



Article

# Experimenting with distributed approaches – Case study: A ‘national-level’ distributed dialogue on bioenergy in the United Kingdom

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## Abstract

An emerging thread in the public participation debate is the need for innovative and more experimental forms of dialogue to address weaknesses of previous structured deliberative methods. This research note discusses an experiment with a distributed approach to dialogue, which used bioenergy as a case study. We discuss the potential of the model to attract a variety of publics and views and to inform policy. This is done with a view to refining future dialogues and increasing the involvement of scientists and other practitioners at the science-policy interface.

## Keywords

bioenergy, distributed dialogue, public dialogue, public participation, science policy

## 1. Introduction

An emerging thread in the public participation debate is the need for innovative and more experimental forms of dialogue that emphasise two-way communication between experts, decision-makers and the public, and address weaknesses of previous structured deliberative methods such as the involvement of restricted publics (Mohr et al., 2013). This article discusses an experiment with a distributed approach to dialogue designed to involve a wide variety of publics in policy making about complex issues in science and technology (Andersson et al., 2010). The dialogue was undertaken in 2013 in the United Kingdom by Biotechnology and Biological Sciences Research Council (BBSRC) with co-funding from Sciencewise Expert Resource Centre (ERC),<sup>1</sup> and aimed to discuss bioenergy nationwide.

The distributed approach draws on deliberative and upstream engagement methods (Wilson and Willis, 2004) but attempts to deal with the challenge of scaling up the dialogue by engaging large numbers of people in ‘long-term’ debates (e.g. Powell and Colin, 2009) and ‘giving citizens

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more power to influence the direction and distribution of the processes' (Andersson et al., 2010: 64). It aims to address 'highly complex issues' that affect a large spectrum of the population over long periods of time in 'unpredictable ways' such as climate change or society ageing. According to model's authors, such issues have not yet been adequately addressed using public engagement and require a distributed dialogue approach that considers the views, expertise and experiences of different publics for meaningful action in policy to be taken (see Andersson et al., 2010 for a detailed description).

Bioenergy affects various publics in multiple ways. It has potential to contribute to global targets regarding the reduction in carbon emissions (Resch et al., 2008) and a significant role to play in the UK energy mix over the coming decades. Bioenergy is also one of the three priority areas of funding for BBSRC that funds research to inform policy development and technological advances to help switch from fossil fuels to renewable energy. However, bioenergy also raises many ethical and social issues. Ensuring the success of bioenergy technologies and the achievement of energy policy targets (Department of Trade and Industry (DTI), 2003) is primarily a matter of 'public acceptance' rather than technology development (Upreti and van der Horst, 2004). But when compared to other renewable energies, public support for bioenergy is low (Business Enterprise and Regulatory Reform (BERR), 2008; Poortinga et al., 2006). This can be explained in part by controversies around bioenergy production (particularly, first-generation biofuels) and its potential negative social and environmental impacts, as well as the lack of public engagement with bioenergy. Until now, despite public deliberation in energy more broadly, analysis of public engagement in bioenergy carried out in the United Kingdom has shown that these have relied on deficit approaches based on provision of information rather than participatory methods (Cass, 2006; Chilvers et al., 2005) and focused on local and regional issues (Upham et al., 2007). The bioenergy dialogue was the first national-level opportunity for large numbers of the UK public to discuss ethical, social, environmental and political issues around bioenergy and have their opinions considered in policy.

### *Setting up the context for distributed dialogue*

Breaking with a longstanding tradition of, as Thorpe (2010) has noted, 'elitist and often exclusionary governance', public participation is now agreed to be a key means of providing outside scrutiny by giving non-academic voices the chance to contribute to science policy (e.g. Dryzek, 1990; Flyvbjerg, 1998). This agreement has been reached through various fundamental rationales, often presented to bring to light the benefits that public participation can offer in decision-making (Fiorino, 1990): 'normative' benefits of increasing democratisation and empowering lay publics to have a say in science and technology issues, 'substantive' benefits of producing better policies based on local knowledge and 'instrumental' benefits of contributing to legitimacy, public trust, credibility and acceptance of institutions' outcomes and policies.

However, despite the United Kingdom having been at the forefront of public engagement and extremely innovative in experimenting with dialogue (Stilgoe, 2007), institutions still grapple with how best to involve the public in science policy (Rowe and Frewer, 2000). Examinations of dialogues on science and technology undertaken by government institutions in the United Kingdom have shown that, until now, there have been few cases where policy decisions have been affected by the outputs of public participation (Chilvers, 2010; Chilvers and Macnaghten, 2011; Sciencewise – Interim Evaluation 2012, 2013). Among other criticisms, representativeness, willingness of the public to engage meaningfully and efficiency of processes (whether better policy is actually produced) have been identified as key critiques leading to lack of credibility of deliberative processes (e.g. Abelson, 2003; O'Neill, 2001).

These have generally occurred in highly structured ways limiting outcomes: they are often one-time events conducted by social scientists with a restricted number of (generally) recruited participants and limited (or no) participation of scientific experts or policymakers, thus making the discussions most times unknown to the vast majority of the public (Chilvers and Macnaghten, 2011).

The distributed approach demarcates itself from previous processes by using a flexible methodology to allow for greater public engagement on the order of hundreds or thousands; it relies on engagement ‘toolkits’ distributed by a central organisation to local groups and networks to reach citizens at the local level and on the results of the distributed conversations being fed back into decision-making processes (Andersson et al., 2010). The idea of running science dialogue in a more distributed way is not completely new (e.g. 2005 Small Talk on nanotechnology run by the British Science Association), but this was the first time a distributed approach has been used to inform science policy.

The bioenergy dialogue was led by the Engagement Team within BBSRC’s External Relations Unit with oversight from the BBSRC Sustainable Bioenergy Outreach Group, comprising researchers and industry representatives to advise BBSRC policy structures, and the Process Sounding Board (PSB) comprised social scientists to advise on the dialogue process. The process was undertaken in three main phases: (1) preparation of materials, training of researchers and piloting; (2) the events themselves and (3) analysis and reporting. The bioenergy dialogue had two main aims: (1) to explore public concerns, hopes and expectations for bioenergy, and consider those views in BBSRC strategy and policy development in this area and (2) to pilot a distributed approach to public dialogue aimed at developing a national, ongoing discussion on bioenergy with the broad UK public (BBSRC, 2013). The purpose of this research note is to examine the potential of the model to reach its goals. It is not intended to be a purely academic study attempting to test a framework for evaluation of participatory processes (Abelson et al., 2003) but should be understood as an applied study, aiming to examine the response to the model in order to reflect on the contribution it may or may not have to deliberative approaches and science governance. The bioenergy dialogue took pioneering steps in experimentation with national-level distributed dialogue and scientists’ participation; it is our belief that the discussion presented here is meaningful in designing future dialogical approaches involving the public.

## 2. Methods

The bioenergy distributed dialogue was a year-long dialogue that ran throughout 2013. The methodology had specific features to engage as many participants as possible, as follows.

### *Dialogue materials were developed*

A toolkit that could be used by anyone interested in running an event was specifically developed by BBSRC in collaboration with academics and the new economics foundation. It included guidelines for running an event and resources to discuss second-generation bioenergy, including a Democs card game and future scenarios representing what the United Kingdom would look like in 2030 should certain decisions be taken on the use of second-generation bioenergy.<sup>2</sup> While a toolkit developed in-house and events run by experts funded by the sponsoring institution may generate claims of bias (Horlick-Jones et al., 2004) and of a process to support the interests of the funding institution – ‘strategic behaviour by sponsors’ (Cass, 2006) – discussing the appropriateness of the materials goes beyond the scope of this research note.

*Events were run by researchers.* This aimed to engage BBSRC bioenergy researchers around the country, mobilising the scientific community for public engagement. It was expected that BBSRC-funded researchers would run events themselves in their local areas. Researchers received training from BBSRC on how to run events and use the toolkit.

*Participants at the events were self-selecting.* This aimed to allow representativeness of publics and views (e.g. O'Neill, 2001) by maximising the collection of information from individuals with different backgrounds and values. Yet, there are risks associated with self-selection such as stronger attendance by interest groups and informed publics (e.g. Hendriks, 2002). We reflect on this in the 'Discussion'.

*Public views were collected to inform policy.* Public views on bioenergy were collected through post-event questionnaires to be fed back into BBSRC policy structures.

## Analysis

The points discussed here are based on observations, participation and notes taken at the events, as well as participation at meetings with the BBSRC scientific community and policy bodies throughout the timeframe of the project. The views and interpretations are, importantly, drawn from the experiences of the author while coordinator of the project and do not necessarily represent those of the organisation.

## 3. Results

### *Number of events and profile of participants*

Between January and September 2013, eight dialogue events were run by researchers and communication professionals from BBSRC-funded institutes.<sup>3</sup> All events took place at the researchers'/communication professionals' institutes, including Nottingham, Harpenden, Cambridge, Aberystwyth, Falmouth, Exeter and Sheffield, except the pilot event, which took place at the Dana Centre in London and was organised by BBSRC. Events took place during the evenings on weekdays, bar the Cambridge event, on a Saturday afternoon.

The pilot event aimed to examine the appropriateness of the toolkit and language used and to train researchers to use the toolkit and run a dialogue event. Nine bioenergy researchers and three communication professionals attended the training and ran the evening discussions with members of the public.

As events were open to anyone, numbers of public participants were unpredictable. In total, 133 members of the public attended the eight events described here, and 51 bioenergy experts were involved in running the events. Table 1 shows the locations, dates and number of attendees at each event. Of the bioenergy experts, most were bioenergy researchers, varying from postdoctoral to senior researchers, with no special prevalence of any type; three were communication professionals. Public participants had a relatively high level of education: about half held a postgraduate degree and three quarters were in some way involved in science (BBSRC, 2013). Participants were likely to have either a general interest in bioenergy or a link with bioenergy (e.g. there were consumers of biofuels, farmers, local government members, owners or workers at small and medium-sized enterprises (SMEs) in the bioenergy sector and bioenergy researchers).

**Table 1.** Bioenergy dialogue events and participants (BBSRC, 2013).<sup>a,b</sup>

Dialogue events	Location	Venue	Date	Number of public participants	Number of bioenergy experts	Number of group discussions
<i>Event 1</i>	London (pilot)	Dana Centre	24 January	30	12	6
<i>Event 2</i>	Nottingham	Nottingham University	25 April	12	6	2
<i>Event 3</i>	Harpenden	Rothamsted Institute	6 June	13	4	2
<i>Event 4</i>	Cambridge	Cambridge Union Society	8 June	20	10	4
<i>Event 5</i>	Aberystwyth	Aberystwyth University	13 June	8	7	2
<i>Event 6</i>	Falmouth	University of Exeter, Cornwall Campus	18 July	11	5	2
<i>Event 7</i>	Exeter	University of Exeter, Exeter Campus	30 August	18	3	3
<i>Event 8</i>	Sheffield	Showroom Café Scientifique	9 September	21	4	4
				Total: 133 <sup>a</sup>	Total: 51 <sup>b</sup>	Total: 25

<sup>a</sup>Numbers of public participants correspond to the number of feedback forms received (attendees were sometimes more).

<sup>b</sup>Number of researchers who participated in running the events, but did not necessarily organise the events. Only the Cambridge and Aberystwyth events were organised by researchers; all others were organised by communication professionals.

### Structure of the events

Each dialogue took approximately 2 hours. Discussions were based on a focus group approach; small groups of four to eight members of the public discussed bioenergy with experts. But they differed from traditional focus groups as discussions were guided by a researcher rather than an experienced facilitator and there were at least two bioenergy researchers per group to provide scientific information to participants when needed. The discussions did not aim to reach a consensus but simply to explore views.

The events began with a general introduction on the project aims, expected outcomes and structure of the event by the dialogue project coordinator, followed by a brief talk (approximately 15 minutes) on general issues around bioenergy by a bioenergy expert (what it is, what is being said about it). The discussion followed, based on the toolkit materials. Although there was no exact plan to follow, discussions generally included an icebreaker activity using 'picture cards' on the impact of bioenergy in the environment, family, third world countries and so on to identify participants' initial reactions to bioenergy; a group discussion of the social, ethical and economic implications of bioenergy based on future scenarios and a plenary session where each group summarised the main points discussed. After the discussion, participants were asked to express their views on bioenergy in a questionnaire. Information collected through the questionnaires might not represent the discussion, but was sufficient to bring to light the main areas of concern discussed.

## 4. Discussion

The bioenergy dialogue was an opportunity to explore the potential of a distributed method to scale up dialogue aimed at informing policy. While we consider the model valuable as an engagement

process in itself, we believe it did not reach its full potential. The first and foremost observation is that given the flexible methodology, response to the dialogue was highly unpredictable and lower than expected. The few events that took place were conducted at a limited set of geographical locations, and the lower than anticipated number and type of participants challenge the conceptualisation of the distributed model and bring into question its potential for creating a 'national' engagement in science policy. We identify the following issues for consideration.

First, design and implementation of the bioenergy distributed dialogue were likely to have compromised numbers and representativeness. Underlying this are the issues of *self-selecting participants*, who, as volunteers, were individuals with an interest in bioenergy, and thus contradicted the model expectations of achieving broad representation; the *venues*, mostly academic, may have discouraged people from attending (this might in part explain the higher numbers at the London and Cambridge venues which regularly organise public debates;) and the *publicity*, which was generally confined to posters distributed at universities and advertisements on the institutions' websites and networks, BBSRC website and social media channels - all of which were likely to reach a more science-interested cohort rather than people at the community level. In addition, *public willingness to participate* cannot be disregarded: people (if aware) may not have been interested in participating or may have been sceptical about the value of such exercises to policy. The 2014 UK survey of public attitudes to science (Public Attitudes to Science (PAS), 2014) has shown that only 2% were actively involved in science and technology (S&T) decision-making and 8% would like to, while 52% thought that such exercises do not make any difference to policy. Finally, despite the innovation of engaging researchers, the fact that the bioenergy dialogue relied on researchers to organise the events may have contributed to the low number of events carried out. While this suggests a lack of commitment on the part of researchers and their institutions, it is not entirely surprising: in addition to individual barriers (e.g. Royal Society, 2006), the fact that there were no incentives for participation (e.g. awards for best events, visibility among peers and/or local communities) and the significant amount of time required to organise an event (seen as a primary difficulty by the organisers) might have restricted scientists' involvement. This underlines the point raised by Wilsdon et al. (2005) on the importance of considering the role scientists may play in such exercises and emphasises the need for better cooperation between researchers and communication/public relations (PR) offices, which is likely to be key in facilitating scientists' participation in such activities.

While we cannot say whether a wider variety of publics would have been reached had more non-academic venues been chosen, more local publicity given or incentives provided, we know that individuals are more likely to participate in events on issues that relate to them and bioenergy is no exception (Upreti and van der Horst, 2004), as confirmed by the profile of attendees at events. It is therefore reasonable to assume that distributed approaches are likely to attract more *attentive* and *interested* publics. Similarly, as comparisons were not made, it is not possible to know whether the views and concerns of those attending the events would differ from representative samples including citizens who had not previously been exposed to the topic. However, one may reasonably assume that they differ, and therefore, the public views collected through the bioenergy distributed dialogue cannot be assumed to adequately represent the range of views on bioenergy at a national level. Given the notion prevailing in policy environments that public dialogue must rely on representative samples (e.g. Mohr et al, 2013), we argue that the views collected through distributed approaches are likely to be irrelevant to policymakers, despite the recognised value in involving different publics in policy processes (e.g. Lezaun, 2007; Jackson et al. 2005; Wehling, 2012).

While distributed approaches may be less appropriate to reach a broad diversity of publics and views, they create excellent opportunities to attract the *interested/attentive* spectrum of the population. These publics may have an important role to play in upstream engagement by bringing to light the concerns,

hopes and expectations for S&T developments they are attentive to and informing the direction of developments before decisions take place. And, distributed approaches may create the 'right' social setting for scientists and policymakers to receive social reflection on public issues of national interest.

Second, the bioenergy dialogue was not clearly framed by a policy context – there were no clear policy aims behind the process or reasons for seeking public views or vision as to the way these would be used to inform research and policy agendas, suggesting a disconnect between the aims of the dialogue and policy. This compromised the expected substantive aims of the dialogue, suggesting that the motivations for conducting it were purely normative and instrumental: responding to the institutional commitment to dialogue and upstream engagement, the bioenergy dialogue may have been seen as the right thing to do, a way of building trust and possibly increasing public acceptance of second-generation bioenergy, to avoid similar public controversies to those seen around first generation. This disconnect highlights the need for improved collaboration between groups involved in the dialogical processes, including organisers, policymakers, researchers and practitioners of dialogue, as well as better understanding of how these and similar processes can be used by institutions to serve society and specific policy agendas. Practically, future dialogues aimed at informing policy should define clear policy objectives from the start to help participants (researchers, policymakers and the public) understand why and what they are doing to reach the desired goals. Most importantly, these processes should engage policymakers early on, including in defining aims and methodologies, scale and participants.

Finally, despite the lack of import for policy making, the distributed approach had positive effects such as the participation of publics other than the 'invited' ones (Wehling, 2012), the involvement of more researchers and members of the public than one-time events and face-to-face meetings and the personal relationships built between researchers and public participants. In addition, the bioenergy dialogue was a good exercise to enhance learning about public dialogue and help funding bodies and scientific institutions build capacity and 'develop internal capabilities in practicing dialogue' (Chilvers, 2010, p. 33). All these aspects remain key to the ongoing cultural change in public engagement at institutions and scientists' mobilisation for public engagement, and to the incorporation of public dialogue into the functioning of government organisations.

## 5. Conclusion

The bioenergy dialogue demonstrated positive attributes of the distributed approach; however, it did not achieve its key goals. This might have been either because the approach to the design and implementation was inappropriate or because distributed approaches offer more promise than reality. Based on the results of the dialogue, we are not entirely sure whether distributed approaches contribute to previous participatory efforts that seek involvement of citizens in science and technology decision-making. However, distributed approaches may reach specific groups whose input might be valuable at certain points in the policy-making processes.

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## Declaration of conflicting interests

The views expressed herein are those of the author and not necessarily represent the views of the Biological Sciences Research Council (BBSRC).

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## Notes

1. Sciencewise is the United Kingdom's national centre for public dialogue in policy making involving science and technology. It is funded by the Department for Business, Innovation and Skills to help policymakers understand and use public dialogue to inform and improve policy decisions.
2. The future scenarios were adapted from the academic report of Dingwall et al. (2011). Biotechnology and Biological Sciences Research Council (BBSRC) Sustainable Bioenergy Scenario Tool, and simplified by a science communicator to a level more appropriate for the purpose.
3. Two other events took place in September 2013; however, as they were centrally run by BBSRC, we do not consider them in this study.

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