (exhibitions, talks, etc.) or hands on activities with models or exhibits, is not likely to have a clear understanding of what dialogue is, or what really good facilitation looks like or how to do it. The skill of the facilitator will of course be an important factor in the outcome of dialogue or engagement activities: a skilled facilitator will know how to manage a 'difficult' group and get them to interact effectively.

6.24. It seems vital that a distributed dialogue should be supported by continuous training and review opportunities for those leading and facilitating the events. It would also be important to have a mechanism for monitoring sessions to identify priority areas for training and support.

Involving specialists in dialogue events

6.25. In general, researchers on bioenergy at the participating universities and research centres were keen to get involved in the dialogue events. This was apparent through observations made by engagement managers who organised events and also as some events were led by researchers and academics themselves who were interested in hearing the views of the public.

6.26. Dialogue between specialists and participants worked well. The participation of researchers was seen as a very positive aspect of the dialogue sessions. In almost all the events, an expert introduced the topic and one or more researchers participated in table discussions which meant that they could clarify information on the cards or in the scenarios as it came up. Some were also good at prompting questions so that more issues were brought out.

6.27. The presence of specialists at the events was considered important in order to answer questions on, for example, first generation biofuels. This was particularly important where participants were curious about the research or surprised by the information supplied.

6.28. In general the specialists and researchers who participated in the sessions were felt to have made an important contribution as they were able to talk about bioenergy from their own experience of the research. Participants commented that '*gaining information from current researchers' [PPN-7], 'talking with experts' [PPC-12], 'Having experts on hand to avoid our worst prejudices' [PPB-10]* and '*The talk by the researcher on his research into developing biofuels' [PPE-2]* were positive aspects of the sessions.

6.29. Having researchers participating in the small group discussions helped to supplement the information needs of some participants, but this was not always felt to be sufficient:

> *There could have been more information provided on bioenergy. I felt there was a lack of explanation. Some explanations were provided by the expert in the group, e.g. about GM crops and the possibilities for growing algae in ponds, but it wasn't enough to get a clear idea of the topic. [P-BB3]*

6.30. One significant problem for distributed dialogue is the ability to enable effective discussion of complex subjects in simple terms. This is part of the skill-set of an experienced facilitator, but may not be something that comes easily to a researcher. The ability to make science accessible will be even more important when the dialogues involve people who are less familiar with scientific topics and concepts.

Clarity of objectives

6.31. Half of the event organisers said that they were not sure, or were not clear about, how the information supplied to BBSRC would be used. Similarly, of the public participants interviewed, about half said that they did not know how the results would be used, even though an explanation had been given at the beginning of the session. This may reflect the lack of understanding that most people have about how research institutions and funders develop their programmes.

6.32. One event organiser noted that if they had been clearer about the objectives and how the information was to be used then it would have been easier to ensure that appropriate information was being gathered for BBSRC. This highlights the need for closer working relations and ongoing coordination between the institution promoting the dialogue and people running events on the ground.

Materials and techniques: appropriateness and reflecting a diversity of perspectives

6.33. As described above, two different sets of materials were used: the Bioenergy Dialogue Toolkit and the Democs game. All materials for the events were supplied by BBSRC which was an important factor in enabling events to happen. Organisers, particularly researchers, would not have had the time to produce the materials themselves.

6.34. All dialogues started with a short introduction to bioenergy. BBSRC didn't provide the introduction in order to give organisers an opportunity to talk about their own research or use other techniques such as videos. BBSRC did provide organisers with suggestions of videos and guidance on what to include in their introduction, for example in terms of explaining the purpose of the dialogue for example. Several interviewees commented that they would have welcomed a pre-prepared presentation.

Bioenergy Dialogue Toolkit

6.35. The Bioenergy Dialogue Toolkit structured dialogue sessions around future scenarios and associated activities (cue cards, character cards, a voting exercise and videos)

6.36. Overall, the materials were considered to be effective, entertaining and fun. Several event organisers mentioned different elements of the Future Scenarios Toolkit that were useful for promoting discussion, especially with quiet participant groups. Comments included:

> *The whole design was good and effective. [EO6]*

> *I thought the tools were useful for getting people into the zone. [EO5]*

> *It worked pretty well.... I came away feeling quite positively surprised. [EO9]*

> *It was stimulating. [EO10]*

6.37.   The main problems identified by several interviewees were: time constraints; the length of the scenarios and cue cards; and the lack of realism and focus on bioenergy in the scenarios.

6.38.   The lack of focus on the science and technology within the scenarios did not enable participants to explore different types of bioenergy and their characteristics. Some participants felt that they didn't have the scientific knowledge (which was missing from the scenarios) to fully engage in a meaningful discussion of the issues. One event organiser noted that participants felt constrained in their discussion by being forced to talk about social science issues which they probably would have talked about anyway if left and steered by an experienced facilitator. Concerns were also expressed about the scenarios being unrealistic and one interviewee felt that this had the effect of dumbing down the science. Specific comments were:

> *They were appropriate... scenarios were well thought out and distinctive enough and potentially believable. [EO5]*

> *If we did this again we would want to anchor these scenarios more in what we actually think might realistically happen. [EO9]*

> *There wasn't enough context on bioenergy in the materials.[EO8]*

6.39.   *The scenarios didn't really cover the things we were working on and didn't engage the public in BBSRC research. [EO4]* Both organisers and participants generally felt that the cue cards were useful, although two event organisers who ran events together said that they shortened the cue cards to two to three sentences. Another organiser said that:

> *What worked really well were the cards with images on them which helped people to verbalise their thoughts. [EO9]*

6.40.   One interviewee said that it would have been good to be involved in the initial stages of developing the resources to provide input and feedback. For example, the cards needed to be simplified for clear understanding by participants; and the scenarios could have been made more positive as, while they gave a lasting impression, they were depressing.

Democs Game

6.41.   Three dialogues used the Democs Game which was generally considered to be: '*Nicely planned in stages and each stage followed on from the last*.' *[EO10]* The game covered a lot of information and was considered to be enjoyable, informative and bring up issues not previously thought of by participants.

6.42.   The game ends with an exercise aimed at quantifying results (Making Choices in a real world). One of the organisers commented that this was an interesting element but that it had caused problems in the group because of different interpretations of the texts and uncertainty about the definition of six goals of biofuels, one of which is 'justice for the poor' The participants who didn't agree that this could be defined as a goal refused to score it, thereby invalidating the results.

6.43.   A participant from another Democs session commented that this could be improved by giving a '*clearer purpose to the game' [PPR-12].*

Deliberation

6.44.   Dialogue events ranged considerably in length. While both the Bioenergy Dialogue Toolkit and the Democs Game instructions said that organisers could decide on the length of the sessions,

in practice all of the events held lasted for between two to two and a half hours. Some evidence already exists about the difference in results obtained from short dialogues, in relation to longer whole day events or events lasting more than one day. The evaluation of the Science Horizons dialogue found that:

Strand 1 [the longer strand of the dialogue] did provide much richer data on 'why' participants raised the issues they did, influenced participants' thinking, with significant impacts on learning, clarifying people's views and making a difference to what they thought: 20% said (without prompting) that they felt more positive about science and technology as a result of being involved. Other strands helped spread awareness of the issues, because many participants were engaged enough in the discussions to send in responses, but the quality of the engagement and of the data emerging did not have the depth and richness of Strand 1[19].

6.45. Participants were asked whether there was enough time for discussion. Figure 8 shows that a significant proportion of participants would have liked more time. This is reflected in a number of comments such as:

Would like to see debate with speakers + plenty of time for discussion/debate. [PPEF-1]

Not so rushed. [PPR-10]

More time. [PPC-12]

Figure 8: Time for discussion

Q5.7. Was there enough time for discussion?
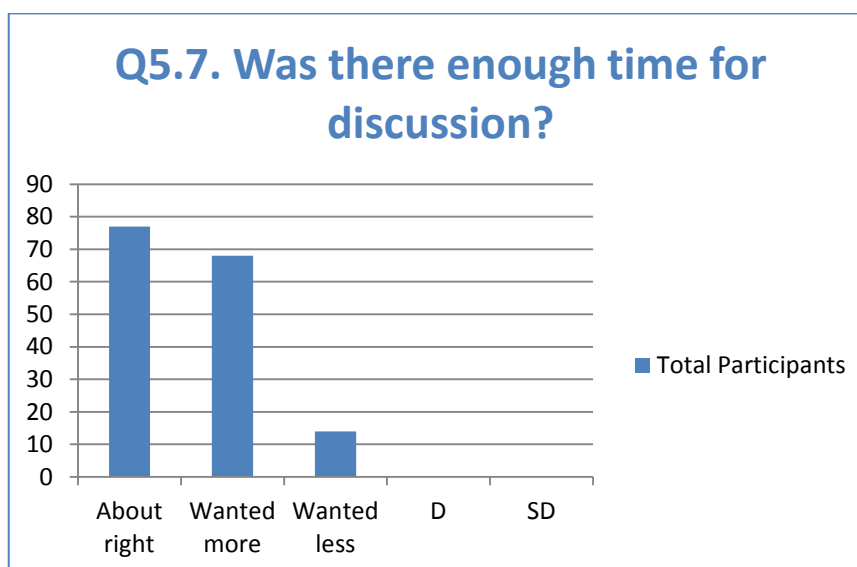
Note: The response options shown on the horizontal axis include: Disagree (D); Strongly Disagree (SD)

6.46. The sessions did not comply with the Sciencewise good practice principles for dialogue, in the sense that they did not allow enough time for effective deliberation. Effective deliberation should enable participants to:

- become informed about the topic;
- be able to reflect on their own and others' views;
- explore issues in depth.

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[19] Shared Practice (2008) *Evaluation Findings: Evaluation of Sciencehorizons*, p2

6.47. In terms of becoming informed about the topic, two-thirds of public participants said that there had been enough information for discussion (see section 5.8).

6.48. In terms of being able to reflect on their own and others views and explore issues in depth, while many participants noted the range of views in the room and the value of being able to share views, there were frequent comments on the lack of time.

6.49. When asked to say what were the best things about the event, comments included:

> *I learnt about issues that I had previously no idea of and concepts. Actually having time to consider the use of bioenergy and surrounding issues. [PPR]*

> *The engagement from people from different backgrounds on the debate [PPC]*

> *Interaction with others! [PPR]*

6.50. When asked about what could be improved, time for debate and discussion came up often:

> *[I] would like to see debate with speakers + plenty of time for discussion/debate. [PPEF]*

> *Opportunity needed for more free discussion. [PPA]*

> *More scenarios / shorter in order participants to come in contact with more aspects/dilemmas and trigger rounded discussions. [PPC]*

6.51. Both organisers and participants' comments and the observation of dialogue events indicated that the events were fast moving and stimulating, but very much driven by the need to complete tasks within a limited time. Several organisers commented that the outcome of the dialogue was the raising of awareness rather than the development of understandings. Several researchers suggested that better results would have been obtained from a more rounded discussion:

> *Results were mainly awareness – gained knowledge that can take forward in the future. [EO2]*

> *For me – the fact that even though this was a dialogue event – for people who have a strong view on bioenergy – during this dialogue discussion won't be able to change their view a little bit and they will still have a strong view because not enough time for comprehensive discussion on different aspects of bioenergy so not a balanced discussion on all aspects. If it had been then the results would be better. [EO7]*

6.52. There were no opportunities for participants to reflect on what they had learnt and discussed and come back with further questions or issues to explore.

Accessibility

6.53. Good dialogue practice should ensure that no relevant participants are excluded from taking part, and that special measures are taken to access hard to reach groups where appropriate, including considerations of appropriate venues, timing and technical equipment in line with the Equality Act 2010.

6.54. The limitations on access to the dialogue have been raised earlier in paragraph 4.19 and paragraphs 5.18 – 5.20.

6.55. The pilot event was held at the Dana Centre, which is attached to the Science Museum in London. One of the interviewees had become aware of the influence of venue on the audience attracted to events during this pilot training event. The interviewee commented that the choice of venue resulted in a biased sample of people; as it was held at the Science Museum, the members of the public who attended were in the majority people who are interested in science. Participants sitting at the interviewee's table said that they hadn't

appreciated that the event would be run as an interactive session; it is possible that the way in which the event was advertised might also have influenced the type of participant choosing to attend. The project Team recognised that there was a risk that the audience would be biased towards people with an interest in science, but they felt that the priority for the pilot was to ensure that there were enough participants.

6.56. Many of the externally-organised events were held on University / Institute premises. Three events were held at conferences: one at a conference for teachers where the dialogue was held as a workshop (two sessions were run); one at a science education conference where the Democs materials were used in a practical demonstration; and the other following an open event on climate change. Two further events were held at local centres open for public events.

6.57. Three of the events had significantly lower attendance than expected by the organisers. This may be down to a range of factors including the use of university venues which may not be accessible or may be off-putting to non-academics or the lack of publicity or inadequate publicity. Several event organisers said they had learnt a lot about running events of this kind and felt that they would be able to build on this learning if they were running future events.

6.58. All participant groups were highly educated and with an interest in science: as shown in Figure 5 (Chapter 4), 49% held a postgraduate degree, compared to 8% in the UK working population[20]. The event organisers interviewed said that the setting and location for the dialogue event influenced the type of participants attending. For example, where events were held at a conference for teachers / education the audience consisted inevitably of teachers.

6.59. The fact that many participants were from similar academic backgrounds and age groups (either young - 16 – 30 years - or older - over 65 years) makes it difficult to feel confident that a good cross section of views were explored.

Provision of information and views from a range of perspectives

6.60. Figure 9 shows that only 15 members of the public participating in the dialogue events disagreed or strongly disagreed with the statement 'The information I was given at the event was fair and balanced'. 112 participants agreed or strongly agreed with the statement. Additional comments provided by some participants give added support to the suggestion that the information was fair:

> *A wide range of unbiased viewpoints [PPR-12]*

6.61. Comments from those who disagreed that the content had been fair and balanced included:

> (Things that could be improved)*: more points of view and reasoning for opposition to biofuels. [PPN-3]*
>
> *Less propaganda by researchers [PPA-4]*
>
> *Some more information of the positive aspects of biofuels [PPN-12]*
>
> *Less left wing bias in the scenarios [PPEF-11]*

6.62. It is difficult to draw conclusions from these comments as they refer to events run by different facilitators and using different scenarios.

6.63. In general most participants seem to have felt comfortable in the events and that their views were listened to. Some specific comments on this aspect included:

> *Congenial participants – open, free, respectful environment [PPB-2]*

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[20] BBSRC (2013) *Bioenergy Dialogue Final Report*, p 20

Figure 9. Responses to statement: 'The information I was given at the event was fair and balanced'.
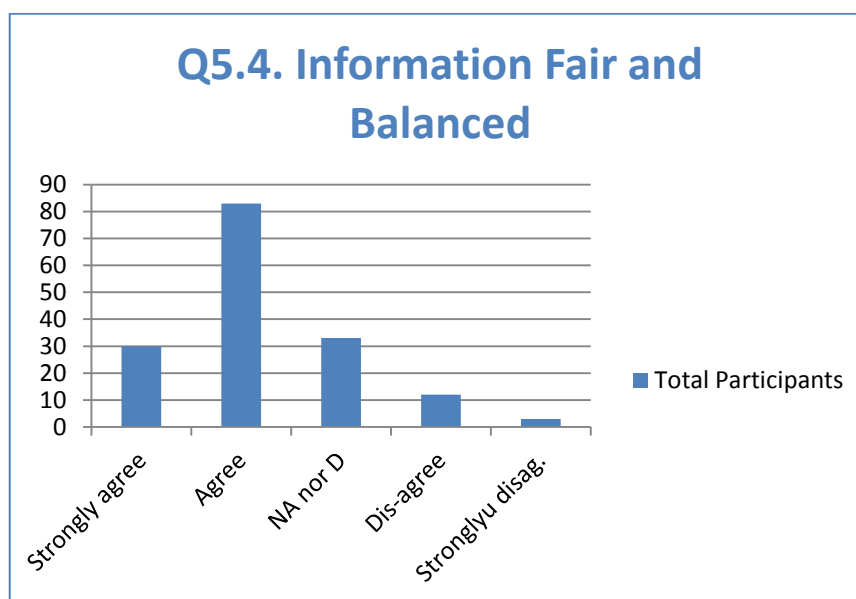
Q5.4. Information Fair and Balanced

Note: The response options shown on the horizontal axis were: Strongly Agree (SA); Agree (A); Neither Agree nor Disagree (NA nor D); Disagree (D); Strongly Disagree (SD)

Involving participants in reporting

6.64. The main information collected from the dialogue events was from the feedback forms completed by participants and facilitators after each event (see Appendix 3). There were no flip charts or notes made by the facilitators and they had not been asked to as part of the process. In general the feedback forms were returned to BBSRC immediately after each event. One event organiser mentioned that they collated information from the feedback forms for their own use (from the three events they ran) before sending the forms to BBSRC. Another noticed that the comments on the feedback forms matched what was said in the room.

6.65. One event organiser commented that they had been unclear about how information should be reported back to participants. Another had seen the final report and fed back information to participants. In this case, the organiser felt it was important to 'close the loop' because participants had been sceptical about the results being used. BBSRC also contacted those participants for whom they held details, to let them know that the report had been published.

6.66. Ipsos MORI did the analysis of the data from the events which consisted of the feedback forms. In the final dialogue report they commented on the lack of other information collected at the events. Further, some of the feedback forms had been filled in differently and some participants' writing was illegible. It was suggested in the final project report that in future other methods for collecting information could be used. The final report also commented that there was limited information on the events and what was written was not always easily understandable. What emerges from this is two-fold:

- That there should have been consideration of how the events would be reported so that they could input into the final report in a meaningful way. Information on the feedback forms was superficial and without any documentation on the conversations (notes, flip charts, or audio recording) it is hard to be able to report effectively on the process of the different events. Events could have been recorded in different ways but there should have been some advice from BBSRC to the event organisers on the need to do this. All other dialogue processes employ a range of methods to record the events (flip charts, note

takers, audio recordings) and usually more than one method is used. Feedback forms are there to gather the views of the participants and are not going to give detail on how the dialogue ran.

- It might have been useful for BBSRC to have sought more advice on what sort of recording would be suitable at the time that the model was being developed.

Box 6

Summary of findings on delivery

What worked well:
- Getting researchers to independently organise and run eight events within a period of about six months is a considerable achievement. If the bioenergy dialogue were to continue, it is likely that more researchers and engagement experts would hear about it and want to run events.
- Bioenergy researchers were keen to get involved in the events and their specialist input was appreciated by participants.
- Most members of the public who participated in the dialogue felt that the materials they were given were fair and unbiased.

What worked less well:
- Many of those participating in dialogue events were not trained in engagement or dialogue. Several reported having difficulty in managing sessions (for example, managing people who dominated within the discussion group and recording conversations). This meant that the events did not deliver the expected results in terms of views of members of the public on bioenergy.
- One two-hour session is too little time for members of the public to explore a topic like bioenergy in sufficient depth to be able to give a considered opinion on it. Although over half of those who participated said that the time allowed was about right, many also said that the event felt rushed and that it was not possible to have a long conversation.
- Participants mainly came from similar backgrounds and were not illustrative of the wider population. Findings from the dialogue should be seen in this context and used with care.

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7. Evaluation Findings: Impacts

7.1.   This section looks at the extent to which the dialogue achieved the outcomes desired, considering the interests of the BBSRC itself, the organisers of the individual events and the participants.

7.2.   Impact in this case refers to the use of dialogue results to inform policy and decision-making and generally to increase understanding of the opinions and concerns of different groups and sectors of society towards bioenergy, its uses and implications and ensuring that participants can see how their input to the dialogue has been taken into account in policy and decision-making.

7.3.   It also looks at changes in the willingness of policy and decision-makers to become involved in and use public dialogue; and finally, at impacts on increased collaboration, networking and cooperation over public engagement in science and technology.

7.4.   For BBSRC, the distributed dialogue model aimed to develop an ongoing, embedded discussion between BBSRC, its research community, the public and other stakeholders, around bioenergy research, that would engage a larger number of researchers and members of the public than previous dialogues and that might be more cost effective than previous dialogues. The information captured from the dialogue activities was expected to be used to inform research policy within BBSRC.[21]. One Advisory Panel interviewee described the ambitious expectations of the dialogue:

> *I would hope it would have an influence, for example on the framing of calls for research, prioritisation of budgets (i.e. taking some directions rather than others) and more subtly, in creating a wider understanding of the value of dialogue among researchers, giving them an opportunity to put their work in a wider context and to hear what non-expert members of the public think. This is an intangible result - it's less easy to attribute to the dialogue - but it's an important one. [PM3]*

Informing decision-making

7.5.   The results of the bioenergy public dialogue were analysed by Ipsos MORI for BBSRC. The Project Team then drafted a report (Bioenergy Dialogue Final Report) which was circulated for comment to members of the PSB and the Sustainable Bioenergy Outreach Group. The report was published on the BBSRC website in December 2013. The report was also sent to the two advisory panels that have had a governance role in the dialogue: IBBE and BSS. It was discussed at the BSS meeting in January 2014. The report was also sent to the people who organised dialogue events and to members of the public who had participated in the events, where BBSRC had the contact details. At least one event organiser also sent the report to participants.

7.6.   The report made clear that the findings describe the views and opinions of the people who participated in the dialogue events and cannot be extrapolated to wider publics. The particular characteristics of the participants were their high educational qualifications, the proportion who were professionally involved in science and the age profile which was weighted towards people under 30 and over 65.

7.7.   The results focus on responses to four key questions in the Participant Feedback Forms that were completed at the end of each event:

- Thinking about bioenergy my main concern is...

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[21] BBSRC (2013) Bioenergy Dialogue Final Report, p7

- I think that bioenergy could be useful because...

- I would like researchers to think carefully about ...

- There are significant issues that were NOT discussed in this event but which should have been. These are ...

7.8. Box 7 shows the summary of the findings from the report:

> **Box 7**
>
> *Summary of dialogue findings*
>
> *Hopes for bioenergy*
> Overall, many saw bioenergy as a key part of - but not the entire solution to - our energy needs in the future. Responses were positive about the range of potential uses of bioenergy, and saw a key place for bioenergy as part of a suite of renewable energy sources that will help us reduce our use of fossil fuels and thus reduce carbon emissions. Some noted its potential for use to power our transport needs, while others pointed to its use in recycling waste. The potential for bioenergy to allow for decentralised generation was also seen as a positive aspect of this source.
>
> *Concerns about bioenergy*
> However, there were concerns about whether the gains from bioenergy use will be spread fairly among all those involved in and affected by its production. The potential range of negative impacts was a worry for many, in particular the consequences for land use, food production, biodiversity and the environment more generally. Participants thought that there is potential for those who are already poorest to suffer the most from any such impacts.
>
> Another strand of concern related to how bioenergy fits into the wider debate around cutting carbon emissions and diversification of the energy mix. Some worried that it could be used as "greenwash", others thought it was distracting from the need for reducing the demand for energy. More practical concerns related to the ability of those taking decisions around energy to plan wisely in the long-term to ensure impacts are acceptable and to cooperate internationally to allow for efficient and speedy progress in the use of bioenergy.
>
> *What researchers should be thinking about*
> The participants who took part were keen to ensure that researchers are thinking about the 'bigger picture' issues of benefit and fairness, impact and sustainability, and not lose sight of the wider goal of reducing carbon emissions through both demand and supply side mechanisms.
>
> They also suggested that researchers should be transparent in their work on bioenergy, and where possible make efforts to inform the public about their work, as well as providing high-quality evidence to politicians to enable good decision making in this area.

Responses to the findings on the part of BBSRC decision-makers

7.9. It is not possible to fully assess the impact of the bioenergy dialogue on BBSRC decision making as yet. BBSRC reported that a deliberate decision was taken to limit publicity and to

delay discussion of the results until the evaluation was available, given that the dialogue was a pilot[22].

7.10. Only one of the four committees, boards and Strategy Panels involved in the governance structures for the BBSRC bioenergy dialogue had discussed the Bioenergy Dialogue Final Report when the research for the evaluation report was being completed.

- Bioscience for Society Strategy Panel (BSS) met at the end of January 2014. As well as the Bioenergy Public Dialogue Report, they also considered a report exploring the relationship between public engagement (including dialogue) and corporate stakeholder engagement at BBSRC (using bioenergy as a case study), prepared By Rob Smith of Nottingham University and a report of the stakeholder workshops that were held during 2013.

- Industrial Biotechnology and Bioenergy Strategy Advisory Panel will meet in November 2014.

- BBSRC Sustainable Bioenergy Outreach Group is being disbanded partly because BBSRC is tending to focus more on industrial biotechnology as a whole rather than single out bioenergy. The Group will meet once more to look at the Bioenergy Public Dialogue Report and Evaluation.

- Process Sounding Board members were sent the draft Final Report for comment in December 2013. Two of the three members sent comments on the report.

7.11. The dialogue report is recognised by many interviewees as a useful contribution to understanding how dialogue can provide insights into public views about science. One Advisory Panel member commented:

> *The report is a good read. I am trying to balance my critical edge with saying that there are some really good things in it. BBSRC are talking a lot about being open – that means listening to people as well as talking to people. That's a really good thing. [PM7]*

7.12. The results give some insights into the sorts of issues that people who are not working directly on bioenergy are interested to find out about. Clearly, the fact that a large proportion of the people participating were involved professionally in science, means that their responses are likely to be more similar to the responses of bioenergy researchers than the responses of a random sample of members of the public would be. Nevertheless, their responses were often quite surprising to decision-makers:

> *It's good that some of these higher level issues have come out. I think when you are developing research, you don't think about them. Scientists might be surprised that people are concerned that the benefits won't be fairly distributed. This might be quite a political thing to say. This might make policy-makers think about this a bit more. [PM7]*

> *... useful in terms of process and thinking. The awareness will help even if don't use the results. [PM8]*

> *The main learning was that there is interest but there is also confusion. Information and knowledge exchange is very valuable in this area. It resulted in both learning from the public and learning about public views and attitudes…. We also took from this the importance of being open to discussions about the use of different types of biofuels and the importance of looking at socio-economic and political frameworks. [PM9]*

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[22] Personal communication.

7.13. Some decision-makers have expressed a concern that the dialogue involved too few people to provide robust results. 162 participants is not in itself a low number but might be considered low if the expectation was that the dialogue would explore the views of a wide range of people in the UK population. It is important to clarify the differences between quantitative data about opinions and priorities that might be obtained from a survey of a large number of people and the understandings of the attitudes and concerns of groups of people that can be provided by dialogue. The use of the phrase, 'engagement with a large group of people nationwide' in the revised objectives (see Table 5, Chapter 4) may have been misleading.

7.14. The focus should be on how the less-targeted approach followed affects the way the dialogue results are interpreted, understood or used, in order to draw out learning about targeting, sampling and representation (and therefore credibility of the dialogue project).

- The dialogue project did not define a sample of members of the public (e.g. the proportion of participants from different age groups, educational and employment backgrounds, etc.) to be included.

- The project did not identify or target priority groups or people within the population to involve in the activities, for example groups that might have a specific interest in bioenergy, such as farmers or rural labourers, or parts of the population whose voices may not usually be heard on topics like this, such as young people.

7.15. This approach affects the way that the results should be interpreted and used. For example, the results do not provide information about what different publics or groups think about bioenergy and their priorities and concerns, because the public participants in the different dialogue events shared similar characteristics.

7.16. The short time allowed for each session and the limited recording of the discussions that took place[23] made it difficult to get an understanding of the attitudes and rationales that informed the answers in the Participant Feedback Forms (see section 6.66).

Use of findings outside BBSRC

7.17. During interviews conducted at two different points in the project, people involved in the governance of the bioenergy dialogue project through BBSRC committees and Strategy Panels have expressed doubts about the level of involvement of Government bodies including DECC:

> *I would like to see what BBSRC makes of the results, and I would like to see a response from Government, particularly from DECC. At this stage I don't know how interested DECC is. The dialogue in part came out of DECC research into pathways to energy futures. This was part of the original stimulus but I don't know where DECC sits on this now. But one would hope someone in DECC would be interested. [PM3]*

7.18. It is unclear whether anyone in Government has been sent the Bioenergy Dialogue Final Report. The BBSRC project team has been cautious about publicising the results until the evaluation is published[24].

7.19. The report is starting to have an impact on interested groups. FACE, a charity that educates children and young people about food and farming in a sustainable countryside, contacted the project team about the possibility of BBSRC contributing to a bioenergy resource for

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[23]No written or audio recordings were made of the discussions in plenary or small group discussions during the events organised externally. Audio recordings were made of the last two events organised by BBSRC, but the recordings were not of good enough quality to be analysed by Ipsos MORI.

[24] Personal communication from BBSRC Project Manager.

secondary schools. The organisation's Chief Executive commented that the Bioenergy Dialogue report had been circulated widely in the farming community[25].

Impacts for the event organisers

7.20. The event organisers interviewed gave different reasons for volunteering to organise dialogue events:

> *'As scientists... it is vital that we listen and note concerns that may need to be addressed.' [EO5]*

> *'Interested to see that when people were making choices, how different it can be for different people as they weighted issues differently.' [EO7]*

> *'Getting people to adopt technology is essential... building that acceptance and listening to what people will and might accept is the key thing.' [EO9]*

7.21. In addition to the reasons above, raising awareness was mentioned as an important impact particularly given the need to address misconceptions resulting from media coverage of issues related to bioenergy:

> *'It was important that people engaged, that their perception might have changed, that they had extra knowledge and that they are interested in the future.'[EO2]*

> *'A lot of people presumed that it was a case of making fuel from food rather than waste as they had been reading things in the media about fuel from food. So they were happy that this was happening and that it was sustainable.'[EO3]*

7.22. Many of those involved welcomed the opportunity to experience and run a different type of event. One interviewee noted that it demonstrated a broader range of approaches to working with members of the public: *'It provided an example of the things that we can do with engagement.' [EO8]*

7.23. Three of the event organisers work with teachers and, outside of the scope of the dialogue, were involved in demonstrating the materials and activities at two teachers' conferences (one in Derbyshire and one in Wales).

7.24. All but one of the interviewees felt that they had learnt something from organising and running events. They described different kinds of learning: improved knowledge and experience of managing discussion groups with different audiences and using a variety of engagement methods; awareness of the difficulties of managing extremes of participant behaviour, e.g. the very quiet and the very talkative; assertiveness; keeping discussion focussed on the topic; and the importance of looking at socio-economic and political frameworks.

7.25. Organisational benefits arising from the events included: strengthening links between internal departments; training for staff; introducing the idea of what public dialogue means to researchers; engaging members of the public in participative ways.

7.26. All the event organisers interviewed said that they would run events again. Several interviewees were already planning further bioenergy public dialogue events. One said that they were developing resources for a similar activity on sustainability.

7.27. One interviewee suggested that they would be interested in doing more events especially if BBSRC or other Research Councils began to run dialogues on a regular basis. In universities and research centres which have public engagement managers, these managers could

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[25] Personal communication from BBSRC Project Manager

publicise information about opportunities to participate in dialogues as part of their work with the academic community. Researchers could then write involvement with the dialogue into their research proposals.

What has changed for teams that organised dialogue events as a result of the project?

7.28. The experience of running the dialogue event was reported to have had an impact on some teams' understanding of the role of dialogue in their work. Organising the event contributed to a gradual shift in attitudes:

> *At the moment [we are] running another public dialogue activity – gradually bringing in this idea of what public dialogue means and how engage in participative ways – so making a gradual impact. Scientists can be sceptical, so the event helped. [EO1]*

7.29. All of those involved in running events said that they would do it again but many commented that they would do things a bit differently, for example:

> *Definitely would do an event again. I would like a fuller conversation with people – not where I'm arguing and justifying my case. I would like to consider people's fears and hope and distil out views that are not geared to any particular group. [EO5]*

7.30. Researchers and public engagement managers involved in running local events did not talk much about how the results of these events would inform their own work. One researcher who did mention this felt that the event had been too small (8 participants) to be relevant:

> *We would like to run events like this in the future. Didn't think the results of this event were really helpful to us because not large enough audience and not balanced. But keen to run events in future and improve on this and gain useful information. But would change the way we run it. [EO7]*

Impacts for members of the public

7.31. The majority of public participants enjoyed the events and found them interesting, as shown in Figures 10 and 11.

Figure 10. Public Participant responses to Feedback Form question on their enjoyment of the event
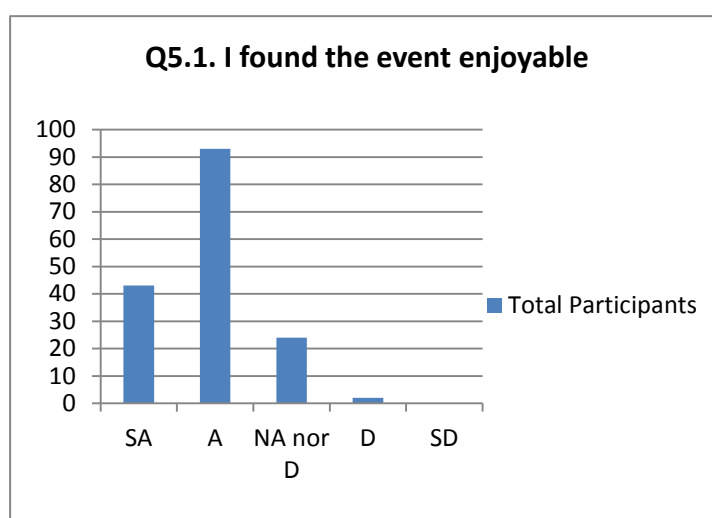
Note: The response options shown on the horizontal axis were: Strongly Agree (SA); Agree (A); Neither Agree nor Disagree (NA nor D); Disagree (D); Strongly Disagree (SD)

Figure 11: Public Participant responses to Feedback Form question on how interesting they found the event
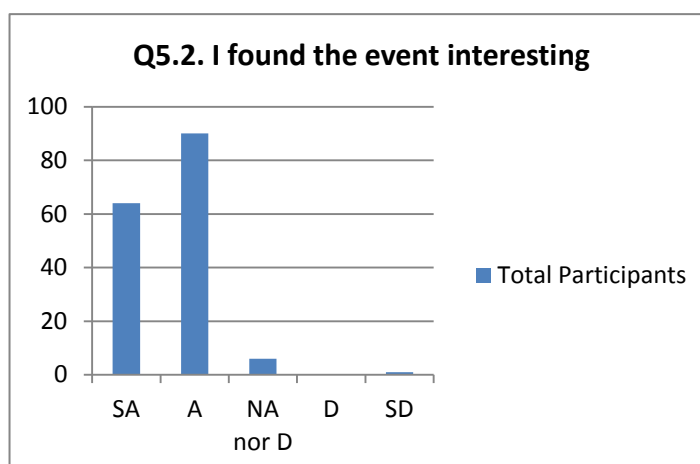
Note: The response options shown on the horizontal axis were: Strongly Agree (SA); Agree (A); Neither Agree nor Disagree (NA nor D); Disagree (D); Strongly Disagree (SD)

7.32. Over 84% of public participants said they had learnt a few new things (63.6%) or a lot of new things (21%) at the event they attended. Only 2.5% of participants said that they hadn't learnt anything new.

7.33. Information about the publication of the results of the dialogue in the Bioenergy Dialogue Final Report has been sent to all the public participants whose contact details are held by BBSRC. One event organiser mentioned that they had sent the report to all participants in their event but it is not clear that this has happened in all cases.

7.34. In their feedback on the event attended, many public participants said that they had learnt new things from their participant in the activity:

> *Expanded grey areas to help my understanding on overall issues (not any one topic in particular). [PPS-1]*

> *I did learn something – I learnt about the environmental aspects of bioenergy in the UK. The opinions of the participants came out in the discussions. [PPM5]*

7.35. However a small number of people felt that they hadn't learnt much or hadn't learnt as much as they were hoping, because the discussion didn't focus on bioenergy as such:

> *I don't feel I learnt much because there wasn't much information on bioenergy, not much focus on the topic. [PPM6]*

7.36. Overall, more public participants were uncertain about whether their views would be used by BBSRC than felt certain that they either would or would not be used. However, there were considerable differences between events, with participants at some events expressing much higher confidence that the results would be used. Many of those who commented on this point felt that this was an important result of the activity:

> *It is key that public opinion is taken into account when deciding areas of research that will have a huge impact on societies. If knowledge is kept among researchers, companies and the Government, individuals are powerless on these decisions. [PPC-9]*

> *Public opinion is key to any development. [PPS-1]*

7.37. At all the events, most participants said that they thought that the results would be used by BBSRC. Those who felt the results would not be used mainly gave one of two types of reason:

that the results of the discussions were not focused or robust enough to be useful or that decision-makers (Government or BBSRC) would have already made up their minds:

> *I don't know if there is sufficient precision in our comments to be really useful. [PPE-9]*

> *I'm not sure the results of this event should be used as I feel we failed to examine in any depth the biggest issues surrounding this topic and thus cannot begin to make any suggestions or draw any conclusions. [PPS-21]*

> *Government has already made up its mind. [PPC-16]*

7.38. There were also a small number of participants who said it was not appropriate that BBSRC should take account of the opinions of participants in the dialogue events. In some cases this seemed to reflect a belief that researchers and specialists were best placed to decide:

> *Many of the comments were made from a position of limited / no information. I would hope BBSRC should have experts making the ultimate decisions on research direction. [PPS-2]*

Box 8

Summary of findings on impacts

What worked well?

- The report makes a useful contribution to understanding how dialogue can provide insights into public views about science.

- One of BBSRC's Advisory Panels (BSS) has reviewed the Bioenergy Dialogue Report and members felt that it provided a lot of good material. There is potential for wider use of the results of the dialogue when the report is discussed by two other advisory groups.

- One organisation working to provide information on sustainability in farming has been in touch with BBSRC as a result of reading the report. There is potential for further interest from stakeholder groups when the report is disseminated more widely.

- People who ran events mentioned many positive impacts for their teams, including better understanding of the role and value of dialogue and increased skills; event organisers were unanimous in saying that they would be willing to participate in this kind of activity in the future.

- Most participants said that they had learnt new things. Over half felt that the results of the dialogue session they attended were valuable and should be taken into account by BBSRC.

What worked less well:

- A number of factors in the way that the distributed dialogue was run mean that the results must be interpreted and used with care. These are: the characteristics of participants, the majority of whom had educational qualifications well above those of the UK population as a whole, were directly or indirectly involved in science activities and were concentrated in two principal age groups (under 30 and over 65 years old); the short sessions which prevented full exploration of issues and concerns; and the lack of recording or reporting of the discussions during the event, which made it hard to interpret some of the participants' feedback.

- There is little evidence that the results of the dialogue events are being used to inform bioenergy research in the institutions where they were held.

- A significant minority of public participants did not feel that they had been able to fully explore the topic of bioenergy and suggested that the results of the activity should not be taken into account in decision-making.

8. Dialogue Costs, Benefits and Value for Money

8.1. The bioenergy public dialogue project had a total budget of £137k, £48k of which was funded by Sciencewise. In practice, there was significant underspend on the project. The cost is also lower than the cost of many more traditional dialogues, for example a previous BBSRC dialogue on synthetic biology, which involved roughly the same number of participants (160), cost almost three times this as much (£334,000). In 2012-13 BBSRC had a working budget of £500m[26], which gives a perspective on the amount spent on the bioenergy public dialogue.

Costs and benefits

8.2. The distribution of costs for this dialogue differed from those for dialogues carried out by an independent contractor in a number of ways:

- A Dialogue Coordinator was financed by the project and worked as part of BBSRC's Public Engagement Team. This had benefits for the project as a whole in terms of networking within BBSRC and with external stakeholders. The Dialogue Coordinator attended some meetings of Strategy Panels and other governance bodies to report on progress and also organised a stand at the BBSRC Sustainable Bioenergy Centre (BSBEC) grant holders' workshop.

- Providing training for people to run dialogue events was an additional cost for this kind of dialogue but has to be set against the cost of using professional facilitators. It is important to recognise that professional facilitators generally have more skills and are therefore likely to get more out of this kind of exercise. One example is the recording and reporting of events: an experienced team would normally use some recording technique (e.g. flipcharts, worksheets, audio recording) and would have checked the quality of the recording and reporting early on. This would have given greater insights into the reasoning that led groups to their conclusions and provided added value.

- Venue hire can be a significant cost for some dialogue events. Many of the universities and research centres that ran events used their own venues, which saved money for the project, although in some cases BBSRC did cover the costs of refreshments and venue hire.

8.3. Additionally, the bioenergy dialogue had an unexpected cost of the co-ordinator attending a number of events to provide support for planning and facilitation. This not only had direct costs for the project but also costs in terms of other activities which could not be done. Much of the cost of running the dialogues was borne by the event organisers and their universities or research centres. None of those interviewed felt that the costs in terms of staff time in organising and running events had been significant or suggested that this would put them off running an event in the future. Holding dialogue events in different institutions gave a larger number of researchers an experience of dialogue and exposed them to the views of some members of the public towards bioenergy. The researchers interviewed all said that the experience had been positive and that they would be willing to participate in similar activities in the future.

8.4. However, it is difficult to compare aspects such as the involvement of researchers versus dialogue experts. As one decision-maker put it:

> *With distributed dialogue you have different advantages: the involvement of people around the country, the possibility that anyone who wants to can be involved. There are different criteria. You aren't comparing like with like. [PM6]*

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[26] BBSRC Annual Report and Accounts 2012-2013, p28

Cost-effectiveness and value for money

8.5.   All eight of the event organisers who were asked whether they felt that the dialogue activities they ran had been cost effective said that they were:

It's cost effective if you have in-house resources to use. Venues were free. It was useful for PhD students etc to extend their experience and engage with the public. [EO2]

So time-wise, was it value for money? Yes, because it supported what I wanted to do. I am well aware of the time it takes to do these things, so I wasn't surprised by what was involved. [EO8]

8.6.   Some of the event organisers interviewed recognised that for BBSRC the cost-effectiveness of the events would also depend on what could be done with the data obtained:

(Do you consider the activity was cost-effective?) *BBSRC probably spent a lot of money – depends on what the data is to be used for. BBSRC often have a desire for information but not a clear plan for what they are going to do with the data – need clearly defined questions which people who are organising the events need to know in order to fulfil their objectives.[EO5]*

8.7.   For decision-makers, the question of about cost-effectiveness generally came down to whether or not the dialogue had provided robust information for decision-making. This will become clearer as the dialogue results are disseminated more widely (see section 7.9).

Box 9

Summary of findings on cost effectiveness

- It is difficult to compare the costs of a distributed dialogue like the bioenergy dialogue with a more conventional dialogue where the activities and their costs are well-defined. In a distributed dialogue the costs are distributed between actors (in this case, BBSRC, the institutions hosting dialogues and in some cases the researchers and facilitators who gave up their own time to participate).

- One significant and unexpected cost for the bioenergy dialogue was the support provided for the teams running events. The need for the Dialogue Coordinator to dedicate additional time to providing advice and training and in some cases attending events was a significant cost to the project as a whole. It is likely that future distributed dialogues will need to take account of this cost.

- It will only be possible to fully assess the cost effectiveness of the project when it becomes clear how the dialogue's findings have been used and the benefits provided (for BBSRC, the researchers who ran events and their institutions and for public participants). This is the key factor in determining the value of the dialogue.

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9. Learning and Recommendations

Lessons from the project overall

Mixed motivations and objectives

9.1. Reflecting on the dialogue objectives as a whole, it is clear that there were a range of different objectives, implicit and explicit, partly because of the different levels at which the dialogue was operating:

- BBSRC as an institution: objective of getting understanding and insights into public attitudes and values to bioenergy, to inform the development of research in this area. BBSRC was also testing the distributed dialogue model and wanted to see how the approach, the design and the materials developed for it would work in practice.

- Bioenergy researchers and public engagement in science staff: the reasons given for wanting to run an event included engaging with members of the public, promoting an understanding of bioenergy, listening to the views of members of the public and testing out new methods. Some of the event organizers also had practical objectives, such as improving relationships with local groups, getting more researchers involved in public engagement activities and promoting their own departments and activities:

    I wanted to try a new form of engagement – so there was a personal benefit [EO1]

    I wanted to showcase the work we are doing – we are a large bioenergy group doing a lot of important work. I was keen on getting public involved in understanding what is happening and getting the public to think about bioenergy. [EO4]

    This was another opportunity to highlight internally what academics could do to get involved. [EO8]

9.2. Finding out more about bioenergy was mentioned most often as the motivation for participants to attend the event, although having a say on the topic, discussing with others and influencing decisions were also motivations.

9.3. At all levels, a number of the people involved felt that the objectives were not altogether clear and that this was something that should be improved in the future. Greater clarity of objectives could have meant that the planning and design of the sessions was more targeted and explicit. One example is the focus on exploring the topic and creating an opportunity to discuss the science. This was one of the motivations for many of the organisers and public participants, but one which in the end seems to have taken second place to a more process-driven objective of going through the materials and completing the exercise. This was not the approach encouraged by the project team; it is not clear what led to this approach to the materials by event organisers. Greater clarity about the key objective might have been helpful here, though the fact that for many organisers this was the first time they had run this kind of event, may have played a part. Clarifying objectives is an area where a specific Oversight Group can be particularly helpful. However, to some extent there may also have been a lack of adventurousness in seeking new ways of achieving objectives. For example, in terms of reaching out to new audiences, those organising events both centrally in BBSRC and in universities and other institutions were encouraged during the training to think beyond the usual audiences of people interested in science and to reach out to other types of publics like women or environmental groups. It was suggested there was an advantage that these kinds of groups often have meetings and venues already arranged and would be glad of an interesting session. Despite these reminders, all the events were held with the usual science-interested audiences.

Tension between policy influence and opening up engagement

9.4. This project demonstrates that it is feasible to get researchers to organise and run dialogue events but they will generally need training and support. As shown in Chapter 6 (e.g. section 6.19) several facilitators reported difficulties in managing events. Without additional training and support, researchers will generally not be able to provide the same quality of facilitation as professional facilitators. Two areas in which the differences in results are likely to be seen are in ensuring an inclusive and effective discussion itself (e.g. managing people who dominate the conversation), and the recording and reporting of discussions.

9.5. As researchers become more familiar with this kind of engagement, levels of competence could increase. Support from dedicated engagement managers in academic institutions could also help to develop skills. A significant minority of public participants said that they had not had the time or been able to fully explore the topic. Making events shorter (in this case, around two hours) may make dialogue events more accessible to busy people and encourage people who do not regularly participate in this kind of event to consider becoming involved. However, this could be at the cost of achieving a depth of understanding of a complex topic and discussing its implications. Some improvements could be made in the way that activities are developed, with less emphasis on reading out text from cards and scenarios, but it is hard to see where enough time could be made for reflection and picking apart the issue. The absence of this fuller testing of views seems to be the reasons why a number of public participants argued that the views expressed at the dialogue events should not be taken into account in BBSRC decision-making.

Credibility of the results

9.6. Many decision-makers expected that a larger number than the 162 public participants would have been involved, but no clear targets appear to have been agreed. Public dialogues are used to explore issues and concerns in depth rather than to get quantitative results about the distribution of views and preferences within a representative sample of a population.

9.7. A number of factors in the way that the distributed dialogue was run mean that the results must be interpreted and used with care. These are: (i) the characteristics of participants, the majority of whom had educational qualifications well above those of the UK population as a whole, were directly or indirectly involved in science activities and were concentrated in two principal age groups: under 30 and over 65 years old; (ii) the short sessions which meant that many participants felt that they had not fully explored issues and concerns around bioenergy; and (iii) the lack of recording of the group discussions which meant that it was difficult to understand how participants had arrived at the views expressed in their feedback forms.

9.8. The fact that most of the events were planned and run by different teams means that there is a risk of inconsistency in the results, if participants in different sessions were encouraged to look at very different issues or to structure discussions in different ways. There are differences in feedback between some groups but there is not enough evidence to be able to say whether this reflects differences in the characteristics of group members or location, or whether it could be a sign of inconsistencies in the way sessions were run. The fact that two different sets of materials were used (the Toolkit and the Democs Game) could add a further element of inconsistency; however the analysis of participant feedback from the London pilot (where both materials were used by different groups) suggested that the results were similar.

9.9. One two-hour session is too little time for members of the public to explore and develop their views on a topic like bioenergy. Many members of the public may not want or be able to attend sessions lasting more than a few hours, which is why recruited processes usually offer a small payment as an incentive. More attention needs to be given to ways of extending the time allowed for dialogue, by offering incentives or using other mechanisms.

9.10. In summary, the findings of the bioenergy dialogue are valuable for highlighting concerns and priorities that some audiences have regarding bioenergy. However, factors such as the potential for inconsistencies between events run in different locations by different teams, the short time for discussion and some of the characteristics of the people involved (for example, the high level of educational qualifications and involvement with science), mean that these results should be used with care.

Impacts of the dialogue results on bioenergy policy and on BBSRC and wider policy on public engagement.

9.11. It is difficult to say what impact the findings of the dialogue will have on policy or decisions on bioenergy as it has only been discussed in one of the relevant Strategy Panels. Some indications of what this impact may be are:

- A number of decision-makers who have seen the report said that it makes a useful contribution to showing how dialogue can provide insights into public views about science.

- Some of the decision-makers interviewed for this report felt that it will not be possible to use the results of the dialogue to prioritise specific bioenergy technologies for research and development, as they had hoped, because the dialogue findings do not provide information about which technologies public participants preferred.

9.12. There is little evidence so far that the results of the dialogue events are being used to inform decisions about bioenergy research in the universities and science centres where they were held.

Governance of the public dialogue project

9.13. It took time to get the dialogue embedded in existing governance structures and this limited the practical oversight provided: while a number of bodies had an interest in the dialogue, none met regularly enough to provide timely oversight and advice. Key decisions about target audiences, sample size and how to increase the number of events being organised, were not addressed by the oversight groups, which ultimately had an impact on the robustness of results.

9.14. The distributed nature of the dialogue may have made it harder for those organising events in different locations and institutions to see a clear link with policy and decision-making. However, this may be an aspect that becomes clearer over time, as those organising events see how the results are used.

Recommendations for future distributed dialogues

Delivery

9.15. Identify target numbers and types of audience, so that all involved are clear about the range of views required to provide meaningful results.

9.16. Ensure that mechanisms (such as flipcharts, audio recording, note-takers, etc) are used to record the proceedings of dialogue events and that results are reported, in order to understand the views and concerns expressed by public participants.

9.17. Recognise that members of the public need sufficient time to be able to explore complex topics like bioenergy. They also need time to digest and discuss the information they have been given before offering views on future decisions. The bioenergy dialogue showed that many participants felt uncomfortable about giving views on the topic after only two hours' discussion and several suggested that these views were not well-founded enough to be used by BBSRC. Public dialogues should ideally involve two or more sessions, in order to give

participants the chance to reflect on the information they have learnt within the context of their own daily lives.

Distributed dialogue

9.18. With the bioenergy public dialogue, BBSRC has tapped into a strong vein of interest on the part of researchers and academic institutions in developing two-way conversations about science with members of the public. Academics and institutions are being asked to demonstrate how their research is relevant to social issues and how they engage with members of the public. In a number of universities there is now a member of staff whose role is to promote engagement with members of the public and who have a clear understanding that engagement needs to go beyond one-way 'public understanding of science' type activities. This represents a resource for dialogue activities: several of the people who ran dialogue sessions were in these roles and expressed their interest in continuing to run this kind of activity.

9.19. Some of the characteristics of the design of the bioenergy public dialogue that make it fit well with this evolving context are:

- The bioenergy dialogue approach is seen as novel and more engaging for many of the audiences that universities work with, who are keen to have hands on activities and interaction with researchers.

- The Toolkit is a very attractive resource for busy organisers, providing them with activities and all the materials they need. This meant they could go to researchers and invite them to get involved without having to take up too much of their time. Organisers who used the Democs Game gave similar views on that resource.

- The type of activity and focus is appropriate for the kind of audiences universities are often working with, e.g. U3A, local people associated with academic or technological occupations or local science societies.

9.20. If BBSRC is to continue providing for distributed dialogues, on bioenergy or other topics, it would be important to put structures and mechanisms in place to encourage people to come forward to organise events but also to develop their skills so that better and more usable results can be achieved:

- Providing mechanisms for networking and peer learning, for example a webpage where people organizing events for the first time can find advice or mentors. This would capitalize on the enthusiasm of those who have been involved and allow the experience of the dialogue events to be fed back into the dialogue process, creating a feedback loop.

- Develop a number of other support mechanisms, such as a pool of expert facilitators to provide advice and assistance and ongoing training and support.

> **Box 10**
>
> ***Recommendations for building on the Toolkit as a means of promoting distributed dialogue***
>
> - There is scope for BBSRC to build on the positive response of the researchers and science engagement specialists who were involved in the Bioenergy Public Dialogue to extend the use of the public dialogue on bioenergy. There is also potential to use this approach to promote public dialogue on other relevant issues.
>
> - The benefit of extending the use of this approach would be to increase understanding of and skills in dialogue; this could be expected to lead over time to more robust information about public attitudes and more useful information for researchers about the relevance of public attitudes to particular areas of research.
>
> - In order for the current resources (the Toolkit and the Democs Game) to be used effectively, the following modifications would be suggested:
>
>   1.1..1. Work with specialists to develop an introductory presentation and possibly other support material like factsheets.
>
>   1.1..2. Encourage experienced public engagement experts (for example at the University Catalysts) to provide feedback and tips on running dialogues; explore the possibility of these staff or other skilled facilitators being sponsored to mentor researchers outside their own institutions who are running events for the first time.
>
>   1.1..3. Hold a workshop or webinar with people who have organised dialogue events, in order to tease out how running dialogue sessions without central support could be made simpler and more relevant to current requirements on researchers.
>
> - BBSRC will need to give strong support to the use of dialogue to ensure that researchers feel that their efforts will be recognised.

The governance of future of distributed dialogue

9.21. Using existing governance structures like expert or advisory groups to monitor and provide oversight of a distributed dialogue process can be an effective way of building ownership of its findings and results within an organisation. It is important to bring out clearly the roles and responsibilities of the different bodies, to ensure active ownership of the dialogue.

9.22. Where several different bodies are involved in oversight and governance of the process, organisations need to ensure that there are opportunities for these bodies and their members to agree objectives and key principles in terms of methodology and outcomes. This would also mean that differences in priority and focus (e.g. between those concerned with using dialogue generally and those focusing on the outcomes of the specific dialogue) can be acknowledged.

9.23. Consider including wider external stakeholder involvement in the dialogue governance bodies, to bring in broader perspectives. Broad stakeholder groups have been used successfully in many other public dialogue projects. Assess opportunities for involving cross-Government stakeholders in existing governance structures or through other mechanisms, to strengthen opportunities for policy influence, to improve links with relevant departments and agencies and to provide wider perspectives on the process.

Appendix 1: Event Observation Guide

Event observation guide (for dialogue events)

Approach to observation

Title and type of Meeting (Date)					
Participants<>					
Key content **<>**					
A. Objectives of the dialogue process					
1. **Were the objectives stated to the participants? if so …**	Fully	Mostly	In part	Not at all	**Comments**
• **What were the specific objectives of the meeting?**					
• **To what extent were they met?**	Fully	Mostly	In part	Not at all	
B. Good practice principles for dialogue processes					
We have four areas of good practice principle for dialogue processes: context, scope, delivery and impact which we will use to order our observations. The following is a set of questions we will use:					
Context					
This refers to the wider context in which the dialogue process is being undertaken and in the case of events the focus is on the objectives of the dialogue, specifically on the clarity of their expression and their comprehension by participants. When observing issues around context, the focus will be on how the objectives of the dialogue are expressed and understood and how the results will be used. Key questions will be:					
a. How were the objectives of the dialogue explained? (clear, succinct, accessible, look at method and manner of delivery)	Fully	Mostly	In part	Not at all	
b. How were they understood? (asking questions that show understanding/looking for clarification etc)	Fully	Mostly	In part	Not at all	
c. To what extent were the **organisers** able to explain the purposes of the dialogue in informal conversation?	Fully	Mostly	In part	Not at all	
d. To what extent were the **participants** able to explain the purposes of the dialogue in informal conversation?	Fully	Mostly	In part	Not at all	
e. How clearly did the organiser explain how the results would be used?	4= Very clearly and there was opportunity for questions, challenging and adding to the way that	3= time was spent explaining results	2= use of results was mentioned briefly but were not explained fully	1= no mention of results and how they would be used	

	Scope				
Scope refers to what is discussed, how issues are framed and whether or not there is room for discussion of related topics. When observing issues around scope, a key focus is whether or not there is time and space to examine and discuss the scope to the satisfaction of the participants.					
a. How were questions about the scope of the dialogue answered (openly, closed, relevance etc.)	Fully	Mostly	In part	Not at all	
b. Was there time for discussion of the scope of the dialogue process?	Fully	Mostly	In part	Not at all	
c. How are the materials presented? Are they accessible/understandable	Fully	Mostly	In part	Not at all	
d. Do the materials assume that the participants have prior knowledge of the topic area?	Fully	Mostly	In part	Not at all	
e. Are the materials presented in a number of different formats? (to meet different learning styles)	Yes	No			
f. How balanced are the arguments - look for pros/cons	Very well balanced	Quite well balanced	Only one side presented	Hard to tell	
g. How well did participants seem to understand the information? (looking puzzled, questions, nodding etc.)	Very well	Quite well	Not well	Not at all well	
h. How comfortable do the participants seem in asking questions?	Very comfortable	Quite comfortable	Not comfortable	Not at all comfortable	
i. Was there enough time to ask questions and raise related issues?	Yes	No			
	Delivery				
Delivery focuses on all aspects of the event: organisation, facilitation and presentation of information. The observation data focuses mainly on delivery, how well the sessions were structured, time, facilitated etc.					
a. How much contact do the participants have with the experts (informal/formal), presentations only, small group work etc	Experts are fully integrated with the participants	Experts only do presentations – no informal contact	No experts		
b. How easy was the conversation with experts, ability to ask questions.	Very easy	Quite easy	Not easy	Not at all easy	
c. How much time was spent presenting information?	(put in a % of the whole workshop if possible)				
d. How much time are participants given to consider and reflect on the information? (e.g. in small groups discussing)	(put in a % of the whole workshop)				
e. Do participants appear to be able to engage with the technical	Fully	Mostly	In part	Not at all	

	details (ask questions, etc)?				
f.	Was there enough time for participants to talk to each other?	Fully	Mostly	In part	Not at all
g.	Was there enough structure to enable discussion?	Fully	Mostly	In part	Not at all
h.	How was the group facilitated? Was everyone encouraged to speak? Did everyone contribute? Did one/two people dominate?	Fully	Mostly	In part	Not at all
i.	How were the discussions recorded? E.g. digital recorder, dedicated note taker, notes recorded publicly on flipchart and checked with participants?				
j.	How were sensitive situations handled?	Very well	Quite well	Not well	Not at all well
k.	How well was the discussion kept on track?	Very well	Quite well	Not well	Not at all well

Impact

Impact refers to the impact of the dialogue process on a number of areas, principally on discussions around issues related to bioenergy, on participants' awareness of these issues, and/or on their views and understandings of the dialogue process. When observing impact, we will focus on the immediate impact of the event on participants (both members of the public and scientists or experts – recording differences between these groups where the impacts are different) and consider in particular:

a.	the mood during the day:				
●	how engaged were participants (leaning forward eager to contribute, amount of questions asked, etc.	Fully	Mostly	In part	Not at all
b.	quality of discussions				
●	were interesting/new points being made	Yes – a lot	Yes - some	No not really	No – not at all
●	did the discussions flow easily	Very well	Quite well	Not well	Not at all well
●	were there contributions from most of the participants	Fully	Mostly	In part	Not at all

C. General Considerations

	There are a number of general considerations about the venue etc that also will be noted:			
a.	Was the temperature ok?	Yes	No	
b.	Was there enough space for all the people?	Yes	No	
c.	Were the speakers audible?	Yes	No	
d.	If there were small groups was there sufficient space between them so that all could hear?	Yes	No	
e.	Were the breaks sufficient?	Yes	No	
	Layout :			
a.	What type of layout? Theatre, café etc.			

b.	How were the experts seated?				
	Registration/welcome				
a.	How was registration carried out?				
b.	What materials were participants given?				
c.	How well was the day introduced (so that participants know what is going to happen e.g. when breaks will be) and how well everyone present is introduced (e.g. ideally facilitators should be easily identifiable so that participants know who to ask if they need help of any sort, the evaluator should be introduced).	Very well	Quite well	Not well	Not at all well	
	Timekeeping				
a.	Did it start on time? (if not, was there a clear reason?)	Yes	No			
b.	Did it finish on time (if not was there a clear reason?	Yes	No			
c.	Were session timings within the workshop kept to? If not, was that because of participants, experts or facilitators' needs to change timings?	Yes	No			

Appendix 2: BBSRC Sustainable Bioenergy Outreach Group

The BBBSRC Sustainable Bioenergy Centre (BSBEC) Outreach Group advises BBSRC and BSBEC on communication and public engagement around bioenergy. Membership of the group is drawn from across BSBEC and includes external stakeholders.

The diverse expertise of the group includes representation from:
• University of Cambridge (BSBEC Lead Institution)
• University of Dundee (BSBEC Lead Institution)
• University of Nottingham (BSBEC Lead Institution)
• Rothamsted Research (BSBEC Lead Institution)
• University of York (BSBEC Lead Institution)
• Dingwall Enterprises (Professor Robert Dingwall)
• NFU
• RSPB
• TMO Renewables

The group works with the BBSRC Bioscience for Society Strategy Panel through joint

membership.

Appendix 3: Participant Feedback Form

Participant Feedback Form

BBSRC
bioscience for the future

All the feedback from this event is very important to BBSRC and will inform our strategy and policy in bioenergy and how similar events are run in the future. All responses will be treated in confidence and no comments will be attributed to individuals.

Please complete this form at the event and leave it with the organising team.

Thank you for participating in the event and leaving us your feedback.

■ Which of the resources did you use in this event?

- o Scenario 1 'No change of course' ☐
- o Scenario 2 'Bumping along the bottom' ☐
- o Scenario 3 'How green is my Valley?' ☐
- o Scenario 4 'Riding along on the crest of a wave...?' ☐
- o Democs card game ☐
- o Don't know ☐

About Bioenergy

■ Thinking about bioenergy, my main concern is...

■ I think that bioenergy could be useful because...

■ I would like researchers to think carefully about...

■ There are significant issues that were NOT discussed in this event, but which should have been. These are ...

1

About the Event

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I found the event enjoyable	☐	☐	☐	☐	☐
I found the event interesting	☐	☐	☐	☐	☐
There was enough relevant information for discussion	☐	☐	☐	☐	☐
The information I was given at the event was fair and balanced	☐	☐	☐	☐	☐
I understood the purpose of the event	☐	☐	☐	☐	☐
I was able to discuss the issues that concern me	☐	☐	☐	☐	☐

■ Was there enough time for discussion?

   o It was about the right time ☐

   o I would have liked more time ☐

   o I would have liked less time ☐

■ Best thing(s) about this event

■ Thing(s) to improve in future events

2

About the Outcomes

■ Which of the following impacts, will this event have on you? Put a cross in as many boxes as are relevant to you.

I will get involved in events like this in future ☐

I will talk to friends and family about this issue ☐

I will follow news stories on this issue ☐

Other (please specify) [_____]

■ Did you learn much from this event?

I learnt a lot of new things ☐   I'm not sure I learnt anything new ☐

I learnt a few new things ☐   No, I did not learn anything new ☐

■ Do you think the results of this event **will be** used by BBSRC in making decisions about future research and policy in bioenergy?

Yes ☐   No ☐   Don't know ☐

■ Do you think the results of this event **should be** used by BBSRC in making decisions about future research and policy in bioenergy?

Yes ☐   No ☐   Don't know ☐

Please explain your responses to the previous two questions

[_____]

✂ ---------

3

About Yourself

"You do not have to provide us with this information, but if you do it will help us to understand the results of the dialogue. This information will be anonymised when processed".

■ **Gender** Male ☐ Female ☐

■ **Age** Under 16 ☐ 16-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐
40-49 ☐ 50-59 ☐ 60-64 ☐ Over 64 ☐

■ **What is the highest level of qualifications you have obtained?**

None/ No formal qualifications ☐ Bachelor degree or equivalent ☐

GCSEs/ O-level/ CSE ☐ Postgraduate qualification (Masters or PhD) ☐

Vocational qualifications (e.g. NVQ1+2) ☐ Other (please specify): ☐

A-levels or equivalent ☐

■ **What ethnic/cultural group would you describe yourself as part of:**

White British ☐ White other ☐ Asian or Asian British ☐ Black or Black British ☐

Other (please specify): [   ]

■ **Do you consider yourself to be professionally involved with science?**

Yes, I'm a scientist ☐ Yes, it is part of my work ☐ No/ Not really ☐

Yes, I'm a science student ☐ Indirectly or occasionally ☐

■ **Why did you choose to attend this event? (Tick the MOST important reason)**

To have the chance to discuss with others ☐ Other (please specify)

To find out more about bioenergy ☐

To have my say on issues concerning bioenergy ☐

To have an opportunity to inform decisions on bioenergy ☐

■ **Is this the first time you have participated in an event of this type where the public are invited to discuss issues to inform policy?**

Yes ☐ No ☐ Don't know ☐

---✂-----------

By completing and submitting this form, you are indicating your consent for BBSRC to share your contact information with CEP and Sciencewise for the purposes below. Your details will be held securely in a BBSRC database and will not be disclosed to any organisation other than those detailed above, except if required to do so by law.

If you would like to receive further information, please complete the boxes below and provide your contact details. Tear it off and leave it with the organiser.

I would like to receive further information from BBSRC about future developments in bioenergy research and policy as a result of this project. ☐

I am happy to be contacted by BBSRC to be asked for more information on this project. ☐

I am happy to be contacted by Sciencewise to hear more about future developments in public dialogue on policy involving science and technology. ☐

Name: _____

Contact telephone: _____ Email: _____

Signature: [   ] Date: _____

4

Appendix 4: Event Organiser Feedback Form

Organiser Feedback Form

BBSRC
bioscience for the future

All the feedback from this event is very important to BBSRC and will inform our strategy and policy in bioenergy and how similar events are run in the future. Please complete this form as soon after the event as possible. Keep your comments brief and cover the most salient points.

Thank you for organising this event and providing feedback.

Venue and Audience

- Date and time of event:
- Name and location of venue:
- Number of participants attending the event:
- Number of members of the organising team at the event (including you):
- Please indicate their roles:
    - o   Providing information on bioenergy
    - o   Facilitating the dialogue
    - o   General assistance
    - o   Other(s)
- Was this an established group/audience?
  If so who were they (i.e. local Women's Institute)?

Event

Based on your observation of the event:

- What were the main topics that were discussed or seemed of most interest to participants?

- Was there any strong agreement on specific topics/issues? Please say which issues.

1

■ Was there any strong disagreement on specific topics/issues? Please say which issues.

■ Based on the level of discussion and debate during the event, how would you describe the initial level of knowledge of the participants on bioenergy? Please tick only the MOST important option:

o Largely unaware of the issues ☐   o Generally well-informed about the issues ☐

o Some knowledge of the issues ☐   o Other _____

■ How did the participants respond to the event and the activities. Please tick only the MOST important option:

o Interested ☐   o Confused ☐   o Wanting to talk about different topics ☐

o Participative ☐   o Bored ☐   o Other _____

o Attentive ☐   o Adversarial ☐

Engagement Activities

■ Did you use the guidelines to run the event? If so, how useful were they? Do you have any views on how could they be improved?

■ Did you use any of the event structure plans suggested on the guidelines:

o 2 hour plan (plan 1) ☐   o 2 hour plan (plan 2) ☐

o 4 hour plan (plan 1) ☐   o 4 hour plan (plan 2) ☐   o Your own plan ☐

If you used any of the plans suggested in the guidelines, was it of use? Was there anything about it that you would do differently in a future event? If you used your own plan, why did you decide to use it and what did you do differently from the plans suggested? (If you used your own plan, could you please attach it to this form?)

■ Which of the future scenarios available in the toolkit did you use?

o Scenario 1 'No change of course' ☐

o Scenario 2 'Bumping along the bottom' ☐

o Scenario 3 'How green is my Valley?' ☐

o Scenario 4 'Riding along on the crest of a wave…?' ☐

■ Were there resources or activities that worked particularly well? Which?

■ Were there any resources or activities that worked less well? What were the difficulties and how do you think they could be overcome in the future?

■ Thinking about the event overall, what were the main 'lessons learned' for you personally and for the organising team? Please include positive and negative experiences.

Organiser

■ What was your motivation to run this event? What did you hope to get out of it?

■ How will you use your experience and the results of this event in your own work and through your organisation? What might you do differently in your work as a result?

■ As a result of this event, would you personally be encouraged to run events like this in the future?

o   Yes ☐   o   No ☐   o   Don't know ☐

3

- How well equipped in advance did you personally feel to run this event?

  - o Very well equipped ☐
  - o Fairly well equipped ☐
  - o Not very well equipped ☐
  - o Not at all equipped ☐
  - o Don't know ☐

- In your opinion, is there anything else BBSRC could do to equip you to run events like this in the future?

Name of facilitator: _____

Contact telephone: _____

Email: _____

Please return this form and copies of all other evaluation and feedback materials collected during the event to BBSRC (address below) within one month of completing the dialogue event. Thank you.

Dr Marta Entradas, External Relations Unit, BBSRC, Polaris House, North Star Avenue, Swindon,

SN2 1UH T: 01793 413368 Email: marta.entradas@bbsrc.ac.uk

If you would like to receive further information, please complete the boxes below

I would like to receive further information from BBSRC about future developments in bioenergy research and policy as a result of this project. ☐

I am happy to be contacted by BBSRC to clarify points I have made or to be asked for more information on this project. ☐

I am happy to be contacted by Sciencewise to hear more about future developments in public dialogue on policy involving science and technology. ☐

Your details will be held securely in a BBSRC database, shared with CEP and Sciencewise for the purposes above only and not be passed to any other third parties.

BBSRC (Biotechnology and Biological Sciences Research Council) funds biological research in universities and research centres. We are committed to engaging in dialogue with the public and others around the research we fund.

Sciencewise Expert Resource Centre (Sciencewise) is the UK's national centre for public dialogue in policy making involving science and technology issues. It provides co-funding and specialist advice and support to Government departments and agencies to develop and commission public dialogue activities in emerging areas of science and technology. For more information see www.sciencewise-erc.org.uk.

Collingwood Environmental Planning (CEP) is an independent multidisciplinary environmental and sustainability consultancy and are the evaluators of the BBSRC Bioenergy dialogue.

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Appendix 5: Public participant interview schedule

'On the spot' interview questions for bioenergy public dialogue participants

These questions need to be asked within the context of understanding the aims of the workshop and related activities – this being the purpose of these questions. As such it may not be necessary to ask every question.

Introduce the evaluation and the purpose of these questions to those that you talk to.

<u>Background</u>

Name:

Organisation (if there is one):

Group (for Pilot Event):

1. How did you find out about today's event?

2. What motivated you to come along to the event?

3. Did you find the activities interesting? If so, in what ways? If not, what could have been done better?

4. In what ways did the activities provide you (or not) with an opportunity to discuss the issues around bioenergy? E.g.:

   o Scope: Were all the issues you were interested in discussed in the session?
   o Did you feel comfortable about expressing your views? Can you say why or why not?

5. Do you feel you have learnt about bioenergy today? Why do you think that was? [PROMPT: activities, facilitation, etc.]

6. Did you find the materials helpful? Please explain.

7. What do you think were the objectives of the event?

8. Did you get a sense of how your contribution will be used? Please explain.

9. What did you think of the venue? [PROMPT: temperature, sound, lighting, comfort, etc.]

THANK YOU FOR YOUR VIEWS.

Appendix 6: Decision-maker interview schedule

BBSRC BIOENERGY PUBLIC DIALOGUE

I.   INTERVIEW SCHEDULE FOR DECISION-MAKERS

We are carrying out an evaluation of BBSRC's Bioenergy Public Dialogue project. The project was intended to trial a different approach to public dialogue, known as 'distributed dialogue', which would differ from big 'set piece' dialogue events in the following characteristics:

- *Allowing ongoing, embedded discussion between BBSRC, its research community, members of the public and other stakeholders;*
- *Engaging a larger number of researchers and members of the public;*
- *Potentially being more cost effective.*

We are conducting interviews with a range of people who were involved with the bioenergy public dialogue, in order to explore their views on the bioenergy public dialogue process, its results, how these were used, benefits or challenges associated with the approach and overall learning from the project. The interviews will be used to inform the Final Evaluation Report on the Bioenergy Public Dialogue.

Your feedback will be extremely important in reflecting on this experience and how best to take forward its lessons.

Your involvement with the Public Dialogue

1   What was your relationship with the bioenergy public dialogue? [Prompt: attended an event, read reports, oversight role, etc]

2   Have you been involved in a public dialogue before this? If so, which and what were the two main lessons (positive or negative) you took from that experience?

3   What were your expectations of the bioenergy public dialogue? Were you hoping to be able to use the results for any specific purpose(s)?

Dialogue process

4   How much do you know about the way that the dialogue activities were organised and run? From what you know, do you have any views about how well individual activities or the process as a whole were run?

5   Was there anything about the *way* the process was designed and run that affected the extent to which you felt the results were credible and you could comfortably use them?

6   From the information you have, do you think that the dialogue was successful in engaging BBSRC researchers? Why / why not?

7   What do you know about the members of the public who participated in the bioenergy dialogue activities? How important do you think it is for a public dialogue to engage specific audiences? If so, which audiences and why? How important is it to know about how many and what sort of participants were engaged?

8   What were the main insights you gained from being involved in the dialogue?

9   Was there anything that you heard about the process or what participants said, that was a surprise / unexpected that you particularly remember and that affected your view of the process?

Results of the public dialogue

10   In what format did you receive the results of the bioenergy public dialogue? [Prompt: written reports, briefing notes, presentations, etc] How well did the format help you to understand and use the results of the dialogue?

11   What did you think about the quality of the way the results were presented? [Prompt: clarity, level of detail, range of issues covered, etc]

12 What did you think of the robustness of the results? What factors made the results more or less robust?

13 What things do you feel that the dialogue results are useful for? Did the results provide you with the kind of information you were expecting? If not, what else would you have liked?

14 Do you think that the dialogue process has increased understanding and skills in public dialogue? Could you give examples?

15 Has the bioenergy public dialogue generated any other benefits for you, your organisation or others?

Learning

16 What were the main lessons about public values and attitudes to bioenergy that you take from the dialogue results? [Prompt: learning about public views & attitudes, learning from the public?]

17 Is there anything about public values and attitudes bioenergy that you would have expected to learn but that did not come out in the results?

18 What have you learned about public engagement generally and public dialogue in particular from your experience of this project?

19 Would you be willing to get involved in a public dialogue process of this kind in the future? What factors would encourage you to become involved? Is there anything that might discourage your involvement?

Using the results

20 Do you think the design and delivery of the project are sufficiently credible for the results to be valid in influencing BBSRC decisions on strategy and policy around bioenergy?

21 Have you personally used any of the results of the bioenergy public dialogue in your professional work? If so, which results and how have you used them?

22 Do you think you will use the dialogue results in the future? If so, which results and how? If not, why not?

23 How valuable are these results for your work? [Prompt: Which of these three statements comes closest to expressing your views: They provide unique evidence about an important issue for bioenergy science; they contribute to a wider body of knowledge; this is not the kind of evidence that I use in my work.]

24 Are you aware of the bioenergy public dialogue results being used by others within BBSRC or outside the organisation? If so, please describe how. Do you have any evidence that they have been used?

25 What are the main factors influencing the way or the extent to which the bioenergy public dialogue results have been used? Have you been at all surprised by how they have been used?

Governance

26 Do you think the project is sufficiently embedded within the appropriate decision making groups within BBSRC and beyond, to ensure the dialogue results are used and have influence? Please give details.

27 Do you think the project is sufficiently well-connected and well-placed in relation to wider current debates and decisions about bioenergy? Please give details.

28 What do you think of the role played by Sciencewise in the bioenergy public dialogue?

29 Do you think that any other groups or individuals could or should have been involved in the bioenergy dialogue in any way? Please identify these interests and how they could / should have been involved.

Value for money

30 What do you believe is the main value or benefit of this sort of public engagement process? To what extent do you think the process has delivered or will deliver this value/benefit? Please say why.

31 Public dialogue has financial costs. Do you feel that the money spent on this dialogue has been well spent? What factors are you taking into account?

32 Are there any other ways in which the bioenergy public dialogue has provided or is providing benefits or saving costs (now and potentially in future), for example to your own work or more widely?

Lessons for the future

33 Are there any lessons from this project that could be useful to future dialogue projects?

34 Overall, what parts of the public dialogue do you think should definitely be done again, or definitely NOT done again, that you are aware of?

35 Are there any other aspects of the bioenergy public dialogue that you consider important that have not been covered?

Appendix 7: Dialogue event organiser interview schedule

Interview Questions

Objectives

1. 'What was it about BBSRC's approach to public dialogue on bioenergy that encouraged you to organise an event, if anything?'

2. What were your principle objectives in organising this event? What did you hope to achieve?

3. What do you think were the main objectives for BBSRC?

Context

4. Was this the first time you had organised an activity of this kind? If not, please describe your relevant experience.

5. What did you feel was different about this public dialogue activity from what you normally do, if anything?

6. What support did you receive from BBSRC in organising this activity? How useful was this support? Was there anything else you would have liked to have received?

7. Did you receive support from sources other than BBSRC? If so, what support and how useful was it?

8. What venue did you use for the activity? Did the choice of venue have any impact on the activity?

9. Did you have a target in terms of numbers or characteristics of participants? If so, how did you choose that target group, what did you do to meet your target and how successful were you? If not, why not?

Process

10. Overall what you think worked well and not so well in the process design and delivery you used for the public dialogue?

11. How appropriate were the information and activities provided for participants in the Toolkit?

12. How much were members of the public able to engage with the topic in the time available? Can you give any illustrations?

13. How would you describe the dialogue between specialists / scientists / researchers and members of the public? Was there anything in the activity that you ran, or what participants said, that was a surprise / unexpected that you particularly remember and that affected your view of the process?

14. What did you think of the way that the specialists / scientists / researchers participated in the dialogue events?

15. Are you clear about how the information provided to BBSRC will be used? Are you satisfied with the way that element of the project has worked?

Results and impacts

16. What were the most important results for you of the activity you organised?

17. Did you gather feedback from the event? If so, could you explain how you did so? What information, if any, was provided to participants about completing their feedback forms?

18. How well did the process of completing and returning forms to BBSRC work?

19. How did the way that you organised and ran the event help to achieve your objectives? Would you do anything differently if you were running a new event?

20. What did you learn personally and for your work from running the event and taking part in this project overall? To what extent do you think there are differences between your experience and that of others who ran dialogue activities?

21. What are you and/or your organisation doing differently now, as a result of taking part in this whole project, if anything?

22. Are you more likely to do public dialogue in future as a result of your work on this, or not? Why would that be different? And, if not, why not?

Conclusions

23. Considering the resources (time and money) you put into this activity and its results, do you consider the activity was (cost) effective?

24. What could have improved the activity or its results?

25. Are there any lessons you would recommend to others as a result of your experience or what your observed in the process overall?

26. Is there anything else you want to add that we have not covered?