Evaluation of Sciencewise-ERC

Final report

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EVALUATION OF SCIENCEWISE-ERC

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COMMENTS WELCOMED

The continuing development of Sciencewise-ERC remains work in progress. We therefore welcome comments and suggestions on this report and the issues it raises. Please contact Diane Warburton, Sciencewise-ERC Evaluation Manager, at diane@sharedpractice.org.uk; and Alan Mercer, Sciencewise-ERC Programme Manager, at alan.mercer@aeat.co.uk.

EXECUTIVE SUMMARY

Objectives and scope of the evaluation

The purpose of the evaluation was to collect and review evidence of the value, history and learning from Sciencewise-ERC particularly:

- the good practice and innovation, lessons and impacts of Sciencewise-funded public dialogue *projects*;
- the effectiveness and value of the advice, guidance and other support services provided by the Sciencewise Expert Resource Centre (Sciencewise-ERC) *programme*.

The evaluation has covered all 14 Sciencewise-funded public dialogue projects from its initial launch in 2004, although the focus is on the nine projects which began slightly later and fed directly into policy development which were completed and evaluated by June 2010. The programme evaluation has focused on the work of the Sciencewise-ERC from February 2008, with a brief summary of the history and developments from 2004. The two main evaluation research methods were review of documents (including full analysis of all independent evaluation reports on dialogue projects), and 48 new interviews with a range of stakeholders.

Impacts of Sciencewise-ERC funded projects

14 public dialogue projects have been funded, completed and evaluated by Sciencewise since 2004, with nine projects that were directly related to and designed to influence national policy and which were commissioned by public bodies.

The analysis of impacts has focused on these nine public dialogue projects, which have covered climate change and energy use, brain science, addiction and drugs, the forensic use of DNA, the use of hybrid and chimera embryos for research, industrial biotechnology, nanotechnology, stem cells and trust in IT.

The difficulties of demonstrating policy impacts are well known, and considered in detail in the full report. However, the evaluation has found evidence of a range of types of policy influence as well as impacts on those involved, as follows:

- **Policy influence**. Sciencewise funded projects can be shown to have had significant direct influence on policy, contributed to policy outcomes (e.g. as part of the evidence base), increased robustness and credibility as the policy was more socially informed and the policy process was more open and transparent, and influenced wider debates around the topic including through generating wider public awareness and understanding of the issues.

- **Impacts on those involved**. The projects also had significant impacts on policy makers and their organisations including better relationships with stakeholders, better relationships with public participants, enhanced profile and reputation for good practice, improved planning for future communications, created synergy and integration across government, and increased the use, experience and knowledge of public engagement.

  There were also important impacts on public participants including increasing their awareness and understanding of the topics being discussed, spreading knowledge to others about the topics and about being involved, becoming more positive about future participation, developing greater trust in public policy-making processes and bodies, changing their attitudes and views, feeling valued as citizens, and gaining increased understanding of different types of people through working together on difficult issues.

Impacts on scientists, experts and other stakeholders involved in the dialogue projects included having enabled them to develop new skills, experience and confidence in communicating with the public, provided opportunities to learn about public views, fears and questions first hand, increased their respect for the quality of the potential public contribution to science and technology, and enabled them to gain a higher personal profile and build new relationships and networks.

- **Wider impacts**. Sciencewise funded projects can also be shown to have increased transparency and openness in government policy and decision making, strengthened democratic accountability, strengthened civil society and built social capital.

Impacts of the Sciencewise-ERC programme

The evaluation found that the Sciencewise-ERC programme overall has achieved the following impacts:

- **Increased the quality and quantity of public dialogue projects** on science and technology, with more projects being funded and completed, and increased investment in dialogue on science and technology through success in leveraging funds from elsewhere. There is evidence that only one of the 14 projects funded would have gone ahead in the same way, and half would not have happened at all, without Sciencewise support.

  There is also evidence from stakeholders that Sciencewise-ERC advice has improved the quality and success of projects by increasing the involvement of stakeholders, ensuring value for money, getting tangible benefits from dialogue, giving government staff more confidence to be transparent and open with their policy development work and to experiment with new approaches, broadening the scope of dialogue projects, and pushing dialogue more upstream (earlier) in the policy process.

- **Developed innovation and good practice in the design, delivery and evaluation of public dialogue**. Sciencewise funding within the clear guidelines articulated in the Guiding Principles has enabled innovation in public dialogue projects within a clear approach and framework, and for good practice in design, delivery and evaluation to continue to be developed.

  Project evaluations show there have been developments in good governance (especially the establishment of project steering groups), and stakeholder involvement more widely, has helped build better decision-making systems within projects and more effective stakeholder relationships on which to build in future. There has also been a greater focus on open communications and transparency throughout and after the project, ensuring wider knowledge of the project, more effective engagement of scientists and other experts during dialogue projects and better recruitment of appropriate numbers and types of public participants to ensure a robust process and credible results.

  The projects themselves have included more focus on a mix of innovative and varied methods and activities for working with the public in ways that fully engage them in open discussion over sufficient time to enable them to take in new information and come to their own conclusions. There has been greater emphasis on preliminary research, and the involvement of stakeholders, in scoping the dialogue and ensuring that information is presented in ways that best support effective discussions among the public to meet the purpose of the dialogue. In evaluations, there has been a growing focus in evaluation on assessments of costs and benefits, as well as continuing to assess the quality, effectiveness and impacts of public dialogue activities.
- **Built greater support and increased awareness, understanding and skills in government** for public dialogue as part of policy making. Evidence shows a significant

role for Sciencewise in creating change (alongside other influences), largely through its support for project design, delivery and evaluation and through creating evidence of the value of public dialogue. In addition, Sciencewise-ERC has commissioned and published reports and case studies on all 14 projects funded, and detailed evaluation reports on 10 of those projects, as well as eight major reports that have taken the principles and practice of public dialogue forward.

- **Established a new centre of excellence and model of support for innovation in public dialogue in policy**. Sciencewise-ERC has created a unique model of support which has helped encourage and support innovation in building public dialogue into government policy making. The mix of funding, advice and support, and the way these are connected in order to maximise learning and capacity building in government through the development of practical projects, seems particularly effective in developing understanding and skills in government for public dialogue, as well as increasing the quality and success of public dialogue projects.

  The most valuable elements of the Sciencewise-ERC package were seen to be access to funding, the Guiding Principles as a framework and other good practice guidance, the independence and status of Sciencewise-ERC and the system of Sciencewise Dialogue and Engagement Specialists (DESs) in providing one-to-one mentoring advice to project managers in government. Funding was important to government project managers and was a major incentive in the initial approach to Sciencewise, although more identified the advice as useful than the funding. Feedback to the evaluation indicated very high levels of satisfaction with Sciencewise-ERC support, with all government partners wanting to work with Sciencewise-ERC again and being willing to recommend the centre to others.

  Overall, there was a high level of enthusiasm and support for the work of the Sciencewise-ERC, and strong indications of the positive impacts the programme had achieved. There were caveats to this, but overall the feedback was significantly more positive than had been expected, which suggests a strong foundation for future development.

Current concerns and future challenges

There have been important concerns and challenges identified in the evaluation, from both the analysis of project evaluations and the assessment of the programme activities. Some concerns are related to the nature of public dialogue now and in future, and some are focused on the role and services of Sciencewise-ERC.

- **Extending impacts on government policy making structures and systems**. Awareness and understanding of public dialogue has increased, but no evidence has been found in this evaluation of any structural changes to government policy making systems that would demonstrate that public dialogue is now embedded in mainstream policy development. Without these changes to policy making systems, it is expected that the influence and value of public dialogue will remain peripheral and fragile.

- **Increasing engagement with stakeholders**. The evaluation has found that Sciencewise could do much more in terms of networking, building broader constituencies of support for public dialogue among a wider set of stakeholders, and providing opportunities for sharing critical reflective learning and experience. Sciencewise could also do more to bring together those with common interests to create more of a movement for change to better integrate public engagement in government policy making, and simply providing opportunities for stakeholders to stay in touch with Sciencewise and others in the field.

  On individual public dialogue projects, there were suggestions for increasing efforts to ensure effective working with NGOs and other stakeholders in the design and delivery of dialogue, including representation on advisory groups. Wider public engagement

was also important, both to continue engagement with people who have participated in specific dialogue projects, and to open up topics for discussion with the public more widely during and after projects.

The evaluation research took place at a time when there was beginning to be increasing work with external stakeholders, which established new ways of working with stakeholders. However, there remains potential for further development of collaborative working with stakeholders.

- **Increasing evidence on the value of public dialogue**. Although there is significantly more information now available on policy impacts (particularly from individual project evaluations), there was felt to be insufficient evidence on the value of public dialogue to policy making generally, the cost effectiveness of dialogue (particularly the extent to which dialogue can save time and money in the longer term, and whether results and impacts of equal quality can be achieved with lower levels of funding), the use and influence of dialogue results to demonstrate how and to what extent decisions have been influenced by public views, and the longer term impacts of dialogue particularly on 'better' policy.

  A more fundamental gap is in translation of raw evidence into clear messages about the influence and value of public dialogue in terms that resonate with government and that can be fed back to past public participants and other stakeholders in projects.

- **Strengthening the integrity of public dialogue**. The Sciencewise-ERC Guiding Principles, and statements on the Sciencewise-ERC website explicitly state that public dialogue does not "seek endorsement of decisions that have already been made"[1], but there remain concerns that government could use dialogue to legitimise decisions already sought or made, or to manipulate public opinion.

  The dangers of misuse raised in this study are seen as practical as well as ethical: without clarity about the boundaries and purpose of dialogue processes, the struggle with public cynicism in public dialogue projects is likely to continue. Greater clarity is needed to support the principle that legitimate public dialogue opens up space for debate with no preconditions, and ensures there are opportunities for influence on decisions. It is honest about what can, and cannot, be changed as a result of the dialogue. It does not hide information about what cannot be changed, nor is it structured simply to go through the motions to close down debate in order to blunt opposition.

  There remains continuing, and possibly growing, pressure for public dialogue processes to demonstrate that they are open and legitimate to help increase public trust and willingness to participate in public dialogue and in society more widely.

- **Strengthening good practice in the design and delivery of public dialogue projects**. Several issues were identified as needing attention in the future development of public dialogue projects; the need for more effective engagement with NGOs and other stakeholders was also identified and is described separately in this summary.

  The other main concerns included the need for better follow up to projects (with past participants and on the impacts on policy), more effective governance of projects (particularly clear decision making and the involvement of stakeholders in advisory and oversight groups), new methods to enable dialogue projects to generate new thinking with the public (beyond identifying concerns and aspirations), recording and analysis that captures the full diversity and richness of public views, and ensuring fully deliberative dialogue with time for the participants to fully discuss the issues among themselves.

[1] www.sciencewise-erc.org.uk/cms/why-do-dialogue/

- **Considering greater independence from government**. Sciencewise-ERC is a government programme, run by the Department of Business, Innovation and Skills (BIS), and delivered by a private contractor (AEA). However, it is seen by many stakeholders as more than that, with an independent identity and wider mission. Independence from government was seen as potentially compromising influence, as much as closeness to government was seen to risk neutrality.

  Other questions were raised about the extent to which closeness to government compromises the ability of Sciencewise-ERC to monitor policy influence effectively, to develop projects that are not necessarily linked to current government policy priorities, and to help develop a wider movement around public engagement in public policy.

  The Sciencewise-ERC approach of using independent contractors to deliver projects to demonstrate the independence of the dialogue processes from government has been seen as a strength. However, for some, the lack of government involvement in direct delivery could reduce the potential for internal capacity building and undermine influence and impacts on government policy (if departments did not 'own' the process).

- **Extending the approaches to public dialogue**. The existing approach to public dialogue promoted and supported by Sciencewise-ERC has clearly been successful in its own terms, and there is a great deal of enthusiasm among stakeholders for the way it has been operating. However, concerns are raised in the study that a specific model of public dialogue has been rigidly applied and suggestions made for greater flexibility to allow for more creative dialogue that allows for greater collaborative working between the public, policy makers and experts.

  There were also suggestions for moving beyond a sole focus on government convened processes to find ways to link more effectively with other participatory processes that could bring in new and different ideas from different publics (e.g. grassroots activities), and to focus on topics which specifically contribute to changes in the governance of science and technology to make it more open to scrutiny and publicly accountable.

- **Strengthening Sciencewise-ERC support for public dialogue projects**. Overall, the Sciencewise-ERC support for public dialogue projects was highly regarded and seen to have added significantly to the quality and success of projects, as well as contributing to capacity building in government and among practitioners. Concerns were expressed over some specific issues including the need for better follow up after dialogue projects (both with public participants and in terms of longer term policy influence), clarifying the extent to which the DES can require changes to the design and delivery of projects or only advise, potential DES and practitioner conflicts of interest, and the need for better links to government departments and policy and for better back up resources from Sciencewise-ERC.

- **Strengthening strategic planning for Sciencewise-ERC**. Three main factors were identified as contributing to perceived problems in strategic planning for Sciencewise-ERC: uncertainty about funding, lack of monitoring of the reach and value of Sciencewise events and publications, and lack of leadership on good practice and future directions on public dialogue.

  Initial problems for Sciencewise-ERC around a lack of leadership on good practice and on future directions for public dialogue were addressed by the appointment in December 2009 of an experienced engagement practitioner (Lindsey Colbourne) as Head of Dialogue, the establishment of new initiatives to consider the role and nature of public dialogue in the changing policy and funding context in 2010, and more effective working with the Sciencewise-ERC Steering Group.

Early practical problems around the monitoring of the reach and value of Sciencewise-ERC events and publications have begun to be addressed with the establishment of new systems. The lack of certainty about funding continues to hamper long term planning.

- **Potential future threats to public dialogue**. By far the biggest threats to the future of public dialogue identified in this study were the related issues of reduced funding (as a result of general public sector funding cuts), and lack of political support. For some, however, reduced public funding was an opportunity: public dialogue being seen as particularly valuable in helping policy makers manage risks effectively by making the 'right' decisions in difficult times.

What have we learnt from this evaluation that is new?

This evaluation has identified significant new evidence about the impacts and effectiveness of the Sciencewise-ERC programme and of the dialogue projects supported by Sciencewise. This evidence comes from new analysis of the independent evaluations of dialogue projects, and feedback from a wide range of Sciencewise's stakeholders. In particular, there is new evidence about the role of Sciencewise-ERC in increasing the quality as well as quantity of projects, and in spreading awareness, understanding and support for public dialogue in government.

The establishment of the Sciencewise-ERC as a centre with a specific model of support for innovation in public engagement in policy (particularly through the one-to-one support to project managers from Sciencewise DESs) was also valued in its own right.

The study has also resulted in a number of unexpected insights, particularly the extent of positive support for Sciencewise-ERC and its work across all types of stakeholders, and the level of commitment and enthusiasm for the Sciencewise principles and the approach to public dialogue it promotes as a way of enabling the public to influence national policy.

It was also unexpected that, although funding was a key incentive for government departments deciding to work with Sciencewise, more said they found the advice 'useful' than funding. Finally, it was not expected that the work with the practitioners who design, deliver and evaluate the dialogue projects would be valued as personal professional development and contributing to the development of the field, and the extent to which those practitioners valued the role of Sciencewise as a 'critical friend' throughout the process of running projects. These somewhat unexpected findings may help in prioritising activities within the next stages of Sciencewise development.

The study has also found that the priority activities for the future as far as the stakeholders interviewed were concerned were the need to make the case for public dialogue in government and more widely and to embed public dialogue in government policy making, work more with other stakeholders, develop practice through projects and evaluation, and further develop awareness, understanding and skills.

In making the case, the key messages identified in the study were that dialogue saves time and money in the long term, it is a practical way to hear authentic public voices, it results in better public policy decisions, and it contributes to a healthy democracy.

Recent changes and next steps

The research for the evaluation was concluded in September 2010. Planning and development for Sciencewise-ERC has continued, with some changes to the arrangements outlined in this report. The main structural change to the programme was

the appointment in December 2009 of a new Head of Dialogue (Lindsey Colbourne), to work alongside the Programme Director in AEA (Alan Mercer) in the Sciencewise-ERC management team. This new role was to provide strategic direction and leadership particularly on good practice and future directions for public dialogue.

By the end of December 2009, the Head of Dialogue had developed a set of priority objectives to provide focus for the work from 2010 to March 2011, which reflect some of the issues emerging from this evaluation.

The detailed findings from this study have also been fed into various internal discussions including presentations to the Sciencewise-ERC Steering Group (in July 2010) and the Sciencewise-ERC Management Team (August 2010). Findings have also been presented at various Sciencewise-ERC stakeholder workshops during 2010.

Conclusions

In general, the evidence in this study is clear that Sciencewise-ERC has had major impacts on the number and quality of public dialogue projects in science and technology and their influence on policy, and has raised the profile of public dialogue in government. The impacts of the projects and the wider programme activities are clearly very closely linked, especially in relation to spreading awareness and capacity building around public dialogue to improve public policy in science and technology.

Overall, the Sciencewise-ERC is seen as a remarkable programme that has achieved a great deal in a relatively short time. The challenge, for many stakeholders interviewed, was how this work could continue to develop and be built on in future.

Feedback from stakeholders has been a mix of highly enthusiastic support for the impacts and achievements of Sciencewise-ERC in general, and quite trenchant specific criticism, often from the same people. Although there are many suggestions for change and improvement, they are largely around building on what Sciencewise has achieved and is doing, rather than proposals for significant changes.

There are some difficult dilemmas here, including how best to influence policy and achieve capacity building without being compromised by being too close to government, and how to ensure that public dialogue is not used to manipulate public opinion or justify existing policy positions.

These dilemmas continue and can be tackled within the context of the overall findings of this study that suggest that Sciencewise-ERC is already achieving a great deal in establishing public dialogue as an effective way of hearing authentic public voices on highly controversial subjects. It is still very early days, there are changes and improvements that need to be made, but there are already achievements to celebrate, and some strong foundations on which to build.

1 INTRODUCTION

This evaluation study is a detailed assessment of the establishment and activities of Sciencewise Expert Resource Centre (Sciencewise-ERC), with particular focus on the impacts of the work and the challenges that have arisen.

The study covers the period from the start of Sciencewise-ERC in February 2008 to June 2010. As this is the first major review of Sciencewise, the study also covers (to a lesser extent) the history and early activities of Sciencewise from its original launch in 2004, particularly in relation to the public dialogue projects funded by Sciencewise from the beginning.

Sciencewise-ERC has a very specific definition of public dialogue (see section 3.4) which forms the basis of its decisions to fund certain projects, and its assessment of the value of those projects. The key elements that define public dialogue for Sciencewise are fourfold:

- the focus on science and technology issues
- the focus on deliberative public dialogue
- interaction between the public participants and scientists and other experts
- the focus on issues that are relevant to, and feed into, national policy development.

It is these four elements that define public dialogue projects for Sciencewise-ERC, and those elements also underpin the analysis that follows.

Overall, the study presents evidence that Sciencewise-ERC has had significant positive impacts on public policy on developments in science and technology through the public dialogue projects co-funded by Sciencewise. It also shows how the programme has improved the quality and success, as well as increased the number, of those public dialogue projects by providing advice and guidance on the design, delivery, evaluation and communications.

Inevitably, problems and challenges have arisen, and some have been tackled effectively providing useful lessons for the future. Some key strategic concerns remain including the dangers of public dialogue being misused to manipulate, co-opt or close down public debates on contentious issues and/or to legitimise pre-existing public policy decisions. Several practical questions have also been raised over the detailed design and delivery of good practice in public dialogue, and the support services provided by Sciencewise-ERC.

The purpose of the evaluation was to collect and review evidence of the value of the new Sciencewise-ERC programme, and to capture the history and learning from Sciencewise-ERC activities to June 2010. It is not an evaluation or review of the state of public dialogue in the UK, what public dialogue should be or what strategic directions should be followed to develop public dialogue in future - in science and technology policy or more widely. It is a practical review of the impacts and challenges in the work of the Sciencewise-ERC programme to date. The outputs from the evaluation are intended to identify practical lessons for the continuing development of the design and delivery of dialogue projects and the support services that Sciencewise-ERC offers, and to increase the transparency and accountability of the work of Sciencewise-ERC.

The focus of the evaluation was on the two key types of activities which form the basis of the Sciencewise programme:

- the good practice and innovation, lessons and impacts of Sciencewise-funded public dialogue projects, including the longer term impacts

- the effectiveness and value of the advice, guidance and other services provided by the Sciencewise-ERC.

The evaluation study was an internal review, carried out by the Evaluation Manager, who also has responsibilities for delivering part of the Sciencewise-ERC programme (including overseeing evaluations of dialogue projects), rather than a fully independent evaluation. However, conventional evaluation research methods have been used to gather and analyse information and feedback from external stakeholders (48 interviews were conducted) as well as detailed analysis of documentary sources, so the analysis presented in this report is based on extensive new evidence, which is illustrated by statistics as well as quotes from the stakeholders interviewed for the study.

Sciencewise has already developed new programmes for the current period (January 2010 to March 2011), designed in part to reflect emerging findings from this evaluation. This report is intended to present the full evaluation findings, describing what has worked well and less well so far, to feed into the continuing planning of current and future Sciencewise activities. The results of the evaluation have already been debated by the Sciencewise-ERC Steering Group (in July 2010), and considered by the Sciencewise-ERC management team (in August 2010).

2 EVALUATION STUDY METHODOLOGY

2.1 Introduction

This evaluation study was undertaken during 2009 - 2010 to review the activities to date of the re-launched Sciencewise-ERC in April 2008 up to June 2010.

The purpose of this evaluation study was to collect and review evidence of the value of the Sciencewise-ERC programme from April 2008 to June 2010, to capture the history of the Sciencewise programme overall, and to capture the learning from Sciencewise-ERC. The focus of the evaluation was on the two key types of activities which form the basis of the Sciencewise programme:

- the good practice and innovation, lessons and impacts of Sciencewise-funded public dialogue ***projects***, including the longer term impacts; all 14 completed projects funded by Sciencewise since 2004 are reviewed, with detailed analysis of the nine later projects based on independent evaluations of those

- the effectiveness and value of the advice, guidance and other support services provided by the new Sciencewise Expert Resource Centre (Sciencewise-ERC) ***programme*** from April 2008.

Some of the 'programme' activities, particularly the advice and support in the design, delivery and evaluation of the projects, link the programme activities to individual dialogue projects. The separation between projects and programme activities is therefore less clear than might appear at first sight.

There is one other point to make about the coverage of the independent evaluations of the nine later projects, and therefore the analysis of the impacts of those projects (see section 4). Those project evaluations (and therefore this overview) focus on the dialogue ***process*** rather than any analysis of the ***findings*** of the dialogue projects in terms of public views on specific subjects, or any overview of trends in public views across all the science and technology issues covered in the projects.

An initial analysis of the 'ethical' issues raised by the public in Sciencewise-ERC funded dialogue projects has been undertaken by Dan Start, which covers some of the dialogue project *findings*[2]. However, there is clearly the potential for significantly more work to be done to assess overall findings in terms of public views.

This section of the report summarises the research and analysis undertaken for this evaluation study. The study was designed in consultation with the programme sponsor (the Department of Business, Innovation and Skills - BIS), AEA and the Sciencewise Steering Group. Following those initial discussions, a programme of work and budget was agreed, and the evaluation research started in November 2009.

2.2 Drivers for the evaluation

An initial paper on evaluation was put to the November 2008 Steering Group which identified three main drivers for evaluating the Sciencewise-ERC programme:

- **Evidence of the value of the new Sciencewise-ERC programme**. The Sciencewise-ERC programme has been piloting an approach to an Expert Resource Centre, communications and marketing, information provision, capacity building and various other activities. The evaluation was designed to provide feedback on the

[2] Start, Daniel (2010) *A review of public perceptions of ethical issues from the Sciencewise dialogues*. BIS Science and Trust Expert Group, London.

quality of these services, and the impacts they were having on the quality of public dialogue and policy processes, so that the findings could feed into the development of future plans for the programme.

- **Capture the history of the Sciencewise programme**. Although some of the previous Sciencewise funded *projects* were evaluated in detail, the previous Sciencewise *programme* itself had not been written up in any way. It was felt to be important to capture the basic history of the development of the Sciencewise programme to support understanding of how and why the current programme was designed, and so that knowledge could feed into the development of future thinking.

- **Capture the learning from Sciencewise-ERC as a model of support and advice on public dialogue and engagement**. Sciencewise-ERC is a unique programme in Government, in providing expert technical advice and funding on delivering public dialogue projects on national policy issues. The evaluation was therefore designed to consider the impacts both of projects and the programme overall as a model of support and development for innovation in government and policy making.

The evaluation was therefore intended to provide:

- **evidence of the history, effectiveness, impact and value of the programme and projects**, to increase accountability, credibility, legitimacy, openness and transparency.

- **lessons from the dialogue projects and the programme model of support**, to feed into the improvement of support in future for public engagement on science and technology across government.

2.3 What to evaluate?

The Sciencewise-ERC programme has included various activities and work programmes, some with clearly agreed outputs and targets (e.g. communications and marketing), and others that were developmental (e.g. research on good practice).

Evaluation work in Sciencewise-ERC since April 2008, and the specific research for this study, has focused on the following:

- **A co-ordinated approach to evaluating individual Sciencewise-funded public dialogue projects** by providing strategic guidance and frameworks. This was established in 2008 and all projects funded by Sciencewise-ERC now have independent evaluations based on that guidance. Reports on the benefits, impacts and lessons from across the dialogue projects have been presented to various Steering Group meetings.

- A review of the **impacts, achievements and success** of the Sciencewise-ERC programme overall by considering:

    - the extent to which the programme overall has **met its aims and objectives**; aims and objectives were discussed with the Steering Group and agreed during 2008 and the activities of the programme are assessed against these in section 7.2 below.

    - the **strategic impacts of the projects and the Sciencewise-ERC programme** overall, including impacts on policy and policy making, policy makers and their organisations, public participants, scientists and other stakeholders

    - the **effectiveness, quality and value** of the Sciencewise-ERC advice, support, communications and other activities

- **Identification of key current concerns and challenges** that have arisen from the projects and from the programme overall, to help identify future priorities for action.

2.4 Evaluation approach and methods

This evaluation study was carried out by the Sciencewise Evaluation Manager, who also has responsibilities for delivering part of the Sciencewise-ERC programme (including overseeing evaluations of dialogue projects). The study is therefore closer to an internal review than a fully independent evaluation. However, various methods have been used in designing and delivering the study to ensure that the evaluation research, analysis and conclusions have been undertaken as objectively as possible in the circumstances. For example:

- The scope and methods of the evaluation were discussed and agreed with the Sciencewise-ERC Steering Group, including the purpose, key questions, types of stakeholders and how to involve them

- The selection of the 48 individuals selected for interview drew on advice from a range of stakeholders, including Dialogue and Engagement Specialists (DESs) and other external stakeholders. The aim was to gain as wide a range of perspectives as possible. See below for the numbers of different types of stakeholders interviewed.

- Interviews were carried out and written up by independent researchers, to avoid any unconscious bias in questioning stakeholders and recording feedback.

- Analysis of the interviews was undertaken by application of grounded theory, so that categories of responses were derived from comments made, not imposed by research assumptions and expectations. The analysis was largely qualitative but included a quantitative element to enable reporting of the numbers of people with specific views where that seemed particularly relevant. Reporting addresses the questions initially identified as important for the evaluation, but other themes were added based on feedback received.

- The reporting makes use of quotes from the notes taken from interviews, so that verbatim feedback is presented as well as analysis, to illustrate the different voices of stakeholder interviewees and also to attempt to reflect the richness and diversity of the interview findings.

The approach has been to provide critical analysis of the feedback received on the programme, and of the findings of the individual project evaluation reports. However, this is an instrumental rather than academic evaluation: it is designed to feed into the future development of the Sciencewise-ERC programme and also to the future development of public dialogue projects and it therefore aims to focus on practical lessons rather than the development of theory.

To that end, the approach to this evaluation study has been based on a stance of complete neutrality in evaluating what worked well and less well, lessons and impacts. The author has no vested interest in particular findings. However, the study is also based on a belief that public participation in government policy is a 'good thing'. The aim has been to retain the credibility of the subject, while subjecting it to rigorous analysis so that it will be stronger in future. This is an approach that aims to be respectful while also acting as a 'critical friend' to the programme and to public dialogue more generally. As has been said elsewhere: "Let us cease to confuse the necessary evaluation of

ourselves with moralising masochism"[3]. In this study, we have sought to evaluate strongly but without the masochism that can sometimes accompany such analysis.

The focus in the analysis and conclusions of this study is on learning from the experience reviewed here so that it can be used to enable improvement to the principles and practice of public dialogue. Negative feedback is therefore reported at least as fully as positive feedback.

The research and analysis process was as follows:

- **Review of the findings from evaluations of individual Sciencewise-funded public dialogue projects**. The role of evaluation in ensuring good quality independent evaluations of all dialogue projects is described in detail in sections 4.8 and 5.4.4 below.

  The study reported here has involved a new complete review of all the independent evaluation reports of all nine public dialogue projects completed and evaluated by June 2010. It includes a detailed analysis of each dialogue project in relation to good practice and innovation in the dialogue process, the concerns, problems and challenges, the lessons and the impacts of the dialogue project overall (see section 4 and Annex 1).

- **Gaining feedback from project managers and those using the policy outputs of the dialogue projects**, on the benefits and value of the advice and support services and products available from Sciencewise including what difference the advice made to the success and quality of the projects, and where problems had arisen.

  This was undertaken through a series of interviews with 13 project managers in the departments and other government bodies that have run public dialogue projects with Sciencewise-ERC support and funding, plus three senior academics and civil servants involved in using the results of the public dialogue from the projects.

- **Gaining feedback from the Sciencewise-ERC Steering Group and the DES team** on how the structure and delivery of the Sciencewise-ERC programme worked from their perspective (e.g. what worked well, what worked less well, and what could improve the programme).

  This process began with review sessions with the Steering Group (November 2008) and the DES group (November 2008) and less formally at subsequent DES meetings. In addition, interviews were carried out specifically for this evaluation with 6 of the 7 independent members of the Sciencewise Steering Group, and 11 of the 16 DESs.

- **Gaining feedback from dialogue practitioners and other external stakeholders** on the role and impacts of the Sciencewise-ERC projects and programme, and where concerns and challenges had arisen.

  This feedback was gained through interviews with 8 practitioners (delivery and evaluation contractors who had worked on Sciencewise-funded projects), plus 7 other external stakeholders with other connections to the Sciencewise programme in various ways (academics, individuals in government agencies and others).

  In this study, the term 'practitioners' has been used to describe the contractors who have delivered Sciencewise dialogue projects and evaluations. This terminology was chosen to avoid any sense that the contractors in this context are mere hired hands. In practice, all the dialogue contractors who have been involved in Sciencewise projects have been as responsible as others in the programme for innovation and

[3] Bruckner, Pascal and Rendall, Steven (2010) *The Tyranny of Guilt*. Princeton University Press, USA. Quoted in *The New Statesman*, 1 April 2010.

good practice, and for commitment to the aims and principles of the Sciencewise programme.

In summary, a total of 48 interviews have been conducted with Sciencewise-ERC's stakeholders, covering as wide a spectrum of internal and external relationships with Sciencewise and different perspectives as possible. The interviews were as follows:

- 13 departmental project managers who have worked with Sciencewise on funded projects; these covered both the public dialogue projects with policy links and earlier projects
- 3 senior policy makers who had been involved with the public dialogue projects (academics and civil servants), and had used the results of those projects
- 8 practitioners (dialogue and evaluation contractors) who had worked with Sciencewise on public dialogue projects
- 6 (of the 7) independent members of the Sciencewise Steering Group (i.e. not AEA and BIS Steering Group members)
- 7 external stakeholders who have worked with Sciencewise-ERC in various ways not covered in the categories above
- 11 (of the 16) Dialogue and Engagement Specialists, with varying degrees of involvement with Sciencewise-ERC activities including close involvement with some public dialogue projects.

The interviews were recorded in note form and analysed fully to gain a sense of the extent to which certain views were prevalent (a degree of quantitative analysis), and also to capture the full diversity and richness of comments made (qualitative analysis and use of quotes from interviewees).

In addition to these interviews, questionnaires were used at some Sciencewise events and workshops to gain feedback from those involved. However, these events (and the monitoring) were organised by the AEA communications team and very little data has been available.

Interviews were not carried out with the AEA team, responsible for the contract to deliver the programme, nor with BIS, responsible for the programme in government. However, in order to ensure these core stakeholders were consulted, and their views incorporated into the research findings, a draft of the full report was provided to both AEA and BIS for comment, and factual comments taken into account in the final draft.

Finally, the evaluation research also involved reviewing the monthly reports from AEA to BIS as the sponsoring department. This was undertaken particularly to identify all key activities during the period March 2008 to June 2010, and any statistical data that would help describe what had taken place and contribute to an assessment of achievement and success. However, it was found that this data, and therefore the descriptions in section 5.5 below, were incomplete.

3 INTRODUCTION TO SCIENCEWISE-ERC

3.1 Introduction

This section summarises the history of how and why Sciencewise was set up, provides a brief summary of the changes since the original Sciencewise programme was launched in 2004 and shows the overall aims and objectives of the programme. It goes on to summarise the nature of public dialogue within the Sciencewise-ERC.

3.2 Brief history

Government routinely engages with experts and stakeholders to inform its thinking. This engagement has become seen by policy makers and others as necessary but no longer sufficient. Policies that emerge have sometimes been difficult or impossible to implement because they fail to take account of broader public concerns. At the same time, interest has grown in increasing the transparency and democratic accountability of public policy. Over the past few years, public dialogue has been developed and used to fill the evidence gap on public concerns and aspirations and to address the wider social and political drivers for greater public participation in public policy.

Public participation in the development of public policy is not new, and arose for both practical and political reasons[4]: conventional programmes were seen not to deliver or sustain the changes needed, and there was political pressure to open up decision making to wider influences. Earlier movements existed but it was in the 1950s and 1960s that systemic changes to integrate participation began to appear particularly in international policy for aid and development. Changes in the UK followed from the 1960s in fields including regeneration, planning, housing, sustainable development, health, economic development[5]. In science, movements to demystify and consider the social impacts and purposes of science were beginning including the concept of *community science*[6], leading perhaps to the idea of *civic science*[7] (or *citizen science*).

Science communication became increasingly important in the 1980s. The Bodmer Report for the Royal Society in 1985[8] argued that Public Understanding of Science (PUS, or what others called public communication of science and technology - PCST) was essential for the UK to make the most of its scientific potential. However it is named, PUS was considered to be the 'deficit' model of public engagement, in which the aim is to provide information to the public so that they would understand, value and trust what scientists do.

10 years later (1995), the Government Office of Science and Technology (OST) published the Wolfenden Report[9], which reviewed progress on PUS and argued for universities to recognise and build PUS skills among their students and staff. Also in the 1990s, the Biotechnology and Biological Sciences Research Council (BBSRC) had devised a programme to enhance public access to science and scientists to improve public confidence and stimulate open debate about science and technology.

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[4] Warburton, Diane (1997) *Participatory Action in the Countryside. A Literature Review*. Countryside Commission.
[5] Brodie, E., Cowling, E. and Nissen, N. (2009) *Understanding participation: a literature review*. NCVO, IVR and Involve, London
[6] Rose, Hilary and Rose, Steven (1972) 'The Radicalisation of Science', in *The Socialist Register*, 1972, pp 105-132
[7] O'Riordan, Tim (1998) 'Civic Science and the Sustainability Transition', in Warburton, Diane (ed) (1998) *Community and Sustainable Development. Participation in the Future*. Earthscan, London.
[8] Bodmer, Walter (1985) *The Public Understanding of Science*. Royal Society, London.
[9] Wolfenden et al (1995) *Report of the committee to review the contribution of scientists and engineers to the public understanding of science, engineering and technology*. Office of Science and Technology, October 2005.

By this time, public dialogue was seen - in science and technology related policy areas and also in other policy fields - as an approach that broadened communications with the public from only 'information giving' to include 'listening', alongside a growing interest in deeper public involvement that had a more central and influential place in policy making.

In 2000, the House of Lords Select Committee report on Science and Society[10] (also referred to as the Jenkin report) suggested that there was a 'mood for dialogue' and that, although the public was largely positive about science, scientists needed to listen to and learn from the questions that members of the public were asking. This report argued that dialogue should become embedded in policy making and in science:

> *"Direct dialogue with the public should move from being an optional add-on to science-based policy-making and to the activities of research organisations and learned institutions, and should become a normal and integral part of the process."*

The reasons for this were that scientists were expected to apply their own morality and values to their work, and that *"by engaging with the values and attitudes of the public, they are more likely to command public support"*. It is suggested that this shift to greater public dialogue came after the problems of public hostility to biotechnology in general, and genetic engineering in particular, that could not be solved by mere repetition of scientific information[11]. It is at this point, it is argued, that PUS became PEST - public engagement in science and technology[12].

It is within this policy and political context that the Sciencewise programme started, within the Government's Office of Science and Technology (briefly called the Office of Science and Innovation). The Sciencewise programme was established in 2004, and launched at the BA Festival of Science in September 2004, to encourage good practice in public engagement projects on science and technology.

Sciencewise was rooted in the Government's 10 year Science and Innovation Investment Framework 2004-2014. This stated that

> *"Researchers and policy makers must earn public confidence and trust in science through addressing public priorities and concerns. In this way the scientific community, working with Government and other partners, can ensure that society's understanding and acceptance of scientific advances moves forward, and does not become a brake on social and economic development in the UK."*[13]

Sciencewise was initially a grant-making programme, which took applications from a wide range of public, private and voluntary organisations with projects designed to engage the public. This was successful in its own terms but had limited direct impacts on policy due to the lack of involvement of policy makers. Consequently, it has evolved into a commissioning programme to help government departments and agencies develop public dialogue to help make better public policy. Public dialogue was defined then as a two-way conversation between the public and experts on science and technology issues.

In 2005, as public dialogue evolved and was being extended, the Government's Council for Science and Technology (CST) recommended in a report to Government that public dialogue activities should be more effectively embedded into policy making structures and processes. The CST argued the following:

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[10] House of Lords (2000) *Science and Society* - Third report of the Science and Technology Committee.

[11] Trench, Brian. (2008) "Towards an Analytical Framework of Science Communication Models" in D. Cheng, M. Claessens, M., T. Gascoigne, J. Metcalfe, B. Schiele, B. and S. Shi ed. (2008) *Communicating Science in Social Contexts: New models*, *new practices*. New York: Springer Publishing, pages 119-135.

[12] Stilgoe, Jack (2009) *The Road Ahead. Public Dialogue on Science and Technology*. Sciencewise ERC / BIS.

[13] HM Treasury / DTI / DfES 2004. *10 year Science and Innovation Investment Framework 2004-2014*. Annex A. The Economic Case for Investment in Science and Research, p156

"The returns on the government's ten-year investment framework for science and innovation will be at risk if there is not broad public support for its policies in areas related to science and technology. Some developments in science and technology have attracted considerable public controversy that governments have been poorly equipped to respond to in ways that command public and stakeholder confidence.

Although government has recognised that engaging experts, stakeholders and the public in the development of science-based policies can inform its thinking and help to develop policies that carry greater support, the standard methods of engagement are limited in what they can offer. The time is ripe for government to engage earlier and more deeply with the public in the development of policies and priorities, so that they are informed by public aspirations and concerns from the outset.

The government has taken the first, welcome steps in this regard. It now needs to generate a change in culture across government to ensure that non-expert and non-partisan perspectives are used effectively to inform the development of policies that are based on science and technology.

This change in culture will require mechanisms for:
- *identifying issues where an investment in public dialogue is likely to bring benefit;*
- *ministerial buy-in to the purpose of any dialogue process and commitment to explain how the dialogue has informed government policy or thinking;*
- *appropriate means of governance and resourcing;*
- *a capacity within government to learn from experience and improve the process."*[14]

The CST 2005 report:

- called for an explicit framework for the use of public dialogue to inform science and technology related policies
- outlined the purpose of dialogue (to inform, not to determine, policy)
- proposed clear criteria for prioritising areas that would benefit from dialogue
- suggested clear governance roles (sponsor - to set objectives and use the outcomes, directors - to oversee the process, and contractors - to manage the process)
- promoted the use of the OST's guiding principles (now adopted as Sciencewise-ERC guiding principles)
- have sufficient resources
- work with others (e.g. research councils, universities, professional bodies and industry) to build capacity, and
- create a mechanism that would develop a corporate memory, based on evaluations of dialogue processes, share this information across government, and generate *"a change in culture where dialogue is seen as a normal part of government's policy development processes on science and technology related issues"*.

The CST report provided the framework for the further development of Sciencewise. In 2006, Sciencewise undertook a Scoping Study among policy makers to see how they viewed dialogue and what support they would need to carry out this sort of engagement with the public. The results showed there was a pressing need for information, guidance and support in how, when and where to engage with the public on a whole range of scientific and technological issues.

[14] Council for Science and Technology (2005) *Policy through dialogue: informing policies based on science and technology*. March 2005.

The findings from the Sciencewise Scoping Study were presented to Government and led to an announcement in the pre-Budget report in December 2006 from Gordon Brown (then Chancellor), of the Government's intention to set up an Expert Resource Centre for Public Dialogue in Science and Innovation.

The Sciencewise Expert Resource Centre (Sciencewise-ERC), operating as a programme under the Department for Innovation, Universities and Skills (DIUS) - now the Department of Business, Innovation and Skills (BIS) - launched in May 2008.

3.3 Purpose of Sciencewise-ERC

Initial aims and objectives were agreed as part of the establishment of Sciencewise-ERC and then, in December 2008, the Sciencewise-ERC Steering Group considered a slightly revised set of aims and objectives for the programme, resulting in agreement on 10 objectives. Following further discussion, these aims and objectives were revised and shortened to a single aim and six key objectives, agreed at the May 2009 Steering Group meeting, as follows:

Aim:

To create excellence in public dialogue to inspire and inform better policy in science and technology.

Objectives:

1 **Innovation and good practice**. Stimulate and support innovation and the development of good practices in public dialogue on science and technology.

2 **Capability, skills and learning**. Identify and maximise learning opportunities at national level, in collaboration with others, to ensure best use of shared knowledge, expertise and resources on public dialogue in science and technology in order to build the capability and desire in Government departments, agencies and other organisations to carry out good quality public dialogue activities and effectively disseminate results.

3 **Resources**. Create a 'one-stop-shop' to ease access for policy makers and wider stakeholders to information, advice and practical resources that support good quality public dialogue on science and technology (e.g. mentoring, training, case studies and evidence-based guidance).

4 **Awareness and cultural change**. Raise awareness and demonstrate the benefits of public dialogue in science and technology in order to help promote a culture across Government and wider political debate that understands and values public dialogue as part of evidence-based policy making and embeds dialogue within Government policy making processes.

5 **Collaboration**. Engage with relevant stakeholders to support and develop the Sciencewise approach and principles of good practice in public dialogue in science and technology (e.g. science community, academic community, science communicators, policy makers, public).

These remained the objectives for the Sciencewise-ERC programme for the period under review in this study. In December 2009, specific strategic priorities were identified within these overall aims and objectives for the work for 2010-2011 by the new Head of Dialogue following her appointment in December 2009 (see section 7.6).

3.4 Nature of public dialogue in Sciencewise-ERC

The exact definition of public dialogue has been developing within and outside Sciencewise for some years. Within Sciencewise, the nature of dialogue was described initially in the set of Guiding Principles for Public Dialogue, published by the Office of Science and Innovation in September 2006 as '*The Government's Approach to Public Dialogue on Science and Technology*'[15].

These Guiding Principles are still used within Sciencewise as the touchstone for defining public dialogue. They remain largely unchanged in 2010, and define public dialogue as follows:

> Public dialogue is a process during which members of the public interact with scientists, stakeholders (for example, businesses and pressure groups) and policy makers to deliberate on issues likely to be important in future policies.
>
> Some of this deliberation must be face-to-face and it needs to give all sides the chance to speak, question and be questioned by others. It must take place far enough ahead of policy being made to be able to have some influence over the eventual policy decisions.
>
> Such dialogue is normally commissioned by policy makers who are in the process of formulating policy positions, so it feeds directly into the policy-making process. A key requisite of public dialogue as developed by Sciencewise-ERC is that it must have a 'policy hook' with a clear understanding of who will be listening to the outcomes.

More recently, at the end of 2009, a short document was prepared and published at the request and with input from the Sciencewise-ERC Steering Group, called '*What is Sciencewise-ERC?*'[16]. This text is now used on the Sciencewise-ERC website to define public dialogue as follows:

> Public dialogue run by Sciencewise-ERC brings together members of the public, policy makers and scientists to discuss and come to conclusions on the social and ethical issues raised by new science and technology, and other policies of national importance. It allows a diverse mix of public participants with a range of views and values to:
>
> - learn from written information and experts
> - listen to each other, and share and develop their views
> - reach carefully considered conclusions
> - communicate those conclusions directly to inform Government's decision making.
>
> Good public dialogue can help policy makers and Government to:
> - make better, more robust decisions that reflect public values and societal implications
> - increase legitimacy for tough decisions
> - demonstrate accountability in public investment
> - overcome entrenched positions to enable policy to move forward
> - gain a rich understanding of public aspirations and concerns that goes beyond media headlines or focus groups.
>
> Public dialogue does not:
> - remove Government responsibility for decision making
> - rely only on surveys or opinion polls to gather public views
> - seek endorsement of decisions that have already been made
> - replace other public information or consultation processes.

[15] www.sciencewise-erc.org.uk/cms/sciencewise-erc-resource-library
[16] www.sciencewise-erc.org.uk/cms/why-do-dialogue/

In summary, the definition of public dialogue which forms the basis of Sciencewise-ERC decisions to fund certain projects, and its assessment of the value of those projects. has four key elements:

- the focus on science and technology issues;
- the focus on deliberative public dialogue (i.e. in depth discussions by the public based on information provided in writing and in person from experts, providing opportunities for participants to develop and share views, and come to carefully considered conclusions that are communicated to inform policy making);
- interaction between the public participants and scientists and other experts;
- the focus on issues that are relevant to, and feed into, national policy development.

The exact parameters of public dialogue, and what constitutes good practice, continue to evolve. The Guiding Principles remain the most comprehensive description of how public dialogue is understood by Sciencewise-ERC but, as is stated in that document: "*This document will be kept under review and the guidance will be revised and re-issued periodically*".

Sciencewise-ERC continues to engage in this debate in various arenas, and it is hoped that some of the findings of this evaluation report will also contribute to clarification and development of public dialogue.

4 SCIENCEWISE-ERC PUBLIC DIALOGUE PROJECTS

4.1 Introduction

Sciencewise-ERC funds public dialogue projects as part of its overall work to create excellence in public dialogue to inspire and inform better policy in science and technology, and to contribute to its overall objectives of innovation and good practice, building capability, skills and learning, building resources to support future work, spreading awareness and cultural change, and developing collaborative initiatives with stakeholders in the field.

Sciencewise-ERC has a very specific definition of public dialogue (see section 3.4) which forms the basis of its decisions to fund certain projects, and its assessment of the value of those projects. it is this definition that underpins the analysis that follows.

The public dialogue projects funded by Sciencewise-ERC have value in their own right, and every project is now independently evaluated on that basis. However, they should not be seen in isolation from the overall work of Sciencewise-ERC in meeting its aims and objectives: they are part of the overall strategy and delivery.

The activities of the broad Sciencewise-ERC programme are described in section 5 of this report. This section (4) focuses on the nature, impacts and good practice of the dialogue projects supported by Sciencewise-ERC. It also identifies current concerns and challenges that have arisen from the approach to public dialogue promoted by Sciencewise-ERC and from current approaches to design and delivery.

4.2 Sciencewise-ERC support to public dialogue projects

When the Sciencewise-ERC was established in 2008, the process of providing support to public dialogue projects changed significantly. Initially, in 2004, the programme was essentially a conventional grant programme. External organisations seeking funds for work on public engagement around science and technology applied to Sciencewise for a grant to undertake their project.

From 2005 to 2006, the Sciencewise programme started to become more deeply involved in the development of project ideas to promote and encourage the focus on links to national policy. The shift of focus to public dialogue around policy issues was accompanied by the gradual development of a more collaborative approach to project development and funding.

The new Sciencewise Expert Resource Centre (Sciencewise-ERC) built on this earlier work and developed a comprehensive programme of support and funding for public dialogue projects that was designed to contribute to capacity building in government, and embed the concept of public dialogue in policy making. This support system worked alongside a wider programme of activities.

The system of Dialogue and Engagement Specialists (DESs) working directly with project managers in government departments, alongside the other Sciencewise products and services, was intended to ensure the maximum impacts from the projects both in terms of policy influence and wider learning and change.

Full details of the Sciencewise-ERC systems of support for public dialogue projects are given in section 5.4; the impacts of that work are described in section 5.6 and current concerns and challenges in section 5.7.

4.3 Scope of analysis in this study

Since April 2008, all Sciencewise-funded dialogue projects have been required to include an independent evaluation, and this section draws extensively from those evaluations. Earlier Sciencewise funded projects were not all dialogue projects, and not all were evaluated: 10 full evaluations have been completed of the 14 major projects funded since Sciencewise was established in 2004.

Also since April 2008, Sciencewise-ERC has provided written guidance which sets out what those independent evaluations have been expected to cover, and the Sciencewise evaluation manager provides support and advice to departmental project managers and evaluators during project evaluations. Final evaluation reports are usually published jointly by the commissioning government department or agency, Sciencewise-ERC and the evaluator.

Early evaluations of Sciencewise-ERC public dialogue projects focused primarily on the dialogue 'process' (and particularly the interactive events with the public), looking both at the extent to which the projects met their own stated objectives, and at the extent to which the project met the Sciencewise principles of good practice.

More recently, there has been a shift of balance in evaluating Sciencewise funded projects, with greater emphasis on assessing the impacts of projects (on policy and those involved), as well as quality of process and meeting objectives. However, the results of this shift have only more recently started to be apparent in completed evaluation reports.

The difficulties of demonstrating policy impacts are well known, and are considered in more detail below. However, difficulties notwithstanding, there has been a growing interest (in government and elsewhere) and resulting emphasis in evaluations in attempting to identify and demonstrate impacts.

Evaluation of public dialogue projects, and public engagement more generally, is still in its relatively early days, and the methodologies and criteria for assessment continue to be developed. Some of these issues were considered in the recent research on evaluating engagement, published by Sciencewise in March 2010[17]. The analysis in this section does not duplicate that work, and focuses instead on reviewing some specific key areas agreed by the Sciencewise Steering Group as priorities for this study.

In summary, the purpose of this evaluation in relation to the Sciencewise-ERC funded public dialogue projects has three main elements, on which the remainder of this section focuses:

- lessons from evaluations (where there was good practice and innovation, and lessons for future)
- updating information on the longer term impacts of the projects
- the extent to which the projects have contributed to meeting the Sciencewise aims and objectives.

The analysis below is based largely on reviews of the evaluations of Sciencewise projects since 2004, supplemented by a series of new interviews with project managers from within the commissioning government department or other public body, policy users within those institutions, and contractors. The Sciencewise Dialogue and Engagement Specialists most closely involved with the projects have also been consulted.

[17] Warburton, Diane (2010) *Evidence Counts. Understanding the Value of Public Dialogue*. Sciencewise-ERC March 2010.

The main emphasis in the following analysis is on the nine policy-related public dialogue projects, although the outputs and outcomes from the five earlier projects are also summarised so that the impacts of the full spread of Sciencewise projects can be understood.

4.4 Overview of Sciencewise-funded projects

Since 2004, Sciencewise has funded, completed and evaluated 14 major projects working on issues of science and technology with the public. The earliest projects were funded through a conventional grant mechanism and prioritised work that experimented with techniques of working with the public on science issues (such as Risky Business with school students, and the Democs card game), and on sharing experience and good practice in participatory methods (the Science Communication Working Lunches).

A major change was signalled in March 2005, when the Prime Minister's independent advisory body, the Council for Science and Technology, published its report on *Policy through Dialogue: informing policies based on science and technology*. This report focused on public dialogue as the key mechanism for engaging earlier and more deeply with the public in the development of policies and priorities for science and technology. Although the structural changes to the Sciencewise programme took some time to be established to reflect this new priority, the projects funded started to focus increasingly on public dialogue.

The first of these, and the longest running (running for three years from 2005 - 2008), was probably the Community x-Change project was launched with the BA (the British Association for the Advancement of Science; now the British Science Association - BSA) to develop a dialogue approach to a range of science issues including climate change, animals in research and food.

Over the period since 2004, the 14 projects Sciencewise has funded include work with the public on some of the most controversial issues in science and technology, including:

- energy
- climate change
- nanotechnology
- robotics
- cyber security
- the use of hybrid embryos for research
- stem cell research
- DNA databases
- industrial biotechnology.

Several other public dialogue-based projects were also launched in 2005: the Nanodialogues and the associated Nanotechnology Engagement Group, and Trustguide. Table 1 summarises all 14 of the projects funded by Sciencewise since 2004, in roughly chronological order, earliest first.

Table 1. Sciencewise funded projects 2004 - June 2010

Name and date of project	Topic and purpose of project	Outputs (all projects also have final reports and case studies)
Risky Business 2005-2006 (16 months) • Total cost of project: £128,000 • Sciencewise funding: £63,000	Work with school students on environmental risk especially climate change	• 3,500 participants • Play written and performed in schools, followed by workshop discussions • Performance for 40 staff in Defra • Evaluation report
Science Communication Working Lunches 2005-2006 (21 months) • Total cost of project: £51,000 • Sciencewise funding: £22,000	Events for science communication community to share good practice in participatory methods	• Roadshow working lunch touring the UK
Democs 2005-2006 (12 months) • Total cost of project: £166,000 • Sciencewise funding: £81,000	Pilot of Democs card game / policy tool on vaccinations, animal experiments, climate change, neuroscience, GM food and stem cell research	• 1,189 participants in 30 schools • Trials at BA Festival of Science • Democs kits produced for download and in print • Evaluation report
Community x-change 2005-2008 (16 months pilot, then roll out over remainder of the 3 years) • Total cost of project: £86,000 • Sciencewise funding: £42,775	Workshops for public, scientists and policy makers to discuss issues around science including climate change, animals in research and functional foods	• Pilot phase with 39 participants • Evaluation of pilot phase • 800 participants in roll-out events • Included groups normally excluded from policy making processes • BA Festival of Science workshop • 2 videos
Nanodialogues 2005-2007 (26 months) • Total cost of project: £240,000 • Sciencewise funding: £120,000	Four experiments on how to take forward nanotechnology research through 'upstream' public dialogues	• 100 participants people's panels (including in Zimbabwe), dialogue and focus groups • Input to the cross-government Nanotechnology Issues Dialogue Group (NIDG) • Reports by each project partner (Environment Agency, Practical Action, BBSRC and Unilever) • Pamphlet by Demos covering all four projects • 2 evaluation reports
Nanotechnology Engagement Group 2005-2007 (24 months) • Total cost of project: £115,000 • Sciencewise funding: £115,000	Research on public engagement in nanotechnology in UK and overseas	• 19 members of Nanotechnology Engagement Group (NEG) • Pamphlet by Involve • Results passed to NIDG
Trustguide 2005-2006 (15 months) • Total cost of project: £140,000 • Sciencewise funding: £40,000	Public dialogue on security, risk and responsibility in relation to ICT / cyber trust	• 300 public participants at 29 workshops • Guidelines on use of personal data • Industry and academic stakeholders • Memorandum to House of Lords Committee • Advice to Government Information Commission
Drugsfutures 2006-2007 (6 months) • Total cost of project: £300,000 • Sciencewise funding: £300,000	Public dialogue on brain science, addiction and drugs	• 727 participants in 27 workshops around UK • Results fed into recommendations from AMS Working Group to Department of Health and Home Office • Cross-Government advisory group • Evaluation report
Sciencehorizons 2006-2007 (18 months) • Total cost of project: £360,000 • Sciencewise funding: £360,000	Public dialogue and engagement on future applications of science and technology based on findings from two government Horizon Scans	• 3,165 participants in a deliberative panel, facilitated meetings and self-organised groups • Original materials printed and downloadable • Website with information; participants could upload responses • Results integrated with findings from stakeholder discussion on the Wider Implications of Science and Technology (WIST) • Workshop with policy makers from across government to feed into future dialogue plans

		• Online mapping of dialogue and engagement activities across government • Identified priority issues for Sciencewise funding • Evaluation report
Hybrid and chimera embryos for research 2006 (six months) • Total cost of project: £140,000 • Sciencewise funding: £60,000	Public dialogue on whether and under what conditions the use of hybrid and chimera embryos for research should be allowed	• 106 participants in 12 regional discussion groups and national event • 153 at open public meeting • 2,073 in opinion poll • Online consultation around document • Meetings with scientific stakeholders • Advisory group of stakeholders • Results considered at open meeting of HFEA • HFEA decision followed public priorities and included caveats • Evaluation report
Stem cell dialogue 2007-2008 (14 months) • Total cost of project: £300,000 • Sciencewise funding: £300,000	Public dialogue on ethical issues around stem cell research	• 50 interviews with stakeholders • 200 participants in workshops in 5 locations • Oversight group of scientists, research councils and Department of Health • Results presented to workshop of research councils • Results used by DH study on cord blood banking policy and practice • Final report launched by Lord Drayson • Evaluation report
Forensic use of DNA 2007-2008 (7 months) • Total cost of project: £100,000 • Sciencewise funding: £50,000 • Wellcome Trust £30,000 • ESRC Genomics Forum £5,000 • HGC £15,000	Citizens' inquiry on the forensic use of DNA and the National DNA Database	• 30 participants in workshops and residential weekends • 12 scientists / experts • Final project report plus Citizens' Report • Citizens presented their findings to Human Genetics Commission • HGC launched a wider consultation based on issues raised in the Citizens' Inquiry • Evaluation report
Industrial biotechnology 2008 (4 months) • Total cost of project: £90,000 • Sciencewise funding: £60,000	Public dialogue on public perceptions of bioscience (including genetically modified organisms)	• 48 participants in two Citizens' Juries, with 18 expert witnesses • Project Advisory Group involving key cross-sector stakeholders • Results put to BERR (now BIS); and the cross-sectoral Industrial Biotechnology Innovation and Growth Team (IB-IGT) to feed public views into their action plan for the industry to 2021 • Evaluation report
Big Energy Shift 2008-2009 (7 months) • Total cost of project: £788,000 • Sciencewise funding: £381,000	Public dialogue to establish the basis on which the public would be prepared to take up energy savings, renewable and low carbon measures	• 120 participants in 9 neighbourhoods in England, Wales and Northern Ireland • Website with discussion forum, questions, links • Results report presented to DECC • Establishment of Challenge Fund so communities could bid to pilot practical measures proposed by the public in 20 local communities • Work across government and with devolved administrations • Evaluation report

Given the increasing importance in Sciencewise-ERC funding decisions on the focus on links to national policy, projects have often been closely linked with government departments. In practice, three projects have worked directly with departments:

- The Big Energy Shift: the Department of Energy and Climate Change, Defra and others
- Industrial biotechnology: Department of Business, Innovation and Skills (BIS), with BBSRC
- Sciencehorizons: Department of Business, Innovation and Skills (BIS), with the Government Foresight Programme's Horizon Scanning Centre and the British Science Association (BSA)

Others have worked with bodies advising Government, while also involving Government departments in various ways:

- Drugsfutures: Academy of Medical Sciences, with Department of Health
- Forensic use of DNA: Human Genetics Commission, a Department of Health advisory body, with Wellcome Trust, ESRC and University of Newcastle
- Hybrid and chimera embryos: Human Fertilisation and Embryology Authority, a regulatory and advisory body to government
- Nanodialogues: led by Demos (think tank) and involving the Environment Agency, BBSRC, EPSRC, Practical Action and Unilever

The other frequent commissioning institutions in Sciencewise projects have been the research councils (as well as being partners on several others):

- Stem cell dialogue: Biotechnology and Biological Sciences Research Council (BBSRC) and Medical Research Council (MRC)

Finally, one of the earliest dialogue projects with a focus on policy influence was led by two commercial companies:

- Trustguide was commissioned by British Telecom and Hewlett Packard.

Inevitably, more initial discussions about projects are started than there are completed projects. From the available data, it seems that around 11 other projects have been developed to varying degrees but not come to final fruition, largely since 2008. These projects have covered issues including tidal power, aviation, space exploration, carbon capture and storage, waste and composting, flooding, water extraction, sustainable development, assisted living and low carbon vehicles.

During 2009 new projects were being discussed but were not fully operational until 2010, and are thus not covered in this evaluation, including on synthetic biology, working with low carbon communities, geo-engineering, the use of animal/human hybrid embryos and environmental change.

Of the 14 projects Sciencewise has funded since 2004, nine have been policy-related public dialogue projects. These are, in alphabetical order:

- Big Energy Shift
- Drugsfutures
- Forensic use of DNA
- Hybrid and chimera embryos
- Industrial biotechnology
- Nanodialogues
- Sciencehorizons
- Stem cell dialogue
- Trustguide.

Eight of these projects have been independently evaluated (Trustguide was earlier and was completed before evaluations were required). This section provides an analysis of all eight evaluations, supplemented with new interviews for this evaluation and reviews of other project documents. Annex 1 provides a detailed analysis project by project of the evaluations of the nine dialogue projects completed by June 2010. That analysis covers:

- The basic details of the project: timing, costs, commissioning department, delivery and evaluation contractors, Sciencewise DES

- The stated objectives

- Innovation and good practice in the way the process was designed and delivered

- New lessons learnt, based on difficulties encountered in the project and how they were or could have been tackled

- Specific impacts on policy and policy makers, public participants and scientists, experts and other stakeholders.

Most of the individual evaluation reports assessed the project in terms of the extent to which they met their stated objectives, and met the principles of good practice required by Sciencewise-ERC. The analysis here is intended to draw the key information from those evaluations (and the other sources), and answer the most common questions from policy makers and others about the value of the projects - in terms of good practice, lessons and impacts.

The detailed analysis is also designed to provide the raw materials for a range of other communications materials, by Sciencewise-ERC and other stakeholders, about the nature and value of public dialogue. There are quotes in the full analysis of each dialogue project from some of those involved, as well as more formal analysis.

It is recognised that any assessment of good practice that goes beyond simply evaluating against the Sciencewise-ERC principles is based on assumptions about a particular approach to good practice in public dialogue that is based on expectations about what public dialogue is for, and what it can achieve (see section 4.8).

4.5 Impacts of Sciencewise-funded public dialogue projects

4.5.1 Introduction

This section summarises the impacts of public dialogue projects funded by Sciencewise on policy and policy making, on policy makers and policy organisations, on public participants, on scientists, experts and other stakeholders and (by extension) on government and wider society. The section starts with a brief review of the difficulties of measuring and demonstrating the impacts of public dialogue on specific policy decisions.

As well as identifying the positive impacts of the projects, this section also identifies the concerns and challenges raised by the project evaluations about the nature, design and delivery of public dialogue. It then considers the implications for planning evaluations in future, and identifies a series of additional questions for evaluations, as well as the wider implications of the findings of this study for evaluating dialogue in future. The section concludes with a short summary of the findings on impacts.

The summary below uses examples from the dialogue projects to illustrate each point made. The examples shown below refer to those projects in which the impacts are specifically mentioned in their evaluations. It does not mean that other projects did not have similar impacts (or problems).

4.5.2 Measuring impacts on policy

Evaluations of the impacts of public dialogue projects are only very rarely able to demonstrate clear impacts on policy. There are a number of reasons for this, including the long term nature of impacts on policy (which can take a long time to be manifested, especially as policy can take a long time to be finalised and published), and also because final policy conclusions are likely to result from a very wide range of different inputs and evidence, only one element of which is the results of public dialogue. Cumulative impacts of this nature are very difficult to disentangle.

In addition, policy makers and politicians are not always willing to clearly identify the specific evidence and arguments that have influenced and/or led to a final policy decision. It is therefore usually very difficult to demonstrate direct cause and effect from the impacts of public dialogue.

Recognition of these difficulties has led some researchers to suggest analysis of impacts of public participation in terms of 'intermediate' outcomes, such as strengthening a sense of citizenship, or improving participation practice[18]. Consideration was given to structuring the analysis here around immediate, intermediate and long term (or 'ultimate') outcomes.

On reflection, however, the decision was made to treat all impacts as simply impacts rather than steps towards an ultimate outcome. This was partly to avoid any sense that the impacts on those involved were less valuable than the impacts on a specific policy, and partly to recognise that the 'ultimate impact' may be a very long time in the future and thus impossible to measure in any practical way. However, a separate analysis has been made of the impacts on policy and policy making, and on policy makers and others involved.

The evaluations considered for this summary have tended to ask questions about impacts on policy such as:

- anything new being added to, or removed from, public policy proposals
- anything being raised or lowered in priority in public policy proposals
- greater confidence in specific proposals that were contentious, and thus going ahead; or less confidence in specific proposals that were contentious, and thus not going ahead.

A clear audit trail to answer these questions is almost never available. However, data to answer these evaluation questions can usually be identified from two main sources - review of documents, and interviews with policy makers. Both of these are covered below.

- **Review of documents**. This can be used to compare conclusions from public dialogue with the policy proposals that emerge. This only applies where there are direct policy proposals that follow public dialogue (which is far from universal), and where public dialogue comes to clear conclusions (also not universal). Even if both are clear, the links between the two are unlikely to be sufficiently clear to show direct cause and effect.

  Where it is possible to show some sort of trail, usually only a very broad assessment of links is possible as public conclusions are usually quite broad and/or reported rather than agreed at the event, except where there is polling, and even that tends to be on broad questions rather than on specific recommendations. However, some comparisons between dialogue conclusions and policy proposals can sometimes be done.

  In practice, few if any evaluations of public dialogue examine impacts on policy in terms of the content of the issues discussed by the public, and the extent to which public views, priorities, concerns and aspirations were reflected in the final policy decisions beyond what is reported in interviews with policy makers. A full content analysis of public dialogues may provide valuable data on the extent to which priority issues for the public were reflected in policy decisions (and which were not), and the factors that affect both translation and influence.

- **Interviews with policy makers**. The policy-making process in Government is often mysterious, with the process of coming to policy conclusions rarely being made

[18] Gaventa, John and Barrett, Gregory (2010) *So What Difference Does it Make? Mapping the Outcomes of Citizen Engagement*. Development Research Centre, University of Sussex, DfID and UKAID.

public. Certainly who decides what on public policy, and on what basis, is rarely spelt out in any detail. Public dialogue results are usually seen as 'part of the evidence' that is taken into account, rather than being addressed directly when policy conclusions are announced. However, interviews with policy makers can identify where they have been influenced and where things have changed as a result of public dialogue. In addition, interviews with participants can confirm whether there were issues that they felt had been agreed, or had been important, that had then not been taken into account, which can then be followed up with policy makers.

Of course, as dialogue becomes better understood, policy makers increasingly understand the importance of demonstrating impacts on policy and are becoming more prepared to identify exactly where there have been impacts from public dialogue. This is a double-edged sword; it is helpful to be able to demonstrate policy impacts resulting from public dialogues, but greater awareness among policy makers about this risks assessments of impacts that depend entirely on feedback from these sources becoming open to manipulation.

The summary below recognises these limitations and has sought only to cite impacts where there is clear evidence of a link between the public dialogue and the policy (or people) change. It does not suggest direct cause and effect. The summary has attempted to recognise the subtleties of levels of influence on policy by differentiating between direct impacts on policy and less direct impacts such as 'contributions' to policy outcomes, increased robustness and credibility of policy, and influencing wider debates.

Finally, on a very practical level, the summary below has been arrived at through a detailed analysis of the independent evaluation reports of each dialogue project funded by Sciencewise and of the new interviews carried out for this study (see section 2.4 for details of interviews). Points identified were clustered and the heading used below are taken from the meaning implicit in the clustered points. The headings are therefore taken directly from the evidence.

4.5.3 Influence on policy and policy making

The analysis below focuses on very specific examples of influence on policy and policy making from Sciencewise funded public dialogue projects. More generally, many policy makers identify the practical value of public dialogue in creating 'better policy'. Dialogue can provide policy makers with direct access to the knowledge, experience, views, priorities and values of the public. As importantly, it can help policy makers understand 'why' the public have those views and the implications of their values. Understanding 'why' requires qualitative approaches to research and engagement, whereas quantitative approaches such as polling can show what the public thinks but provides less depth and richness on reasons for those views (some dialogue processes include polling to complement the qualitative findings).

Feedback shows that there is particular value for policy makers when they hear public views in person so they see, hear and feel the strength of public views on particular issues. When heard first hand, public views are unmediated by research analysis or media interpretation; the final reports from the dialogue that provide written evidence of the results can then be understood more fully.

Public dialogue is thus seen to strengthen, enrich and underpin the evidence base for policy from other sources (such as expert, scientific and technical views) and fill the gap in evidence-based policy that existed in the past when public knowledge and experience were not included.

Policy makers have also identified that policy is likely to be more robust because they have had to think about how the issues will play with the public much earlier in the process than is normal in policy development. They suggest this results in them thinking more widely

than in normal policy development processes because they have also seen the issues through the public's eyes.

Overall, policy is seen by policy makers to be 'better' as a result of dialogue because:

- **Policy is more socially informed**, by including public knowledge and experience as well as consideration of social and ethical issues alongside technical and scientific issues. There is also seen to be a good likelihood that public engagement will reduce the negative social impacts of policy, including avoiding policy solutions that unfairly affect certain parts of the population; the public is very good at spotting potential inequities in policy proposals ('not fair').

- **Policy is more publicly acceptable, with more 'stickability'** because policy is developed with an understanding of how and why the public is likely to react, where they will draw the line, where are the issues of conflict and consensus, and what the public suggest will and will not work in practice (from their knowledge and experience).

- **Policy is more cost effective** in the longer term, saving time and money in launching and implementing policy decisions. Public dialogue helps to reduce unforeseen later conflict by identifying difficult issues early, at a stage where they can be dealt with before becoming entrenched. Also, final decisions are likely to be cheaper, easier and quicker to implement because they are based on the best possible knowledge that includes public knowledge, experience and values as well as scientific and technical input. The evidence for these impacts is currently largely anecdotal, but these benefits are strongly advocated by some policy makers who have used dialogue processes.

The following analysis identifies different 'types' of influence of public dialogue on policy that can be shown from evaluations to have resulted from Sciencewise funded projects. Some are related to the content of the policy and some to the way policy is made. The five main types of influence on policy identified here are as follows (each is described in more detail below):

a) direct impacts on policy decisions
b) contributions to policy outcomes
c) increased robustness and credibility of policy decisions
d) influence on plans for future public engagement
e) influence on wider debates.

a) Direct impacts on policy decisions. Direct impacts on policy decisions from Sciencewise funded projects include new policy programmes on science and technology implemented, new science and technology developments going ahead, new priorities for science and technology development, and policy mistakes avoided. Examples of each are outlined below.

i) **New policy programmes on science and technology programme implemented**. For example:

- **Big Energy Shift**: This public dialogue was designed to test options for new policy measures to encourage public take up of carbon reduction measures. The results fed directly into the development of the Low Carbon Communities Challenge (LCCC), launched in September 2009 by the Secretary of State to pilot community-led approaches to reducing carbon emissions. The LCCC programme was designed to invest £12 million over two years in 22 pilot communities to test a range of energy developments in different types of communities.

  "How far dialogue leads and how far it runs along with what is happening is uncertain. Big Energy Shift might not have caused all the impacts, but it certainly helped ... On

policy - it created quite a stir within the department and it entered a bit into the DNA of DECC" (practitioner interviewee 24)

ii) **New science and technology development gone ahead**. For example:

- **Hybrids**: The public dialogue results were supportive of research to use hybrid embryos (as long as it was undertaken 'with caution and careful scrutiny' and that the research was 'both necessary and desirable'). Public caveats were repeated in the policy decision by the HFEA to allow research under certain conditions.

  "This was the most successful consultation that I have been involved in during my five years as a member of the HFEA. I felt that it successfully dissected the strands of opinion, highlighting the differences between informed opinion and instinctive responses in the general public. It also highlighted the dangers of reliance on public meetings and responses to consultation documents - by definition these target those with a specific interest in the topic - with a reduced chance of an unbiased opinion." (Authority member quoted in evaluation report p63)

- **Nanodialogues**: The Environment Agency revised their approach to regulation of nanoparticles as a result of the Nanodialogues: *"The Environment Agency came up with a new approach to how they regulate nanoparticles in the environment" (departmental project manager interviewee 10)*

iii) **New priorities for science and technology development**. For example:

- **Drugsfutures**: The Academy of Medical Science (AMS) decided to follow up public priorities from the dialogue project on: addiction as a disease (leading to £8 million of new funding being made available from the Medical Research Council on the issue); and the need for more work on the safety and regulation of cognition enhancers (which became the subject of a detailed review by the Home Office Advisory Council on the Misuse of Drugs). Without the public input, these issues may not have emerged as priorities for the AMS, which took into account the strength of feeling of the public in coming to its recommendations.

- **Nanodialogues**: *"... the findings of the NEG, including Nanodialogues, were quite important in terms of shaping how the UK nanotechnology policy was put together. For example the first area of funding was for nanotechnology in solar energy, which was highly endorsed by the public. The same with nanomedicine."* (policy maker interviewee 21)

iv) **Policy mistakes avoided**, through setting priorities for what should go ahead and what should not, such as the setting of priorities for research in nanotechnology following on from Nanodialogues. Not making policy mistakes avoids risks such as time lost correcting mistakes (and dealing with public concerns about actual and potential policy mistakes), delaying implementation of the parts of the policy that could have been taken forward without problems, as well as major financial, legal, reputational and regulatory costs. For example:

- **Industrial Biotechnology**: *"I don't think we've had any nightmares like GM Nation, which says a lot."* (departmental project manager interviewee 11).

b) Contributions to policy outcomes that can be logically linked to the results of a public dialogue, but not necessarily directly caused by them. Five types of policy contributions from public dialogue have been identified: results from dialogue that fed into a longer term process, public input that fed into other associated policy fields, where public input was part of the evidence base on which policy was decided, influence on the tone and language of policy decisions, and where the dialogue process led to changes in policy relationships.

i) **Results from a dialogue that fed into a longer term process** that led to specific policy changes. For example:

- **DNA dialogue**: Changed the questions for the formal broad consultation that followed which in turn influenced the recommendations on the Database from the Human Genetics Commission to government. The Government's Green Paper '*Keeping the right people on the DNA Database*', published in May 2009, reflected some of the concerns identified in the Inquiry.

  "[The Citizens' Inquiry] report gives us a rich and valuable balance of views from which the HGC can proceed to a wider national consultation before we produce our own report to Government" (Alice Maynard, Chair of the HGC Working Group, in the HGC press release 29 July 2008.

  " ... with the general drift of policy, you can plot the course as being consistent with the conclusions of the Inquiry. It influenced policy towards a more liberal approach on this issue." (departmental project manager interviewee 7).

- **Industrial Biotechnology**: Led to a recommendation in the Government's Industrial Biotechnology - Industry Growth Team action plan for more public and stakeholder engagement in IB as part of their strategy for industry.

- **Nanodialogues**: Fed into further dialogues on nano and health which in turn directly influenced the EPSRC priorities for research funding on nanotechnology

- **Trustguide**: The dialogue led to the production and distribution of a set of six guidelines aimed at enhancing the trustworthiness of ICT, covering education, experimentation, restitution, guarantees, control and openness.

ii) **Public input fed into other associated policy developments**, as results from public dialogue projects were passed on to colleagues in related policy fields. For example:

- **Big Energy Shift**: The findings of the project are reported to have fed into the following policies, as have the credibility and partnerships developed during Big Energy Shift (BES evaluation report p37):
  - Trials of **pay-as-you-save.**
  - The roll out of **smart meters**.
  - The **Renewable Energy Strategy**, particularly public engagement around large-scale renewables and the 'green challenge'.
  - The **Heat and Energy Saving Strategy**, particularly the case for pilots and learning on the ground.
  - DECC's **public sector announcement** because the findings from the householder dialogue were used to argue the need for a strong set of announcements.

- **Nanodialogues**: The results of the dialogues fed directly into:
  - the EPSRC Ideas Factory (held in January 2007) which considered priorities for £1.5 million research funding (Demos, p47)
  - BBSRC / EPSRC thinking about their role as investment brokers, balancing demands from scientists and policy makers to allocate resources, and to consider where research agendas come from more widely (Demos, p55)
  - work by the cross-Government Nanotechnology Issues Dialogue Group, which is chaired by the Government Office for Science (GO-Science) and works to enable the development of nanotechnologies and co-ordinate government activities across departments, agencies and research councils
  - work by the Nanotechnology Engagement Group (NEG), a group convened by Involve with Sciencewise support, to contribute to the future interface between democracy and technology, as part of the evidence base for their conclusions.

- **Stem cell dialogue**: The results of the dialogue were fed into and informed:
  - the Department of Health's study of cord blood banking policy and practice. (Stem Cell evaluation report p8)

- **Trustguide**: Findings were fed into the following (departmental project manager interviewee 19):
  - the House of Lords Science and Technology Select Committee that was investigating internet security

- the House of Lords Constitution Committee on the Impact of Surveillance and Data Collection
- Government work on ID cards (in relation to cyber security)
- the Information Commission on privacy and protecting children on the internet.

iii) **Where public input was part of the evidence base** on which policy is made. This is one of the most common types of policy impacts and is evident in Sciencewise projects including Drugsfutures, the Industrial Biotechnology dialogue, the Stem cell dialogue, the Big Energy Shift (which also fed into parallel policies on renewable energy sources, heat and energy efficiency). For example:

- **Drugsfutures**: *"I think getting a feel for public attitudes is of tremendous importance. It can show up in sharp focus the reasons why some legal interventions don't work. There are three things affecting this, from the research looking at why laws don't work: the regulatory side – lack of resource; the attitudes of those regulatees who are not complying – e.g. why do young people feel it's ok to file share; why does the business chose to pay the fine? and the possibility of external factors. Public engagement is crucial to developing intelligence around that."* (policy maker interviewee 20)

- **Nanodialogues**: *"Our experiment showed that it is possible to develop a dialogue about a complex environmental issue with a group of people who initially know very little about it. The nature of the questions asked by the Inquiry and their focus on uncertainties and risks, the need for contextual research, openness, accountability and education shows that their input has been not only meaningful, but valuable. This 'socially framed' evidence adds weight to the existing government position on the use of nanoparticles in environmental clean-up."* (Environment Agency response to the People's Inquiry, quoted in Demos booklet, p31)
- **Industrial Biotechnology**: *"We wouldn't have known what the public would have said otherwise. It could have been guessed but there wouldn't have been evidence. It was interesting for us to sit down and listen to what the public thinks. I had never done that before. It was an eye-opener."* (departmental project manager interviewee 11).

- **Stem Cell dialogue**: *"From an organisational point of view we gained a much better understanding of people's attitudes, concerns and so on ... We certainly got a much more nuanced understanding of how the public see the whole area, as well as some generally applicable stuff about the application of science"* (departmental project manager interviewee 15)

  "*These types of events have a broader, normative utility as a rich source of 'social intelligence' that underlines the public value of science. Bhattachary sees the public dialogue as playing both a moral and practical role in the social shaping of stem cell science alongside funders and other institutional actors*" (Stem Cell evaluation report p37)

- **Trustguide**: *"Understanding why, where and how trust in the cyber world is lost is vital to the successful introduction of technologies that are true online enablers. Trustguide provided an excellent and welcome opportunity to understand these tensions at first hand."* (Stephen Crane, HP Project Manager, case study)

iv) **Influenced the tone and language of policy decisions**, through articulation of public values and showing where there is particularly strong public feeling. For example:

- **DNA dialogue**: *"...it certainly improved the quality of the conclusions ... I don't think the Commission could have produced the report without it - a lot of the evidence is to do with the way in which concerns are expressed."* (departmental project manager interviewee 7)

- **Drugsfutures**: the Academy of Medical Sciences took into account strength of public feeling on issues such as treating addiction as a disease, focusing on harm reduction rather than punishment, and tighter regulation of cognition enhancers in their recommendations to government on brain science, addiction and drugs.

- **Nanodialogues**: *"As one member of the Environment Agency suggested following the event, participants spoke about risks in ways which have made these issues stand out in her mind."* (evaluation report by Jones and Irwin, p55)

v) **Where the public dialogue process led to changes in policy relationships or activities**, such as the Industrial Biotechnology dialogue which led to the establishment of a new group between the government and NGOs.

c) Increased robustness and credibility of policy, giving policy makers greater confidence in decisions (especially on highly contentious topics), because the policy was more socially informed, and had been developed in a process that was more transparent and accountable, as follows:

i) **More socially informed**. Policy has been more robust because it was more socially informed by including public knowledge and experience, as well as including consideration of social and ethical issues; examples include Drugsfutures, Nano, Sciencehorizons. For example:

- **Nanodialogues**: *"There are strong arguments that public deliberation and interaction can lead to more robust science policy, particularly in areas that are intrinsically interdisciplinary and explicitly coupled to societal goals. What will be interesting to consider as more experience is gained is whether embedding public engagement more closely in the scientific process actually helps to produce better science"* (Professor Richard Jones in *The Way Ahead*, edited by Jack Stilgoe, p68)

ii) **Greater transparency and accountability**. The policy and decision-making was more transparent, open and accountable through having involved the public, and knowing the extent and limits to public support. For example:

- **Big Energy Shift**: *"[The main benefit was] Our confidence to be more transparent. It can take you down new directions ... it is pointing us in directions we hadn't thought of. Climate change is so complex that you can only start talking about it from where people are at."* (departmental project manager interviewee 13)

- **DNA dialogue**: The HGC view was that the Inquiry gave *"much more credibility and legitimacy"* to HGC conclusions by broadening the range of views taken into account, and therefore improved policy *"in terms of quality and robustness"*:

  "There are certain things we wouldn't have understood without the dialogue and it has enabled the Commission to reflect that understanding. In many ways it confirmed a lot of our suspicions about the way people would think, but we would have had no way of knowing for sure without the dialogue." (departmental project manager interviewee 7).

- **Drugsfutures**: "*You can't expect any drugs policy to have long-term success unless you take people with you. If you cut across the grain of the public instinct, it's disastrous. Engaging with people should help us devise policies which are acceptable and sustainable*." Roger Brownsword, Professor of Law, Kings College London, on Drugsfutures project (evaluation report p81)

  "I'm sure that it improved the report. Whilst I wouldn't say that the public engagement was anywhere near sufficient for supporting a major regulatory change in something like recreational drug use – we need a broad and ongoing conversation for that – to have done the report without public engagement would not have been sufficient ... public views ... provide a content to a report that otherwise would have been rather hollow" (policy maker interviewee 20)

  "Our work has been influenced because we listened to and we learned from what was being said. We took into account the strength of feeling and the emotional weighting in the public mind." (Drugsfutures evaluation summary)

- **Hybrids**: *"[HFEA is] in a much more secure position now to carry decisions out. They will be able to back up their decisions with the findings of the consultation."* (Stakeholder quoted in Hybrids evaluation report p15)

"Well it definitely helped the authority come to a robust decision as it gave in depth knowledge of public opinion and the reasoning behind it. With questionnaires you don't get the rationale behind it." (departmental project manager interviewee 14)

"It helped to hear people articulate strong views. It is right that we should listen to these views and that we should be seen to be listening to these views. It's part of our accountability." (Authority member quoted in Hybrids evaluation report p48)

"I think the whole debate was an educational process for most people involved. It certainly was for me as a non-scientist. [It was] a reinforcement of the importance of this type of open public consultation, as a sort of educational process, and at the same time a process of accountability, when dealing with contentious issues." (Authority member quoted in Hybrids evaluation report p38).

"The nature and importance of the issues meant that the exercise was very visible and involved a lot of people. Our decision will always be met with howls of protest from some quarters, but this type of consultation helps reassure us that we have gone about making decisions in as open a way as possible." (Authority member quoted in Hybrids evaluation report p64)

- **Industrial Biotechnology**: *"The IB subject is all about GM – being more open about things like that can only be a good thing. The report showed that people don't trust the Government on things like GM so just having these conversations helped transparency from that point of view"* (departmental project manager interviewee 11)

- **Nanodialogues**: *"...we can comment on the contribution these activities have made to making the governance of nanotechnologies more transparent. In many senses, the movement towards upstream engagement has been an attempt to bring into public scrutiny the wide range of factors that affect the construction of science, and to expose the relationships, assumptions, and values held by those at the heart of science policy-making. In essence, to make transparent the social, political, and cultural foundations of any new and emerging science."* (Involve, p92-92)

- **Stem Cell dialogue**: *"One thing we have learned from our ongoing activities on stem cell research is that the way in which you become a leader in stem cell research is by being responsive to public opinion and by making sure that the things that encourage trust in the process of doing stem cell research are things like regulation and . . . trust in the scientists . . . and the ethical probity of what you are doing"* (Simon Wilde, MRC).

  "... it did give the Department of Health and MRC the confidence to say 'this is what the public think'. It's about making sure the confidence is there in terms of balancing science with the public point of view. It's always difficult to measure because it's about perceptions and process change rather than specifics, and that is as if not more important ... as part of the wider movement it played a crucial part in a suite of different activities. It gave us the confidence to say 'people want this but there are difficulties' ... [public dialogue] gives you confidence in the way you communicate but it can be much more than that if you do it well." (departmental project manager interviewee 15)

d) Influence on plans for future public engagement, which built on the priorities and foundations of public dialogue to further engage the public in the development of policy thinking. Examples include the dialogues on the DNA database dialogue, the Nanodialogues, Sciencehorizons, the Big Energy Shift and the Industrial Biotechnology dialogue. For example:

- **DNA dialogue**: *"'We have established a basis for continuing dialogue and communications – HGC is taking the dialogue forward through the National DNA Database working group"* (HGC Working Group member quoted in evaluation report, p9)

- **Hybrids**: *"I was always quite positive towards this way of working but it definitely makes you see it as a valuable part of policy making ... We have increased our level of dialogue."* (departmental project manager interviewee 14)

- **Industrial Biotechnology**: *"It surprised me how much people were concerned about the environment and climate change. They find it very hard to see industrial biotechnology in isolation which is fair enough because it is all related ... We can't just focus it on specific technology issues, we are going to have to focus on the big picture otherwise people just don't get it. It's about global warming, climate change, land use and waste. We have got to put it in that context otherwise people just don't see it. We probably realized that but I think this has brought it home that that is what we need to do."* (policy maker original evaluation interview)

- **Nanodialogues**: *"At the Nanodialogues activity with the research councils in Swindon it was interesting – it raised the profile of public engagement in the research councils and laid the groundwork for further engagement.... It opened the space for future dialogue and contributed to the quality of information. And you can see this going forward into the debate around synthetic biology."* (policy maker interviewee 21)

- **Sciencehorizons**: The project provided sufficient information, and opportunities for policy makers to come together in a workshop to agree priorities for future public engagement on science and technology, including priorities for topics for future Sciencewise projects: *"I think 8 out of the 10 topics suggested in the report went on to be used. It was used to pick the next topics for Sciencewise to fund."* (departmental project manager interviewee 12)

- **Stem Cell dialogue**: It was expected that the dialogue would influence the MRC's Stem Cells Communications Coalition, and therefore influence the ways in which the Coalition engaged with the public in the future (Stem Cell evaluation report p39)

e) Influence on the wider debates, changing the weather around policy issues and raising the priority of certain aspects of future policy issues, such as the DNA database dialogue, Nanodialogues, and the Stem Cell dialogue. Policy makers have also identified the value of public dialogue in raising public awareness and understanding of the issues. Public dialogue gives opportunities to increase public knowledge about the subjects being discussed, the specific policy proposals, and the constraints on policy makers and what they can and cannot do. Dialogue can also be an opportunity for sponsor organisations to clarify and build understanding of the limits to their own specific role with public participants.

Although dialogue reaches relatively limited numbers of people, participants very often talk to others afterwards as a result of having learnt about the subject and developed an interest so the 'reach' in terms of awareness raising is usually many times the number of people in the actual dialogue. The evaluation of one public dialogue[19] found evidence that each participant talked to an average of 30 others about the issues of the dialogue; a 1:30 ratio of outreach and awareness raising. There are also examples of participants then going on to act as 'ambassadors' for the issue and talk to others about the problems that need to be tackled (e.g. on climate change issues).

In summary, the evaluation findings of Sciencewise funded projects, and subsequent interviews for this evaluation study, show that public dialogues have had the following impacts on policy and policy making:

- fed directly into the design and development of new programmes (Big Energy Shift)

- led to changes in regulation (Nano-EA)

- led directly to a specific policy decision to proceed with a controversial area in science and technology (Hybrids)

- fed directly into government policy on the issues (DNA, Industrial biotechnology, Nano, Trustguide)

[19] Warburton, Diane (2008) *Evaluation of Defra's public engagement process on climate change*. Shared Practice / Defra, November 2008.

- led to the establishment of a new government group to work with NGOs on the issues (Industrial biotechnology)

- opened up debates on potentially controversial science and technology issues (Sciencehorizons)

- stimulated the provision of additional funds for new research on issues identified as public priorities (Drugsfutures)

- led to new work by government (Drugsfutures - new work on the safety and regulation of cognition enhancing drugs)

- fed into parliamentary enquiries by committees (Trustguide)

- was used to add questions for wider consultation that followed the public dialogue (DNA)

- been taken on board in associated policy areas (Big Energy Shift, DNA, Industrial biotechnology, Stem cells, Trustguide)

- fed into decisions on future research funding (Nano)

- influenced priorities for future public engagement on science and technology (Sciencehorizons)

- influenced the general drift of policy on specific issues (Drugsfutures, DNA, Stem cells)

- spread awareness and understanding of the issues (Hybrids, Industrial biotechnology, Sciencehorizons)

- affected the language / terminology used in final policy conclusions and recommendations (DNA, Hybrids, Stem cells)

- provided fresh thinking (Nano)

- enabled decision-making to demonstrate legitimacy and credibility (Hybrids, DNA)

- a good process done for the right reasons (e.g. openness) increased legitimacy (e.g. not legitimising decisions by using persuasion / manipulation) (Drugsfutures, Nano, Stem cells)

- public acceptability of decisions taken on the basis of the results of the dialogue because they could trace input by seeing their own words in final policy documents (Hybrids, Industrial biotechnology, Nano)

- 'democratised' decision making by opening up contentious issues to public scrutiny (Drugsfutures)

- provided additional evidence for policy and decision making (Hybrids, Industrial biotechnology, Nano, Sciencehorizons, Stem cells, Trustguide)

- provided accountability by being open, transparent and responsive (Hybrids).

Before leaving this analysis of the impacts of Sciencewise funded public dialogue projects on policy, it is important to address the difference between dialogue that provides *legitimacy* for public policy decisions - through an open and transparent process, and dialogue that seeks to *legitimise* public policy decisions - through

manipulation or persuasion - by undertaking public dialogue after decisions have been made or by 'selling' new developments to the public.

There are dangers of public dialogue being used to sell unpopular, risky and questionable technologies. The examples of public dialogue analysed in this evaluation study do cover some highly contentious scientific and technological developments. In these cases, the aim of Sciencewise-ERC advice has been to support public dialogue projects that identify the win-win of new technologies that do have public support, and under what circumstances that support would cease to exist, not to 'sell' those developments.

With the rich understanding of public views, and the development of new ways forward that command public support, including clear priorities about where progress can and should best be made, scientific and technological development can move forward faster and with less risk of protest, complaint and criticism. The result is less conflict and faster progress on better policy solutions. The positive impacts of public dialogue on these developments would be seriously threatened if the Sciencewise approach to public dialogue opening up debates on issues were to be lost in favour of legitimising decisions already made or desired.

4.5.4 Impacts on policy makers and policy organisations

Evaluation findings and subsequent interviews show that Sciencewise-funded public dialogue projects have had seven main impacts on policy makers and policy organisations. These impacts are as follows (each covered in more detail below):

a) Better relationships with stakeholders
b) Better relationships with public participants
c) Enhanced profile and reputation for good practice
d) Improved future communications
e) Created synergy and integration across government
f) Increased experience and knowledge of public engagement
g) Increased use of public and stakeholder engagement.

a) Better relationships with stakeholders as a result of public dialogue processes requiring input from a wide range of scientists and other experts in various ways. Dialogue processes provided different types of opportunities for public bodies to work with external stakeholders, and to work with stakeholders they do not normally have contact with, such as in Big Energy Shift, DNA, Industrial biotechnology, Nanodialogues, Trustguide. For example:

- **Big Energy Shift**: There were extensive and positive relationships between the project partners and a wide range of stakeholders. There were one-to-one contacts between the DECC project manager and about 50 other stakeholders (BES evaluation report p12). Formal links were established through the formal oversight panel - the Energy Engagement Working Group (EEWG), which was convened by COI. This group had 26 members, 10 from government and 16 others (including NGOs, local government organisations, government agencies). The EEWG advised on materials for public participants as well as links to policy and to parallel engagement activities with business and the public sector. The inclusion of external stakeholders on this group was unusual, and was welcomed by government policy makers as well as external stakeholders: *“Just to have external members on [EEWG] was so radical whereas now I think everyone would be quite relaxed about it. Just by doing it, it was breaking ground.”* (policy maker quoted in BES evaluation report, p34)

- **DNA dialogue**: *"...the project has provided a node through which a variety of relevant actors have been linked (e.g. individual citizens, professionals working in various related disciplines, HGC, government officials, public dialogue specialists, research bodies and academics)."* (Working group member quoted in evaluation report, p16)

- **Industrial Biotechnology**: The dialogue led to BERR starting to set up a group with NGOs to look at IB: *"We were in a better position to engage the NGOs and retailers ... in terms of opening doors and creating that space for further work."* (policy maker interviewee 22).

  "[The most important benefit] was getting some of the companies involved and exposed to the public. They actually enjoyed it and it was very interactive. We've now got ideas going forward of having IB champions and how we could use the report to have the most impact." (policy maker interviewee 22).

- **Sciencehorizons**: Six new collaborative initiatives were established among stakeholders as a result of the project involving institutions including the Royal Academy of Engineering, the Dana Centre, Spectrum Drama, Glasgow Science Centre, Science Oxford, the Teacher Scientist Network and the Inspire Discovery Centre.

b) **Better relationships with public participants**, through building mutual trust and confidence as a result of effective public dialogue projects, such as Big Energy Shift, Drugsfutures, Hybrids, Nanodialogues, Sciencehorizons. The public report trust in the institutions taking account of their views, and public bodies report confidence in the commitment and ability of the public to understand complex issues and to engage in dialogue with common sense and a sense of responsibility. For example:

  - **Sciencehorizons**: *"[Public dialogue] improves and strengthens relations between citizens and the state – a relationship that needs strengthening."* (departmental project manager interviewee 12)

c) **Enhanced profile and reputation for good practice** in policy development and decision-making processes by using public dialogue well, such as the DNA and Trustguide projects which were used as an example of good practice by parliamentary committees. For example:

  - **DNA dialogue**: This dialogue was used as an example of good practice by the House of Lords Constitution Committee. The Committee went on to reflect some of the Inquiry's findings in its recommendations: In its report "Surveillance, Citizens and the State" the House of Lords Constitution Committee said *"We are impressed by the use of this technique [The HGC Citizens' Inquiry] for eliciting informed opinions by citizens and thus helping to shape policies….We recommend that the Government should undertake an analysis of public consultations and their effectiveness, and should explore opportunities for applying versions of the Citizens' Inquiry technique to surveillance and data processing initiatives involving databases."* (paras 431-432)

    The Inquiry also raised the profile of the HGC and its work on the DNA database through media coverage of the Citizens Inquiry's findings including coverage in the Daily Mail, Independent (front page), a Guardian editorial plus Daily Express, Financial Times and Metro (London). There were also interviews on the BBC Radio 4 Today programme, and Radio 5 Live. In Scotland, there was similarly extensive coverage in the Herald, radio and television.

  - **Trustguide**: *"It was so hugely successful. One of the main things with a big company like BT is that this kind of thing often stays inside. The huge advantage was that this could be in the public domain, and that was massively successful for us. We got it out to so many people in so many areas – the UK government (around security and ID cards), the Dutch government, the IOTR, we have written a book based on the findings. None of these things could have been done without the public element ... it's done an awful lot for BT's reputation with government. And we are not necessarily telling them things they want to hear."* (departmental project manager interviewee 19)

d) **Improved future communications**. Policy makers have used the rich understanding of the main interests and concerns of the public they gain from public dialogues, and the values which underpin those views, to better plan and tailor future communications. In several cases, policy makers have been surprised by a lack of public knowledge on specific issues, and by public demands for more information. New plans for communications developed as a result of public dialogue projects have included providing specific information to fill newly identified gaps in public knowledge

and reassurance where there was misunderstanding, and giving better explanations of regulatory processes.

The focus on exploring how to improve future public communications has sometimes been an explicit objective for policy makers in undertaking public dialogue, but it is more often an unexpected and valued by-product reported by policy makers. Improving the effectiveness of public communications, and meeting public demands for relevant information, is a challenge that is likely to grow in importance as Government budgets for information and communications activities are reduced, and priorities need to be set more carefully. Examples of impacts on communications as a result of public dialogue projects include Big Energy Shift, Industrial biotechnology, Trustguide and Stem cells.

For example:

- **Big Energy Shift**: Policy makers learnt new and different types of communication approaches that would be effective with the public: *"The video, the initial presentation was quite interesting, because participants actually seemed quite shocked at the information they were being given. Yet obviously all that information had been in the public domain already ... It gave me an idea of how delivery methods actually will change the impact of what's being said – it was quite clear that this message may as well have been quite a new message on the seriousness of climate change and the figures."* (Policy maker quoted in BES evaluation report, p41)

- **Hybrids**: *"There is a clear demand from people to know more about what researchers are doing and their plans for future work, highlighting a need for better communication about science and research from both the scientific community and ourselves as regulator"* (Charles Lister, Head of Policy, HFEA, quoted in case study)

- **Industrial Biotechnology**: *"The next steps will be to look at the issues of concern for the public and develop messages or research. So in terms of forming strategy going forwards it was very useful. It helped us in terms of looking at how to communicate."* (policymaker interviewee 22)

  "The key findings will actually start shaping how to do communication. We are using academic scientists and it's got to be facts, [talking about] how it fits in their daily lives, regulations. We would now paint a more holistic picture, whereas before we would probably have said industrial biotechnology is good for you. We have a better understanding of how to tailor it." (policy maker original evaluation interview)

e) **Created synergy and integration across government**. Many Sciencewise dialogue projects have been on topic areas that cross scientific disciplines, professional boundaries and departmental interests. It has become increasingly important for dialogue projects for the full range of policy views to be represented on any advisory and oversight groups for the project, which also often bring together several different government departments and agencies.

For example, a Sciencewise-ERC funded dialogue on climate change (the Big Energy Shift) involved the Department for Energy and Climate Change (DECC), Department for Environment, Food and Rural Affairs (Defra), Department for Communities and Local Government (CLG), Northern Ireland Department of Enterprise, Trade and Investment (DETI) and the Welsh Assembly Government.

Dialogue has also provided a focus for better internal communications and relationships in the sponsoring organisation (government department, agency or research council). People from across large organisations collaborating on preparations for a public dialogue work together in an outward facing activity, having to present a united and coherent picture to the public. This has helped staff understand more about how their own organisation is and could be seen from the outside, which has been both motivating and helped organisational cohesion.

f) **Increased practical experience and knowledge of public engagement**. Policy makers learnt about working more effectively and building better relationships with the public. This influenced the ways in which policy is made as well as resulting policy solutions. Learning from practice also fed into future improvements in dialogue practice. All Sciencewise-ERC funded public dialogue projects reported achieving this learning from experience of dialogue; for some it was an explicit objective of the exercise although more usually it was seen as a valuable side effect.

Knowledge and experience have been gained from first-hand experience of public dialogue (particularly being involved in dialogue events but also experience of commissioning and managing dialogue, and using results), observing dialogues run by others, lessons identified by evaluation processes and in evaluation reports, and advice from experienced practitioners (including Sciencewise).

Policy makers also reported learning about the value of dialogue in specific circumstances (e.g. Sciencehorizons, Stem cells), why previous policy interventions have not worked (Drugsfutures), that the public tend to look at the 'big picture' rather than specific solutions to specific technical problems (Industrial biotechnology), and about the need for institutional change to engage more effectively (Nanodialogues). For example:

- **Drugsfutures**: *"It was interesting to attend the events and listen at first hand to how the public thinks aloud about these issues. Obviously, back in the Working Group we received from the contractor an edited version of findings given in headlines and bullet points – these are helpful when we see how they fit with other views on our major questions."* (policy maker interviewee 20)

  "*The thing was getting [Working Group members] along to meetings as observers in order to add an extra level of reporting, so that they could say 'I remember hearing this concern'."* (departmental project manager interviewee 9)

- **Industrial biotechnology**: *"It broadened my experience, and to sit and hear the questions people had was very interesting and useful."* (policy maker interviewee 22)

g) **Increased understanding of the place and value of public and stakeholder engagement**, as a result of experience, such as following Big Energy Shift, Drugsfutures, DNA, Hybrids, Industrial biotechnology, Nanodialogues and Sciencehorizons. This was as a result of understanding the value of public dialogue and where it can usefully form part of policy development. For example:

- **Big Energy Shift**: The project has ensured that public dialogue has become much more important to DECC and how they achieve their objectives. "*Pretty much everything will have to change over a period of time and if we're going to do that then sensibly we need to know to what extent we can bring the public with us. We can't just do it ourselves. The public are part of it*." (Joan Ruddock MP, Minister of State, Department of Energy and Climate Change)

- **Industrial Biotechnology**: The results informed the IB-IGT action plan for the industry to 2021, and led to a specific recommendation for further public and stakeholder engagement in future: *"Recommendation 21: The IB-IGT recommends that Government, industry [including brand owners and retailers], Research Councils, NGOs, and professional institutions should develop an effective, balanced and informative communication strategy, including stakeholder and public engagement, for IB. The strategy should utilise academic scientists to provide factual information on IB processes, regulations and fit to daily life; involve the environmental NGOs in the process; and give consideration to the consequences of indirect land use change through moving to a more bio-based economy." (*Quote from IB-IGT Steering Group report; via departmental project manager interviewee 11).

In summary, the findings show that Sciencewise projects achieved the following impacts on policy makers and policy organisations:

- experience and results of dialogue contributed to the development of future communications methods and messages on the issues (Big Energy Shift, Industrial biotechnology, Stem cells, Trustguide)

- increased confidence in public engagement, willingness to be open to public input and to value the public dialogue approach in policy making (Big Energy Shift, Drugsfutures, DNA, Hybrids, Industrial biotechnology, Stem cells)

- led to increased use of public and stakeholder engagement (Big Energy Shift, Drugsfutures, DNA, Hybrids, Industrial biotechnology, Nano, Sciencehorizons)

- learnt about the design and delivery of public dialogue, and what different approaches to public engagement could achieve (Nano, Sciencehorizons)

- understood the value of public dialogue in changing public attitudes and behaviour (Big Energy Shift)

- enhanced the profile and reputation and organisations because public dialogue seen to be a good thing (asking the public) done well (DNA, Hybrids, Sciencehorizons, Stem cells, Trustguide)

- improved relationships of trust between the public participants and the public bodies involved (Big Energy Shift, Drugsfutures, Hybrids, Industrial biotechnology)

- avoided public relations disaster (Industrial biotechnology)

- public dialogue used as an example of good practice (DNA)

- learnt about the interest and commitment and ability of the general public to work on complex scientific issues; renewed faith in the general public (Drugsfutures, Hybrids, Nano)

- gained greater understanding of why previous policy interventions had not worked (Drugsfutures)

- greater understanding of what the public views were, and what were the underpinning values (all projects)

- learnt about the need for institutional change so could engage more effectively with the public (Nano)

- increased confidence when making policy decisions (Hybrids, Drugsfutures, Stem cells)

- influenced view of own role in policy making process (Nano)

- increased understanding that the public think about scientific and technical issues differently from specialists, as public look at the 'big picture' rather than a very specific technical problem with a specific solution (Industrial biotechnology)

- increased understanding that the impacts of public engagement can take a long time to be apparent, especially in terms of impacts on policy and especially if the issue is upstream (Nano)

- provided an opportunity to bring in other stakeholders not normally worked with (Industrial biotechnology, Nano, Trustguide).

4.5.5 Impacts on public participants

Evaluation findings show that public dialogues have had seven key impacts on public participants in dialogue projects. These impacts are, in summary:

a) Increased public awareness and understanding
b) Participants talked to others
c) Participants became more positive about future participation
d) Participants developed trust in public policy-making
e) Dialogue changed participants attitudes and views
f) Participants felt valued as citizens
g) Participants gained understanding of different types of people.

a) Increased public awareness and understanding. Almost all public participants learn about the topic being discussed, and about how to participate (usually 80-90%). They report new interest in the topic as well as new knowledge. Participants report learning as much from hearing each other's views, and from the debate, as from written information and hearing from experts. This has been the case in all Sciencewise projects. For example:

- **Big Energy Shift**: 99% of participants said they had learnt something from the project (after Event 3). They had found out about technologies they did not know before, how technologies worked, where to go to find out more, and payment options and delivery methods (BES evaluation report, p27 and annex pix).

- **Drugsfutures**: 90% of participants at the regional workshops said they had learnt something new (100% at Brainbox), 87% at regional workshops said it had clarified their thinking (100% Brainbox) (Drugsfutures evaluation report p78)

- **Hybrids**: 98% of participants at the reconvened event said they had learnt something they didn't know before, and 93% said it had helped them think more clearly about the issues.

- **Industrial Biotechnology**: 100% of public participants said they had learnt something they didn't know before. 29% said they wanted to learn more. One said "*once you whet the appetite...*" (IB evaluation report, p28). Another said: *"I was very surprised because I thought it was going to be just a big yawn and a lot of it would go over my head. It turned out very interesting. To me personally it was a whole new world."* (public participant, case study)

- **Sciencehorizons**: 96% of Strand 1 participants said they had learnt something, and that the events had helped them think more clearly about the issues (evaluation report p27). *"I feel more involved, knowledgeable and informed on where to find information"* (Strand 1 questionnaire respondent, reported in Sciencehorizons evaluation report)

b) Participants talked to others about the topic and about being involved. Participants report feeling more interested and enthusiastic about the topic and talking to friends, family and colleagues about the issues they have been discussing, spreading awareness and interest further. Examples include Big Energy Shift, Drugsfutures, Industrial biotechnology. For example:

- **Big Energy Shift**: *"[I spoke to] friends, family, my work colleagues, because I come away after the very first visit and I was really really enthusiastic about it. I really was and I'm not just saying that!"* (Householder, Cardiff quoted in BES evaluation report p30)

- **Drugsfutures**: Almost all evaluation interviewees said they had talked about the issues at the workshops with friends and family (Drugsfutures evaluation report p39 and p62). For example:

  "Yes [talked to family and friends about] … the gene therapy – when to look at the genes of someone who could possibly become a drug addict, and all the moral ethical and legal stuff that goes along with it" (Liverpool interviewee)

"The main ones were the Alzheimer drugs and brain enhancing drugs – I discussed these with many people" (Brainbox interviewee).

The 14 Sciencewise-ERC funded projects up to June 2010 had worked with a total of 12,595 public participants. An evaluation for Defra has demonstrated that each public participant in that deliberative dialogue process talked, on average, to 30 others[20]. This 1:30 ratio of spread of public interest, enthusiasm and knowledge means Sciencewise dialogue participants are likely to have talked to approaching 400,000 members of the public.

c) **Participants became more positive about future participation**. As a result of taking part in dialogue projects, public participants feel strongly that public engagement in these sorts of policy issues is important (usually 90-100% of participants), and are almost always more willing personally to get involved again (examples include Hybrids - 95% were more willing, Drugsfutures - 90%, Sciencehorizons - 96%). For example:

- **Big Energy Shift**: Many participants said they would like to take part again as a result of being involved in this project. They valued learning something new, having their say and some influence over important issues, and the social interactions (BES evaluation report p33-34). By the end of Event 3, 98% believed that consulting the public on these sorts of issues is important (BES evaluation report p32).

  "*That was my first time taking part in something like that, but it wouldn't be my last. I was impressed about the whole thing. I went 'this might not be too much fun', we were there six or seven hours. [But] each one of the days, it was very, very informative, you weren't bored, or anything like that. You got on with it, everybody was in the same team, everybody was motivated. It was a good day. When it was over, you went, 'oh, well, a bit more of that would do'. It was hours well spent. I enjoyed myself."* (Householder, Irvinestown, BES evaluation report p34)

- **Drugsfutures**: Taking part resulted in public participants being more positive about the involvement of the public in these sorts of discussions. 90% of participants at regional workshops and 95% of those at the Brainbox said they were more likely to get involved in these sorts of events in future. Also, 96% of Brainbox participants said they thought it was important to involve the public in discussing issues like this; 91% of these thought it was *very* important.

- **Hybrids**: 95% of participants at the reconvened event said they were more likely to get involved in these sorts of events as a result of attending this one. (Hybrids evaluation report)

- **Industrial Biotechnology**: After the event, 96% of public participants thought it was very important to consult the public about issues like this: *"You are voted in by the people, you have got to listen to what people say sometimes [although] you might not always be able to go along with it"* (public participant quoted in IB evaluation report, p23)

- **Sciencehorizons**: 96% of Strand 1 participants (evaluation report, p29) and 79% of Strand 2 organisers, thought there should be more events for the public on these issues. 75% of Strand 3 respondents said they wanted to have more discussions on science and technology.

- **Stem Cell dialogue**: 92% of public participants said they were more likely to get involved in future as a result of taking part in this project. 99% of public participants said they felt it was important to involve the public in discussing these sorts of issues; 90% of those thought it was *very* important (Stem Cell evaluation report p49).

[20] Warburton, Diane (2008) *Evaluation of Defra's public engagement process on climate change*. Shared Practice / Defra, November 2008.

Participants often report feeling proud that they have taken part in a nationally important debate, that their contribution has been valued, and they see taking part as a responsibility but also a pleasure: all important factors in building active citizenship.

d) **Participants developed trust in public policy-making processes and bodies**. Participants often enter dialogue events being sceptical about Government and other public bodies. After involvement in dialogue projects, they often trust the sponsoring body (and government and experts) to take account of their views. Examples include Big Energy Shift, Drugsfutures, Hybrids, Industrial Biotechnology, Sciencehorizons. For example:

- **Big Energy Shift:** *"I was delighted something good has come about because to be quite honest you sort of came away thinking this is probably a waste of money. So it's great to know that they're now taking action, they're doing something about it."* (Big Energy Shift Householder, Lisburn quoted in evaluation report, p32)

  Confidence among participants in whether the public views from this project would make a difference to government policy grew from 58% thinking it would at the beginning to 79% after Event 3. Confidence was affected by the cost and effort involved in the project so "*they're bound to be guided by it to a certain extent"*, the presence of Ministers at events so *"you do feel that you were actually sending a message directly to the Government and that it's being listened to*", and that the Big Energy Shift depended on public buy-in so they had to listen (evaluation report, p31-32).

- **Drugsfutures**: The dialogue events resulted in high levels of trust that those who commissioned the process would take notice of what the public said: 80% of regional workshop participants agreed they would (2% disagreed) (Drugsfutures evaluation report p43) and 55% of Brainbox participants agreed (none disagreed) (p66)

- **Hybrids**: *"To have been involved in the process reassures me and enables me to reassure others that our opinions can make a difference and that public bodies such as HFEA are interested in public opinion and do react to it. They are not autonomous megalomaniacs who make up rules and regulations for the hell of it. They are responsible and accountable."* (participant quoted in Hybrids evaluation report p33)

- **Industrial Biotechnology**: More than half (59%) thought the government would take the public's views into account (evaluation report, p23). Just over half (51%) said that the meeting had boosted their trust in the government's decisions about these issues (evaluation report, annex pvi).

  Providing a summary report that reflected participants' views and conclusions in ways they recognise and that make sense to policy makers helped build trust in the process. Even participants who had just 'skimmed' the report commented that it reassured them: "*just the feeling that people actually took notice of what we said and did go to the trouble of putting it all in a report*" (IB evaluation report, p23)

  "People just didn't come down just for the ten minute talk… There were people who stayed until the end, sat at the back and listened to the outcome. I thought 'Yes, they are definitely interested in what the public opinion is'." (public participant, case study).

e) **Dialogue changed participants' attitudes and views**. Many public participants report that they have changed their views as a result of taking part in a dialogue project, generally becoming more positive about scientific and technological development. Some participants also said that they would change their behaviour.

Although Sciencewise public dialogue is not designed to change public views or behaviour, it is a clear impact in many cases, largely resulting from participants having learnt about the issues and having explored the implications with experts and other participants. Examples include Big Energy Shift, Drugsfutures, Industrial biotechnology, Hybrids, Sciencehorizons, Stem cells. For example:

- **Big Energy Shift**: 89% of participants said, after Event 3, that their attitudes had changed including becoming more interested in the technologies. Taking part also overcame concerns and increased the appeal of some (although not all) technologies (e.g. those who were positive about wind turbines in their community rose from 8% to 45% by the end of Event 3). It also increased understanding about the environmental consequences of energy use.

  "All this environmental information, you don't really listen to it to be honest with you – it took something like that to sort of waken me up to it." (Householder, Lisburn quoted in BES evaluation report p30)

  There was also a significant increase in the numbers believing that individuals should be responsible for technologies in the home (up from 49% at the start to 70% at the end of Event 3), and that communities should be responsible for technologies in their areas (up from 47% to 62%). Evaluation interviewees also reported making small changes in their own energy use, such as switching off lights, turning down the thermostat; some were also thinking about larger changes.

  "I'm going to be moving in the next year or so and it certainly changed my view on what I might look for. I don't think that energy saving gizmos or the way that the place is built necessarily would have been a factor in my choice, but I think it would be now." (Householder, Harrow quoted in BES evaluation report p30)

- **Drugsfutures**: Participants said they had changed their views as a result of taking part: 34% said they had changed their views as a result of attending the event (evaluation report p38), although this rose to 45% saying they had changed their views at the Brainbox event (evaluation report p61); 50% at the Brainbox said it had made a 'difference' to their views. Comments from participants at workshops reported in the Drugsfutures evaluation included:

  "It did, definitely [make a difference to what I thought]. I went in, read everything and thought that gene therapy was a great thing. But listening to others made me think about infringements on privacy and other issues like that" (Liverpool interviewee).

  "I think it has. Perhaps it's changed my perception of people using drugs. There were one or two people I spoke to who had been addicted – they were very articulate and clever. It was interesting to meet them and to hear their experiences – it changed my views of the stereotype" (Liverpool interviewee).

- **Hybrids**: 70% said taking part had made a difference to what they thought about the issues. The most influential factors included having in depth information, hearing the range of different views, and having the scientists explaining the issues personally. The trend among participants was to become more positive about the use of embryos for research over the course of the dialogue - about half the interviewees said they felt more positive.

  "I did change my mind, yes. Before, I was probably against it but when I learned all the facts and why [they do it] I was in agreement." (participant quoted in evaluation report p35)

- **Industrial Biotechnology**: 49% of public participants at the first event and 100% of those at the second event said they had changed their views as a result of taking part (IB evaluation report, p29).

- **Nanodialogues**: *"My thinking's changed, because I did say when we were in our last group, I said that perhaps the research that's going on should be of benefit to people, like you're paying tax into things. But sitting at home in the last few weeks, I felt I'd hate to stop research that's going on ... because it's valuable in other fields rather than just beneficial to us ..."* (public participant quoted in Demos, p52)

- **Sciencehorizons**: Public participants in Strand 1 said (Sciencehorizons evaluation report p28): *"Less worried about the future development of science" "More enthusiastic" "More positive about technology" "I feel more enthusiastic about science and technology" "Less worried about the future development of science".*

- **Stem Cell dialogue**: 81% of public participants said that taking part had made a difference to what they thought about these issues. Most explained this by referring to greater knowledge and understanding of the issues surrounding stem cell research. 25% said they had become more in favour of, or had increased confidence in, stem cell research. For nearly half the participants, this learning was one of the most successful aspects of the workshop (Stem Cell evaluation report p48).

f) Participants felt valued as citizens. Feedback was that participants felt increased self esteem and sense of self worth through making a difference on something important. They felt their views had been respected and valued, often mentioning the value of taking part in something of national importance, and making a difference. They were pleased to have an opportunity to have their say, be listened to and taken notice of. They report that they expect Government (or other commissioning body for the dialogue) will take the final decision, but valued having their views seriously considered as part of that process. For example:

- **Drugsfutures** (all from Drugsfutures evaluation report, p50): *"Enjoyed debating important issues and feeling like my opinion counted"* (Liverpool questionnaire respondent)

  "Being able to contribute to something as important as this" (Liverpool questionnaire respondent)
  "Feeling that my opinion is of worth and also meeting a variety of people involved in these issues - either as carers, workers or people affected by mental illness" (Merthyr Tydfil questionnaire respondent)

  "Being involved in something of national importance and of importance to so many people today" (Merthyr Tydfil questionnaire respondent)

- **Hybrids** (all comments from public participants from reconvened event, Hybrids evaluation report p37):

  "Taking part in something that may change medical science"

  "Having the opportunity to give my opinion, whether they took it on board or not. You know, it's a life experience you wouldn't normally have."

  "Well, I felt part of it. I felt part of the process … of giving my opinion. Before, I've never been part of giving my opinion - not on something as important at least."

- **Nanodialogues**: *"I feel lucky ... I feel like we can make some nanoscule contribution to society"* (public participant quoted in Demos, p12)

- **Stem cell dialogue**: *"The 'opportunity to participate' was clearly a significant criterion against which the respondents evaluated the success of the workshop, as evident in the first Edinburgh workshop where the participants agreed that the public should have a say about scientific issues – 'it should not be left to politics' one participant commented.*" (Stem cell evaluation report p49)

  "The issues involve society as a whole and not just the scientists doing the research. We need to be accurately informed about the actual research and what is happening without media hype or hindrance" (a public participant quoted in the case study)

Many participants only valued the dialogue process if they felt their input was listened to and taken into account. Participants also report gaining skills and confidence through taking part, including in participating in group discussions, reporting back to plenary sessions, and writing reports. Examples include DNA, Drugsfutures and Nanodialogues. For example:

- **Drugsfutures**: *"I don't really like speaking out in public, but when we split into smaller groups I was able to say what I wanted and then it got fed back to the main group"* (Brainbox participant interviewee).

g) **Participants gained understanding of different types of people**. Participants met and discussed difficult issues with people they would never normally meet. Where public dialogues recruit to achieve a cross-section of the UK population and make efforts to include 'hard to reach' groups that do not normally participate, dialogue events create unique opportunities for bridging social divides that participants enjoy and value.

Evaluations have shown that new respect and tolerance has developed between people from different backgrounds with different views. Examples include DNA, Drugsfutures, Hybrids, Sciencehorizons. In the DNA project, participants remained in contact with each other for years afterwards:

- **DNA dialogue**: *"... the people involved are still in contact with each other ... it had a real impact on them ... the level of participation of the individuals and the support they provided to each other was one of the best things. It was clear that they had developed a lot of respect for each other and each others' views"* (departmental project manager interviewee 7).

- **Drugsfutures**: *"Discussing topical issues with people who I wouldn't necessarily speak to in my normal life [was the best part]"* (Liverpool questionnaire respondent). (Drugsfutures evaluation report p47)

  "I think one of the main things is meeting a lot of other people with a lot of different views and altering my own views. It's important to hear other people's points of view" (Liverpool interviewee). (p49)

  "Workshops like this are good. You need to sit with people, listen to their opinions and discuss it all together" (Exeter interviewee).

- **Hybrids**: *"We weren't stifled and everyone was polite enough not to talk over each other. And if it got heated we all got a chance to have our say at some stage … it certainly wasn't intimidating and everyone was encouraged to have their say."* (participant quoted in Hybrids evaluation report p31)

  "Even when there were quiet ones, there were people asking them questions and prompting them to speak. So everyone had the chance to have their say … There were plenty of arguments that went on, when people had different views. I felt that all views were covered, definitely." (participant quoted in Hybrids evaluation report p31)

In summary, evaluation findings show that Sciencewise-ERC public dialogues have had the following impacts on the public participants:

- participants have developed awareness and understanding; usually 90-100% of public participants reported learning about the subject, and about how science and policy making are done (all projects)

- the experience has helped build public confidence and trust in public institutions and public policy making, by enabling them to understand the influence they have had (Big Energy Shift, Drugsfutures, Hybrids, Industrial biotechnology, Sciencehorizons)

- dialogue has changed attitudes and views to science and technology, resulting in greater confidence in future development in science and technology (Big Energy Shift, Drugsfutures, Industrial biotechnology, Hybrids, Sciencehorizons, Stem cells)

- it has changed attitudes and views about personal and community responsibility for tackling public policy issues such as climate change (Big Energy Shift)

- it has resulted in almost all participants (usually 90-100%) feeling strongly that the public should be involved in discussions about science and technology issues

- it has resulted in public participants themselves being more enthusiastic about taking part in such discussions about public policy in future (all, including Hybrids - 95% more willing, Drugsfutures 90%, Sciencehorizons 96%)

- it has generated interest and enthusiasm for the subject so talked to others about it (Big Energy Shift, Drugsfutures, Industrial biotechnology)

- participants have met a diversity of people they would never normally meet and shared views with them (Drugsfutures, Hybrids, Sciencehorizons)

- participants developed personal skills and confidence through activities such as participating in group discussions, reporting back to plenary, writing reports (DNA, Nano)

- they built new relationships and networks (DNA)

- participants gained an increased sense of personal value, and of role in society, by doing something important (DNA, Nano).

In general, the impact that public participants report most often to evaluation researchers is about learning about the subject (and about policy making). Evaluation reports show that the great majority of participants report they have learnt something new, have clarified their thinking and that taking part has affected their views on the topic.

It is part of the value of these forms of deliberative public engagement that they do create real learning. Bloom's taxonomy of learning[21] identified that there is a learning hierarchy through which levels of learning can be tested: knowledge, comprehension, application, analysis, synthesis and evaluation. Evaluation, the highest level, requires critically considering ideas, information, knowledge and their limitations, assumptions and bias to test their validity in the context of the issue under scrutiny. This is precisely what good deliberative public dialogue can achieve, even in a single day and even on the most complex, technical and controversial subjects.

This goes beyond simple 'knowledge', the lowest level of Bloom's hierarchy: Bloom defines 'knowledge' as being about recalling information. This level of learning is often the explicit level of learning expected from deliberation, and almost always achieved, but much deeper levels can also be reached through the most effective processes. Given the levels of increased knowledge reported by participants in feedback to Sciencewise evaluations, it is clear that these processes do achieve the highest levels of learning in Bloom's taxonomy.

Learning is rarely the only, or most important, objective of any deliberative public engagement process: influence on policy decisions is often the key aspect of assessing value. However, without effective learning mechanisms covering all levels of Bloom's taxonomy, it is unlikely that the other objectives will be fully realised.

4.5.6 Impacts on scientists, experts and other stakeholders

Evaluation findings and interviews show that public dialogues have had five main impacts on the scientists, experts and other stakeholders that have taken part. These were, in summary (and each described below):

a) Developed new skills, experience and confidence
b) Learnt about public views
c) Increased respect for public input to science and technology

[21] Bloom, Benjamin (ed) (1956) *The Taxonomy of Educational Objectives*. Allyn and Bacon, Boston, MA. Copyright (c) 1984 by Pearson Education.

d) Gained a higher personal profile
e) Built new networks and relationships.

a) Developed new skills, experience and confidence in communicating complex ideas to lay audiences, learnt more about ways of working with the public, and had opportunities to talk to wider audiences (particularly the public) about their work. Stakeholders have also valued discovering that they were met with public interest rather than hostility. Examples include Drugsfutures, Industrial biotechnology, Nanodialogues, Sciencehorizons. For example:

- **Drugsfutures**: *"I think it is terrifically important for academics like myself to be involved in forums like this ... I think it enriches my understanding of policy making."* (policy maker interviewee 20)

  "It was good to experience the workshop. It sort of set me thinking as well … It was really interesting. I think there should be more of this type of public engagement because as far as I'm concerned it works" (Brainbox expert interviewee).

  "The college is interested in us being involved in them [dialogues]. But if you were a younger academic looking for promotion it would look good on your CV. So there are incentives for younger academics and the intellectual incentive. ... a big change is being suggested that there should be an assessment of how much impact the research is having. This is being hotly debated but being involved in these kind of initiatives would be highly relevant to this." (policy maker interviewee 20)

  "It's the first time I've been involved in this sort of thing … I was a bit nervous about the sort of reception we might get. You know, you expect the public to be a bit hostile. But they weren't" (Brainbox expert interviewee).

  "People obviously liked the subject … and some people saying 'I never knew that' and 'That's an eye-opener'. I suppose there is quite an amazing lack of knowledge in the general public so this was all really enlightening" (Brainbox expert interviewee).

  "I'd never really thought about it before. Even though it's very important in my work … to get messages across to the public, I'd never been involved in this sort of event before so it has set me thinking" (Brainbox expert interviewee).

  "It's a very effective way of getting down to the reality and peoples' views of the reality" (Brainbox expert interviewee).

  "I was interested in some of the facilitation techniques – the use of post-it notes, for example … It was fascinating for someone like me, a lecturer usually giving information on my home ground" (Brainbox expert interviewee).

  "I think the way the break-out groups operated was very interesting. I might think about that in the future" (Brainbox expert interviewee).

- **Hybrids**: *"So actually this stuff works, and I don't mean to trivialise it, but it's not as scary or difficult as one might think … This whole topic has been like a case study for how public engagement can work. Public opinion has come out completely in favour of something which it could have turned against. So if scientists get a chance to really explain what they're doing, they're not as scary. But at the same time it's important to respect that people have different views and give them a chance to discuss them."* (stakeholder quoted in Hybrids evaluation report p16)

- **Industrial Biotechnology**: *"Because I do press work as well as broadcast, I really want to understand how the things we were talking about worked with the general public. Getting a straight reaction to the messages, actually listening directly to the general public is a good experience."* (expert speaker, case study)

  "I had no idea what to expect. I was worried about whether it was going to be hostile or not and that made me nervous ... I really enjoyed it actually." (expert speaker, IB evaluation report, p26)

- **Nanodialogues**: *"One of the scientists, who had not previously engaged with lay publics in this way, had learned about how to act in public fora and about the sorts of questions and ethical perspectives that emerge."* (Chilvers evaluation, p10)

  "It has made me think much more carefully about how we present this work ... it has made me take a step back and consider how we think about this and how I can explain why we should be doing it." (scientist quoted in Involve, p62)

- **Stem cell dialogue**: The dialogue worked to "*socialise the expert speakers into lay discourse and alert them to the range of presuppositions embedded in the views held outside the expert community"* (Stem Cell evaluation report p47).

b) Learnt about public views, fears and questions first hand, and watched the public's immediate reactions to their subject, so they could test their own assumptions as well as identify where (and how much) the public was excited or worried about the implications of their work.

Scientists report that this interaction with the public (and with other scientists / experts) in an informal, safe environment in which ethical issues can be explored, helps them test their own assumptions about the issues, helps improve the transparency and scrutiny of their work, enables them to ask better questions of and within their own research, and stimulates ideas for new research of public value. Examples include Drugsfutures, Industrial biotechnology, Big Energy Shift, Trustguide. For example:

- **Big Energy Shift**: The evaluation found that one NGO intended to adjust the way that they work, having found out from the Big Energy Shift that simply offering technology at no cost is not enough to motivate householders to take it up. *"I have thought for a while that if you could find a method of ensuring that there was nil immediate cost to the householder, that that would make people do stuff. Clearly that is not the case. We need to do more."* (External stakeholder quoted in BES evaluation report p38)

- **Drugsfutures**: *"It helped me test my views and adjust them. I took notes all the time"* (Brainbox expert interviewee).

  "It's useful and sort of refreshing to get back into a sort of community forum and to hear ordinary people making their views known … it was useful to get a sort of reality check" (Brainbox expert interviewee).

- **Industrial Biotechnology**: *"You suddenly realise why people are so scared and that was quite an eye opener for me – people really don't understand."* (expert speaker, case study)

- **Nanodialogues**: *"It had a huge impact in terms of the way I think about science and how scientific priorities are set"* (policy maker interviewee 21).

  "Many of the scientists (me included) who have been involved with public engagement, however, have reported that the experience is very positive. In addition to being reminded of the generally high standing of scientists and scientific enterprise in our society, they are prompted to re-examine unspoken assumptions and clarify their aims and objectives." (Professor Richard Jones in *The Way Ahead*, ed Jack Stilgoe, p68)

- **Stem Cell dialogue**: *"I gained a lot from listening to the views of a very diverse range of members of the public who, by and large, were very supportive of us but had a few areas where they weren't certain. I think it has allowed me to sort of set my barometer at a more appropriate point"* (Professor Chris Mason, University College London, an expert speaker and member of the Oversight Group, Stem Cell evaluation report p47).

c) Increased respect for public input to science and technology, and understanding of the value of public dialogue for their work and in relation to the wider governance of science and technology. This is largely through seeing first hand the commitment and ability of the public to work on complex scientific issues. Several have said public dialogue has renewed their faith in the general public. Examples include Big Energy

Shift, Drugsfutures, Hybrids, Industrial biotechnology, Nanodialogues, Stem cells. For example:

- **Big Energy Shift**: *"This was genuine engagement – the amount of noise in the room, the way people across the whole room would participate, absolutely no holding back. Giving up a whole Saturday – it's absolutely incredible!"* (External stakeholder quoted in BES evaluation report p33)

- **Drugsfutures**: *"I went around the discussion groups from one table to another – frankly I was moved by the depth of feeling I witnessed... I'm a medical man so I was partially aware of the strength of feeling about these issues, but I had really barely realised the half of it."* (Drugsfutures evaluation summary)

- **Hybrids**: *"[want] to say how impressed I continue to be by the way ordinary members of the public can say in a few words what an academic says in a paragraph."* (Authority member quoted in Hybrids evaluation report p32).

- **Industrial Biotechnology**: *"Some of the people who I got the impression didn't know a lot before the event seemed to have picked up a lot, and that was quite impressive I thought, for non-scientists to pick up as much as they did in that very short time. I was very impressed with that."* (expert speaker, IB evaluation report, p28)

- **Nanodialogues**: *"This engagement has shown that, given adequate resources and access to expertise, publics can not only take on difficult issues, but work with them in ways which provide meaningful contributions to governance."* (Jones and Irwin evaluation, p58)

  "I was very impressed by the questions that were asked. There were a number of quite insightful questions about nanotechnology. They'd really done a lot of research in some cases ... For me it was a really useful and interesting experience" (scientist quoted in Involve, p57)

  "I learnt about the willingness of people to accept there is a role for fundamental science, for pushing forward the boundaries of knowledge without having an actual application in mind ... there seemed to be more trust in scientists than I had thought there would be." (scientist quoted in Involve, p56).

d) Gained a higher personal profile, including higher profile for their work as well as for their organisations, with other scientists/experts, with the sponsoring / commissioning Government department or research institution, as well as with the public - enhancing their status and reputation. Examples include Big Energy Shift, Drugsfutures.

e) Built new networks and relationships across departments, disciplines and institutions, such as in the Big Energy Shift.

In summary, evaluation findings and subsequent interviews show that Sciencewise-ERC public dialogues have had the following impacts on the scientists, experts and other stakeholders that have taken part. They have:

- developed new communications skills and skills and experience in working with the public (Drugsfutures, Industrial biotechnology, Nano, Sciencehorizons)

- found that involvement in public dialogue could build personal reputation and status, within their own institutions and more widely, especially in the context of new need to demonstrate the impacts of research (Big Energy Shift, Drugsfutures)

- discovered new ideas about the practical implications of introducing new technologies on the basis of feedback from the public (Big Energy Shift, Trustguide)

- built networks and new relationships across disciplines, departments and institutions (Big Energy Shift)

- learnt about public views on governance and risk including around regulation and support (Big Energy Shift, Trustguide)

- valued the opportunity to talk about their work directly with the public, and to hear public reactions and views first hand (Drugsfutures, Industrial biotechnology)

- learnt about broader policy making processes (Drugsfutures)

- learnt about the interest and commitment and ability of the general public to work on complex scientific issues; renewed faith in the general public (Drugsfutures, Hybrids, Industrial biotechnology, Nano, Stem cells)

- learnt about public engagement processes, how they work and where they can add value (Big Energy Shift, Drugsfutures, Hybrids, Nano)

- understood that the public could understand and readily accept scientific uncertainty (Nano)

- valued the opportunity to talk about ethical issues and challenge their own assumptions (Drugsfutures, Nano)

- learnt about public views on the issues (all).

4.5.7 Benefits for government and wider society

The wider impacts of public dialogue can be identified by linking the findings from the evaluations of specific Sciencewise-ERC dialogue projects summarised above with concepts about the *potential* impacts from national government and other policy statements on public engagement. Such impacts include:

a) **Increasing transparency and openness in government policy and decision making**, and thus increasing public trust in government and public institutions. Public participants report greater trust in decision making processes and bodies as a result of taking part in high quality dialogue processes.
   More generally, dialogue projects increase openness and transparency in decision-making processes, and help public participants to understand and have confidence in public policy processes.

b) **Strengthening democratic accountability**, by providing effective new ways for citizens to engage in, and influence, political and policy decisions (e.g. the allocation of resources). Evaluations show that appropriate recruitment in public dialogue processes can ensure the involvement of traditionally disenfranchised sectors of society, as well as a cross section of the population.

c) **Strengthening civil society**, by building skills and enthusiasm for public engagement through direct experience. Public participants report that they gain confidence in their opinions and that someone will listen to and take account of their views. Their interest and willingness to take a greater part in society increases as a result of taking part in dialogue.

d) **Building social cohesion and social capital** by bringing diverse types of people together in a safe environment in which they can exchange views and work together on a joint enterprise, and get to know and better trust people from sectors of society that they would not normally meet. Public participants report particularly valuing the opportunity to talk with people they would not normally meet in their everyday lives, and find that dialogue processes ensure everyone is tolerant of the views of others, even if they disagree.

Overall, the Sciencewise approach to public dialogue can demonstrate evidence of different 'types' of benefits, which can be categorised in different ways:

- Added value benefits and unique benefits[22]. Added value benefits are benefits that have come from engagement that would not have been available without it; unique benefits are those which can only be achieved through engagement.

- Developmental benefits and instrumental benefits[23], or what Tim O'Riordan et al called 'transformative' and 'instrumental' outcomes[24]. Instrumental benefits include legitimacy of decisions or strengthened democracy, and transformative benefits are around learning, capacity building, empowerment.

The distinction between instrumental and transformative benefits is useful for considering the unique benefits from the Sciencewise approach to dialogue, as there is evidence of both. The focus on added value and unique benefits is useful in considering both what engagement can provide that no other process can, and what could be lost if engagement did not take place.

In the analysis above, distinctions have been made between different benefits, and between 'who' benefits and values the impacts (e.g. participants, policy makers). It is important to note that the benefits and impacts described have resulted from highly effective dialogue processes; not all benefits will be achieved in all types of engagement processes in all circumstances.

There are overlaps between benefits to and impacts on different groups: for example, if participants gain confidence and enthusiasm for future civic participation, it is a benefit to them personally but also a wider societal benefit as those individuals may become more engaged citizens who are more willing to take a larger role in society in other ways. In addition, the impacts of public dialogue are given different weight by different audiences. Evaluations of public dialogue on national policy issues have found that the most important impacts from dialogues have been as follows:

- For **public participants**, the most important impact of dialogue is **influence**: whether their views are listened to and/or the dialogue makes a difference.

- For **policy makers**, the most important impact from dialogue is the extent to which it contributed to their policy development processes. In particular, they tend to value gaining **confidence and reassurance in their decision-making** so that decisions can be taken and policy can be moved on (*political* value), and to meet the need for public input as an essential **part of the evidence base** for policy making (*practical* value).

Other outputs and outcomes will also be important to these two (and other) audiences. However, the influence on policy seems to be the crucial test for both these audiences in terms of whether the process was worthwhile.

4.6 Analysis of good practice and innovation in Sciencewise funded projects

[22] Colbourne, Lindsey (2008) *Mainstreaming collaboration with communities and stakeholders for FCERM*. Science Report SC060019 Improving Institutional and Social Responses to Flooding. Environment Agency, Bristol.
[23] Richardson (1983) quoted in Burton, Paul (2007) *Conceptual, theoretical and practical aspects in measuring the impact of citizen participation in policy making*. Paper to CINEFOGO Conference, Bristol, 14-15 February 2007.
[24] O'Riordan, Tim; Burgess, Jacqueline and Szersynski, Bron (1999) *Deliberative and Inclusionary Processes. A report from two seminars*. CSERGE Working Paper PA99-06, Centre for Social and Economic Research on the Global Environment, University of East Anglia.

4.6.1 Introduction

This section summarises the good practice and innovation in Sciencewise funded public dialogue projects identified through a new detailed analysis of individual evaluation reports on the projects, supplemented by new interviews for this study. Points identified were clustered and the heading used below are taken from the meaning implicit in the clustered points; the headings used are therefore taken directly from the evidence.

The analysis below separates *strategic* good practice (e.g. clarity of purpose) from *operational* good practice (e.g. quality of facilitation). The strategic issues are possibly related more to the overall *design* of the process, and the operational issues possibly more to the *delivery* of the process, although quite a few issues relate to both design and delivery and there are clearly many overlaps between these categories.

For each point identified in the following analysis, examples of good practice and innovation are provided from specific dialogue projects. These examples are taken from those projects in which the issues are specifically mentioned in their evaluations as either good practice or new understanding as a result of a problem that has arisen. It does not mean that other projects did not also achieve good practice or had problems in similar ways.

Definitions of good practice are not always immediately obvious, as they depend to some degree on the purpose of the exercise and the methods used: good practice is context specific. Although Sciencewise has a particular approach to public dialogue (see section 3.4), which is used for funding decisions, advice and guidance, the details of good practice implied in that approach continue to be developed and articulated.

For this analysis, therefore, definitions of good practice have been based partly on conclusions in the independent evaluations (where they have identified 'good practice' or 'what worked well'), partly on feedback from the interviewees for this study (where they have identified 'good practice' and/or 'worked particularly well'), and partly on general elements of good practice drawn from the overview gained from the analysis undertaken for this study.

4.6.2 Strategic good practice and innovation

Nine elements of strategic good practice and innovation in the design and delivery of Sciencewise-funded dialogue projects were identified through analysis of the independent evaluations and interviews. These were, in summary (each covered in more detail below):

a) Clarity of purpose, scope and approach
b) Appropriate level of public participant engagement in the design of the process
c) Good governance
d) Effective stakeholder relationships
e) Sufficient time for public understanding and buy-in
f) Open and transparent process
g) Effective management of expert input
h) Appropriate scale and diversity of public participants
i) Effective engagement of relevant policy makers
j) Assessment of costs.

a) Clarity of purpose, scope and approach

- clear and serious policy question addressed (Big Energy Shift, Hybrids, Nano, Trustguide)
- clarity about the questions for the public to consider / discuss (Drugsfutures, Nano, Sciencehorizons)
- identified need for clarity about what was <u>not</u> for discussion: boundaries and limits (DNA)
- identified need for clarity about philosophy / theory of approach to be used (DNA)

- clarity about level of public influence on policy, and that clearly communicated to participants (Big Energy Shift, Drugsfutures, Hybrids)
- clarity about how the public dialogue related to other relevant policy areas (Big Energy Shift)

b) Appropriate level of public participant engagement in the *design* of the process

- public participants chose expert input and information needed (DNA, Sciencehorizons)
- participants questioned and challenged expert opinion (DNA, Drugsfutures)
- participants chose priority issues and options for discussion (Nano)
- participant involved in analysis of results from dialogue (Stem cells)
- participants prepared their own report of conclusions from the dialogue (DNA, Nano-EA, Industrial biotechnology)
- participants presented conclusions from the dialogue to policy / decisions makers in person (DNA, Nano-EA)

For example:

- **DNA dialogue**: *"We allowed participants a lot of scope in defining the issues and got a report out of it written very much in their own words, so it wasn't necessarily easy to map this onto the policy questions we wanted to answer. There are two approaches really. You either define the scope but get less authentic answers, or you let participants define the scope but get answers that don't necessarily fit easily, which is what we did. There is no perfect way of doing it but the virtue of doing it the way we did was that you get an understanding of the language and values through which the participants approached solutions."* (departmental project manager interviewee 7).

c) Good governance. The governance of dialogue processes within Sciencewise projects has increasingly been managed through multi-stakeholder oversight / advisory groups. However, although a few evaluations cover this (e.g. Hybrids), this has not been an issue of good practice that has been fully examined to date.

Good governance can contribute significantly to the success of a dialogue project and is likely to need to be evaluated around a wide range of issues including around the diversity of perspectives covered by formal members of advisory and oversight groups, and the extent to which the theoretical perspectives underpinning the public engagement are made explicit so that the approach can be fully articulated and understood. Good governance can help in the following ways:

- diverse views and perspectives inform the framing of the dialogue: what it will cover (and what it will not cover), and how

- similarly, diverse perspectives should inform the information given to participants both in writing and choice of experts / scientists (where these are not entirely chosen by participants)
- ensuring the outputs of the dialogue process (final results) are produced in a form, covering the issues and answering the questions relevant to policy makers and targets, and thus ensuring the outputs are as easy to use as possible

- stakeholders disseminating and promoting findings through their own networks.

Without effective management and governance processes, problems have arisen in projects previously, such as:

- questions about the neutrality of the process and the balance of views presented, leading to suspicions that the process was leading or manipulative

- insufficient understanding by the advisory group of the philosophy and contractual obligations of the delivery contractors, resulting in detailed plans being developed and made operational before advisory groups have a chance to consider the implications of the proposed approach and input effectively

- confusion over roles and responsibilities between these advisory / oversight groups and others managing the project over who takes decisions and when.

d) Effective stakeholder relationships

- stakeholders involved explicitly embodied / represented diverse views on the topic in the oversight of the project process and the information materials used with the public through oversight or advisory groups (Hybrids, Industrial biotechnology, Stem cells)
- the range of stakeholders involved demonstrated the independence and neutrality of process and information used with the public (Hybrids, Industrial biotechnology, Stem cells)
- stakeholder engagement developed buy-in and created allies for policy influence (Big Energy Shift)
- built relationships and involvement in the actual delivery of the project process (Sciencehorizons)
- separate contractor expertise brought in to develop stakeholder engagement elements (Industrial biotechnology)
- public dialogue process brought together stakeholders who had not worked together before (Industrial biotechnology, Nano)
- stakeholders provided a source of knowledge and expertise to project (Sciencehorizons)
- public dialogue process created new collaborative ventures between stakeholders (Sciencehorizons)

For example:

- **Hybrids**: A Stakeholder Advisory Group with representatives from 16 organisations was convened in the planning stages of the project, and provided input primarily on the information materials used with the public. The group met twice and also gave input by email. The group included organisations with very diverse scientific, ethical and religious perspectives on the issues, which strengthened its credibility in providing scrutiny and oversight to ensure the materials were fair and balanced.

  "There are ... benefits in having the steering group – it helps to take that suspicion away and helps to ensure that there is a full reflection of the various views in the materials." (departmental project manager interviewee 14).

e) Sufficient time for public understanding and buy-in

- each group of people met enough times to allow public participants to absorb and reflect on new information, with time to go away and talk to friends and family (Big Energy Shift - 4 stages, Hybrids - 2 stages, DNA - met 5 times)
- design of dialogue process allowed time and scope for buy-in from public and other stakeholders (Big Energy Shift)

For example:

- **Hybrids**: *"I think the iterative process, where you got people's thoughts first and then observed how their views changed with more information and context, was very important. Especially with these sorts of issues where people's responses are often their gut reactions, or influenced by how the media presents it.*" (Stakeholder Advisory Group member quoted in Hybrids evaluation report p14)

- **Industrial Biotechnology**: *"If we hadn't had such a long period of discussion we would only have had surface level impact; we would only have had the knee-jerk reactions we got at first. Also the participants wouldn't have spoken to and learnt from each other."* (practitioner interviewee 23).

  "The complicatedness of this whole issue, it needed 2 days, you couldn't do it in half a day because you wouldn't have time to explain it and let people digest it and understand it and then respond to it. It's got to be that detailed, it's not a simple black or white answer." (policy maker original evaluation interview)

f) Open and transparent process

- all materials used by public participants published (Sciencehorizons)
- all reports on process and findings published (including evaluation report) (all)
- all written input to the dialogue (e.g. online) published (Sciencehorizons)
- deliberative public meetings held with public audience (DNA)
- decision-making meetings of policy makers held in public (Hybrids)
- website running throughout with all project details and how to get involved (Big Energy Shift, Hybrids, Sciencehorizons, Trustguide)

g) Effective management of expert input

- role of experts was clearly limited to informing the discussions by public participants (Big Energy Shift, Drugsfutures)
- experts identified to be as balanced as possible in terms of pro- or anti- the technology under discussion, with care taken to ensure that those with better social or communications skills, powerful arguments around cures for fatal diseases or local knowledge (all known to be influential with public participants) were not used to generate undue influence (Hybrids, Industrial biotechnology, Stem cells)
- experts provided input in various ways including presentations, questions and answers and in small discussion groups to answer immediate questions (DNA, Drugsfutures, Hybrids, Stem cells)
- extensive work to involve NGOs as experts (Industrial biotechnology)
- broad range of experts involved including scientists and others with expert and academic technical knowledge, and also those with personal experience of issues being discussed (e.g. ex-drug users), or in campaigning or service organisations (NGOs and community organisations) (Drugsfutures, Hybrids)
- experts were provided with thorough briefing and support (Drugsfutures, Hybrids)

For example:

- **Stem cell dialogue**: There is a danger that, if there is insufficient disagreement between expert speakers about the pros and cons of the subject, disagreement among participants may be reduced and/or those who do disagree may drop out (Stem Cell evaluation report p51). Facilitation can reduce this danger, and in this case was excellent, but careful planning is needed to avoid losing differences of views.

  "In retrospect, the homogeneity of responses appears to have been shaped by the role played by experts in framing the discussion. Framing played a significant role in bounding the discussions as participants showed a strong tendency to follow and explore the main issues raised in the most influential experts' presentations. We noted big variations in the responsiveness of participants to particular experts who were more effective communicators. A number of our interviewees also noted that scientific experts were relatively more influential than social scientists and ethicists in shaping participant responses ... symmetrical dialogue can only be expected to happen if it is structured in a way that minimises the tendency for experts to slip into the 'deficit model' role of providing information as we observed at the workshops." (Stem Cell evaluation report p53)

h) Appropriate scale and diversity of public participants. The actual numbers being 'enough' differs in different circumstances; one key factor is for there to be enough participants involved for the process and the results to be credible to policy makers, media and all those involved. For example, two highly influential projects involved very different numbers - the DNA project involved 30 public participants and 12 scientists / experts, and the Drugsfutures project involved 727 public participants. Lack of sufficient numbers for policy maker and other key audiences can be seen to potentially undermine the credibility of results (Industrial Biotechnology). Other examples of good practice on this issue include:

- over-representation among public participants of certain sectors of society where that group was disproportionately affected (DNA)
- participants were diverse enough to be seen to cover key demographics (age, gender, ethnicity, social class / education); diverse groups recognised as valued by

public participants (interested in meeting each other and hearing different views) and policy makers (credibility of results) (Drugsfutures)
- outreach / special events to ensure inclusion of groups not normally participating (e.g. young, black and minority ethnic groups), within and/or alongside mixed groups (Drugsfutures)

For example:
- **DNA**: The DNA dialogue involved a 'diverse' group rather than aiming for demographic representation, with over-representation of some groups who may otherwise not have been heard but who may be disproportionately affected by the issue. The scale (30 public participants) and recruitment worked well to 'get a feel for where citizens were coming from', rather than being fully representative of the views of the general public:

  "We made a deliberate decision to recruit a diverse panel with significant black and ethnic minority membership so we could hear from a wide spectrum of people and especially those whose opinions are not often heard." (Alice Maynard, Chair of HGC working group, quoted in HGC press release 29 July 2008)

  "*Anyone involved in multicultural education knows how fraught issues of racism and difference can be during the learning process; for all the progress made in the past 40 years, the injustices arising from perceived difference can still wound a group and strangle learning. The opposite of this seemed to be taking place during the panel sessions I witnessed. The pleasure in lively debate, the respect for diverse opinions, the intelligence and confidence that were displayed by all the participants really was a joy to behold. Vis-à-Vis's gifted facilitators deserve much praise for creating such a productive environment.*" (DNA Evaluation report, page 17).

  "*The mix of faiths, ages and backgrounds was well organised – this was the best thing.*"(participant interviewees quoted in the DNA Evaluation Report)

- **Industrial Biotechnology**: Participants were recruited to broadly reflect the composition of the general public in terms of gender, age, ethnicity, socio-economic group and/or education, and work status. This approach to recruitment was seen to be sufficient to provide a diverse range of views. The mix (and number) of public participants was important to the credibility of the results, for participants as well as for policy makers. The evaluation report identifies that the number of public participants (48 in total) and approach here worked well for the objectives of this dialogue, and in terms of qualitative research.

  "The concern about sample size reflects a lack of understanding of qualitative research; the purpose of the project was to find out what views exist, what drives these views, and how people respond to information, not to understand the prevalence of certain views, drivers, or responses which would have required a quantitative approach. To boost trust in the findings, this could perhaps have been explained in a couple of sentences in the summary report." (IB evaluation report, p24)

i) Effective engagement of relevant policy makers
- involvement of policy makers in advisory / oversight groups (Drugsfutures, Industrial biotechnology, Stem cells)
- engagement of policy makers at sufficiently early stage so they could help frame the dialogue process and the key questions, and therefore bought into the process and could ensure the process was relevant (Big Energy Shift, Drugsfutures, Industrial biotechnology, Nano-EA)
- policy makers represented at key public dialogue events so they could hear the strength and richness of public discussions first hand, and could demonstrate they were listening and taking notice of public views (Big Energy Shift, Drugsfutures, Industrial biotechnology)
- cross-government involvement so all relevant policy makers aware and involved (Big Energy Shift, Drugsfutures)
- policy makers from commissioning body made formal response to public input (Nano-EA)

For example:

- **Stem cell dialogue**: The preliminary results of the dialogue were considered by a workshop of policy decision makers from their own organisations, jointly hosted by BBSRC and MRC; attended by the Department of Health. *"A specific thing that worked well with this project ... was the policy workshop we had around a month before the final report [was published]. We got key people in the room and discussed the main aspects of the report and potential impacts"* (departmental project manager interviewee 15)

j) Assessment of costs

- project commissioners feedback that dialogue was value for money (Drugsfutures, Trustguide)
- project commissioners proposed that calculation of costs of dialogue should be by comparison to the problem being tackled (e.g. costs of drug crime) (Drugsfutures)
- project commissioners proposed that calculation of costs should be set in the overall context of science funding (Nano)

For example:

- **Drugsfutures**: *"I think having public consultation ... on recreational drug use was very important indeed. It is one of the most serious social problems we have. The amount of money being absorbed by crime associated with drugs is staggering. If you could spend a small amount of money on public dialogue to make changes that save more money in the long run then that is key."* (policy maker interviewee 20)

- **Nanodialogues**: *"[It was money well spent. The financial cost] needs to be considered in the overall context of the cost of science funding in the UK."* (policy maker interviewee 21).

- **Trustguide**: *"BT feels we got very good value for money ... Because of the impacts and the variety of impacts across different arenas. It's the best way to spend money ... We've had great feedback, and I can't wait to do it again."* (departmental project manager interviewee 19).

4.6.3 Operational good practice and innovation

Eleven elements of operational good practice and innovation in Sciencewise-funded dialogue projects were identified as follows (each covered in more detail below):

a) Preparatory research
b) Effective deliberative discussions among public participants
c) High quality facilitation
d) Effective recording and analysis of participants' views
e) Effective reporting
f) Efficient delivery arrangements
g) Mix of engagement methods
h) Appropriate information
i) Effective communications with participants
j) Effective and timely evaluation
k) Good working relationships.

a) Preparatory research

- initial desk research (e.g. literature reviews, interviews with stakeholders) established what was already known about public engagement in the field, and public views on the issues (Drugsfutures, Stem cells)
- initial discussion paper widely published, based on contextual research, to stimulate interest in the project and its issues (Sciencehorizons)

b) Effective deliberative discussions among public participants

- small group discussions (5-10 people) and plenary sessions within events (all projects)
- input of information to stimulate discussions (all)

- balance of experts to public participants: not more than 1:10 (Big Energy Shift)
- focus on public participants' discussions and hearing the public voice (all)

c) High quality facilitation

- consistent high quality facilitation ensured everyone had a chance to have their say, and no single view or person dominated the discussion (Big Energy Shift, DNA, Drugsfutures)
- facilitators focused on ensuring the process worked for participants and that the conclusions and outputs required to meet the objectives and for policy makers were achieved (Big Energy Shift)
- facilitators were not seen as experts providing technical or scientific information, but as experts on process management (Big Energy Shift)
- facilitators created a safe environment to ensure emotions caused by prejudice and powerful beliefs were not allowed to dominate or stifle the full range of views being expressed (DNA, Hybrids, Stem cells)

d) Effective recording and analysis of participants' views

- mix of qualitative (e.g. notes of participants' views) and quantitative methods (e.g. electronic polling) enabled triangulation, richness, breadth and depth
- electronic polling (Drugsfutures, Stem cells)
- flip chart recording so notes taken were seen by participants, challenged and changed where needed (Industrial biotechnology, Sciencehorizons)
- audio-recording used as back up to note taking, but without transcription (Industrial Biotechnology)
- audio-recording used, with transcription (Trustguide)
- analysis undertaken by coding transcripts of audio-recording (Trustguide)
- analysis undertaken by 'clustering' points (all others, except Trustguide which coded)
- analysis partly undertaken by participants (Stem cells, using Q methodology to prioritise)
- participants formally agreed points to be taken forward (Hybrids)
- participants prepared their own report of conclusions from the dialogue (DNA, Nano-EA, Industrial biotechnology)

e) Effective reporting

- emerging findings reported during the process to policy and decision-makers, and oversight groups (Drugsfutures)
- final written report explained the dialogue process, methodology and recruitment of public participants on which findings were based (including scale, diversity, objectives, approach, etc) (Drugsfutures, Hybrids)
- report clearly summarised the conclusions from the dialogue in ways that allowed policy makers to use reports to come to decisions (Hybrids, Stem cells)
- separate reports were provided of input from different parts of the process, to allow policy makers to disentangle sources of differing views (Hybrids, Sciencehorizons)
- reports used direct quotes from public participants to evidence the 'public voice' (Hybrids, Industrial biotechnology, Nano)
- reports reflected the mood and style of the dialogue as well as reporting conclusions on the issues (Industrial Biotechnology, Stem cells)
- overall reports and papers produced for wider audiences and disseminated (Nano, Trustguide)

For example:

- **Stem cell dialogue**: The final report integrated the feedback from the public at the workshops and from stakeholders. It effectively conveyed the complexity of the wider scientific, social, policy and ethical issues in stem cell research. *"This is an impressive achievement especially since it can be difficult to capture the range and depth of arguments around controversial topics where opinions, at first, appear polarized and predictable. The range of perspectives added nuance and specificity to the overall finding of high levels of support for stem cell research."* (Stem cell evaluation report p51)

f) Efficient delivery arrangements

- approvals, funding, agreements were made efficiently to ensure momentum (Drugsfutures)
- a wide range of skills and experience was available to the project design and delivery, either from a large contractor with all the skills in-house, or a consortium of smaller organisations (Drugsfutures, Trustguide)
- delivery contractors had the flexibility to allow responses to emerging priorities (from the public or commissioning body) by changing the design of the process and the content of materials (Stem cells, Trustguide)
- tight, right specification understood as needed for delivery contractors, including identifying timing and content of key deliverables such as final reports (DNA)
- early detailed communications between commissioning body, oversight group and contractors agreed approach and detailed plans (Sciencehorizons)

g) Mix of engagement methods used to stimulate public discussions and provide triangulation of results so there was robust evidence of public views before and after information was provided and dialogue took place

- methods used within deliberative discussions
  - deliberative discussions in small groups and plenary (all)
  - role play (DNA)
  - video links between parallel group discussions in different locations (DNA)
  - mapping (DNA)
  - electronic polling (Drugsfutures, Hybrids, Stem cells)
  - disaggregated activities / beyond meetings, such as interviews with participants in homes, diaries, visits, help for personal research (Big Energy Shift)

- methods used within the dialogue project to supplement / complement deliberative public discussions
  - questionnaire survey of interested parties (Trustguide)
  - open public meeting (Hybrids)
  - omnibus public opinion polls (questions added to regular opinion polls), to establish broad public opinion on the issues (Hybrids, Stem cells)
  - formal written consultation with printed document and opportunities for postal and online feedback (Hybrids)
  - support for third party discussion meetings that fed results into project website (Sciencehorizons)
  - open access process that enabled any groups to have a discussion and feed into results to the project website (Sciencehorizons)
  - stakeholder engagement activities (Big Energy Shift)

  For example:
  - **Hybrids**: *"I was very impressed by how they had put the different processes together. That was quite groundbreaking I thought. And the evening public event, though [the audience] was self-selecting … it was still very important I think. … I think the quality [of the conclusions] is high because it was done in so many different ways. It was very thorough. I only wish this pattern could be replicated. It gives good conclusions about public opinion. … This was a unique example of using so many avenues [of engagement]. It was done very comprehensively and I think it was a very good model for doing public engagement on these sorts of issues"* (Expert speaker at open public event quoted in Hybrids evaluation report p59).

h) Appropriate information provided to inform the public participants and to provide catalysts for discussions, with appropriate time for participants to consider and absorb the information so they can discuss it fully:

- written information
  - short, printed materials, effectively designed (including diagrams), with 'facts' for participants to use at dialogue events (Hybrids)

- input from scientists and other experts from different backgrounds provided diverse perspectives on the issues
  - presentations, with Q & A (DNA, Drugsfutures, Hybrids, Sciencehorizons)

- other methods to introduce and provide information and ideas
  - actors to introduce scenarios (Drugsfutures)
  - use of scenarios (Nano, Sciencehorizons)
  - prompt cards (DNA, Industrial biotechnology)
  - use of topical media stories (Drugsfutures, Trustguide)
  - hands-on interactions with new technologies (Trustguide)
  - visits to sites using new technologies (Big Energy Shift)
  - games (Industrial biotechnology)
  - quizzes (Industrial biotechnology, Stem cells)
  - postgraduate students within small groups to answer technical questions (Hybrids)

- time allocated for information input balanced with (more) time for participant discussions (Big Energy Shift, DNA, Hybrids, Sciencehorizons)

For example:
- **Hybrids**: "*It is so difficult to provide balanced and unbiased information, to provide enough information for people to be able to discuss, but not too much so they can't take it all in. But in the end I was very impressed.*" (Stakeholder Advisory Group member quoted in evaluation report p14)

i) Effective communications with public participants
- before dialogue events, with enough information so participants understood timing and structure of engagement activities (Big Energy Shift)
- during dialogue events, with timetables so participants comfortable with process and what was expected of them and when (Big Energy Shift)
- after dialogue events, providing information on the results of the dialogue, where the results were going and how they would be used, what the final decision was and what difference the public input had made to that, and how to keep in touch (e.g. continuing website) (Big Energy Shift)
- follow up later, to explain what happened on the issue since (Big Energy Shift, Drugsfutures)

For example:
- **Big Energy Shift**: There were good communications at the end of the project, both to participants and other stakeholders. A summary of the conclusions of the Citizens' Forums was produced and circulated in April 2009, before Event 4 (to inform those discussions), and the full project report was posted to all public participants and emailed to all 50 policy officials who had been in touch with the project, and all other stakeholders. Both project reports were published on the Big Energy Shift website. The findings were also communicated through conference presentations including at the 2009 National Energy Action conference. Specific briefings were given to senior DECC policy makers.

  "Well, I was glad to have the report so that I could read through what everybody thought of it, you know? Usually if you go to something like this here you never hear of it again." (Householder, Lisburn, quoted in evaluation report, p36)

  The communications continued after the end of the project. A letter was sent to all public participants signed by the Minister (Joan Ruddock) to inform them about the Low Carbon Communities Challenge, and let them know that their input had been used to design that new initiative. All policy makers and external stakeholders were also informed of this new development. The letter to the public participants said the Challenge was going ahead *"as a direct result of your contribution to the Big Energy Shift. We are grateful for your help."*

j) Effective and timely evaluation
- started at the beginning and provided feedback from participants during the process to contribute to ongoing development of design and delivery (DNA)

- independent from design and delivery contractors (all)
- detailed report with qualitative and quantitative analysis of feedback from all those involved (Big Energy Shift, Drugsfutures, Hybrids, Industrial biotechnology, Sciencehorizons)
- covered quality of process, whether met objectives and whether met principles of good practice (Big Energy Shift, Drugsfutures, Hybrids, Industrial biotechnology, Sciencehorizons)
- covered impacts on policy, policy makers, experts and other stakeholders, and public participants (Big Energy Shift, Drugsfutures, Hybrids, Industrial biotechnology, Sciencehorizons)
- evaluator presented key findings at final project team debrief / wash up meeting (Big Energy Shift, Drugsfutures, Sciencehorizons)

k) Good working relationships

- between oversight groups, project managers, contractors and Sciencewise to get effective buy-in and clarity about expectations of design and delivery (Big Energy Shift, Drugsfutures, Sciencehorizons)
- high commitment and sense of responsibility within commissioning department / agency for good practice (Drugsfutures)
- high levels of trust and respect allowed flexibility (Drugsfutures, Stem cells).

Overall, the extent of good practice and innovation in these projects is remarkable and clearly valued by those involved: policy makers who have been able to gain the outputs needed for policy development; participants able to influence national policy; and scientists and other experts who have been able to ensure their views and expertise are taken into account in public deliberations.

4.7 Current concerns and future challenges

4.7.1 Introduction

Many of the difficulties, problems and challenges identified in Sciencewise project evaluations are around the technical design and delivery of public dialogue events, such as inconsistent quality of facilitation that does not ensure adequate deliberative discussions among public participants, or the failure to capture the complexity and diversity of public views as a result of inadequate recording and reporting. However, beyond these operational issues, there are some more fundamental concerns about the nature of dialogue and the approach that is currently used that have emerged from Sciencewise project evaluations.

This section outlines some of the broader concerns that have emerged from across the evaluations of Sciencewise funded dialogue projects, such as the extent to which a dialogue is legitimate (i.e. the dialogue process opens up a political space for debate) or is designed to legitimise a decision already taken or wanted (i.e. closes down debate by manipulating the process). The findings from this analysis are then addressed in the following section on planning future evaluations of public dialogue.

4.7.2 Legitimacy or legitimising?

The Sciencewise-ERC role in helping develop good practice in specific public dialogue projects focuses partly on identifying appropriate methods that are delivered effectively to meet the agreed purpose of the exercise. This includes ensuring that the methods chosen, the design of the process and the results are credible and seen as legitimate to all those involved: public participants and experts, to gain their involvement; and policy makers, so they are willing and able to take the results seriously as part of the policy making process. The extent to which the process is seen to be 'legitimate' is therefore a key element of good practice.

More generally, a perceived lack of legitimacy undermines the reputation and value of public dialogue to the public and to government, and therefore their willingness to engage in dialogue in future.

The question of legitimacy has been raised in the research for this evaluation as a *potential* problem for public dialogue in two evaluations - in practice, it was not a problem in either of these projects:

> *"...the Stem Cell Public Dialogue may be viewed both by the sponsors and by publics as a way of legitimising decisions rather than a legitimate social process with an open outcome. Research council representatives acknowledged this concern and expressed confidence that a culture had been created that would help initiate further public engagement as clinical applications started to emerge."* (Stem Cell evaluation report p52)

> *... there is a difference between legitimation (which is politicians wanting to square this off with their stakeholders – this is about persuasion and manipulation, not honesty or integrity) and legitimacy (which is about looking for the right thing to do for the right reasons)"* (policy maker interviewee 20)

Essentially, this is the issue of the extent to which any particular dialogue is a legitimate process which *opens up* a political space for debate with no preconditions on the results, or closes down debate through a manipulative political exercise designed to provide public approval for (legitimise) a decision already made or wanted, or to achieve a change in public attitudes (e.g. participants feel more positive about a controversial technology).

A legitimate exercise is said by the evaluation interviewee cited above as one which is "done for the right reasons in the right ways". Although that raises as many questions as it answers, it does accurately reflect the need for the right motivations for dialogue (and willingness to change policy as a result, where appropriate), as well as the right design and delivery (including appropriate processes to gain policy credibility). There remains continuing, and possibly growing, pressure for public dialogue processes to be demonstrably open and legitimate.

4.7.3 Structural changes in government policy-making systems

Evaluations note that, as practice in the design and delivery of public dialogue events continues to improve and develop, there has not been a complementary shift in the ways public institutions work with public dialogue. In addition, there has been significant practical learning among those in government who have had hands-on experience, but that has not translated into structural changes in the way public dialogue is embedded in policy making processes in government. Comments included:

> *"I think [Sciencewise] needs to be much clearer what they are trying to achieve ... it's not entirely clear that Sciencewise is having the impact within government in terms of embedding and raising demand. They don't need to continue testing new kinds of engagement but they need to look at embedding and identifying the barriers."* (Steering Group member interviewee 1)

These types of changes are sometimes referred to as 'culture change', although that implies much wider systemic change than is being considered here. In practice, there do not appear to have been even minor structural changes to integrate public dialogue processes or how the results from dialogue are considered and used.

There remain concerns that public dialogue remains an optional extra in policy making, and has still not become an integral part of the policy process. Without these institutional and structural changes, the future of public dialogue in policy making remains fragile.

4.7.4 The need for more evidence

Evaluations suggest there remains a need for evidence on the following:

- **Evidence of the use and influence of dialogue results**. Although some evaluations have demonstrated how trust is often developed through dialogue, all recognise the difficulties of demonstrating policy influence from public dialogue - usually in relation to there being no immediate evidence of impacts in the short term. However, the reluctance of policy makers to explain exactly how their decisions have been influenced by public views, and the continuing failures to report back to public participants how their input has been used, have exacerbated this problem.

  At present, there is no sense that participants in public dialogue experience what in other forms of public engagement is known as 'consultation fatigue'. However, unless real evidence showing how public views have made a difference to national policy, fatigue, suspicion and cynicism are likely to grow.

- **Evidence that public dialogue is cost effective**. None of the evaluations analysed for this study considered cost effectiveness, beyond asking those involved whether they considered the exercise was 'money well spent'. Those evaluations found great support for public dialogue in terms of value for money, with certain caveats: for the public participants - if their views are listened to; for policy makers - if there are results they can use.

  However, as budgets get increasingly pressured over the coming months and years, it is likely that greater efforts will need to be made to better demonstrate the cost effectiveness of public dialogue, particularly the extent to which public dialogue can save time and money in the longer term, and whether results and impacts of equal quality can be achieved with lower levels of funding.

- **Evidence to demonstrate longer term impacts and 'better' policy**. Future funding and public policy support for public dialogue will depend on powerful evidence that it does make a difference and does improve policy, decision making and relationships between all those involved. Funding for public dialogue tends to finish with the production of the final report from the dialogue and for evaluation with the evaluation report which is usually completed within a few months of the end of the dialogue.

  Dialogue project teams within government and within contractors tend to disperse quite rapidly. At present, the resources for gathering and analysing evidence of longer term impacts, particularly the extent to which public dialogue creates 'better' policy (and indeed, how 'better' policy is defined) do not exist beyond one-off research and meta-analysis of evaluations (such as this study).

4.7.5 Effective follow-up with public participants and other stakeholders

At most, public dialogue processes tend to end with a letter thanking public participants for their input, and informing them of the publication of the final report and where it can be accessed. There is almost never any information provided on what impact public input has had on policy (the Big Energy Shift is a notable exception), and no opportunities for the public and other stakeholders to stay in touch with developments.

Lack of follow-up reduces the benefits from the investment of resources by and in all those involved (in depth learning opportunities etc) and can create dissatisfaction and cynicism among those involved, as those evaluations that have addressed this issue demonstrate. For example:

- **Drugsfutures**: *"I really enjoyed the day. I would really like to know what other people thought*

… [and] I'd be interested in being kept updated on the statistics and changing topics on drugs and brain science" (Drugsfutures evaluation report, Liverpool interviewee).

- **Nanodialogues**: *"If we got some feedback saying there had been even a slight change in how things work because of something we said, then that would be a success. And even if they came back to us and said that they had listened to us but didn't agree with what we suggested, then that would still be a success, as long as they had considered it"* (public participant, quoted in Involve, p64)

4.7.6 Effective engagement with NGOs

Several evaluations have pointed out that, although efforts have been made to encourage NGOs to take part in advisory groups and to provide expert input to public dialogue processes, these have rarely been entirely successful.

Whether NGOs are campaigning for or against scientific and technological developments, their engagement in public dialogue processes is likely to become more important. This brings challenges for the design and delivery of public dialogue, as well as to the wider role and priorities of NGOs themselves.

4.7.7 Effective governance for projects

The evaluations reviewed often mention but rarely assess governance issues, although the governance of dialogue is becoming increasingly important, both within projects (increasingly managed through multi-stakeholder oversight / advisory groups) and more generally in terms of the principles of dialogue and the implications of the public dialogue process for the governance of science and technology.

There have been concerns raised by some evaluations around the diversity of perspectives covered by formal members of advisory and oversight groups, the extent to which the theoretical perspectives underpinning the public engagement are made explicit so that the approach can be fully articulated and understood, and operational issues such as confusion over roles and responsibilities between these advisory / oversight groups and others managing the project over who takes decisions and when.

Good practice in governance is becoming increasingly important, including as a result of greater scrutiny of the neutrality, effectiveness and influence of dialogue processes.

4.7.8 Detailed design issues

The evaluations identified a series of challenges within the detailed design and delivery of public dialogue processes, including:

- **Neutrality in dialogue design and delivery**. Sciencewise dialogues aim for neutrality and strive for a balance of views in terms of the key arguments for and against proposed new science and technology.

  However, there are criticisms in some evaluations of perceived bias where, for example, certain experts who appeal more to public participants (if they are doing medical research to cure fatal diseases, are good communicators or locally based) may have more influence than others.

  Questions have also arisen where all the experts in favour of a new scientific or technological development are scientists and all those opposing are not. Similar issues have arisen over the balance of views in the materials used to provide background information to public participants and to help stimulate debate.

  Although there is recognition that it can be very hard to find the right experts to provide an absolute balance of views, and potentially impossible to cover every view

on an issue in a limited process, there is existing and continuing pressure to justify the choice of experts taking part in public dialogue to provide sufficient diversity of views, and to ensure that materials provide an appropriate balance of views where the issues are contested.

- **Fully capturing the complexity and diversity of public views**. Some evaluations identify problems with recording and reporting the full complexity and richness of public views, and particularly where minority views were expressed. In some cases, the full report of the dialogue has captured this richness and diversity, but in general public views have rarely been comprehensively recorded and fully analysed.

  In some cases, this was what was required, but often policy makers want to see the full details of public views, especially to establish where some consensus has been achieved and where conflicts remain, as well as a summary of the key issues emerging.

- **Enabling fully deliberative dialogue**. In some cases, evaluations have drawn attention to the tendency to focus on information giving and then gaining immediate feedback from participants with insufficient time for participants to absorb the information they are given; overload of information; and a 'question and answer' approach to facilitation. These approaches are in danger of doing no more than harvesting views, and are thus little more than focus groups. In these cases, the public who take part are more research subjects than engaged participants.

  Effective deliberation requires time for discussion among participants and, ideally, time between events to allow participants to go away and reflect with others outside the process on the implications of the issues. The nature of effective deliberation is now well understood among some, but further dissemination of good practice is likely to be needed.

- **The role of public dialogue in generating new thinking**. One evaluation has pointed to the failure of public dialogue processes to develop entirely new thinking on an issue, although several have identified policy makers who feel 'nothing new' has resulted. For many policy makers, this is not a problem. The lack of anything 'new' reassures them there is nothing they have not considered.

  However, in terms of taking the debates on science and technological development forward, the lack of any new thinking to emerge from public dialogues may be a missed opportunity.

The concerns and challenges reported here raise some important questions about the nature of 'good' public dialogue and how it might develop in future to be more effective and influential. The nature of 'good practice' in public dialogue continues to develop, with evaluations continuing to provide evidence of what is working well and less well in individual projects. There remains significant scope for wider awareness, understanding and application of these lessons (and their implications) to be developed.

4.8 Planning for future evaluations of public dialogue projects

4.8.1 Introduction

The review of evaluations completed for this study has shown the extent to which previous studies have focused on actual dialogue *events* with the public, and much less on everything *around* those events that affect the broader issues identified above as concerns and challenges.

This section summarises some of the specific questions that could be important in future evaluations of public dialogue, but which have often been neglected to date in spite of

their importance to the quality and success of the process. There is then some exploration of some of the wider implications of some of the findings of this study for future evaluations, particularly around the current approach to public dialogue, including all the unstated assumptions on which instinctive judgements are made about the success or otherwise of public dialogue projects. This includes some analysis of the different motivations of those involved in public dialogue projects, and some of the different traditions that lay behind much current public dialogue practice.

4.8.2 Key questions for future evaluations

In future, it is likely that evaluations will need to cover all the issues they currently cover (see, for example, section 5.4.4), plus the following:

- **Influence on the wider policy environment**. Evaluations could cover the potential for influencing the wider policy environment for the specific policy issues being discussed with the results of public dialogue, as well as impacts on specific policy targets. There are two dimensions to this:

    - Influence on the wider policy environment affecting the topic itself. Evaluations may currently consider the extent to which the results of dialogue are fed to the originally intended policy targets and homes, but rarely consider impacts on the wider debates on the issues. This is something that could be followed up with key stakeholders over time, as well as monitoring relevant policy and other documentation.

    - Influence on the wider political policy arena. For example, difficulties currently arise whenever public participants challenge market-based approaches to the development science and technology, especially the role of the private sector. This sort of issue can be seen as 'outside the scope' of the dialogue and may therefore not even be recorded or taken into account in the specific policy issue, let alone taken into wider policy arenas.

- **Impacts on engagement practitioners**. In order to fully assess the impacts of public dialogue, assessing the impacts on public participants, experts and other stakeholders and policy makers is not sufficient. Evaluations could also consider the extent to which the good practice and lessons from any public dialogue project has influenced wider practice among engagement practice and practitioners (including evaluators).

- **Longer term impacts on policy and people**. Evaluations need to cover both longer term policy outcomes and also impacts on relationships and networks within organisations and with external stakeholders, which may be crucial in terms of wider and longer term policy influence.

- **The changing role of NGOs**. Evaluations cover the involvement of NGOs in the specific process, but rarely reflect on the implications of the growth of public dialogue in policy for the wider role of NGOs, both within dialogue processes and more widely. At present, there are real difficulties finding effective ways to engage NGOs in public dialogue in ways that improve the dialogue process and provide NGOs with benefits for their own work.

- **Governance**. Evaluations usually mention but rarely assess governance issues, although the governance of dialogue is becoming increasingly important, both within projects (increasingly managed through multi-stakeholder oversight / advisory groups) and more generally in terms of the principles of dialogue and the implications of the public dialogue process for the governance of science and technology.

- **Past participants**. Evaluations could consider the longer term involvement of those public participants who have contributed to a specific public dialogue, in terms of building on and using their developing knowledge of the subject and their skills and experience in engagement.

- **Summarising public views**. Evaluations could cover the context for public dialogues in ways that include summaries of past work with the public (surveys, polls and other dialogue), as well as the ways in which the results of the specific dialogue project being evaluated contributes to knowledge about public views on the topic over time.

- **Embedding learning and culture change**. Evaluations could consider the extent to which commissioning government departments and agencies have embedded learning from their experience of public dialogue and have changed their approach to policy making as a result of running a public dialogue; for example, future plans for wider public engagement, future public dialogues, changing the framework of policy development so that public dialogue becomes integral to the process rather than an occasional optional extra.

- **Communication of the results of dialogue**. Evaluations could cover the extent to which a policy issue is framed and communicated in future as a result of public dialogue, including how future public and stakeholder engagement is structured, as a potentially key impact especially when the issue is very upstream. That in turn may deeply influence how policy is framed and delivered in future especially if built into a re-structured policy development framework.

- **Demonstrating the cost effectiveness of dialogue**. Evaluations still only very rarely cover the extent to which the costs of the public dialogue are outweighed by the benefits (or not). At present, it is as difficult to get good data on costs as it is on policy impacts and both need to be demonstrated if public dialogue is to continue to build a reputation as a valuable element of national policy making.

4.8.3 Wider issues for evaluating public dialogue in future

Evaluations of public dialogue are usually structured within a framework based on the purpose of the dialogue (objectives), and principles of good practice (in Sciencewise, the guiding principles). This approach leads to very practical evaluations designed to assess the quality of the design and delivery, and the specific impacts, of the project.

What is missing from these existing frameworks is any analysis of the wider beliefs and understandings of ***what public dialogue is for*** - the unstated assumptions that are the basis on which many people instinctively judge the success or otherwise of public dialogue as a contribution to policy development.

Those assumptions are not currently fully articulated or shared, and there is therefore little agreement about the approaches to dialogue that Sciencewise is aiming for, and therefore should be evaluating against. At the moment, this results in a lack of clarity in a number of specific practical areas:

- **Numbers of public participants** required for valid and credible qualitative data to be produced for policy makers to use as evidence in their policy making. This affects how 'good practice' on sampling, scale, diversity etc is assessed.

- **Relationship between the public and the scientists / other experts**. There are several issues here. For example, whether the ideal balance between public participants and expert / stakeholder input is dialogue *by* the public, with expert / stakeholder in a supporting role providing input, or dialogue *with* the public, where experts / stakeholders are fully part of the discussions. This affects assessment of the relationships between experts / stakeholders and the public participants, including

whether the ideal is about *equality* (i.e. without deference and with experts 'on tap not on top') or *partnership*. This issue can also have relevance to considering the appropriate *numbers* of public participants to scientists and other experts in any specific event.

Feedback from policy makers suggests that they want to hear an informed and authentic 'public voice'; others suggest that good practice results in the development and recording of the collective voice of all those involved (public plus others) working together to come to joint conclusions (co-creation).

- **Seeking consensus or diversity of views**. The question here is around the extent to which what is sought is a collective view, and therefore probably the public reaching some level of consensus even if not on all issues, or whether what is sought is a picture of the diversity of views.

- **Extent of public influence on policy**. It remains unclear whether the ideal is public control, or partnership, in policy making, or whether the public voice(s) expressed through public dialogue is only one input to that policy making.

  There are three elements to this - public influence on the inputs to dialogue (e.g. influence over setting the agenda, framing the question), public influence on the outputs of a dialogue process (e.g. doing their own reports, presenting their own findings), and public influence on (or direct involvement in) the final decision.

  - **Public influence on dialogue inputs**. For some evaluators, the extent to which the public participants control the process (e.g. shaping the agenda and key questions, deciding on which information and experts are needed to inform the work) is a basic principle for good practice. The lack of clarity is over whether this is an 'ideal' approach in principle, or simply an effective method in certain circumstances depending on the purpose of the exercise.

  - **Public influence on dialogue outputs**. There are several Sciencewise-ERC projects where the participants have written their final reports (sometimes with help from contractors), and where they have presented their own findings to the policy making body (e.g. DNA, Nano-EA). As with influence on inputs, the lack of clarity is over whether this is an 'ideal' approach in principle, or simply an effective method in certain circumstances depending on the purpose of the exercise.

  - **Public influence on policy and decision-making**. Evaluation evidence suggests that both the public and policy makers currently tend to seek public input and influence, rather than the public being part of the actual decision-making. In feedback to evaluations, the public very often say they want to learn about the issues, develop their thinking, give their views and be part of the process. They want to be listened to, taken seriously and told what has happened as a result. But they tend not to want to make the decision themselves and are usually willing to leave that to 'elected representatives' or other decision-makers.

    Evaluations show particular reticence from the public where they feel that a small group of the public may be given too much influence over decision-making; they tend not to want that responsibility. They often take the view that policy decisions are taken on a whole range of evidence, and their views will be part of that. Policy makers, for their part, tend to want to remain in control of policy development and decision-making processes, linking to formal representative democratic structures where politicians take final decisions. However, others suggest that greater influence and control by the public in decision-making would be preferable in future public dialogue projects.

- **Responsibility for use of dialogue outputs**. The issue here is the extent to which it is a responsibility of the project managers (and others) to ensure that the results of

dialogue are considered by policy makers in appropriate ways. There is a lack of clarity over whether the responsibility for using dialogue outputs stops at the production of the final report, or whether there is a further responsibility to ensure the dialogue results are properly considered by policy and decision makers, and that their response is reported back to those involved in the process.

- **Dialogue as a project or as a wider force for change**. The issue here is about the extent to which individual dialogue projects are stand-alone activities, focused on a single policy or decision, or whether dialogue projects could and should be part of wider shifts in the nature of the governance of science and technology, and in the democratisation of public policy and decision-making, and therefore be seen much more as part of a set of relationships that develops over time.

All these issues affect what may be considered 'good practice' in public dialogue and therefore which frameworks should be used for evaluating public dialogue in general, good practice in particular, and what is considered 'success' in a dialogue project.

Taking this further, the evidence from evaluations suggest that there are different interests and motivations among those taking part in public dialogue:

- **Public interests and motivations** include:
    - exercising influence and having a say in something nationally important
    - learning new information and knowledge
    - curiosity
    - social (day out / meeting new people)
    - money (the incentives paid to participants)
    - doing something different
    - taking part in democratic activity
    - status (being part of a special group).
- **Policy maker interests and motivations** include:
    - wanting data that summarises and explains public views on the topic to inform policy development and decision-making, so their evidence includes a good understanding of public views, why they hold those views, what are the boundaries to public approval and disapproval, public values and priorities, and where there is consensus and where there remain areas of conflict
    - gaining access to the knowledge and experience of the public to improve the content of policy and its implementation
    - opening access to the decision-making process to increase transparency, legitimacy and accountability, especially where the issues are or could be highly contentious
    - wanting data on the extent to which public views can or might change as a result of information being provided, what are the key concerns the public have that affect their views, and what arguments and facts may affect those views
    - exploring the potential to gain buy in from the public to the design and delivery of policy, especially where that depends on public behaviour change
    - spreading understanding and awareness of the issues around the subject, to overcome myths and fears
    - testing ideas and messages about the subject with the public, including for future communications and consultation exercises

- risk management, to identify potential elephant traps / show stoppers for later on in the policy communication and implementation process, so that public views (especially potential public opposition) are understood early on

- to address the democratic deficit.

- **Scientist / expert / stakeholder interests and motivations** include:

  - telling people about their work / subject / views: to directly inform the public by providing technical knowledge and practical experience on the content of the dialogue topic

  - finding out about and contributing to policy development in a field relevant to their work, alongside the public

  - talking face to face with members of the public to develop mutual understanding, to test their own assumptions, and to advance thinking (their own as well as the public's thinking)

  - listening to and learning about public questions and views to inform their own thinking and research and consider the wider impacts of their work by exploring ethics, priorities, values, new questions

  - developing communications skills through experience of direct contact with the public

  - gaining experience of working with the public for career development, where that is a priority for their organisations / institutions.

The way these interests and motivations are summarised above draws substantially from direct feedback from these different participants in Sciencewise-ERC dialogue projects as described in evaluation reports, and the wording reflects the ways in which each group has described what is important to them.

As above, the issues that are raised here are based on largely unchallenged assumptions about what public dialogue can and should do, and what it is therefore acceptable to say, and so should not necessarily be taken to be the final word on the deep interests and motivations of each group. Further research could be very valuable to test some of these interests and motivations in more depth.

Beyond this set of interests and motivations, many dialogue professionals (practitioners, researchers and commentators) also assess 'what is good dialogue?' in different ways, depending on the different professional, ideological and academic traditions from which they start - most often the traditions in practice of market research, science communication, consensus building and conflict resolution, and community development.

In exploring these four traditions, some different perspectives on 'what is good dialogue?' emerge, as shown in the table below.

Professional discipline	**View of 'the public'**	**Focus of activity**	**Methods**
Market research	• 'Them' • Research subjects	**Main purpose is to *gather data*: tell us, we will write it down and report**	• Sampling / recruitment to get representative / diverse group

		• Researchers frame the process, and identify the questions to be addressed to the public • Selected information may be provided; the focus is to gather / explore existing public views • Success is measured in terms of numbers reached and stats on answers to questions, as well as qualitative research results	• Quantitative and qualitative research • Focus groups • Polling • Q & A approach to facilitation • Surveys • Public discussions led by 'moderator'
Science communications	• 'Them' • Audiences	**Main purpose is to *tell* the audiences something about the subject and/or scientific methods to improve understanding** • Scientists / organisers design the process and identify the information to be provided • Success is measured in terms of numbers reached, public interest and positive feedback on science messages	• Information disseminated through print, online, new media • Exhibitions, displays, theatrical presentations, events (including hands-on explorations) • Public involvement in practical research projects as 'lay researchers'
Stakeholder dialogue = consensus building / conflict resolution	• 'All of us' • Joint action / co-creation	**Main purpose is to *get somewhere new*: new ideas, new priorities, new options, new responsibilities - that are agreed amongst the stakeholders** • Stakeholders represent the 'public voice' in different ways; no direct public involvement • Participants set the agenda, and decide the key questions • Participants discuss the issues amongst themselves • There is no distinction between different stakeholders (no separate 'experts') • Minimal external information is provided; the stakeholders are expected to have all the necessary expertise to come to conclusions • Key points are agreed and recorded in the meeting - focus is collective conclusions and shared responsibility • Reports are produced	• Stakeholder analysis, to ensure all stakeholders aware of the opportunity • Open invitation, with stakeholders deciding if they want to attend • Interactive workshop formats, with almost all activity focused on discussion among participants • Mix of plenary sessions and small group discussions • Led by 'facilitator'

		by facilitators; often no more than the summary of the key points agreed and recorded in the meeting • Success is measured by new actions involving different stakeholder interests	
Community development	• 'We the people' • Empowerment: you do it	**Main purpose is to *enable those taking part to change the world* and thus to improve their own and their communities' lives** • Participants set the agenda, and decide the key questions • Participants discuss the issues amongst themselves • Experts 'on tap not on top', to help with community development, but focus on 'public voice' and community control of the process • Other information may be provided, at the request of the participants • Collective decisions although there may be minority views / dissent • Participants agree the conclusions among themselves • Participants write and present their own findings to decision makers • Success is measured by social and personal change	• A range of community-based activities (geographical or interest communities), involving both discussions and other activities • Open invitation, enabling those who want to be active to work together • Led by 'community worker', whose role is to enable and support progress by the group

This is a very rough and ready analysis, based on some of the basic professional and ideological positions taken by some of those involved in designing and delivering dialogue practice. Many professionals cross these boundaries and often work very differently, and this analysis is designed just to illustrate the different approaches and the implications of those approaches for methods. Each field has its own ethics, principles, priorities, history and politics.

The issue for this analysis is about how to judge whether a public dialogue process is 'good practice' and has been 'successful' - success and good practice for someone with a market research background may be very different from someone with a community development background, both of whom may be involved in trying to deliver the same dialogue project based on equally strong beliefs and values.

Any measurement of 'success' also depends on the purpose of the public dialogue, on the context within which it takes place, and on the resources available. These constraints are fairly well recognised in evaluation practice. The uncertainties around 'good practice' are less often rehearsed, perhaps because based on such basic professional assumptions.

There are many analyses of different forms of working with the public, particularly around science and technology (and different forms of science communications[25]), and the summary in the table of these four background disciplines are simply an illustration that there are very different underpinning frameworks.

The Sciencewise-ERC approach to public dialogue has evolved as a sort of hybrid from these four different roots. In many cases, excellent quality dialogue processes have been achieved by Sciencewise-ERC funded projects, which satisfy the interests of all those involved, as well as those using the results. However, dialogue projects can sometimes be seen to have 'failed' in some way, because they have not met some of the (usually unarticulated) ideological and professional standards of good practice identified in the table above. These underlying differences are usually no more than vague assumptions, and the lack of clarity can create confusion and perceptions of poor practice. Greater clarity would aid both evaluation, and better conclusions about what is 'good practice'.

One of the key differences between the four roots summarised above is the level of influence participants have on the process. Numerous generic criteria of good practice[26] for public engagement have included 'participant control of the agenda' as a key element for assessment; others argue that the level of participant control depends on the purpose and context for the dialogue.

Again, lack of clarity about whether participants 'should' frame the dialogue, decide which issues and questions are discussed, control and/or produce the reports, control and/or make the presentations of findings to policy makers all conspire to uncertainty about what is good practice or not, and thus if the dialogue is successful or not.

Evaluations can assess practice against any agreed frameworks, but for evaluations to be really effective, there needs to be broad support for the frameworks being used. For Sciencewise-ERC, the Guiding Principles provide guidance on some practice, but not on all the detailed issues discussed above.

In conclusion, therefore, lack of clarity on these issues does not make it impossible to evaluate public dialogue, but it reduces the credibility of the evaluation findings if they are not using frameworks that command broad support. In addition, it makes it very difficult to decide about strategic direction, if it is still not clear what all the dialogue is finally for. There is growing experience and understanding of how to set appropriate and specific objectives that define the specific purpose of the specific exercise, but still little explicit consensus about where public dialogue is going more broadly.

[25] Brian Trench (2008) 'Towards an Analytical Framework of Science Communication Models' in D. Cheng, M. Claessens, M.T. Gascoigne, J. Metcalfe, B. Schiele and S. Shi (ed) *Communicating Science in Social Contexts: New models, new practices*. Springer Publishing, pp 119-135.

[26] Rowe, G. and Frewer, L.J. (2000) 'Public participation methods: a framework for evaluation', in *Science, Technology and Human Values*, 25 (1), 3-29; Petts, Judith and Leach, Barbara (2000) *Evaluating Methods for Public Participation. Literature Review*. Environment Agency R&D Technical Report E135; Diane Warburton (2010) Warburton, Diane (2010) *Evidence Counts. Understanding the Value of Public Dialogue*. Sciencewise-ERC March 2010

4.9 Summary and conclusions

This section has summarised findings from a detailed analysis of independent evaluations to examine examples of good practice and innovation, based on what has worked best and least well in the projects that have been funded by Sciencewise-ERC. It describes the 14 projects funded by Sciencewise since the programme started in 2004, and focuses on the nine of those projects that can be described as public dialogue according to the Sciencewise definition: deliberative public engagement feeding into government policy decisions.

The findings here demonstrate the significant achievements and impacts of these projects over recent years, with evidence of impacts on specific policies as well as on policy makers, public participants, scientists and other stakeholders who have taken part, plus the benefits for national government and wider society. In summary, over the past five years, Sciencewise-ERC has:

- **Influenced public policy** by providing evidence of the richness and strength of public views and ideas (e.g. influenced priorities for investment in nanotechnology research, and the extent and conditions for the use of hybrid embryos for research). By 2010, 14 major Sciencewise-ERC projects had worked with 12,595 public participants, providing immediate face-to-face feedback to policy makers, as well as reports summarising the public views, concerns and aspirations.

- **Influenced practice** by supporting development and innovation in good practice, and helping Government learn through practical experience by providing extensive one-to-one mentoring, general advice and guidance that demonstrate how dialogue can build legitimacy and accountability with the public and contribute to greater trust in science-based decision making. By 2010, 10 full evaluations had been completed of the 14 Sciencewise-ERC projects.

- **Enabled progress to be made on strategically significant, sometimes highly contentious topics** by supporting policy makers to find ways forward that go with the grain of public views, and avoid the conflicts and entrenched positions that can result in the complete rejection of new technologies.

- **Improved the quality of communications between Government, scientists and the public** by providing a rich understanding of the public's potential concerns and aspirations on new science and technologies. Policy makers are then better prepared to discuss the implications with the media and the wider public.

- **Increased public awareness and understanding** of science and technology issues, both among immediate participants and their contacts. Evaluations show that each dialogue participant is likely to talk to 30 others. This 1:30 ratio of spread of public interest, enthusiasm and knowledge means that Sciencewise-ERC dialogue participants will talk to and influence approaching 400,000 members of the public.

- **Created synergy and integration among policy makers across Government** by bringing together different departments and agencies to work on the complex and contentious issues covered by public dialogue projects.

The analysis also identifies a number of current concerns and challenges that have emerged from evaluations of Sciencewise-funded projects which need to be taken careful account of in the design, delivery and evaluation of future dialogue projects. These include:

- **Legitimacy or legitimising** - the extent to which public dialogue is seen as a legitimate and valuable element of policy making which opens up the space for

dialogue, or is used to legitimise a decision that is wanted by government or, in effect, already taken.

- **The need for structural change in government policy making systems** - to ensure that public dialogue, and the use of the results, become an integral part of the policy process and no longer just an optional extra.

- **The need for more evidence** - of the use and influence of dialogue results, that public dialogue is cost effective, and of the longer term impacts of dialogue especially in creating 'better' policy.

- **Effective follow-up with participants**, to let them know what the results of the dialogue have been, how those results have been used by policy makers and how the public input has actually influenced the policy or decision.

- **Effective engagement with NGOs** as stakeholders in the governance of public dialogue projects and/or as experts in public dialogue.

- **Effective governance for projects** - to ensure that dialogue processes include sufficiently diverse perspectives being brought into any advisory and oversight groups guiding the design of the dialogue.

- **Detailed design issues** - including ensuring neutrality in the design and delivery of the process so that information and experts genuinely reflect the diversity of views on the topic, fully capturing the complexity and diversity of public views, ensuring there is time and the right process to enable fully deliberative dialogue, and developing the extent to which dialogue can generate new thinking.

These concerns and challenges will need to be considered in planning future evaluations of public dialogue projects, which need to consider the influence on the wider policy environment (for example where issues are raised in dialogue that are wider than the specific topic under discussion); impacts on engagement practitioners as well as policy makers, public participants and experts and other stakeholders; longer term impacts on policy and people; the changing role of NGOs; the governance of public dialogue processes; continuing relationships with past participants; summarising public views for future use; the extent to which commissioning departments and agencies have embedded learning from their experience; communication of the results of dialogue to participants and more widely; and demonstrating the cost effectiveness of dialogue.

This section concludes with a review of the implications of these findings for evaluating public dialogue in future, and concludes that further work is needed on the nature and purpose of public dialogue so that future evaluations are set within a better understanding of what dialogue is 'for' - beyond the specific objectives for individual projects and good practice principles. This would provide a framework for setting more effective standards of good practice.

This type of reflection on the nature and purpose of public dialogue would be invaluable in moving the field beyond its roots in a mix of disciplines, professions and traditions including market research, science communications, consensus building and conflict resolution, and community development, all of which are based on assumptions around the role of the public (e.g. research subjects, audiences, partners, agents of change), the focus of activity (e.g. gather data, empower citizens), and methods. This would also help create a framework for resolving many of the other concerns and challenges identified above, and provide a positive way forward for future development.

Most of the challenges for the future are around two key issues: the extent to which government policy making structures have and/or should change to reflect the place of public dialogue in policy making (embedding public dialogue in structural changes), and

what is the nature, role and place of public dialogue in policy making (framed as legitimate and open dialogue processes).

These key challenges are, therefore, largely beyond the design and delivery of individual public dialogue projects (vital though those continue to be), and are around the wider implications for government, practitioners and evaluators of the role of the public in policy and decision making, and how it can and should develop in future.

5 SCIENCEWISE-ERC PROGRAMME

5.1 Introduction

This section describes and assesses *programme* activities undertaken by the Sciencewise-ERC between April 2008 and June 2010. It covers the establishment of the new Sciencewise Expert Resource Centre (Sciencewise-ERC) and its work on supporting and evaluating public dialogue projects, as well as on communications and marketing. The key impacts and achievements, concerns and challenges, of the Sciencewise programme overall, identified throughout the evaluation, are also described. The activities and impacts of the public dialogue *projects* are covered in section 4 of this report.

This part of the evaluation involved a review of all formal reports on the Sciencewise-ERC programme activities since the start of the Expert Resource Centre in April 2008, including any evaluations of specific events, products and services. It also involved 48 new interviews with six (of the seven) independent members of the Sciencewise-ERC Steering Group, 11 (of the 16) DESs, eight practitioners (delivery and evaluation contractors), seven external stakeholders, 13 project managers in government departments, agencies and research councils, and three senior policy makers in those institutions.

The original plan for this study was that the focus of new research for the evaluation of the Sciencewise-ERC support activities should be on feedback from all those stakeholders involved. This approach was based on the expectation that data on the communications and marketing activities (publications, events, website etc) had been collected and analysed by AEA as part of their monthly reporting to BIS. In practice, the expected data on communications and marketing was very patchy, and there was little or no feedback from users of those services. This is an unfortunate gap in the data for the evaluation overall, and suggestions are made throughout section 5.5 for addressing this gap in future.

Nevertheless, the review has allowed us to develop a detailed picture of what has worked well and less well throughout the Sciencewise-ERC programme activities. In practice, since the start of the Sciencewise-ERC programme in April 2008, activities have increasingly focused on two main areas:

- supporting and evaluating Sciencewise-ERC funded dialogue projects;
- communications and marketing to spread awareness of the Sciencewise-ERC resources available, including events and publications to share knowledge and learning.

These two areas are closely interconnected, including that materials from projects are used extensively in communications and marketing activities. This section is largely structured around these two streams of activity, after initial sections on the activities to establish the Sciencewise-ERC and the role of the Sciencewise-ERC Steering Group. The key impacts and achievements of the programme are then summarised, followed by an analysis of the current concerns and future challenges for the programme.

5.2 Establishing the Sciencewise-ERC

5.2.1 Introduction

Although the Sciencewise programme had been running for some years, the establishment of the new Expert Resource Centre involved significant changes from the priorities and operating arrangements of the past (see section 3 for details). The establishment of the new centre involved changing the branding, re-structuring the organisation and management of the programme, recruiting new people and developing and launching a whole range of new products and services. This section describes the activities involved in setting up the new centre.

By the time of the official launch of the new Sciencewise-ERC in May 2008, the team was established, services set up, and a comprehensive initial set of information available. The Sciencewise-ERC was by then fully operational and working to a detailed programme agreed with BIS as the sponsoring department.

The Sciencewise-ERC services to support and evaluate public dialogue projects, and the communications and marketing activities, are described in detail in sections 5.4 and 5.5 below.

5.2.2 Contractual arrangements

The original Sciencewise programme was managed from 2004 directly on a day to day basis by the Department of Trade and Industry's Office of Science and Technology (OST), with part-time support, on a freelance basis, from Alison Crowther, and with the grants management contracted out to a consultancy specialising in funding management (NEL).

These arrangements continued until June 2006 when AEA Momenta took over as external contractors working with the OST, and the Science and Society team in the DTI / OSI transferred to the new Department for Innovation, Universities and Skills (DIUS) in June 2007.

Towards the end of 2007 and early 2008, DIUS undertook a formal tendering process to appoint a new contractor to develop the next phase of Sciencewise and set up the Expert Resource Centre. AEA Momenta (now AEA Technology) won the contract to deliver that programme for 14 months from February 2008 to March 2009. The Sciencewise-ERC programme has since been delivered through a contract from DIUS (now the Department of Business, Innovation and Skills - BIS) to AEA Technology.

Early in 2009, negotiations took place around whether the contract would be extended, or whether a completely new tendering process should take place. In the event, the contract was extended temporarily to December 2009 (a further nine months), based on a detailed new proposal from AEA Technology. As the new deadline of December 2009 approached, further negotiations took place as to the continuation or cessation of the contract. Again AEA prepared a detailed programme of work for the forthcoming 15 months (up to and including March 2011) and BIS accepted this programme and extended the contract.

This new funding has proved to be the longest single period of confirmed funding since the beginning of the Sciencewise programme in 2004 - a full 15 months. This allowed for the beginning of longer term strategic planning throughout the programme, and the appointment (in December 2009) of a Head of Dialogue (Lindsey Colbourne) to provide strategic direction and intellectual leadership based on expertise in public dialogue, alongside the AEA Programme Manager.

All those involved in delivering the programme on a day to day basis since the work to establish Sciencewise-ERC began in February 2008 are either directly employed by AEA Technology, or are sub-contracted to deliver certain services. Detailed monitoring and reporting arrangements, including monthly reporting cycles, were established between the AEA team as contractors and the Department of Business, Innovation and Science (BIS) Science and Society team as the sponsoring government department. Detailed performance indicators and targets were agreed between BIS and AEA.

Beyond these basic contractual arrangements, there are two main elements to the way that decisions are made within the Sciencewise-ERC programme:

- The Sciencewise-ERC Steering Group provides advice and guidance to BIS on the programme. The Steering Group is made up of key stakeholders with knowledge and expertise in the field of public engagement in science and technology. A new Steering Group was established from March 2008; their role and responsibilities are described in section 5.3 below.

- Formal approval for key decisions (e.g. project funding, activities, publications) is provided by the Science and Society programme at the Department of Business, Innovation and Skills (BIS).

5.2.3 Personnel

The Project Manager and other AEA staff changed several times during the course of the period under review, settling in the summer of 2009 into the team that remains: Alan Mercer in the roles of both Programme Director and Manager, James Tweed as Projects Manager, and Amy Peach co-ordinating marketing and communications. Other AEA staff have taken responsibility for specific tasks as required. The AEA Programme Director works closely with the Science and Society team at BIS.

In addition to BIS and AEA staff, the three main appointments to the Sciencewise-ERC team have been Alison Crowther as Dialogue Manager (continuing from her earlier role which she started in 2007), Diane Warburton as Evaluation Manager (from March 2008) and Lindsey Colbourne (Head of Public Dialogue from December 2009). All three are independent contractors sub-contracted to AEA.

The Dialogue Manager co-ordinated the recruitment and training of a team of Dialogue and Engagement Specialists (DESs), which began to be appointed in March 2008. The DESs were recruited as highly experienced practitioners in dialogue and engagement and their role was largely to give advice on good practice to government departments and agencies who were designing, delivering and evaluating dialogue projects. By December 2009, 16 DESs had been recruited. All DESs, like the Dialogue and Evaluation Managers, are retained on a sub-contract basis to AEA. See section 5.4 for more detail on the roles and responsibilities of DESs.

Lord Robert Winston was appointed Sciencewise-ERC Ambassador in April 2008.

5.2.4 Branding and initial communications

Early in the Sciencewise-ERC programme, investment was made in branding, marketing and communications, initial information materials and initial website and enquiry services, including the following:

- New branding (logo etc) was agreed in April 2008 and was produced on banner stands (including 15 banners which carried 'top tips' for dialogue), name badges, pens, memory sticks (with key Sciencewise-ERC documents)

- A series of pamphlets to introduce Sciencewise-ERC which were designed to slot into A4 and A5 folders for policy maker and public audiences and included
  - What is the Sciencewise-ERC?
  - What is public dialogue?
  - A summary of the Sciencewise Guiding Principles for Public Dialogue
  - Top tips for Public Dialogue
  - Short (A5) and longer (A4) case studies of dialogue projects funded by Sciencewise-ERC
  - the new Sciencewise newsletter (first published March 2008)

- A telephone helpline and e-mail enquiry service was launched on 29 May 2008.

- A revamped website was launched on 29 May 2008; a YouTube site was launched in August 2008; and Twitter in 2009.

5.2.5 Costs

It was never intended that this evaluation would provide a detailed review of the costs of the programme, nor attempt any cost / benefit analysis. However, it was considered useful to provide some basic data here on costs, as far as that information has been available, to give some indication of the scale of Government investment in the Sciencewise programme, and the broad costs of spending on the different types of activities. These figures are based on budgets rather than actual spend, and on data provided by AEA.

In summary, the main costs appear to have been as follows:

- The overall annual budget for Sciencewise-ERC is approximately £2.2 million: £1.2 million available to fund projects (delivery and evaluation), and £1 million for the remainder of the programme.

- Project funding is held in a separate budget (by BIS). Spending is agreed by BIS and funding released on submission of a satisfactory 'opportunity analysis' and 'business case' for each project.

- The budget for 2008-2009 shows the division of resources into five core activities, excluding direct project costs, which each account for the following percentages of expenditure:
  - Capacity building and embedding - 27%
  - Communications and marketing - 24%
  - Administration of projects - 23%
  - Programme management including evaluation, Steering Group etc - 15%
  - On-line resource - 11%

- The budget for 2008-2009 also shows the division of resources on programme activities in terms of recipients, as follows:
  - AEA - 62.5%
  - DESs and other associates - 16%
  - Dialogue Manager - 6%
  - Evaluation Manager - 3.5%
  - Travel and subsistence - 2%
  - Other costs - 10%

Analysis of actual activities within each of these activity headings and recipients has not been possible, as detailed data is not available partly for reasons of commercial confidentiality.

To put the costs for Sciencewise-ERC into context, the annual budget of around £2.2 million (including £1.2 million for individual dialogue projects) can be compared to budgets for other major national engagement activities. For example:

- The Committee on Radioactive Waste Management (CoRWM) cost £4.8 million over four years, including £0.8 million for programme management fees, £1.3 million for members' fees and expenses, and £1.5 million for public consultation.

- The national public and stakeholder consultation in 2008 on building new nuclear power stations, which cost £2.4 million over nine months.

In terms of shifts in priorities in spending within the Sciencewise-ERC programme, the proportion of Sciencewise-ERC funding spent on public dialogue projects has risen steadily: from 42% in 2004 to 55% in 2009. At the same time, advice, support, management and evaluation services have also continued to expand to meet greater demand.

5.3 The Sciencewise-ERC Steering Group

5.3.1 Steering Group role and purpose

The terms of reference for the Sciencewise-ERC Steering Group have evolved since 2008. The Group usually meets quarterly and its purpose is (quoted from the Steering Group's current terms of reference):

> "to help the Department for Business, Innovation and Skills (BIS) ensure that the Sciencewise-ERC creates the environment and has the resources and processes in place to enable policy and decision-makers in Government Departments and Agencies to understand the value of public dialogue in the development of policy related to science and technology and have the capacity to commission and make effective use of such dialogue."

Essentially, the role of the Steering Group is to provide strategic advice and guidance to BIS to help ensure that the Sciencewise Expert Resource Centre achieves its aims and objectives. The Steering Group also has an important role to play in:

> "helping to ensure that cross-government links are forged and maintained and that there is coherence and cohesion in bringing members of the public more fully into the democratic decision-making process."

5.3.2 Steering Group Chair and membership

The original Sciencewise-ERC Steering Group was set up in 2004. It was chaired by Professor Kathy Sykes, Professor of Sciences and Society, University of Bristol, and co-chaired by Richard Wilson, Director of Involve at the time. In May 2008, Stephen Axford, Head of the Science & Society Unit, BIS, was appointed co-chair to replace Richard Wilson. Richard Wilson remained a member of the Group until he was replaced by Simon Burall as the Director of Involve in 2010.

The Sciencewise-ERC Steering Group was re-launched with some new members in April 2008, and held its first meeting on 15 May 2008. It met six more times between its re-launch and June 2010. The members, at June 2010, were as follows:

Chair: Professor Kathy Sykes, Professor of Sciences and Society, University of Bristol
Co-Chair: Stephen Axford, Head of Science and Society Unit, Department of Business, Innovation and Skills (BIS)

Members:

Simon Burall, Involve
Ben Dipper, Officer of Chief Scientific Advisor, Scotland
Sir Roland Jackson, British Science Association
Paul Manners, National Co-ordinating Centre for Public Engagement, University Beacons
Clare Matterson, Wellcome Trust
Dr Kerry Leslie, Research Councils UK (or Chloe Sheppard)
Professor Judith Petts, University of Birmingham
Jaime Rose, Department of Communities and Local Government
Graham Spittle, Technology Strategy Board
Jack Stilgoe, Royal Society
Professor Andy Stirling, University of Sussex
Tony Whitehead, GO-Science

In addition, the Steering Group includes:
Karen Folkes, Head of Public Engagement with Science and Technology at BIS
Marilyn Booth, Senior Policy Adviser, Science and Society at BIS
Alan Mercer, Sciencewise-ERC managing contractor at the AEA Group
Lindsey Colbourne, Head of Dialogue (from December 2009)

All Steering Group meetings have been attended by members of the AEA delivery team and, on occasion by specific request, by the Dialogue Manager (Alison Crowther), Head of Dialogue (Lindsey Colbourne) and Evaluation Manager (Diane Warburton).

Since the Steering Group started, the following members have left:
Isabel Bruce, Scottish Government
Matthew Harvey, Royal Society
Fiona Fox, Science Media Centre
Ian Johnson, Ministry of Justice
Gillian Rendle and Saffron Townsend, Research Councils UK
Roy Stephenson, Cabinet Office
Jean Ward, Government Communications Network
Richard Wilson, Involve

5.3.3 Effectiveness and priorities of the Steering Group

In December 2008, the Steering Group undertook an initial evaluation exercise (with the Evaluation Manager). They discussed what was working well and less well across the Sciencewise-ERC programme, including the way the Steering Group itself operated. This fed into the development of key questions for the broader evaluation reported in this study. The Group felt then that the priorities for the programme in the immediate future were a need for more strategic thinking and intellectual leadership for Sciencewise-ERC, clearer criteria for funding dialogue projects, and better advocacy on the benefits of public dialogue.

More generally, there was concern at that stage that Sciencewise funded dialogue projects may be interpreted as a means of justifying, rather than informing, policy development, and that it was therefore a priority to demonstrate substance especially in terms of influence of the projects on policy.

More recent interviews with Steering Group members (specifically for this study) explicitly covered the role and activities of the Steering Group, as well as exploring views on the programme more widely. The feedback on the programme overall is analysed in detail in sections 5.6 and 5.7 below.

In terms of the effectiveness and operations of the Steering Group itself, the feedback is that the membership of the group is a strength as it includes a diverse and relevant mix

of stakeholders. However, there were criticisms of the role of the AEA secretariat for the group, particularly in providing insufficient clarity about the role and responsibility of the Group and what is expected of Steering Group members, and poor organisation and structure of meetings with insufficient focus on strategic discussions. Steering Group members were interested in the identification of more opportunities for them to be involved in specific projects and other Sciencewise activities, and felt these had not been sufficiently developed or offered.

Since this feedback, developments have taken place which have been intended to address some of these issues. In particular, the appointment of the Head of Dialogue (Lindsey Colbourne) in December 2009 was intended specifically to meet the need for strategic direction for Sciencewise-ERC (in association with the AEA team) and to provide intellectual leadership from someone with dialogue expertise. This appointment was welcomed by Steering Group members.

5.4 Funding, supporting and evaluating public dialogue projects

5.4.1 Introduction

The establishment of the new Sciencewise Expert Resource Centre required a completely new system to fund, support and evaluate public dialogue projects. This system is described in this section.

The funding and support of new dialogue projects through Sciencewise-ERC is core to the overall programme, with the aim of developing innovation and good practice through experimentation and example in the dialogue projects completed, as well as the support and advice provided to government and other public agency staff contributing to embedding and capacity building within government and beyond.

Details of the projects funded by Sciencewise since 2004 are given in section 4 of this report, with detailed information on the impacts, good practice and innovation in the projects as well as concerns and challenges. Annex 1 provides detailed analysis project by project of the evaluations of the nine dialogue projects completed and evaluated by June 2010. This section of the report focuses on the funding, support and advice provided by Sciencewise-ERC, largely since 2008, and the work on evaluation and other outputs from projects designed to contribute to wider learning.

5.4.2 Public dialogue project funding and advice

The process for providing funding and other support for government public dialogue projects through Sciencewise has changed significantly over the life of the programme. Initially, in 2004, the programme was a conventional grant programme. External organisations seeking funds for work on public engagement around science and technology applied to Sciencewise for a grant to undertake their project.

From 2005 to 2006, the Sciencewise programme started to become more deeply involved in the development of project ideas, to promote and encourage more focus on links to national policy. This was a more collaborative approach to project development between Sciencewise and the government department wanting to lead a dialogue. A Dialogue Manager (Alison Crowther) was appointed in 2007 to provide guidance to projects.

Once the Sciencewise-ERC was established (in 2008), an entirely new system was required to manage the funding, support and evaluation of public dialogue projects. The process of providing support was core to the Sciencewise programme overall, to meet the objectives of supporting innovation and good practice through actual public dialogue projects, as well as the support and advice to potential and actual project

managers in government departments contributing to embedding public dialogue and capacity building in government.

A new system of approving project funding was established, with BIS giving formal approval to funding on submission of a satisfactory 'opportunity analysis' and 'business plan'. The budget for funding projects is held separately from the Sciencewise-ERC programme budget.

The Sciencewise-ERC eligibility criteria for funding projects are that:

- the proposer of the dialogue had to be a central government department; or an agency or Executive Non-Departmental Body with support from a central government department
- there must be a clear policy 'hook' and a clear policy-owning department
- there must be compliance with the Sciencewise-ERC Guiding Principles
- there must be a financial contribution from the proposer (usually 50%).

The establishment of a new advice and support system was also a major development as part of the new Sciencewise-ERC. More details are given below but, in summary, written guidance was produced in addition to the Guiding Principles (which were updated), and the Dialogue Manager recruited a team of highly experienced practitioners as Sciencewise Dialogue and Engagement Specialists (DESs). The DES team was established to provide advice and support to government departments wanting to run public dialogue projects. An Evaluation Manager was appointed to oversee the independent evaluations required of each funded project.

In addition, a set of priority topics for public dialogue projects to be funded by Sciencewise was agreed by BIS, following a major public dialogue process run by Sciencewise itself: the Sciencehorizons project.

The process for identifying potential projects for funding has developed further since 2008. Initially the expectation was that projects would be brought to Sciencewise by government departments, as a result of marketing and other awareness raising activities, and would go through a process of further development (with DES support) and then gain funding to proceed.

However, by September 2009, in spite of numerous leads, few projects had developed to the stage where they could gain Sciencewise funding. Additional resources were therefore made available to the Sciencewise Dialogue and Engagement Specialists (DESs), to enable them to spend more time on initial development work with their contacts in government. In preparation for the expected increase in demand, a more detailed set of selection criteria were developed, and the AEA processes of providing formal advice and approving project funding were streamlined from the middle of 2009.

The effectiveness of this new approach to initiating, supporting and approving funding for projects can be seen in the increased numbers of projects being funded and completed (see section 5.6.2). From 2004 to June 2010, 14 public dialogue projects had been completed, a further five projects were underway and funding had been agreed for a further three projects, all to be completed by March 2011. In addition, the pipeline of projects (project leads) had risen significantly from 45 in 2009 to 69 at 30 June 2010.

Beyond funding, the system of support to potential and actual departmental project managers is as follows:

- Written guidance has been produced to support those who were interested in developing a Sciencewise-ERC funded public dialogue project, all published on the Sciencewise website:

  - **Guiding Principles**. *The Government's Approach to Public Dialogue on Science and Technology* are the Sciencewise-ERC Guiding Principles, which summarise the approach to public dialogue promoted by Sciencewise-ERC, and the principles to be followed in public dialogue projects.

  - **Guidance for projects applying for funding**. A series of seven guidance notes and templates have been produced and are available on the Sciencewise-ERC website to help anyone thinking about planning a public dialogue project and applying for funding from Sciencewise-ERC. The guidance notes are:

    1 Guidance for Application, providing the background, eligibility criteria and application process
    2 Requirements for Projects, explaining what each project needs to provide and covering invoicing, progress reporting, project materials and working with the media
    3 Business Case Template, which is the formal application for the funding, requiring the background to the project, the justification, anticipated timings, and a budget
    4 Example Work Specification, which can be used by the applicant to commission and appoint a delivery contractor for the project (which is the usual delivery mechanism)
    5 Progress Report Template, to record progress
    6 Final report template, providing a suggested framework for the final report to Sciencewise-ERC
    7 Requirements on Evaluating Sciencewise-ERC Projects, explaining the aims and objectives for evaluating these projects, key questions and principles for independent evaluations.

- One DES is appointed by the AEA project manager to each project to monitor progress and provide support and guidance, sometimes with a co-DES for back up. This may or may not be the DES that undertook the initial development work. The DES works with the government department to clarify the nature of the project and to develop an opportunity analysis and business case to formally request project funding from BIS. BIS holds this budget and makes the final decisions on project funding.

- The DESs have responsibilities to monitor detailed plans and activities for the public dialogue to ensure that the Sciencewise requirements are met, using the guidance documents identified above, the Guiding Principles and any other agreements on the particular project. The AEA Projects Manager is responsible for detailed contractual matters such as issuing the grant offer documentation and payments.

- The funding is provided to the government department to run the dialogue, and the departmental project manager makes all the day to day decisions, with support and guidance from the DES as required. This approach is designed to ensure that there is clear ownership within government for the project and its outcomes, including conclusions from the public, and to therefore maximise capacity building.

- The departmental project manager runs a procurement process to appoint two sets of contractors: one to design and deliver the public dialogue, and one to do the independent evaluation. The DES (and Evaluation Manager) provide advice on draft Invitations to Tender (ITTs), and usually participate in the selection process, although the decision about who to appoint rests with the department.
- The department also usually establishes a steering group, increasingly including external stakeholders, to oversee the public dialogue project. The importance of the

project steering group has greatly increased over time, especially for larger and/or more contentious projects.

- Throughout the project, the DES acts as a mentor to the departmental project manager, providing advice on good practice in the design and delivery of the dialogue process. The Evaluation Manager takes a similar role on the delivery of the evaluation (since March 2008, each project funded by Sciencewise is required to have an independent evaluation). The DES usually reports monthly to the AEA project manager on progress on the project, and any current concerns or potential risks.

5.4.3 The Dialogue and Engagement Specialists (DESs)

From March 2008, the Dialogue Manager (Alison Crowther) recruited a team of Dialogue and Engagement Specialists (DESs) to provide expert advice and guidance on the design and delivery of public dialogue projects. Public dialogue projects funded by Sciencewise-ERC are usually formally managed by a project manager within the relevant government department, and the role of the DES is to work directly with that departmental project manager, providing support and advice as needed.

By December 2009, there were 16 DESs:

Andrew Acland
Diane Beddoes
Jason Chilvers
Ian Christie
Lindsey Colbourne
Richard Harris
Rowena Harris
Pippa Hyam
Suzannah Lansdell
James Martin-Jones
Abdul Rahim
Carl Reynolds
Steve Robinson
Melanie Smallman
Daniel Start
Penny Walker.

The DESs are all highly experienced practitioners in the design and delivery of dialogue projects. As Dialogue Manager, Alison Crowther also provided advice and support to projects, as does Diane Warburton (Evaluation Manager), who provides advice (as a DES) on evaluation. Lindsey Colbourne (Head of Dialogue) also continues to provide project advice as a DES in some cases.

DES work has been supported by various materials and training, co-ordinated by the Dialogue Manager. The Dialogue Manager ran nine initial meetings for the DES team at regular intervals while the DES system was being established, to clarify and establish working practices and to share learning from experience. An induction day for new DESs was also held during 2009. These meetings ceased from September 2009, as the team was by then fully established. The Dialogue Manager also developed a complete manual of written guidance to support DES activities.

The Sciencewise DES role is partly as a mentor - the DES advises on good practice and innovation in the public dialogue processes, while the day-to-day decisions on the project are taken by the departmental project manager. Here, the DESs are interested in three things: innovation, quality and capacity building.

The aim of the Sciencewise DES approach is to build the skills of the departmental project manager so that they are running the project, with help, and are developing sufficient experience to run projects themselves in future, with less or no advice and support from Sciencewise. This part of the DES role is therefore designed to help to deliver capacity building and embed dialogue in government

However, the DES also has a role as a monitor on behalf of Sciencewise as a co-funder of the project, ensuring that the project meets the Sciencewise guiding principles. The DES role is therefore quite a complex balancing act, between support, advice and monitoring on behalf of one of the funders. This requires significant sensitivity and careful management.

The DES model of support has developed since 2008, and is now working very effectively, according to feedback from departmental project managers and DESs themselves. In addition, more projects are being developed through to successful business case and funding stages, and more are being completed.

The DES model of support developed by Sciencewise-ERC has a number of unusual features for a government-funded programme:

- All DESs are independent, and are sub-contracted to AEA to provide services as required. Although initial investment was required (initial meetings, guidance materials etc), this model has enabled the programme to keep costs minimal and manage resources very effectively.

- All DESs are working in this field anyway, and are constantly updating their skills and experience through their work on other public and stakeholder dialogue projects as well as through Sciencewise. Working for Sciencewise enables them to share their knowledge and experience. At the same time, DESs gain personally as they are able to extend their knowledge and professional experience through the innovative projects funded by Sciencewise. The mutual benefits and shared learning help to maintain DES interest, commitment and enthusiasm to the programme and projects.

- The allocation of DESs to any particular activity is administered by a Projects Manager, so if there are any problems between the DES and the project manager in the department, there is a mechanism for complaint and change.

- After the initial work to set up the project, DESs remain available to the departmental project manager to answer questions and provide specific support as and when needed. This has clearly been of real value to project managers, who often want advice and guidance throughout the project.

The feedback from project managers and others involved in Sciencewise projects has been almost entirely positive about the role of DES and the way that role is carried out. For many, the advice and support from the DES, especially at the setting up phases, was the most useful part of the support they gained from Sciencewise.

However, the research for this evaluation is the first time since April 2008 that the support has been evaluated. Proposals have since been developed by the Evaluation Manager, Projects Manager and Head of Dialogue to gain feedback on the Sciencewise-ERC provision of support and advice at the end of each project, and to ensure that learning from that review is used in planning future services.

5.4.4 Public dialogue project evaluation

From March 2008, all Sciencewise-ERC funded public dialogue projects were required to have an independent evaluation. As with the detailed design and delivery of the projects, evaluation is commissioned by the government department running the dialogue, funded (either wholly or in part) by Sciencewise-ERC and carried out by independent contractors. It is a requirement of Sciencewise funding that the contractors are independent from the dialogue contractors and the government department.

The Sciencewise-ERC Evaluation Manager oversees these evaluations, and provides advice and support to the government department in exactly the same way as the DESs do on the design and delivery of the public dialogue (see above). A Sciencewise-ERC guidance document summarises the six key questions for any Sciencewise-funded evaluation, as follows:

- has the dialogue met its objectives?
- has the dialogue met standards of good practice (Sciencewise-ERC principles)?
- have those involved been satisfied with the dialogue (value to them)?
- what difference/impact has the dialogue made?
- what was the balance overall of the costs and benefits of the dialogue
- what are the lessons for the future (what worked well and less well, and more widely)?

Each evaluation may also have specific questions, set by the project manager in association with the project steering group, to reflect the specific purposes of the public dialogue and the lessons the commissioning department wants to learn from the process.

Sciencewise evaluations focus on the quality and effectiveness of the public dialogue *process* (the events, information use of experts, reporting), and its *impacts*. They do not consider the topic of the dialogue or the public conclusions on the issues (other than the extent to which they can be seen to have achieved impacts and influence.

More recently, the Evaluation Manager has been asked by the Sciencewise-ERC Steering Group to summarise overarching findings from the individual project evaluations, particularly around the impacts and benefits of public dialogue. Several papers have been prepared as briefings for the Steering Group during 2009, and that work is continued and extended in this present evaluation study.

5.4.5 Public dialogue project products

Each Sciencewise-ERC funded project produces a number of written and other outputs. In the past, the outputs of any project have included the following:

- the delivery contractor usually produces:
    - one or more interactive workshop-style events providing opportunities for the public to take part in deliberative dialogue to discuss key questions among themselves and with policy makers, with input from scientists and other experts
    - specially produced materials to provide information to the public on the topic; these might include written materials, statistics, diagrams, video clips etc
    - a final report on the results of the dialogue, providing a description of the process and who took part, and the conclusions of the public on the issues

- the evaluation contractor produces:

    - an evaluation research process involving questionnaires, review and reflection sessions, interviews etc

    - a full evaluation report.

- the project manager, in association with the DES and the AEA communications team, produces:

    - a short (2 or 4 page) case study, published by Sciencewise-ERC.

More recently, Sciencewise-ERC has produced other outputs from projects including interviews with participants and experts, to publish on the website. There may also be articles for the Sciencewise-ERC newsletters, as well as blogs etc on the Sciencewise website. All these other outputs are managed by the AEA communications team with input from others in the Sciencewise-ERC team.

By June 2010, the following had been published:

- 14 project reports, produced by contractors delivering the Sciencewise-funded projects.

- 14 project case studies, on each of the projects funded by Sciencewise-ERC. Mostly 2-pages, these summarise the key elements of the dialogue process, the costs and the initial impacts.

- 10 detailed independent evaluation studies, covering all recent Sciencewise-ERC funded projects. Some of the earlier Sciencewise projects were not evaluated.

5.5 Awareness raising and capacity building

5.5.1 Introduction

The support and advice given to departmental project managers on specific public dialogue projects are a core element of the work of the Sciencewise-ERC programme on awareness raising and capacity building. Alongside this work on specific projects, the Sciencewise-ERC has developed a range of other activities to raise awareness and build capacity and understanding more generally: through publications, events, opportunities for learning by observation, and the website and helpline. These are all described in more detail below.

5.5.2 Sciencewise-ERC publications

Between May 2008 and June 2010, numerous publications were produced, in addition to the project publications outlined above (section 5.4.5).

Eight major publications were commissioned and produced:

- ***The Road Ahead***, edited by Jack Stilgoe. Collection of essays with a wide range of perspectives on public dialogue in science and technology,

- ***Sustainable Participation? Mapping out and reflecting on the field of public dialogue on science and technology***, by Dr Jason Chilvers. Research to map the field of public engagement in relation to policy on science and technology, understand the wider context for the work of Sciencewise-ERC, and develop insights into more effective networking and collaboration in future.

- Six **good practice reports** that researched and provided detailed guidance on the following topics, identified early in the Sciencewise programme as areas where full

guidance did not exist - mass participation, government culture change, measuring costs and benefits, maintaining links with past public participants, working with the media, and working with experts:

- **Enabling and Sustaining Citizen Involvement**, by Dr Diane Beddoes. Research on following up public participants after a specific dialogue project.

- **Departmental Dialogue Index**, by Lindsey Colbourne. Research and development of a tool to assess the cultural character of different government departments, so that future plans for public engagement could be based on a better understanding of the existing knowledge and priorities of departments

- **Widening Public Involvement in Dialogue**, by Pippa Hyam. Research on the size/scale of public dialogue, including the value (or not) of large events, and the uses of technology to widen involvement during and after dialogue projects.

- **The Use of Experts in Public Dialogue**, by Suzannah Lansdell. Research on the role of experts in public dialogue projects, and how to maximise the benefits of their involvement - for them and for public dialogue projects.

- **Working with the Media**, by Melanie Smallman. Research on the role of the media in widening interest and engagement in public dialogue projects, and the extent to which increased media attention could/ should be developed in future.

- **Evidence Counts - Understanding the Value of Public Dialogue**, by Diane Warburton. Reviews and provides a framework for evaluating the quality, costs and benefits of public dialogue, to measure the value and impacts on policy and participants.

A series of regular newsletters was also produced, including a quarterly general newsletter, a newsletter specifically for policy makers, and a internal monthly briefing on developments in the field of public dialogue. Other newsletters were also produced for a short period: a monthly newsletter for the Sciencewise Steering Group and a fortnightly newsletter for DESs. The general newsletter was occasionally printed (when copies were distributed at events), but normally all newsletters were in electronic form only.

From December 2009, the quarterly general newsletter continued to be published. In 2010, a new monthly Dialogue Bulletin to update Sciencewise-ERC stakeholders on developments in the field was commissioned from Involve, with the first issue published in May 2010.

Other publications activities have included Sciencewise personnel writing and placing articles in third party journals and on their websites, including articles by Lord Winston in the Science and Parliament magazine (September 2008) and New Scientist (January 2009). In addition, a Dialogue in Action DVD was produced.

There is very little information available on the reach or reception of any of these publications. AEA figures show that the general newsletter was sent electronically to about 1,200 individuals, about 25% of whom opened it. There is also some anecdotal feedback mentioned in passing for this evaluation suggests that some of the newsletters, *The Road Ahead* and the six good practice reports have been welcomed and valued by DESs and external stakeholders.

Until 2010, very little other data has been available on the numbers of publications distributed in print or by download, nor has there been any feedback from the target audiences on the quality, value or usefulness of any of these. Plans are now in place to collect more data, including feedback on all publications.

5.5.3 Introduction to dialogue events

17 events have been held to spread awareness and understanding of public dialogue among government staff during the period under review: 11 general drop-in sessions, and six events within individual government departments.

The general introductory sessions were short 'drop-in' lunchtime events, each with a particular topic focus and with presentations from a specialist followed by discussion facilitated by a Sciencewise-ERC DES. Participants were invited to sign up for one-to-one sessions after the event if they wanted more detailed advice and support. The events were:

- July 2008. *Hybrid/chimera embryos - a case study of public dialogue.* Presentation by Helen Richens of the Human Fertilisation and Embryology Authority (HFEA), which ran the dialogue.

- August 2008. *Evaluating dialogue*. Presentation by Diane Warburton, Sciencewise-ERC Evaluation Manager.

- September 2008. *Designing engagement processes*. Presentation by Andrew Acland, DES.

- October 2008. *Community x-change - a case study of public dialogue*. Presentation by Nigel Eady, British Science Association.

- December 2008. *Mass dialogue*. Presentation by Pippa Hyam, DES.

- January 2009. *Wise Up: the effective use of specialists in public dialogue*. Presentation by Suzannah Lansdell, DES.

- February 2009. *Addressing organisational personality types*. Presentation by Lindsey Colbourne, DES.

- March 2009. *Engaging the public through online and new media*. Presentation by Melanie Smallman, DES.

- April 2009. *What is public dialogue?* Presentation by Carl Reynolds, DES.

- June 2009. *Managing Enthusiasm*. Presentation by Diane Beddoes, DES.

- September 2009. *Synthetic biology - a case study of a forthcoming project*. Presentation by Dr Patrick Middleton, BBSRC (dialogue project manager).

These general introductory events were publicised through emails sent to all those on the Sciencewise-ERC mailing list (about 1,200 individuals). After each session, a short report was produced and published on the Sciencewise-ERC website, together with a downloadable version of the presentation.

The Evaluation Manager attempted to co-ordinate information and gain feedback on these events from mid-2008, and online questionnaires were circulated to some participants at five events that year, but there was not sufficient information on who actually attended events to ensure that all participants were reached, and numbers of responses were so low as to be insufficient for analysis.

However, short reports were prepared in December 2008 and February 2009 summarising for the Sciencewise-ERC management team the feedback from the five sessions covered, and the feedback that was received from participants was generally very positive. Comments included:

> *"Some additional examples of previous public dialogue activities would have been helpful to illustrate the process to someone who is very new to this. However, that said, it was an*

extremely interesting and useful session and we are now keen to undertake dialogue with the public in the future."

"Within [our] organisation there was some concern and caution about undertaking public dialogue because of previous unsatisfactory experiences - this has given me insight into what could have been improved last time and the desire to do it again in the future - but slightly better!"

"I am much keener to be involved and would like to do more dialogue in the future around some of our funding priorities to enable the public to work with our scientists more to create better understanding between the two - and hopefully to help influence our strategic funding directions better"

Although relatively few, these responses do suggest that the introductory drop-in events were valued by those that attended; there was no other negative feedback. There is also some anecdotal evidence that one or two people from government departments who were introduced to Sciencewise-ERC at these sessions went on to develop and run full public dialogue projects.

However, the numbers of participants at the general introductory events were not always as high had been hoped (there were rarely more than eight and often as few as two or three), and the costs were quite high (with a facilitator, presenter and venue costs), so the events were not considered good value. During 2009, the priority was shifted to departmental sessions which attracted more participants.

The purpose of the departmental events was similar to that of the general introductory events: to introduce the idea of public dialogue on policy related to science and technology, and encourage discussion and detailed questions and answers. There were five departmental events as follows:

- Defra. May 2009. 20 participants; three participants booked and took part in one-to-one mentoring sessions after the main event.

- DECC. Four events: 21 July (two sessions; one morning and one afternoon), 6 and 12 November 2009. There were 18 participants at the first of the July sessions, and 15 at the second; both events attracted mainly policy makers. No numbers are available for participants at the second and third events.

- HM Treasury. 19 February 2010. About 30 participants attended this short seminar which was part of their regular programme of lunchtime discussions on innovation. Presentations were made by Alan Mercer, Diane Warburton and Andrew Acland, followed by Q & A and discussion.

These departmental events were seen by the team delivering them to be effective in reaching the departmental policy maker targets, as well as drawing significantly larger audiences.

5.5.4 Learning by observation

During 2010, a system of learning by observation was introduced to provide opportunities for those who had not seen a public dialogue event to learn through observing events in Sciencewise funded projects.

Observer places were negotiated with the departmental project managers, and offered to individuals within Sciencewise and in the commissioning department. Places needed to be limited to avoid swamping the events with observers.

Observers were provided with briefing about their role at events (e.g. not to disrupt or participate in the events), and about the elements of good practice they might want to

look for. They were also provided with a questionnaire (based on the briefing) which they could complete and return to the Evaluation Manager, who passed them on to the independent evaluator of the project as an additional perspective to add to the evaluation research.

Places for observers were negotiated on three Sciencewise funded projects in 2010: on geoengineering, synthetic biology and animals containing human materials. Feedback from those that took up places was enthusiastic; they greatly valued the opportunity to observe public dialogue events first hand.

There were logistical problems, such as short timescales as event dates were finalised quite close to them actually taking place, limiting time to invite observers and book places. In addition, these places were offered largely to those within Sciencewise in some way, again mainly because of time constraints. It is expected that this approach to learning would continue with future public dialogue projects, and that invitations could be offered more widely.

5.5.5 Sciencewise-ERC and third party events

Since March 2008, Sciencewise-ERC has run numerous events which have brought together a range of national stakeholders to promote and discuss Sciencewise-ERC activities, and to share learning and experience. These events have been co-ordinated by AEA Communications and Marketing, with various input from the Dialogue Manager, Evaluation Manager and the DES team.

Sciencewise has been involved in two main types of events:
- National events run by Sciencewise-ERC to celebrate achievements and to engage stakeholders
- Third party events in which Sciencewise-ERC has participated.

- **Sciencewise-ERC national events**. Eleven national events have been held to celebrate Sciencewise-ERC achievements, new publications and plans and to engage stakeholders including:

    - 12 March 2008: to celebrate achievements over the initial phase of Sciencewise (from 2004) and prepare for the new programme under Sciencewise-ERC, attended by about 80 people

    - 29 May 2008: the formal launch of the new Sciencewise-ERC. 90 people registered to attend

    - 18 February 2009: a dinner with invited guests held to review and celebrate the achievements of Sciencewise-ERC since the launch, and consider future priorities. Short presentations were made by Sciencewise-ERC and there were opportunities for networking

    - 22 June 2009: reception at the Science Communication Conference to launch *The Road Ahead*, with a presentation by Jack Stilgoe.

    - 29 October 2008 and 19 March 2009: two interactive workshops were held on the good practice research work (leading to the six major reports described above). The first workshop summarised and tested the emerging findings, and the second presented final findings and draft frameworks and guidance. Each workshop attracted about 50 participants who gave enthusiastic and positive feedback at the end of the event about the value of the event.

    - 15 February 2008 and 20 October 2008: two workshops were held to bring together Project Managers from government departments and agencies who had

previously run Sciencewise-ERC funded dialogue projects, to share experience and learning. The limited feedback that was received (via an online questionnaire to participants in the second workshop) was that the Project Managers session was of limited value because of the low numbers present, and because the participants were at such different stages of developing and delivering projects. This feedback, and similar conclusions by the Sciencewise-ERC DES running the session, led to the cessation of this approach.

- 27 March 2009: a webcast was broadcast with presentations by Professor Kathy Sykes (Sciencewise-ERC Chair), Andrew Acland and Alison Crowther (Dialogue and Engagement Specialists), Darren Bhattachary (BMRB, a practitioner who had run a Sciencewise dialogue project) and Karen Folkes (BIS). Alongside the presentations, there were opportunities for the participants in the webcast to take part in polling and to ask questions to be answered by the presenters.

  The webcast was undertaken as a way of reaching a much wider audience than would be attracted to a face-to-face event in one location, and therefore spreading awareness and understanding of Sciencewise-ERC and public dialogue. However, only 25 participants took part and it was felt that this was not therefore a good use of resources, particularly the valuable time of those involved, and the initiative has not been repeated.

- 19 October 2009: a joint event was held with The Hansard Society to talk to parliamentarians about public dialogue. The event was attended by about 30 members of the Houses of Commons and Lords, and others. Presentations were made by Lord Robert Winston (Sciencewise-ERC Ambassador), Professor Kathy Sykes (Sciencewise-ERC Chair) and Dr Patrick Middleton, BBSRC (working with Sciencewise-ERC on a current public dialogue project).

- 8 December 2009: an event was held at the Science Museum to reach stakeholders and potential future partners on projects and other activities. About 35 people attended from a range of organisations. Speakers included Alan Mercer (AEA for Sciencewise-ERC) and Penny Fidler (Association for Science and Discovery Centres), and there were networking opportunities over drinks afterwards.

From observation, the events with stakeholders worked well to reach and engage their target audiences, and informal feedback at the events was positive. However, again, no detailed data is available on numbers attending or formal feedback on the value of these events to participants or to Sciencewise.

There have also been numerous meetings with key individual stakeholder interests since 2008 including with the House of Lords, Research Councils UK, NCCPE / University Beacons for Public Engagement, with Involve (including about links to the People and Participation website), and with the Ministry of Justice, Hansard Society and Wellcome Trust on sharing frameworks for evaluating engagement.

There have also been discussions with representatives from the New Zealand Ministry of Research, Science and Technology, the Scottish Executive, the Academy of Social Science and the Central Office of Information.

The Sciencewise-ERC work with stakeholders became a higher priority at the beginning of 2010, and many of these initial meetings have been useful in providing groundwork on which to build a more significant strategic approach for 2010. An internal stakeholder analysis workshop was held on 15 January 2010 to take forward this planning. More generally, in future, more detailed data will be collected to ensure that lessons for the most effective ways of running events with and for stakeholders can be identified and can feed into future developments.

- **Third-party events.** In order to spread awareness of Sciencewise-ERC, and the advice and support offered, Sciencewise-ERC has also participated in a whole range of events run by other organisations. The Sciencewise-ERC activities in these cases falls into two categories, as follows:

  - **Participation in third party events** e.g. speaking / making presentations / running workshops at events run by others, including at the International Association for Public Participation (IAP2) conference in 2008, the British Festival of Science in 2008, the ESRC Seminar Series on Critical Public Engagement and over 20 other events in 2009.

    In 2010, with the increased emphasis on building relationships with stakeholders and 'thought leadership', more emphasis was given to Sciencewise-ERC giving presentations and participating in third party events. Presentations were made at the Cambridge University CRASSH Democratising Futures event in May 2010 (resulting in six new stakeholder contacts).

    Participation in the Science Communication Conference (May 2010), the Cheltenham Science Festival (June 2010) and the Royal Society event 'The Experimental Society' (June 2010) resulted in 180 members of the public asking for ongoing involvement with the programme, over 200 people voting on their 'big issue' for future dialogue, 42 people attending open sessions and 30 new dialogue suggestions.

    A major development in 2010 was the Sciencewise-ERC engagement with the five BIS expert groups on the Science and Society strategy, especially the two groups most relevant to Sciencewise-ERC: the Science and Trust and Science for All groups:

    - Science for All group. The formal report of this group was published in February 2010, which recommended that Sciencewise-ERC take forward specific actions, and be represented on the follow-up group established to take forward the agreed action plan. The main Sciencewise-ERC follow-up work, led by Lindsey Colbourne, focused on the co-design of a framework for engagement, resulting in a draft 'conversational tool' which was launched later in 2010 to help articulate different types of engagement.

    - Science and Trust group. Again, the final report of the group had included recommendations for future actions by Sciencewise-ERC. Here. the main Sciencewise-ERC involvement included the production of a summary of the ethical issues raised by the public in Sciencewise-ERC projects (by Daniel Start) and involvement in the workshop and recommendations on evaluating science and society initiatives in future (Diane Warburton). In addition, the work of this group led to the development of a new project, since funded by Sciencewise-ERC, to explore further the issues around science, trust and governance.

  - **Attendance at third party events** e.g. providing a stand and/or printed literature, and in some cases attending in person to talk to people and answer questions, including at the Cheltenham Science Festival in 2008 and 2009, Innovate 08 and 09, the British Science Festival in 2009 and 2010, plus about five others.

  The AEA Communications and Marketing team has undertaken a partial analysis of the costs and impacts of many of these events, including numbers of emails sent to publicise the Sciencewise-ERC presence, statistics on the % of these emails that were opened, and overall numbers of delegates attending these events. However, up to 2010, very little information was collected on contacts made at events (except that 50 contacts were made by one of the DESs who attended the Innovate 09 event in October 2009). There is also no information available on whether or how these

contacts were followed up, or whether there was any further impact. Since 2010, greater emphasis has been given to measuring the value of these activities, and data collected on numbers of contact made etc (as shown above).

In future, information will be collected more formally on costs including the costs of the materials, the logistics, the people attending, travel and accommodation and other costs, alongside the numbers of contacts made, follow up, and results (e.g. signed up to newsletter, discussed running a project etc), to allow for a better assessment to be made on the cost effectiveness of these activities.

5.5.6 Sciencewise-ERC website and helpline

The Sciencewise-ERC website was re-launched with the launch of the Expert Resource Centre on 29 May 2008. A YouTube site was launched in August 2008. A Twitter feed started in April 2009, with 116 followers in May, rising to 248 by September 2009 (in October 2009, there was an estimated reach of up to 1,500 people as a result of followers re-tweeting).

A further review of the website was completed and a revised website was launched on 29 September 2009. A blog was also launched in November 2009, receiving 33 visits that month. The website was then completely reviewed and revised again early in 2010, and re-launched in June 2010.

The website was intended to be a major element of the Sciencewise-ERC but, in spite of numerous revisions during the period, it has not fully fulfilled this role. Statistics show that, although the number of unique visits to the site rose in 2009, they fell again at the beginning of 2010 (unique visits are a useful proxy for the number of times people have used the site): in 2008, there was an average of 630 unique visits to the site per month, in 2009 the average was 683 per month and in the first six months of 2010 the average was 573 per month (these figures do not cover the period after the launch of the revised website in June 2010). These figures remain relatively low: statistics from another small organisation working in the participation field show between 2,076 and 2,720 unique visits per month in the same period. The use and value of the website will be further reviewed to cover the period after July 2010 to identify any improvements in numbers and satisfaction of users.

Detailed statistics are also available on the telephone helpline. The conclusion on that service is that, although the numbers using the enquiry line were low (2 - 11 calls per month), the costs are also low and this continues to be a useful low cost alternative for initial contact with Sciencewise for those who cannot or prefer not to use the website or email.

5.6 Key impacts and achievements of the Sciencewise-ERC programme

5.6.1 Introduction

The Sciencewise-ERC has now fully established systems designed to provide support for innovative and good quality public dialogue projects. These systems have evolved over time, especially since mid 2009, as experience and working relationships have developed between all those involved: BIS, AEA, the Dialogue and Evaluation Managers, the team of Dialogue and Engagement Specialists (the DESs), the new Head of Dialogue and project managers in individual government departments.

New systems, to disseminate the lessons from dialogue projects, and to embed public dialogue into government policy and decision making, were established later in the programme and had also started operation by the end of 2009.

Research through interviews for this study with DESs, project managers and others suggests that many of these activities to establish and support the design, delivery and evaluation of projects are working well, while others are working less well. This section summarises the key impacts and achievements; the next section (5.7) outlines some of the current problems and challenges for the future that have been identified.

It is important to note that, for many stakeholders, the key impacts and achievements of Sciencewise-ERC are directly associated with the dialogue projects carried out with Sciencewise support and advice. See section 4 for details of the impacts of the dialogue projects.

This section focuses on the impacts and achievements of the project support and other programme-wide services provided by Sciencewise-ERC. These are summarised in the list below, and each then described in more detail:

- Created more public dialogue on science and technology
- Improved the quality and success of dialogue projects
- Increased investment in public dialogue
- Increased awareness, understanding and skills in government for public dialogue
- Built support for public involvement in government policy making
- Created evidence about the value of public dialogue
- Established a new centre of excellence on public dialogue
- Increased capacity for the design and delivery of public dialogue
- Created a new model of support for policy innovation.

5.6.2 Created more public dialogue on science and technology

Sciencewise activities have ensured that more public dialogue on government policy on science and technology issues has taken place, and demand continues to grow.

Sciencewise funded 21 projects between 2004 and June 2010, 14 of which were completed and evaluated by June 2010. It is these 14 projects that provide the basis for analysis in this evaluation study (see section 4 for detailed analysis of projects).

Feedback indicates that Sciencewise support has enabled projects to go ahead that would not have happened otherwise. Analysis of evaluation interviews shows that only 1 of the 14 projects supported by Sciencewise would have happened in the same way without support from Sciencewise: the feedback is that at least half of the 14 dialogue projects (7) completed with Sciencewise support and advice since 2004 would not have happened *at all* without that support, and a further 5 would not have happened in the same way. Sciencewise can therefore be seen to have ensured that more public dialogue has happened on issues related to science and technology policy. Comments included:

> *"I think it's had a fantastic impact when you look at the projects it has supported financially and in terms of shaping the projects. A lot of the projects either wouldn't have happened or not as well as they did without Sciencewise."* (practitioner interviewee 25)

> *"It [the project] would never have gone ahead in the shape it did if Sciencewise hadn't been involved and had the input they did."* (practitioner interviewee 24)

In addition, there is evidence that demand from government for Sciencewise support continues to grow, indicating likely further growth in the number of public dialogue projects in future. This evaluation has found two types of evidence that suggest a growing demand for public dialogue, both of which are considered in more detail below:

- statistics collected by AEA on the growth in number of dialogue projects undertaken with Sciencewise-ERC funding, and on the growth in the number of government policy units seeking Sciencewise support and undertaking dialogue

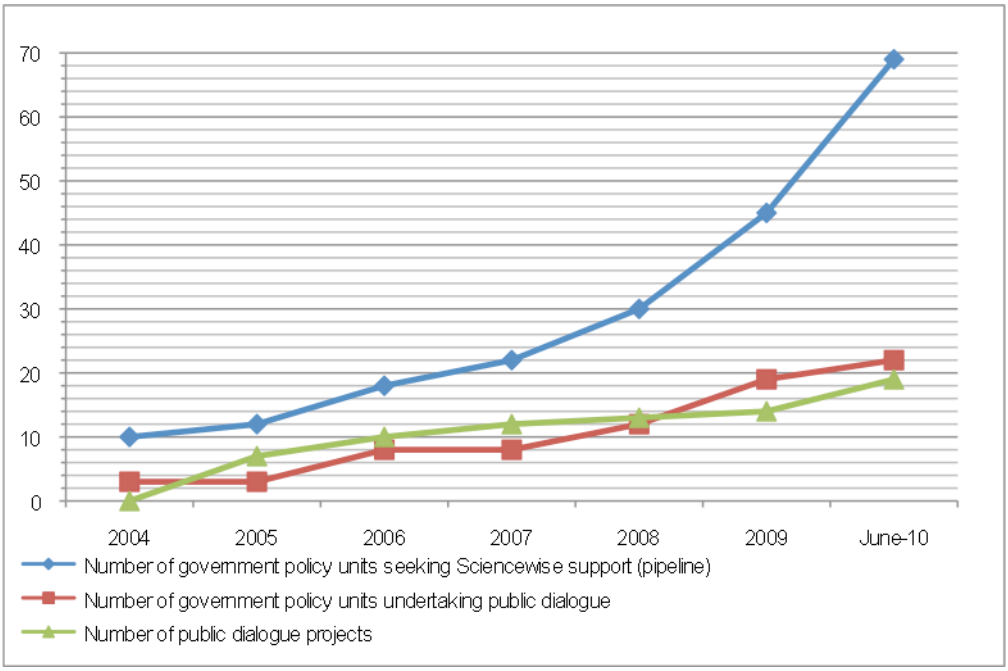
- the feedback from interviewees that awareness of public dialogue among policy makers has grown, and their attitudes have become more positive to public dialogue.

This data shows that the number of dialogue projects funded by Sciencewise has increased significantly over the period:

- from 2004 to the end of June 2010, 14 projects had been funded and completed, a further five projects were underway, and funding had been agreed for a further three projects to be completed by March 2011

- the pipeline of projects (project leads) rose significantly from 45 in 2009 to 69 at 30 June 2010.

The demand for Sciencewise support and advice on dialogue projects has also grown significantly since 2004. The chart below summarises the statistics; the table following the chart provides details of the statistics:



	2004	2005	2006	2007	2008	2009	June 2010
Number of government policy units seeking Sciencewise support (pipeline)	10	12	18	22	30	45	69
Number of government policy units undertaking public dialogue	3	3	8	8	12	19	22
Number of public dialogue projects (running)	0	7	10	12	13	14	19

The feedback from evaluation interviewees confirms these trends and strongly indicates wider growing demand from government for public dialogue. Almost all stakeholders interviewed felt there had been an increase in demand for public dialogue. For some, there was a sense that more people were beginning to see the benefits of public dialogue, although many felt that there was still a long way to go. Several felt that the increase was not necessarily or wholly due to Sciencewise although Sciencewise had clearly played a role. Comments included:

"It's chicken and egg. They've been set up at the same time as a wave of deliberative techniques has happened: public dialogue, etc. Experts and the public are meeting on more even terms. So yes – whether it is down to Sciencewise or they just helped to build it I don't know." (practitioner interviewee 24)

"In terms of science and technology there is a whole suite of other drivers and Sciencewise got built out of this. For example the House of Lords report, the Science and Society work from the Royal Society. It all created a space out of which Sciencewise grew. Whether or not… if it hadn't existed… I don't know. There is a wider move towards dialogue in government" (practitioner interviewee 26)

"...there has been [an increase in demand], partly driven by Sciencewise and partly that people have talked about it more – I think Sciencewise is part of it rather than the driver. And it will only increase" (DES interviewee 38)

"Yes there has been. Part of it is the impact of Sciencewise but part of it is about lots of institutions bringing science closer to society. Not purely Sciencewise" (external stakeholder interviewee 47)

The reasons given by interviewees for this perceived increase in demand included that it was because of the increased demand from the public for more engagement, the institutionalisation of public dialogue in, for example, academic research, the interest in government in behaviour change, and that the commercialisation of the field of public dialogue had in itself generated demand. Comments included:

"In general there has been an increase in demand because we see a highly able, involved public who are able to access information for themselves and want to engage. The more that happens the more demand there will be" (Steering Group member interviewee 1)

"Other reasons why we have public dialogue now – it is to do with behaviour change and to try to understand what drives behaviour and that public dialogue can somehow shed light on understanding of the drivers of behaviour" (external stakeholder interviewee 42)

"Has been massive increase in demand ... Number of policy drivers ... More broadly there has been the emergence of an industry. The demand from decision makers to do this stuff increases funding, and the industry out there has grown which is driving the demand ... [it is] the commercialisation of public dialogue which has led to its growth" (external stakeholder interviewee 43)

Another key reason given for the increase in demand for public dialogue was government's need for greater focus on risk management in a recession. For example:

"Maybe in these cautious times doing dialogue is a way of minimising risk. Seems policy makers do seem to be taking it on board not always for the progressive reasons that social scientists have in mind but for their own reasons" (external stakeholder interviewee 44)

For several interviewees, the increase in the quantity of public dialogue taking place, on new topics and with new people, has been the most important achievement of Sciencewise overall. For example:

"Encouraging and supporting new people in doing public dialogue and helping them to do it ... Getting new people to start thinking about dialogue and doing it. The main problem is where people think about doing it but don't know how – that's where Sciencewise is really useful " (Steering Group member interviewee 2)

"...they have been looking at new and interesting topics, and if they weren't doing it who else would?" (Steering Group member interviewee 5)

"Number of projects public dialogue has been involved in that Sciencewise has been involved in commissioning and funding. This is the most important achievement. Their role in facilitating these projects coming about." (external stakeholder interviewee 43)

"A big impact - they have impressive credentials and have been involved in all the major ones [dialogue projects] " (practitioner interviewee 24)

"It is highly likely that at least 70% of the dialogue projects they've funded wouldn't have happened or not in the same way without them. There is a huge impact on the projects they have funded." (practitioner interviewee 28)

This analysis shows good evidence of the role of Sciencewise in increasing the number of public dialogue projects, and strong indications of increased demand for public dialogue from public policy makers and for Sciencewise support and advice.

The evidence for the extent to which Sciencewise has created these changes, or simply been part of the shifts in understanding and awareness, is not definitive. However, it seems beyond doubt that Sciencewise has played a part in raising awareness and creating more positive attitudes to public dialogue in government, and in increasing demand for public dialogue projects.

5.6.3 Increased investment in public dialogue in science and technology

Since 2004, Sciencewise investment in public dialogue projects has achieved a good degree of leverage of funding and other resources into the field:

- Since 2004, Sciencewise has stimulated an additional investment by Government departments of £2.7 million in public dialogue projects. In 2009 alone, the Sciencewise investment of £1.1 million in dialogue projects has stimulated additional investment of £1.5 million.

- Since 2004, Sciencewise projects have involved 12,595 public participants, plus over 1,000 civil servants, academics and others from across Government, NGOs, industry and other institutions who have taken part in steering groups and dialogue events.

It can be seen, therefore, that Sciencewise has succeeded in bringing more resources into practical public dialogue projects, including additional funding but also the input of more than 13,000 individuals. This is a major investment in public policy on science and technology.

5.6.4 Improved the quality and success of dialogue projects

Sciencewise-ERC support and advice has improved the quality and success of the practical dialogue projects it has worked with.

10 of the 13 departmental project managers interviewed, and all three policy makers, said that support from Sciencewise had made a difference to the quality and success of their projects. Only one said it had made no difference.

Interviewees said that Sciencewise had improved the quality and success of particular dialogue projects in six specific ways: getting stakeholders on board, ensuring value for money, getting tangible benefits from the dialogue, giving departmental project managers the confidence to be more transparent and experiment with new directions, broadening the scope of the dialogue, and pushing dialogue more upstream (earlier in the policy process).

- Getting stakeholders on board. For example:

  "It's adding a different dimension of expertise – suggestions on working with particular groups of stakeholders and so on." (departmental project manager interviewee 17)

- Value for money. For example:

  "Yes definitely. They steered us in the right direction. Their expertise helped us in terms of getting the right balance and getting value for money." (departmental project manager interviewee 14)

- Getting tangible benefits from the dialogue. For example:

  "Because we have worked with Sciencewise we are getting some really tangible benefits from public dialogue ... It would not have been so successful had we gone off on our own ...That is what Sciencewise has done with us. Had we done it on our own our fingers would have been burnt." (departmental project manager interviewee 48)

- Giving departmental project managers more confidence to be transparent in their policy development work and to experiment with new approaches. For example:

  "Our confidence to be more transparent. It can take you down new directions ... I think that Sciencewise gave us the support to have conversations with people and that is a growing conversation – it put us in touch with people." (departmental project manager interviewee 13)

  "Going new into public dialogue was quite a scary prospect and it is a leap of faith. Sciencewise has helped us with that leap of faith – gave us confidence, reassurance and pragmatic advice." (departmental project manager interviewee 48)

- Broadening the scope of the dialogue. For example:

  "We look to public dialogue to inform what we do as an organisation. Sciencewise is interested in this but also push that public dialogue should also inform policy making in a broader sense. So we looked broader. They remind us that the outcomes should be pushed out further than our organisation ... It would have been easier to do public dialogue just about us but Sciencewise challenges us to think beyond and influence policy makers and government. This has been a challenge ... They helped us broaden the perspective we took. Thus we broadened the scope of the dialogue." (departmental project manager interviewee 48)

- Pushing dialogue more upstream (earlier in the policy process). For example:

  "Public engagement previously for us was downstream. Telling people this is what we do. Now more about upstream public engagement to inform what we actually do. From our perspective this has changed and will continue to do so. This is where Sciencewise has made an impact We do see from the department(s) that sponsors us the notion of public participation is being promoted by them much more. Public dialogue is a growing area for us and for a whole science sector because of difficult choices. You need to make sure they are based on best advice you can get – this will include public as well as industry and academics." (departmental project manager interviewee 48)

Departmental project managers particularly valued advice at the start of the project, where the greatest level of DES input is usually made. Departmental project managers and policy makers mentioned particularly help with defining the project at the very beginning, the specification and commissioning external contractors, and ensuring internal clarity and buy-in to the project. Comments included:

"Having the expertise of someone like Sciencewise to plan the process, get the right people involved in the steering group and get the materials right [were the crucial elements in making the dialogue successful] ... The reassurance of having someone dedicated to you for advice and input was invaluable." (policy maker interviewee 22)

"[The most useful was] The upfront advice and helping to get things off the ground ... They helped us through the tendering process. We had a much bigger relationship to start off with the set up, [on the] methodology, the scale and specification for tendering, and what kind of organisations we should look at. Also advice on evaluation. Going forward we met with them, and they were involved at a lower level." (departmental project manager interviewee 14)

"At the outset. We hadn't run something like this before. Giving us an idea of what it would look like, helping us to explain it to the working group – the main benefits were at the front end." (departmental project manager interviewee 9)

"Probably the help with setting up the specification of what we wanted to do. We had never done that before so it was really useful – they knew what the contractors should be offering." (departmental project manager interviewee 11)

"Words I would use to describe the relationship are amiable, friendly, open. I always find Sciencewise to be very professional and readily accessible. ... Individuals I have dealt with have been exceptionally helpful in handholding, mentoring and guiding through a process... When Sciencewise gives advice I know it is hugely informed and makes me more confident in their advice." (departmental project manager interviewee 48)

This feedback was not without caveats in some cases, including concerns being expressed about the lack of flexibility in the approach to public dialogue, and the time taken to get funding in place. There was also some uncertainty about the extent to which Sciencewise actually want to influence the design of the process. One said:

"Sciencewise needs to be much clearer about themselves - what kind of influence do they want to exert. Not really clear." (departmental project manager interviewee 8)

Practitioners also particularly valued the Guiding Principles and other guidance documents (including previous evaluation reports) as well as the personal advice from the DES. For example:

"I think right from the outset ... They also offered another voice at the stakeholder workshop stage. So helping to steer, another voice to the client, third party advice, funding, and material development to a certain extent ... [also] sense of rounding things, for example with the case study afterwards" (practitioner interviewee 23)

"For us really it was really valuable...in terms of the findings. Having to think and talk about what is coming out in the report has meant that we're writing much more useful and concise reports – more helpful to dialogue deliverers and the oversight group, with clearer, firmer findings tested in discussions...Underpinning with the experience and knowledge of the Sciencewise body of work – I really appreciated that as you don't get that with any other project ... It's a commitment to extra time but for the level to which it improves the quality of work it's worth it. As consultants we want to be able to deliver the best service we can so that interaction is invaluable" (practitioner interviewee 30)

"Probably the guidance documents. I used that to set what I compared against – it was useful to have them there to compare. What was really useful after the first evaluation was feedback from [the Evaluation Manager] to make sure I was on the right track. Recently I've found it useful to look on the website and see other examples of evaluation reports." (practitioner interviewee 29)

Overall, this feedback strongly indicates that the content of the advice and guidance provided by the DESs has increased the quality and success of the actual dialogue projects, and was highly valued by those in government who were running public dialogue projects (both project managers and policy makers). More surprisingly perhaps, practitioners also welcomed and valued DES advice.

Advice at the earliest stages of the project seems to have been particularly useful to staff in government departments, as well as helping to achieve internal clarity and buy-in to the project. The Guiding Principles and other guidance documents, as well as the personal expertise of the DES were also seen as particularly helpful. All this feedback suggests that this element of the Sciencewise-ERC products and services has been working very effectively.

5.6.5 Increased awareness, understanding and skills in government

The evaluation research has shown that awareness and understanding of public dialogue among policy makers in government has grown, and that their attitudes to public dialogue have become more positive. In addition, skills and knowledge for public dialogue have grown, particularly among those policy makers with direct experience of dialogue projects. Feedback from evaluation interviewees strongly suggests that Sciencewise has made a significant contribution to these changes.

Numerous interviewees felt there had been a general growth in understanding and awareness over recent years. There was some ambivalence about the extent to which Sciencewise had driven these changes, or simply ridden a wider wave of change. However, there was a strong sense that Sciencewise had played an important role in these changes, and that the changes themselves were significant. There was also a strong sense that it was still very early days, that public dialogue was far from being embedded across government, and that there was still a long way to go. Comments included:

"Yes I have seen that over the past 10 years really. But they are still in relatively small groups. You have some really strong advocates and people with skills spread quite broadly but thinly. And you still have sceptics with focused areas of delivery where public dialogue is seen as holding up delivery. But there are a whole host of people who talk very openly and eloquently about public dialogue from policy to site level. What I don't see is it embedded across government." (Steering Group member interviewee 1)

"I do think there's a growing awareness. I think people are starting to see the benefits, but I have spoken to people who have also been very open that there is a long way to go." (Steering Group member interviewee 4)

"Yes definitely - more than 10, or even just five years ago. People are thinking about doing it and realising the benefits ... Everywhere people are thinking about it more. It's not just Sciencewise, but Sciencewise has played its part. The fact Sciencewise is in government helps too. It is trusted and embedded so people feel confident in them; their position is very helpful." (Steering Group member interviewee 2)

"Yes. Definitely raised awareness around public dialogue without a doubt and increased willingness to do it once they see the benefits." (practitioner interviewee 29)

"Probably yes – certainly in the scientific community there is much more acceptance and openness to public engagement, although there is still some nervousness about what it means. But that comes back to not knowing when it is appropriate. But yes." (Steering Group member interviewee 5)

"I would say in the last two to three years there has been a general increase in awareness around engagement, including what we now call public dialogue. So a steepening of the curve really. There has been a general movement and Sciencewise came into being on the back of it – it's more of a case of Sciencewise exploiting than contributing to it." (DES interviewee 31)

"Broadly. There is a wider awareness and in Sciencewise's case it's coming from inside government, which is enormously valuable. It adds enormous credibility and kudos having a base inside government for people who've been trying for years to sell it from the outside. But it is still quite tenuous – with budget cuts – dialogue may look costly but you have to put the budget for dialogue in the context of the overall budget. It is a fraction of the overall budget yet it can make or break it and there are all kinds of costs of not doing it, or not doing it right, for example legal costs further down the line. There is not that kind of awareness within government." (DES interviewee 33)

"Yes, but we're at really early stages. Yes, there is greater awareness but we are still in the phase of 'let's try it and see what happens'. It's starting to get to a more mature place where it is more joined into future strategy, and it needs to continue along that path of embedding...but it is hard to disentangle that. I'm aware of it. There is greater awareness and it seems to be happening earlier, more upstream, which is good." (DES interviewee 34)

"Yes definitely in terms of attitudes. There is more of a willingness to try and understand." (practitioner interviewee 27)

There were caveats. Several interviewees felt that while awareness of public dialogue was growing, for some policy makers in government it remained a necessary evil rather than a positive contribution to better policy. For example:

"Broadly speaking there seems to be the idea that doing this is an evil necessity rather than interesting." (DES interviewee 38)

In addition, some interviewees felt that government was using public dialogue as a way of selling ideas to the public rather than dialogue being a way to improve policy. For example:

"Mainly there is a growing interest in dialogue but still seen as getting public on side rather than changing fundamentally." (external stakeholder interviewee 47)

There was a general sense that deeper understanding and the development of skills for public dialogue within government were growing. The point made by several interviewees was that skills seem to be developed primarily through direct experience of running or being involved with a public dialogue project, and that wider institutional learning was much more limited. Comments included:

"Once you engage with departments on this they start to get it. Once they start to see the benefits they are more keen but there is still a way to go in terms of learning how to do it well." (Steering Group member interviewee 6)

"... in the cases I've dealt with quite often organisational intelligence is not embedded so it doesn't stick." (DES interviewee 38)

"...in terms of individuals as they go through processes, yes, people understand better and that it doesn't mean handing over control and that you can say 'I've listened to you and haven't used what you've said for the following reasons'. It's knowing that is OK and having more mature conversations." (DES interviewee 35)

"It's seen as an incredibly niche activity. It is not seen as a mainstream activity at best, and at worst it is seen as acting against politicians. In the hands of a few enlightened individuals it is seen as being used for a specific purpose. People have to go through it and get it in order to understand it, but there is no organisational impetus behind doing it at all." (DES interviewee 36)

"Anyone who goes through a dialogue probably understands better how to convene a stakeholder process. They are going to go 'wow – the public can really contribute'. That's an achievement and I suppose it may have changed attitudes. I worry that you tend to just work with one person internally and could do more to pool that out." (DES interviewee 40)

Growing understanding and skills were also seen to have created more confidence among policy makers, and to have reduced the fear of the risks of engaging with the public on policy issues. Comments included:

"...policy makers we've worked with on projects – I'm not sure about skills – but certainly their confidence improves. Quite often it's the first time they've done anything like this ... It's difficult for policy makers – it's a long process." (practitioner interviewee 28)

"It enables government to experience public dialogue without too much risk to itself. It's a foot in the door for government to try dialogue beyond consultation or communications." (DES interviewee 36)

"It is changing slowly but it is part of a whole big picture of changes. There is increasing awareness about the risk being more on the side of not doing it or not doing it well." (practitioner interviewee 25)

A couple of interviewees drew attention to the potential for internal government learning and skills development being compromised by the way Sciencewise-funded projects are managed - with detailed design and delivery of dialogue projects being carried out by external contractors. They said:

> *"Policy makers have diversified their skills though not reached through and across all departments. Sciencewise is an attempt to bring expertise closer to policy makers. [There are examples] where policy makers have tried to increase their skills...it used to be that government would outsource all its public dialogue to others outside i.e. consultants, academics so they [government] had no skill except in commissioning the activity ... there is a tension "* (external stakeholder interviewee 43)

> *"Sciencewise ... Reliant on the one off events and structurally – a very contracted out process ... Huge advantages but this works against developing internalised learning within government."* (external stakeholder interviewee 42)

However, others argued that contracting out the delivery of public dialogue events has benefits in terms of demonstrating the independence of the process.

The feedback to this evaluation strongly suggests that awareness and understanding of public dialogue among policy makers in government has grown significantly. Skills and knowledge about public dialogue have also grown, especially where government staff have direct experience of running or being involved in a public dialogue project. However, many also felt that there was still a long way to go and public dialogue was far from fully embedded in policy making processes across government.

There was also some suspicion that positive attitudes to public dialogue may not be widespread, and that government motivations for some of the public dialogue that did happen may in some cases still be about communicating government views rather than listening to the public and being willing to change policy as a result.

In spite of the Sciencewise programme of outreach and awareness raising (including the 17 introduction to dialogue events for government and various publications), these were not really mentioned at all by interviewees. Indeed, the impacts of the Sciencewise programme on these changes in awareness, understanding and skills mentioned by interviewees focused almost entirely on the impacts of specific dialogue projects. However, this may be due a least in part to the choice of interviewees for the evaluation, most of whom had been involved in projects.

It was clear that Sciencewise had played an important role in the wider changes in awareness and understanding, although it was less certain whether Sciencewise had driven the changes or been part of a wider movement for change.

5.6.6 Built support for public involvement in government policy making

Sciencewise has had a significant role in creating willingness within government to engage with the public on major national policy issues, and in creating practical public dialogue projects using a highly effective model that delivers public dialogue in practice.

Many interviewees identified the role Sciencewise has played in promoting the idea of public engagement in policy as one of the programme's most important achievements. Comments included:

> "*Absolutely prioritising the need for public dialogue in certain circumstances. Being part of a whole movement of understanding across government – Sciencewise has certainly contributed to that ... It is more focused on doing what government departments want to do, which is good."* (Steering Group member interviewee 1)

"With Sciencewise, it has been a fantastic experiment in integrating dialogue into central policy making process. As an initiative it has been good ... Great endeavours by the Government are never perfect things but we should acknowledge and celebrate the fact that this has happened." (external stakeholder interviewee 45)

"It is very much trying to raise the issue of involving the public in different forms of decision making, which it does well ... opening people's eyes to more creative ways of doing engagement – I think they have done that" (Steering Group member interviewee 5)

"The idea of developing policy in partnership with citizens is gaining traction in government, though there is still a long way to go." (Steering Group member interviewee 6)

"From my own point of view it's been extremely helpful and necessary to get it established in terms of policy making in controversial areas. It's helped to put public dialogue in policy making on the map" (departmental project manager interviewee 7)

"It certainly happens now so I notice it [public dialogue] – I am aware, it is more visible. It is taken seriously and seen as a central part of these kind of policy studies where relevant (for example with ethical issues and forward looking projects)" (departmental project manager interviewee 9)

"It is very much trying to raise the issue of involving the public in different forms of decision making, which it does well." (Steering Group member interviewee 5)

"[there is] increased recognition of the value of public dialogue ... policy people are starting to use dialogue as something which is not just a shed load of trouble but something that can help them achieve their objectives and be part of good practice." (external stakeholder interviewee 44)

"More open willingness to engage beyond just the mandatory 12 week consultations ... you don't just sit in a policy bubble and then reveal it to the world in a 12 week consultation. You involve people more throughout the process ... A greater willingness that good policy and services are developed through partnership. The ivory tower approach of the past has gone" (external stakeholder interviewee 46)

For several interviewees, the rise in support in government for public involvement in policy making has been primarily as a result of the public dialogue *projects* Sciencewise has supported. Comments include:

"In terms of legacy ... the people who've commissioned work in government departments speak positively about it ... It has put the word dialogue on the map and it has changed attitudes and expectations of dialogue... There have been high profile dialogues ...The projects stand out really. It has stimulated debate among policy makers. It has possibly made the internal decision making process more transparent." (DES interviewee 40)

"I think it's galvanised some really exciting dialogue and has given a model for engaging the public in policy... The range of partners and the way they run the projects is great ... It's shown that government is interested in working in a different way – a fantastic achievement but I just hope it's built on " (Steering Group member interviewee 3)

For some interviewees, the main contribution Sciencewise has made to increasing government support for public involvement in policy has been through the specific *approach* to public dialogue that Sciencewise has developed and promoted. Comments included:

"[Dialogue is] a great structured way of eliciting public views to inform policy. It is pioneering models that government will have to think about more widely. Dialogue's been around in the UK for 17 years or so. It's clear that the old consultative approaches aren't enough. Sciencewise is providing a good model." (DES interviewee 33)

"...to promote a model of dialogue that genuinely enables the public to contribute to policy development in the context of science. The methodology is really impressive and the approach is right on. What it does best is to try and take forward that approach." (DES interviewee 37)

"Quite a profound impact. Just look at the list of things it's worked on ... I think it's a credible presence for iterative, collaborative dialogue as a style of working for formulating robust government policy." (DES interviewee 33)

For others, public dialogue projects have promoted greater mutual understanding between the public, scientists and the policy community, that has in turn increased the credibility of dialogue as a useful approach for government policy makers. For example:

"It has helped the scientific and political community to understand that the public is smarter than they think and has helped the public to understand that the scientific and political community aren't all demons." (DES interviewee 38)

"...it seems to be at the vanguard of quite a progressive agenda - the idea that it is possible to sit down with groups of people who are 'the public' and talk about serious complex significant issues with them - a sense that if done right you can rely on the public to be sensible and intelligent. Before, scientists and policy people have said they were not capable ... This is quite a phenomenon … the significance of this is underplayed." (external stakeholder interviewee 44)

However, several interviewees felt that real change had been limited, particularly in relation to democratising the policy process, and that more needed to be done. Comments included:

"... looking back Sciencewise has done well over the last years on one off activities bringing the policy makers along in the process but there are limitations in terms of effectively democratising the policy process." (external stakeholder interviewee 42)

"It's good at relating to people within government and policy circles about dialogue. It's built relationships across government departments and that can only be positive. It's been good at building capacity in government and about culture change. Positive role in assisting the commissioning process and building public dialogue. But on their own these things are not necessarily the best things to be doing" (external stakeholder interviewee 43)

"The Sciencewise model and approach generally speaking is a strong one and quite robust ... But important thing would be trying to reframe the approach so that much more talking about society. Science is something which happens within society rather than starting from starting from the science issue itself." (external stakeholder interviewee 44)

There were also stakeholders who felt that actual influence on policy had been limited, and that more needs to be done so that policy makers are more responsive to input from the public. Comments included:

"Raising the profile of dialogue so policymakers are more likely to consider dialogue as an option. Extent to which it has made a difference to policy much more difficult to assess. It has changed attitudes to some extent e.g. politicians see beyond the single idea and see varied views." (external stakeholder interviewee 47)

"Raising the profile of dialogue and changing the perception of science so not just decided by scientists behind closed doors – society plays a role ... Across the board but not purely due to Sciencewise and of course there are people who are still resistant ... Impact on actual science and innovation policy has been quite limited. Need to build on what they have done and get policy makers to be more responsive to some of the issues raised." (external stakeholder interviewee 47)

However, as can be seen from the quotes from interviewees, criticisms of the Sciencewise role in promoting public engagement in policy tended to be around the need to build on and extend from current activities - more about more of the same and better, rather than any need for a complete change of direction.

Overall, there was a strong sense from all the feedback that Sciencewise was doing valuable work and had made a significant contribution to increasing support in government for public engagement in the development of national policy.

5.6.7 Created evidence of the value of public dialogue

Several interviewees (particularly Sciencewise-ERC Steering Group members) felt there were real achievements in the Sciencewise work of gathering evidence from evaluations to demonstrate the impacts of projects individually and as a broader programme. Comments included:

> *"It has provided evidence of particular dialogue activities which is important but I don't see how the case studies have been written up and disseminated and it's not clear that there is consistency across the case studies either."* (Steering Group member interviewee 1)

> *"...lots of evaluations of different projects and there are lots of good examples of projects that have had a good impact on people and policy."* (Steering Group member interviewee 3)

> *"I think Sciencewise has been a champion for dialogue and I think they have done that really well. My impression with Sciencewise around that support for public dialogue around science has increased and the profile has been raised. I don't know if that would have happened without Sciencewise and evaluations have been an important part of that."* (practitioner interviewee 29)

Evidence of the impacts and value of public dialogue projects was mentioned throughout the research, but more often in terms of the need for such evidence rather than the value of the evidence produced to date. It may be that the Sciencewise-ERC Steering Group feels more positive about the provision of such evidence because specific papers have been prepared for them, summarising some of these impacts, over the previous year. They have clearly valued that.

However, it is equally clear that the messages about impact and value have not been seen by wider audiences, even those interviewed for this evaluation (including departmental project managers, practitioners, DESs and external stakeholders). That gap is a challenge for the future.

5.6.8 Established a new centre of excellence on public dialogue

Sciencewise-ERC has created a centre of excellence for public dialogue by developing and providing the resources and services outlined above (sections 5.2 - 5.5). These activities alone have created products (e.g. publications) that did not exist before and that have taken the principles and practice of public dialogue forward. For some stakeholders interviewed for this study, the mere establishment and continued existence of the Sciencewise-ERC has been an achievement:

> *"The very fact that they are still there. It was seen as a very experimental thing in some senses. Fact that they have made a foothold themselves in the difficult landscape. Great achievement. Challenge is how to build on that."* (external stakeholder interviewee 48)

> *"The fact Sciencewise is happening is a good thing in itself – it can help with policy ideas or upstream engagement on issues."* (departmental project manager interviewee 16)

> *"It's really good to have central expertise you can rely on. With [our organisation] a lot of people have done dialogue but to have people there who you can call up and ask for advice – it's a very important resource."* (Steering Group member interviewee 2)

More specifically, the Sciencewise-ERC has created a unique package of services and resources to promote and support public dialogue in a relatively short time. As a result of these activities, Sciencewise has built a good reputation that results from and underpins its services, created new resources, and built relationships with stakeholders that provide the foundations for new work to build capacity and embed public dialogue further into government. Each of these is covered in more detail below. The 'system' Sciencewise has developed to support innovation in government policy-making is described in section 5.6.10 below.

- **Good reputation and profile**. Sciencewise-ERC has established a good reputation and profile, which is essential to the programme's ability to generate further projects and future stakeholder engagement in its activities more generally. More immediately, reputation affects the credibility of Sciencewise advice on current projects, and the extent to which its other work can influence others on the value of public dialogue. For example:

  > *"I was so impressed by the credentials of Sciencewise I could see we could get something useful from working with them."* (departmental project manager interviewee 19)

  Feedback to this evaluation generally was that the reputation and profile of Sciencewise-ERC were good, but only with those in the narrow field of public dialogue relating to science and technology policy. However, reputation and profile were both seen to be growing. For example:

  > *"I think the profile is relatively low. It is well known by people who know about dialogue and science."* (Steering Group member interviewee 3)
  >
  > *"Their reputation. It's growing very positively all the time. The more great projects that come out the better. I would like to see Sciencewise as the benchmark and the first port of call for dialogue projects."* (Steering Group member interviewee 19)
  >
  > *"It is very well known and thought of within the field but outside I don't know"* (practitioner interviewee 24)
  >
  > *"Outside the world of public dialogue people their profile is not especially high. But it's growing... The first project I [worked on] was around 18 months ago and the profile has increased since then, largely as a result of some of the projects. I think they are very well respected. The team is great – the team of DESs are all really experienced."* (practitioner interviewee 29)
  >
  > *"I think they have a good reputation. I guess in the field everyone's heard of them."* (practitioner interviewee 30)
  >
  > *"Quite well known amongst a narrow range of people ... I would like in an ideal world [for it to be] more widely recognised amongst policy makers as a source of expertise and a repository of knowledge."* (external stakeholder interviewee 42)
  >
  > *"Still quite low, although it is known and reasonably well respected among a small group of people. But then it is still young."* (practitioner interviewee 25)
  >
  > *"Sciencewise has a good profile and a good reputation. It has definitely raised the profile of dialogue."* (external stakeholder interviewee 47)
  >
  > *"Profile, as always, could be higher ... Profile can always be higher. Profile is known by people who know them. Reputation – for the people who work with hold them they are held in extremely high regard. Very professional."* (external stakeholder interviewee 48)

Not everyone thought a high profile for Sciencewise-ERC was particularly important, and that the quality and success of the projects was more important:

> *"I think there is a good level of awareness but it is probably fairly fragile. But I question the need for tremendous profile as well. I would rather see a small number of really good projects."* (DES interviewee 31)

These largely positive comments are countered by others who suggest that Sciencewise is too uncritical of its own work, not sufficiently reflective, too evangelical and too focused on a particular approach (external stakeholder interviewee 43) which requires big and expensive dialogue.

Others mentioned that the reputation of Sciencewise was affected to a degree by the criticisms of the programmes structure and management. Comments included:

"Highly thoughtful, highly intelligent, very passionate about the role of dialogue. Perhaps they could be seen as being not quite pragmatic enough and not being slightly more pragmatic in terms of approaches ... you can still do some very useful effective dialogue that doesn't cost over £100,000." (external stakeholder interviewee 46)

There were also comments that the Sciencewise reputation could be affected by suspicions about the government's motives for dialogue, including that there was a danger of 'pushing' new science and technology rather than opening up dialogue.

"People are suspicious that there is an instrumental rationale i.e. acceptance of new technology rather than people having a real say in future development of technology and innovation ... [The] instrumental reason [is] declining trust in science: need to involve more people and understand their concerns and fears so you can shape policy and new developments to make them more acceptable. It is all about acceptance. People would say that this has been the motivation for government interest." (external stakeholder interviewee 43)

"Government using public dialogue to try to change opinions again ... Main premise of science and policy people where public are being 'troublesome' is that if you educate them about the science then people will start to become less concerned ... There is always an instrumental objective because government wants to press ahead." (external stakeholder interviewee 44)

Several interviewees were more specific about the limits to the Sciencewise profile. For example:

"They have tried hard but I don't think it's been that successful. I have been to meetings on public engagement where people from the COI have never heard of them. There is a big job to do, but they are getting there" (departmental project manager interviewee 16)

Overall, the feedback suggests that the profile and reputation are good within the field of public engagement in science and technology, and this is an important achievement in the short time the programme has been running. The aspects that appear to have damaged or limited wider and better profile and reputation are the suspicion that the programme reflects perceived government wishes to promote new science and technology rather than opening up debate, and some discomfort about the focus on a very specific approach to dialogue.

The level of reputation and profile can be seen as a good achievement. However, consideration will need to be given in the coming months as to whether this is sufficient, or whether a wider reputation is needed for survival in the current economic and political climate. There was a sense that there is still a lot to do.

- **Created new resources**. The Sciencewise-ERC has published reports and case studies on all 14 projects funded since 2005, and detailed evaluation reports on 10 of those projects. The Guiding Principles have been updated and supplemented by detailed guidance notes for those seeking Sciencewise-ERC funding. In addition, eight major new reports have been produced to take forward thinking and principles, and practical good practice, on public dialogue.

  A new website, communications and marketing materials have been produced, although these had been less fully developed by June 2010 than had been hoped in the original plans to create a 'knowledge hub' on public engagement. Statistics on the website showed disappointingly low numbers of users, and few stakeholders interviewed for this study had used it and those that had were quite critical (see section 5.7.2), However, the website was being completely reviewed and revised again early in 2010, and was re-launched in June 2010.

- **Relationships with stakeholders**. Most of the stakeholders associated with Sciencewise, even those whose contact was primarily around a specific dialogue project, also had wider links with the programme.

  The main links mentioned by interviewees were through attending Sciencewise events, receiving newsletters, and continued contact with a specific Sciencewise individual. While this does show some recognition of the Sciencewise events, website and publications, use and knowledge of these - and positive feedback on them - was very limited. For example, only 4 of the 13 departmental project managers interviewed mentioned any of these, and none of the policy makers or practitioners; only 1 of the departmental project managers mentioned the website.

  Generally, links between stakeholders and Sciencewise tended to be quite arms length and/or rely on links between specific individuals. There was a strong sense from stakeholders that wider links with Sciencewise, although they existed, were minimal and could be much stronger. For example:

  > *"Not as much as I would have liked. I would like regular contact and to know what is going on. I would like to be part of the Sciencewise family."* (departmental project manager interviewee 19)

  Although explicit work with stakeholders by Sciencewise-ERC has been minimal, feedback to this study shows an unexpectedly high level of support for Sciencewise principles and work - some reflecting real passion and commitment to the whole concept of supporting and delivering public dialogue. For example:

  > "*It is very interesting work and I absolutely subscribe to their principles ... they were always there as a critical friend in the background*" (practitioner interviewee 26)
  >
  > *"There is a benefit to [our organisation], as we would like to think we contribute to the debate and this gives us the opportunity to do so"* (departmental project manager interviewee 10)
  >
  > *"I am very much enjoying the current relationship. There is an openness in Sciencewise to thinking critically and imaginatively about what it is for and what it can do in the next 12 months... As an academic – benefit of working with people from different sectors on live policy problems, a fresh approach and different perspective. Able to bring my academic work into discussions with public dialogue practitioners and policy makers"* (external stakeholder interviewee 42)
  >
  > *"I care a lot about the subject. To be ... involved has been great and wonderful to me."* (external stakeholder interviewee 45)
  >
  > *"Bringing innovative thinking to the way that genuine dialogue can inform policy makers – the way that Sciencewise funding is being used to enable communication practitioners to undertake dialogue that will feed to policy making – I am very excited to be involved."* (DES interviewee 35)
  >
  > *"Very much at one in the principles on how you conduct [public dialogue]. Very useful to have them as an ally."* (external stakeholder interviewee 46)
  >
  > *"Beneficial for me to have to respond to questions and put my point of view on the issues. Beneficial in terms of learning from the people in the dialogue and improving your communication skills. So it's a mutual learning process."* (external stakeholder interviewee 47)

  The focus of interest from stakeholders in building stronger relationships with Sciencewise-ERC was often around the actual concept of public dialogue, but there was also emphasis in the feedback on support for Sciencewise work in getting evidence for the messages about the impacts of public dialogue (especially from the evaluations of projects that are now available) and in working with government to get these messages across to the right people in the right ways.

These comments suggest that the criticisms from external stakeholders come from a strong belief in the principles that Sciencewise has promoted, and a shared sense of purpose. The frustration seems to arise from insufficient achievement rather than a sense that Sciencewise has been moving in completely the wrong direction, although possibly *slightly* the wrong direction.

There was a strong sense in this feedback of the stakeholders interviewed supporting the principles of what Sciencewise was doing. This sense of shared purpose with stakeholders is a very valuable resource for Sciencewise, and one which is barely recognised and not fully supported in current activities.

In summary, the Sciencewise-ERC has created a new hub for the development and promotion of the concept of public dialogue in policy around science and technology issues. Between the time of its launch in May 2008 and June 2010, it has created a good profile and reputation for its work, at least within the field, developed new evidence of the value of public dialogue, and started to build good relationships with its stakeholders. There has been much less achievement in the creation of a more formal 'knowledge hub' in terms of access to wider resources on the subject.

Overall, feedback suggests that the actual establishment of the Sciencewise-ERC and the extent to which it has built a good reputation, created new evidence on the value of public dialogue and established good relationships with stakeholders had been a significant achievement in the short time it had been operating. For many stakeholders, the whole enterprise was still relatively young and there was still a long way to go. As one said:

> *"What Sciencewise is involved in is such a long process of incremental change, progress and capacity building. It is such a long-term activity, it is a case of slow incremental change... there is a long way to go"* (Steering Group member interviewee 4)

5.6.9 Increased capacity for the design and delivery of public dialogue

The Sciencewise approach to public dialogue, through commissioning external contractors and supporting government staff to manage projects, had helped increase capacity in the field for the design and delivery of public dialogue projects. Feedback from interviewees pointed to professional development for practitioners through advising on as well as delivering dialogue projects, and the opportunities for innovation and experiment in Sciencewise-funded projects. The knowledge and experience of the DES team allowed them to support innovation by knowing what was likely to work in different circumstances, and thus extend and develop good practice. Comments included:

> *"It's had the great networking role in terms of joining people up. The consistency in good practice and helping to ensure there is a standard set for good public dialogue. They are doing a really good job in terms of raising the profile of that work and getting a bigger voice for that."* (departmental project manager interviewee 14)

> *"Giving thoughtful, reflective practitioners opportunities to develop thinking. The opportunity to draw out new concepts."* (DES interviewee 35)

Practitioners involved, both as external contractors and as Sciencewise Dialogue and Engagement Specialists (DESs), identified specific benefits in working with Sciencewise which enabled professional development through reflection and through shared learning. Comments included:

> *"...professional development, improving practice, having the space to reflect on your own practice. Having resources and starting points, references to other dialogues – that's been great."* (practitioner interviewee 30)

"It's a learning process for all practitioners with discussion and debate around the right way of doing it. The more I do the more I feel empowered to talk about the best way of doing it. And the opportunity of working with Sciencewise and people from different backgrounds was great." (practitioner interviewee 24)

There were various comments throughout the evaluation about the need to develop the practitioner base in public dialogue, and that the number of practitioners / contractors with the knowledge and experience to deliver high quality and high profile public dialogue is relatively small. However, this is a contentious issue, with some interviewees questioning the value of increased professionalisation. Nevertheless, the professional development of practitioners achieved through Sciencewise-ERC is an interesting and valuable impact of the programme, and the opportunities to spread that more widely throughout the field may be an area for future consideration.

5.6.10 Created a new model of support for innovation in public engagement

Sciencewise-ERC has created a unique model of support which has helped encourage and support innovation in building public engagement into government policy making.

The mix of funding, advice and support, and the way the two are connected in order to maximise learning and capacity building government, is unique and seems particularly effective in developing capacity, understanding and skills for public engagement in government (see 5.6.5), as well as increasing the quality and success of public dialogue projects (see 5.6.4).

There was very clearly significant satisfaction with the package of support and advice available from Sciencewise-ERC. All 13 government departmental project managers interviewed would work with Sciencewise again, and all said they would recommend Sciencewise to others interested in public dialogue. There was similar enthusiasm from practitioners. Comments included:

"*Yes ... Although we have a lot of experience in-house of public engagement, they bring a slightly different dimension to that piece of work – a different perspective on public dialogue and involving stakeholders"* (departmental project manager interviewee 17)

"Definitely, with no reservations [would recommend Sciencewise] – they are a fantastic organisation to work with ... We couldn't have done it without them ... 100%, 200%, yes [would work with Sciencewise again]. I would love to, it was a great experience" (departmental project manager interviewee 19)

"If someone in a government department wanted to do a big dialogue and didn't know how. Sciencewise have a wealth of knowledge, experience and enthusiasm." (practitioner interviewee 24)

The elements of the Sciencewise-ERC package that were particularly valued by interviewees for this evaluation were access to funding, the Guiding Principles as a framework and other good practice guidance, the independence and status of Sciencewise-ERC and the system of Dialogue and Engagement Specialists (DESs) in providing advice. Each of these is described in more detail below.

- **Funding**. The funding was very important to stakeholders. However, although funding was a key incentive for government departments wanting to work with Sciencewise (funding was the most common reason for initial contact), advice was valued more often: 5 departmental project managers said the funding was the most useful support available from Sciencewise, but 9 said the advice and mentoring were the most useful. Several said it was both. For example:

  "Money was a major issue. We wouldn't have gone down that route if the money wasn't available and you can't deal with this policy without talking to the public. Sciencewise had the funding and expertise we needed." (departmental project manager interviewee 13)

"They were able to contribute to the costs and give advice. It was the first time we'd done it – it added value." (departmental project manager interviewee 14)

- **Framework of the Guiding Principles and good practice**. The framework provided by the Guiding Principles was highly valued and, to a lesser extent, other guidance on good practice. For example:

  "I'm sure it did [improve the quality of the project] – they have guiding principles which provided the context in which we worked." (departmental project manager interviewee 9)

  "Based on good principles for engagement. Clear statement of their role and what dialogue is, professional staff who try to take concerns on board ... very professional in the way they work" (external stakeholder interviewee 47)

  "They are a repository for good practice around public dialogue. They have worked with numerous people so advice is based on real good best practice." (external stakeholder interviewee 48)

  "They did conflict management training and gave very good advice on how to deal with conflict in face to face dialogue. So it was good practical guidance on running dialogue ... Seemed to have a lot of experience beyond Sciencewise which they were able to impart" (external stakeholder interviewee 46)

- **Independence and status of Sciencewise-ERC**. The independence and status of a separate centre of expertise was highly valued, especially on highly contentious topics:

  "The status and kudos Sciencewise has. It is very well respected. Having that backing is immensely useful and enables you to approach organisations with a lot more clout. It opened a lot of doors." (departmental project manager interviewee 19)

  "I think the engagement was integral to opening up the space [on this topic], although it wasn't the only thing. There was a mood around at the time and it built and improved upon existing activities. Without the weight and legitimacy of Sciencewise I'm not sure it would have happened so quickly." (policy maker interviewee 21)

  "It is a very contentious subject and we felt that working with Sciencewise would give added independence and additional expertise that we don't have." (departmental project manager interviewee 17)

  Feedback on the issue of independence was complex and contradictory. Some saw independence as a strength but others felt that closeness to government increased the opportunities for policy influence and for capacity building in government (see section 7.4.7 for more on this issue).

- **The system of Dialogue and Engagement Specialists (DESs)**. The Sciencewise DES system for providing advice and guidance was seen by evaluation interviewees who had used these services to have several particularly valuable qualities, particularly one DES being the key point of contact, the personal qualities, skills and experience of the members of the DES team, flexibility, and effective co-ordination by a separate project manager, as follows:

  - **One DES being the key point of contact**. For example:

    "Been dealing mainly with one key person at Sciencewise who has been the continuity right through ... Do know from talking with main point of contact that she has access and uses and gains information from other colleagues. But she is the conduit for us. This is a fantastic model. The last thing you want is a load of different people. A single point of contact is always preferable." (departmental project manager interviewee 48)

- **The personal qualities, skills and experience of DESs**. For example:

  "Providing passionate, inspired, grounded ideas and knowledge on how to engage with the public. Bringing the public together with scientists ... They practice what they preach. They want all the voices to be heard and to learn. That shines through in their dealings with people – all of the DESs are great with that." (practitioner interviewee 24)

  "...their integrity and driving innovation and robust approaches in dialogue in this area, which is a tricky area with potential for growth and associated challenges" (practitioner interviewee 23)

  "I would probably say adding value to improve the quality of dialogue evaluations. The people have been really key to it – people who are committed to the project and give feedback really quickly... someone who's been in the position that we're in…as evaluators there aren't many of us so firstly someone who knows what you're on about and secondly someone who perhaps knows more about it than you do is great – having that critical space" (practitioner interviewee 30)

  "I have been very impressed by the quality of the individuals at Sciencewise. We have worked with a number of people and hugely impressed ... People working for them are exceptional. A lot of them are not directly employed by Sciencewise but are contracted in. This brings a huge breadth of experience." (external stakeholder interviewee 48)

- **Flexibility**. The flexibility of the system which enables the departmental project manager and DES to negotiate to ensure the right amount of advice being giving when it is needed. For example:

  "We had a fair amount of contact at the start as we wanted to ensure we got off to the right start. From then on they were fairly hands off. That's a strength of Sciencewise, that they are able to tailor the amount of support to what is needed. We had some experience so didn't need so much ongoing support, but I know of other projects where they have given more support and advice ... It's a good service, and tailoring the amount of support works well." (departmental project manager interviewee 15)

  "Using DESs as mentors is hugely valuable ... knowing that if I'm feeling anxious about anything I can just call [the DES] up is great." (practitioner interviewee 28)

  "They were pretty light touch but that's a good thing." (practitioner interviewee 26)

- **Effective co-ordination**. The co-ordination of the DES system by a separate (AEA) project manager who appoints the DES with the relevant skills and knowledge to the project and also acts as intermediary in the event of any personality clashes was valued. Those involved in planning and delivering public dialogue often have strong feelings about principles and philosophies that may sometimes differ.

Feedback to this evaluation shows that the Sciencewise-ERC model of support outlined above has specific advantages for different stakeholders. For the Sciencewise-ERC programme itself, the advantages to DES system have included:

- providing the programme with access to a range of skills and experience by having a 'pool' of individual DESs to draw from, so the right expertise for a particular project can be identified

- the capacity to meet growing and fluctuating demand for advice and guidance without significant overheads (after initial induction), as the DESs are independent practitioners brought in as much or as little as necessary

- linking advice to the Sciencewise-ERC role as a funder strengthens the status of the DES, enabling them to encourage innovation including through getting stakeholders more involved, broadening the purpose and scope of the dialogue to really influence policy makers and government, and encouraging a move from downstream to upstream engagement (i.e. earlier in the policy development process).

The system also seems to have worked well for practitioners. For example:

> *"[I particularly valued] ... their integrity and driving innovation and robust approaches in dialogue in this area, which is a tricky area with potential for growth and associated challenges"* (practitioner interviewee 23)

> *"The focus on the meta-level of 'is this a good dialogue?' while we focused on the details like 'are there going to be enough people?'. The extra voice. The evaluation as well."* (practitioner interviewee 24)

For the DESs themselves, the system has worked well, enabling them to contribute to the development of the field (often their main motivating factor for working with Sciencewise) as well as to continue to learn and develop their own practice. These benefits have helped maintain the commitment and morale of the DESs over the period, even when they have not been directly engaged in advising projects. One said:

> *"If you compare it to a traditional funding only model then having an actively involved project officer with content knowledge is pretty good ... to get them to do dialogue in the first place, then working through the tender (which is the key bit), getting the right levels of commitment internally, getting staff involved and introducing the idea of things like reconvening the public – they are all an important part of the role. It's the embedding bit and the handholding through the development of the project."* (DES interviewee 40)

Overall, the feedback from all those involved strongly indicates that the package of support has worked very well. The funding has been a key incentive and in many cases a vital element for government departments doing public dialogue projects, but the advice and guidance has been at least as important. The links between the provision of funding alongside advice and guidance have been key to building capacity in government for public dialogue in future.

The system of a team of DESs providing the advice and guidance has also been key to the achievements of the programme. The overall system has enabled the DES team to encourage innovation and experiment and to push forward the role and boundaries of public dialogue in close collaboration with those in government managing public dialogue projects.

Overall, there was a high level of enthusiasm and support for the work of the Sciencewise-ERC, and strong indications of the positive impacts the programme had achieved. There were caveats to this, as shown in this summary and also below, but overall the feedback was significantly more positive than had been expected, which suggests a strong foundation for future development.

5.7 Current gaps and future challenges

5.7.1 Introduction

The evaluation analysis has identified some significant gaps and challenges both about the activities that the Sciencewise-ERC programme overall has been undertaking, and about the way these activities have been delivered. Five main concerns have emerged, each of which is summarised below and then described in more detail:

- Strengthening Sciencewise-ERC support for public dialogue projects
- Greater engagement with stakeholders
- Greater flexibility in the Sciencewise-ERC approach to public dialogue
- Strengthening strategic planning for Sciencewise-ERC
- Potential future threats to public dialogue.

5.7.2 Strengthening Sciencewise-ERC support for public dialogue projects

While there was a sense that the current support for projects was working well, there were some problems that recurred throughout the feedback to the evaluation particularly around the need for better links to government departments and policy, better follow up after dialogue projects, lack of clarity over DES influence, DES and practitioner conflicts of interest, and problems with management and communications activities. Each of these is addressed in more detail below.

- **Better links to government departments and policy**. This was the most frequent comment on what was missing from current Sciencewise support from departmental project managers and others. It was partly about Sciencewise being more explicit about the need for policy makers to be closely involved in specific dialogue projects, partly about Sciencewise providing more support and guidance on exactly who in government (and which policy areas) are likely to be interested / relevant to dialogue topics, and partly about ensuring wider acceptance of public dialogue across government. More specifically, there was interest in Sciencewise following up more effectively on policy influence after dialogue projects are completed. Comments included:

  "Its biggest weakness is the lack of senior champions in the civil service. It hasn't got the ownership it needs to ... from the policy makers themselves." (Steering Group interviewee 3)

  "Sciencewise has done a reasonably good job overall but I think it needs to go back to doing what I thought it was set up for in the first place: helping decision makers use dialogue to make good decisions rather than an unhelpful focus on process. You can have the best process in the world but if you don't have those other things in place – i.e. a clear place for the dialogue to feed into – then it's worthless." (practitioner interviewee 26)

  "It would be nice if Sciencewise were more upfront about how they are trying to get policy makers involved. They could share the mechanisms and process more." (departmental project manager interviewee 16)

  "Getting the right people on board from the beginning and thinking about where the impact will be – it is quite a difficult process. You need to know who in government is going to be interested and get buy in. If Sciencewise could be more supportive in that area it would helpful." (departmental project manager interviewee 19)

  "To be true dialogue there has to be true influence ... [Sciencewise] could have exerted more influence to really fully identify what the influence on policy could be and what the scope was." (external stakeholder interviewee 46)

  "The challenge for [Sciencewise] is how do they influence government policy holders to value more public dialogue. They need to be advocates within government." (external stakeholder interviewee 48)

- **Better follow up after dialogue projects**. There were three elements to this from different interviewees: follow up with past public participants, follow up in terms of taking the engagement with the public forward after the dialogue events (which could be linked to following up with past participants), and following up on the policy implications of the dialogue project. For example:

  "...the extent to which when people are engaged we then see a sophisticated process of opening up the process, saying these are the areas where decisions have been changed as a result of public input, these are the areas where they haven't and here's why. It's about saying why and how particular decisions are made. We end dialogues with a nice letter but you don't see anything further going forward." (Steering Group member interviewee 1)

  "Until recently when Sciencewise worked with citizens they didn't ask if they could go back to them for other projects, which was a missed opportunity. It would have made subsequent projects easier as you would already have a set of warm contacts." (departmental project manager interviewee 18)

"... some advice on implementing what comes out of the dialogue in terms of next steps – for example best practice in taking dialogue forward ... it would be quite a useful thing to have that element of advice from them on what next and keeping engagement alive; on what techniques to use that aren't massively expensive that have worked for others." (departmental project manager interviewee 22)

"Sciencewise could make those [public] bodies abide by their agreements when it comes to continued engagement. For example our funders made explicit commitments to continue engaging but that never happened – we then have to deal with the public's disillusionment with the government. It was a real shame in our case as we involved people who really felt they were being heard for the first time, and national government completely failed to take on board that enthusiasm. If national government are going to go into true and genuine consultation they need a full understanding of what kind of commitment that entails, otherwise it is not worth doing that at all." (practitioner interviewee 27)

- **Need for greater clarity on DES 'advice'**. There was some lack of clarity over the boundaries of the DES role in providing support and advice, especially the extent to which Sciencewise could insist on certain good practice within and following dialogue projects. Some interviewees would have liked Sciencewise to have been more powerful in pushing good practice, especially in maintaining links with public participants after the dialogue project and tracking policy influence in the longer term.

  This raises wider issues of the extent to which Sciencewise-ERC could or should have a role in standards of good practice, and also links to points above on following up dialogue projects in the longer term to test the extent to which influence had been achieved and to build on the achievements of specific dialogue projects. Comments included:

  "It is good to be autonomous but there have been times when I've thought how far can I take this and where does my DES role stop. For example linking with other projects, opportunities to extend projects and so on ... It's about maximising value for Sciencewise and for projects." (DES interviewee 34)

  "...another model is the Ford Foundation, where the project officer works more as a partnership through the whole project. It is rather unclear whether the DES is a monitoring officer (which could be an irritation or seen as a watchdog) or Sciencewise being involved in the process and has invested in the result as the partner ... We're set up to be fairly hands off. I would set it up as more of a partnership. If it's set up as being an innovative approach and you're not a true partner then it's difficult to ensure the quality ...The word 'mentor' is not really defined." (DES interviewee 40)

  Other issues were around the need for greater clarity about the Sciencewise role, and the need for greater focus on where Sciencewise could really add value (around policy impact). There were also requests for DESs to stay involved throughout projects in future (this is now normal practice), and the need to recognise the different resources of smaller practitioners. Comments included:

  "More clarity of what their role would be in projects. More transparency would help. If it is jointly funded, then a balance in terms of who your client is – more transparency on that too." (practitioner interviewee 23)

  Although there was an overall sense that DESs were able to bring an excellent range of experience and skills to advising dialogue projects, they were not the only ones in the Sciencewise-ERC system with knowledge, and their knowledge was not universal. Others mentioned that many DESs came from a particular background in engagement, and that the public dialogue promoted by Sciencewise is not the same and may require different and new skills:

  "The DESs ... are very good ... [but] They are all from a particular discipline and approach. They are very good but it is a partial picture and different from the original foundation. It has changed to downstream environmental consensus building." (external stakeholder interviewee 45)

Is it representative of the expertise around public dialogue? ... DESs are practitioners and in the main came from a certain part of the community i.e. environmental stakeholders" (external stakeholder interviewee 43)

"Classic facilitation tends to be on stakeholder models. There is a big debate on whether you do the stakeholder model or the representative public model. Most of my work is with specialist stakeholder groups and the Sciencewise stuff is quite different." (DES interviewee 33)

Overall, feedback suggests that the public dialogue approach on which Sciencewise-ERC focuses is still new and the methods remain innovative. Practitioners are bringing expertise from a whole range of backgrounds to the field of public dialogue - from market research, stakeholder engagement, community development - and that is creating great richness. However, there remains a lack of clarity about the special qualities and purpose of public dialogue (and see 4.8.2). Only with greater clarity over the broader purposes of public dialogue can what counts as good practice be clearly understood by all those involved, and therefore the most appropriate support provided for dialogue projects.

- **DES and practitioner conflicts of interest**. There was some feedback from various groups of interviewees around the dangers of conflicts of interest for DESs who were making initial contacts within government, developing project ideas, being commissioned by Sciencewise to advise on projects and also (sometimes in parallel on other projects) sometimes being part of teams assembled by external contractors to deliver Sciencewise-funded dialogue projects.

  The small field of public dialogue on policy for science and technology means that practitioners inevitably know each other. Feedback suggested that this was a potential risk rather than a current problem, but a risk that could become a problem given the complex and multi-layered relationships between AEA, BIS, DESs, departments and delivery contractors. Comments included:

  "I feel a bit uncomfortable about the potential conflict of interest. That is one area where there needs to be some clarity – for me and a couple of others that needs some work to resolve ... there needs to be more clarity over the role of the DES and the contractor. If I was looking in I might feel it's a bit of a club and I'm not sure how that's resolved." (practitioner interviewee 28)

  "They need to think carefully about how they select the DESs and how budgets go. I'm worried in the future we'll be in the public eye and under scrutiny – and it's all the same people. But it is also a small industry and there are not a lot of people with the skills. So maybe some kind of skills development is needed ... We are all working for and with each other in different combinations. It is not necessarily a problem but it could be challenged." (practitioner interviewee 24)

  "There is a huge conflict of interest with the DESs. It is a bad issue and I don't know who to speak to about it. There is a poor designation between people doing research, procurement and delivery. It's an accident waiting to happen, an area that's grown out of control. For example we've been evaluated [for contracts] by big competitive agencies and five minutes later they are up against us for the next piece of work – they aren't thinking this through from a business perspective." (practitioner interviewee 26)

- **Management and communications**. The evaluation found some concerns about delays over project administration, especially over confirmation of funding and contracts for projects, although this was mainly in the early days of the new Sciencewise-ERC programme. Comments included:

  "AEA have been very disorganised ... The organisational aspects are a bit frustrating. The helpline also goes through to AEA Technology and it takes a while to get through to the right person." (Steering Group member interviewee 2)

"I would say ... the clarity of focus and responsibility of the AEA team – it has certainly seemed pretty vague for quite a while" (Steering group member interviewee 4)

AEA has acknowledged these early problems, and the team was reorganised in mid-2009. There were also concerns expressed about the website as not useful or easy to use. Comments included:

"Website is very difficult to use. Downloading and printing documents. Overcomplicated to download a report in pdf or to look at quick summaries that projects have done. It looks that it is trying to be too clever. Don't use it as much as I might. It ought to be a resource that you go to." (external stakeholder interviewee 42)

In addition, there were criticisms of the communications activities, which were seen as unclear in the messages disseminated and ineffective in terms of reaching all the key audiences. Comments included:

"...on a communications side, I was aware of some of their work but it would be great to communicate it more, or more effectively. Some of the stuff they've worked on we would use to inform our approaches to other work." (practitioner interviewee 30)

"The branding and face of Sciencewise should enable people to get through doors but I have a concern there's a disconnect between the people doing the branding and communication, and the people doing the work. I'm not sure the people doing the communicating really get dialogue" (DES interviewee 35)

There were also concerns about the structure of the way the programme was delivered in terms of the principle of contracting out the delivery of the programme, apart from the effectiveness of AEA as the main contractors. Differing views emerged: some felt that contracting out delivery could undermine internal departmental learning; some felt that the contracting arrangements work well to bring in a wide range of expertise to the programme. Comments included:

"All the problems have stemmed from the fact that the people who are running Sciencewise are too expensive, too slow, not expert enough and not committed ... some wonderful projects but been massively inhibited by the administrative structure." (external stakeholder interviewee 45)

"It has a byzantine structure and there is a sense of things being contracted out and contracted out and then contracted out again. To the outside world it is pretty confusing. It is difficult to know who speaks for Sciencewise" (external stakeholder interviewee 42)

The appointment of a Head of Dialogue (Lindsey Colbourne) in December 2009 was designed specifically to address some of these issues, particularly as an experienced practitioner able to provide expert knowledge into programme management at a senior level.

5.7.3 Greater engagement with stakeholders

There were numerous comments in evaluation feedback about the potential for Sciencewise to do more to build networks and enable learning to be shared among stakeholders. Comments included:

"They were much smaller then, and some of the stuff they are doing now like events and networking is really useful." (departmental project manager interviewee 14)

"There was nothing that wasn't successful but I would have liked to feed into Sciencewise more at the end of the project of the project and get feedback from Sciencewise." (departmental project manager interviewee 19)

"...there is something around sharing experience between projects ... Maximum sharing of learning could enhance the experience." (DES interviewee 34)

"Another challenge is around learning. Sciencewise is not learning as well as it should be. There is a focus on more and more dialogue and doing it better but almost a complete lack of reflective learning ... This is the biggest challenge ... At present they aren't co-ordinating the field but they should be. Networking and exchange get left out of the work" (external stakeholder interviewee 43)

The dilemma was recognised that collaboration, co-operation and networking are needed more in times of financial austerity than at any other time (to make best use of scarce resources to still create real change), while austerity reduces the potential for collaboration as organisations compete for new but scarce resources, and there are fewer resources for networking and collaboration. However, the need for greater reflection and shared learning was something that was seen to be a priority for Sciencewise in future. There was a sense that Sciencewise was delivering a specific set of activities rather than contributing to the field more generally. Comments included:

"It has not been agenda setting either in terms of process or tackling issues ... I think the projects as they have been designed and part of the policy making process are good and the team needs to be commended for that. My suspicion is that the cultural impact has not been profound." (external stakeholder interviewee 45)

"It has acted as a funder or grant giver but it hasn't looked to develop a movement towards embedding or contributing to any thought leadership." (DES interviewee 36)

5.7.4 Greater flexibility in the approach to public dialogue

The issue here is around the need to examine the assumptions underpinning the approach to public dialogue promoted by Sciencewise-ERC, and consider again whether the very specific way public dialogue funded by Sciencewise-ERC is delivered is always the most appropriate approach. Comments included:

"[Public dialogue] has been adopted as a slightly evangelical methodology that hasn't been rigorously assessed. It has been evaluated but in quite a soft way. I agree with the concept of opening up different and innovative approaches to involving the public but it feels more evangelical than objective." (Steering Group member interviewee 5)

"We have one-off dialogues that relate to particular decisions. A dialogue that is heavily managed and [the public] are invited by government into a specific model of dialogue. But this one off process is not a good representation of what this is trying to do i.e. influence the governance of science and technology. Sciencewise should be looking more broadly across the field, facilitating lots of things and needs to have a more rounded view of the participatory governance system. This would fit into a new phase of Sciencewise to do with embedding learning and moving away from specific projects." (external stakeholder interviewee 43)

"It might be useful for Sciencewise and practitioners to think about the assumptions about dialogue that are not always surfaced. A more open discussion about what dialogue is and what sort of dialogue is appropriate in different circumstances would be good." (practitioner interviewee 24)

This was linked to criticisms that the specific approach to public dialogue promoted by Sciencewise was too narrow, and that a broader view should be taken that allows for the support of a wider range of public engagement activities. For example:

"It has had a focus on a particular type of public dialogue and sometimes that focus has limited its capacity." (external stakeholder interviewee 42)

"...there's a sense that Sciencewise has a firm fixed notion what public dialogue is. This is based on an idea of a very specific form of public dialogue. Intense dialogue where you bring people together on government invitation to a dialogue process. It involves a relatively small number in intensive dialogue. This is the model that dominates what Sciencewise does. They could encourage a broader range of public dialogue ... Alternative

forms of public engagement in science ... People are having their own dialogues around science and technology in various movements and special interest groups i.e. citizens science. ... Sciencewise needs to recognise this and learn from it" (external stakeholder interviewee 43)

However, there was also recognition that public dialogue is still unusual in government, and is by no means widely understood or appreciated. It was suggested that, for many in government (and in science), public engagement is much more limited and about one-way communications rather than two-way dialogue, so there was still a long way to go in even communicating the apparently narrow approach to public dialogue currently being promoted by Sciencewise.

5.7.5 Strengthening strategic planning in Sciencewise-ERC

Four specific issues emerged from the evaluation analysis that needed to be addressed to strengthen strategic planning for Sciencewise: more clarity about independence from government, uncertainty over funding, more evidence of the value of Sciencewise events and publication, and stronger leadership:

- **Need for clearer communications about extent to which Sciencewise is independent from government**. Sciencewise-ERC is a government programme, run by the Department of Business, Innovation and Skills (BIS). However, there is a sense among stakeholders that Sciencewise is seen as more than a specific Government programme, and that it has an independent identity and wider mission.

  There is a dilemma for Sciencewise (and other promoters of public dialogue) in balancing closeness to government (around the programme as a whole as well as departmental 'ownership' of dialogue processes and results) in order to achieve policy influence and capacity building, with the need for independent processes that focus on ensuring the influence of the public voice on policy which could be compromised by closeness to government. This dilemma is not resolved.

- **Uncertainty about funding**. The impacts of lack of certainty about funding on Sciencewise strategic planning and contractual arrangements have already been described, particularly in relation to some short-termism in thinking and planning. That situation is not likely to change and will continue to undermine effective longer term planning unless thought is given to different models of structure, management and funding in future.

- **Need for more evidence of the value of Sciencewise events and publications**. The lack of data throughout the period on the reach (audience types and numbers) or value of Sciencewise events and publications has limited the extent to which plans for new developments can be based on a thorough understanding of what has worked well (or not) in the past. Of all the problems facing Sciencewise in developing new strategic directions, this is the easiest to rectify, and the most important in demonstrating sound management. Actions were already in place to tackle this during the period of the evaluation study, partly as a result of emerging evaluation findings.

- **Need for stronger direction and leadership**. The governance of Sciencewise is relatively simple in theory: BIS is responsible for the strategic direction of the programme (advised by the Steering Group), and AEA is contracted to deliver an agreed programme. However, a gap in the system was identified by various stakeholders: the need for someone on the delivery team with sufficient experience and knowledge of engagement to provide leadership on good practice and future directions for public dialogue. This issue has been addressed during the period of the evaluation study through the appointment in December 2009 of the Head of Dialogue (Lindsey Colbourne) with a particular role in developing strategic direction for the programme.

5.7.6 Potential future threats to public dialogue

By far the most likely future threats to public dialogue were seen by respondents to this evaluation to be reduced public funding for projects and support, and lack of political will to fight for dialogue. On funding, the feedback strongly emphasised the need for Sciencewise to make the case for the value of public dialogue - and the case for Sciencewise as a programme. Comments included:

> *"Money. There has been a period of feast over the past 10 years or so. It will be interesting to see as science budgets are cut to what extent Sciencewise can demonstrate the need and value for money"* (departmental project manager interviewee 15)

> *"Clearly resources – how much you can do, what it costs and the benefits it delivers. You have to demonstrate the value for what an engagement process costs you"* (Sciencewise-ERC Steering Group member interviewee 6)

> *"Sciencewise feels quite expensive and luxurious ... Need to reframe and rebrand it as an essential part of the democratic process ... Need to reframe it emphasising it is there for the people, for democratisation of science, something not about being worthy but being an effective balance both for people and a nimble economy."* (external stakeholder interviewee 45)

> *"Reminding people why it matters. Real dialogue fatigue could set in among policy makers where they see it as a fad and don't really see the value and that's a concern."* (departmental project manager interviewee 10)

> *"Showing why it's useful and making sure the policy makers understand it is not an expensive luxury, but a way of making policy better and cheaper."* (DES interviewee 41)

However, some saw reduced funding as a possible opportunity as those taking decisions on new science and technology investment would need to be even more cautious and risk averse, to avoid wasting scarce resources on the wrong decision or investment:

> *"Funding crisis also an opportunity. There will be a funding squeeze on science and the policy makers are going to want to make the right decisions about what to invest in."* (external stakeholder interviewee 47)

> *"Cost, but that's where Sciencewise can have a role. It's not about doing it all singing and all dancing every time, but it is about doing it properly – and they can help people to do it on a limited budget."* (departmental project manager interviewee 14)

> *"... the nature of government and nature of public spending is going to be austere and difficult [for] science funding. There need to be difficult decisions about the nature of science funding. That is where I see public dialogue has a real role to play - in helping that decision making. There is going to be more [public dialogue] because of the very nature of the austere times. Science has grown and is able to offer answers. What limits it is the resources. So difficult decisions to make. Public dialogue has a huge role to play."* (external stakeholder interviewee 48)

There was also a strong sense that the political arguments for the value of public dialogue had not been fully won, and that there was still ambivalence (at best) in the minds of many policy makers. For example:

> *"The main challenge is still a political one. I hear it regularly at a high level that it is still for parliament to take decisions and there is a tension over who makes decisions. We're saying that the public don't have to make the decisions but they should have input."* (Sciencewise-ERC Steering Group member interviewee 1)

> *"I think it feels like it's about hearts and minds in government that they get their heads around working in this way and some of the risks around it – being more genuinely open to developing policy in partnership. It's about giving project managers the confidence to think about making policy in a new way."* (Sciencewise-ERC Steering Group member interviewee 3)

Beyond these two highest priority threats - of funding and political will - several other concerns were also expressed as potential risks to the future of public dialogue:

- The potential to push for much more online engagement to save costs, and therefore reduce deep deliberation among the public before coming to conclusions. For example:

  "Money ... Its not cheap and it is people intensive ... People will want to do almost everything online. There is pressure to do it online which loses some of the dimensions of public dialogue." (external stakeholder interviewee 46)

- The risk that public dialogue could be misused by Government to manipulate public opinion, or blunt opposition; and then the extent to which Government actions may be perceived (by the public and others) as misuse, and that suspicion souring the opportunities for effective dialogue. Comments included:

  "The notion of political legitimacy – the tension between a genuinely open process of dialogue as opposed to a way of blunting public opposition to what the government wants to do. There are a lot of big issues coming up in terms of science and society." (policy maker interviewee 21)

  "The difficulty for the UK government is that the public is so disenfranchised with politicians that then the public will think there is something manipulative and won't believe what they're hearing. The souring of the relationship between government and the public makes engagement difficult." (policy maker interviewee 20)

  "Government using public dialogue to try to change opinions again ... Main premise of science and policy people where public are being 'troublesome' is that if you educate them about the science then people will start to become less concerned ... There is always an instrumental objective because government wants to press ahead." (external stakeholder interviewee 44)

  "...the biggest challenge [is] where politicians and policy maker enter into engagement or public dialogue without a very open and transparent agenda – that is still all too frequent. We are a long way from a really open and transparent public sector" (DES interviewee 31)

- The potential for dialogue overload, by policy makers and by public participants; others identified the issue and suggested it was not a current problem. For example:

  "There could be a certain level of overload ... there is possible fatigue with the number of dialogues. People can jump into doing a dialogue for everything and we have to be careful about getting too gung ho about it all." (policy maker interviewee 22)

  "Lots of people say that the public will get fed up with being dialogued. My impression when people take part is that they are really invigorated. There may be a public backlash about the expense and perhaps they will. But I don't think there is going to be dialogue fatigue." (external stakeholder interviewee 44)

- The dangers of professionalisation of public dialogue were identified although, here again, there were differing views: some felt that increased professionalisation was a problem as it could lead to excluding certain purposes for dialogue (especially ethical and social justice purposes) as well as excluding certain practitioners and methods; others felt that there was an alternative challenge in that there were too few experienced practitioners who could deliver public dialogue well. Comments included:

  "Another issue is the rapid professionalisation of the field and so it is more institutionalised. Sciencewise is an example of it becoming institutionalised. You have professional facilitators and best practice guidelines and framework contracts ... Professionalisation [can] lead to an exclusive field of facilitators excluding other members of the public and scientists... It can be disempowering. People are worried that the ethical or social justice reasons which drove participation ... is being compromised by commercial concerns ... It creates a focus on method or dialogue technique ... If we don't question why we are doing it, it can lead to the politics behind the processes not necessarily being aired." (external stakeholder interviewee 43)

"[the challenge is] ... a difficulty in finding the people who can do these things to the level Sciencewise demands. They are concerned that they have to go back to the same old service providers." (external stakeholder interviewee 44)

5.8 Conclusions

This section has described and analysed the Sciencewise overall *programme* activities from the launch of the new Sciencewise Expert Resource Centre (Sciencewise-ERC) in March 2008 until June 2010. A separate analysis has been made of the public dialogue projects funded by Sciencewise (see section 4).

In practice, since the start of the Sciencewise-ERC programme in April 2008, programme activities have increasingly focused on supporting and evaluating Sciencewise-ERC funded dialogue projects, and communications and marketing to spread awareness of the Sciencewise-ERC resources available, including events and publications to share knowledge and learning. These two areas are closely interconnected, including that materials from projects used extensively in communications and marketing activities.

Overall, the findings in this section have shown a mix of quite trenchant criticism and equally enthusiastic support for the impacts and achievements of Sciencewise in general, sometimes from the same people. Although there are many suggestions for change and improvement, they are largely around building on what Sciencewise has achieved and is doing, rather than proposals for complete change.

The programme was seen to have achieved some important impacts and achievements including having created more public dialogue on science and technology, increased investment in public dialogue in science and technology, improved the quality and success of dialogue projects, increased awareness, understanding and skills in government for public dialogue, built support for public involvement in government policy making, created evidence of the value of public dialogue, established a new centre of excellence on public dialogue, increased capacity for the design and delivery of public dialogue, and created a new model of support for innovation in public engagement.

The feedback overall from the 48 interviews conducted on the Sciencewise-ERC programme has been remarkably positive, and that is reflected in this report. There could have been all sorts of reasons for this positive feedback, beyond the simple conclusion that almost everything Sciencewise has done has been appreciated by internal and external stakeholders - such as a sense that Sciencewise is doing something unique and it is good for that to be done even if the way it is done is far from perfect. Whatever the reasons, the feedback is largely positive, with some very specific suggestions to tackle the problems.

The feedback has also identified some complex and challenging problems including weaknesses in the Sciencewise-ERC support for projects, insufficient engagement with stakeholders, insufficient flexibility in the Sciencewise-ERC approach to public dialogue, weaknesses in Sciencewise-ERC strategic planning and a range of future threats to public dialogue particularly around funding reductions and lack of political support. There were also some continuing dilemmas identified facing the continuing development of public dialogue including how best to influence policy and achieve capacity building without being compromised by being too close to government, and how to avoid the dangers of public dialogue itself being co-opted and used to manipulate public opinion.

However, there is strong evidence here that public dialogue is still seen as a very effective way of hearing authentic public voices on highly controversial subjects. It is recognised that it is still very early days, but that there are already important achievements to celebrate and some good foundations to build on. However, unless the challenges are recognised and tackled, the remarkable achievements to date could be undermined and potentially lost completely.

6. LOOKING TO THE FUTURE

6.1 Introduction

The feedback to this study has identified a number of current concerns and challenges for Sciencewise-ERC and for the future development of public dialogue in public policy making more widely. The evaluation interviews also sought feedback specifically on the views of stakeholders on the key activities needed to support public dialogue in future and what they saw as the key messages for government.

This section summarises this feedback on priority activities and messages to take forward into future planning. Many of the suggestions reflect the implications of the concerns and challenges identified elsewhere in this evaluation (see sections 4.7 and 5.7).

6.2 Key activities for the future

The key activities identified by stakeholders as necessary to support public dialogue in future were around making the case for public dialogue, development of practice through projects and evaluation, embedding public dialogue in policy making, developing skills, awareness and understanding of public dialogue and working with others more effectively. Each of these issues is explored in more detail below.

6.2.1 Making the case for public dialogue

The overarching priority, from all stakeholders interviewed, was around the need to make the case for public dialogue. This was most often framed as the need to demonstrate the impacts and value of public dialogue. For example:

> *"You need to show the benefit of it ... We need to show them it's not something we ought to do or is nice to do but that it has real benefits and that there are risks in not doing it."* (Sciencewise Steering Group interviewee 2)

> *"Studies about where successful and genuinely influenced policy before the event ... where really had an impact. Need to publicise that so ordinary citizens come across it in their daily lives."* (departmental project manager interviewee 8)

> *"There is a lack of evidence as to the value of public dialogue – it goes back to ... costs and benefits. I don't think the case to government is well made."* (departmental project manager interviewee 18)

> *"Show it can be done in a cost effective way and it is a duty and it can be done in a really effective way. Also the process needs to fit the need – that's where Sciencewise going forward can be really useful. Getting the messages out is key – it can be cost effective and deliver robust policy."* (DES interviewee 32)

> *"...finding real stories to tell to demonstrate the difference it makes."* (DES interviewee 41)

> *"I think it would be useful to get ... a short paper arguing the political and philosophical case for public dialogue. We need to set out why it is not enough to leave it to our representatives in parliament"* (DES interviewee 39)

> *"From my limited involvement with politicians they need to see hard evidence. Where has the public added value? Where has deliberative dialogue added value? Role of Sciencewise would be to develop a set of case studies. Politicians think 'don't tell me what you are going to do but what have you done'. Need a body of hard evidence to promote public dialogue. Its not the message but how you convey the message. They don't want long case studies. A couple of paragraphs professionally written, short and concise."* (external stakeholder interviewee 48)

"...why public views should be thought about more – that kind of support work beyond just one off dialogues that is very valuable...need to have basic principles of why it is a good idea but also concrete practical examples of how it works." (external stakeholder interviewee 42).

Some interviewees felt that the most important approach was for leadership on promoting public dialogue to come from within Government. One specific activity suggested was to encourage government to issue statements supporting the value of public dialogue at the end of each project:

"I think they [government] could be more responsive at the end of projects around how reports [of dialogue] have been useful. Sometimes they are reluctant to speak too soon but they can still put out a statement around supporting public dialogue." (departmental project manager interviewee 9)

For several interviewees, the main reason for making the case about the value of public dialogue was to ensure continued funding was available. For example:

"Consolidating funding streams is also vital. It won't happen without funding and it comes down to recognising the value of public dialogue" (departmental project manager interviewee 7)

"If there is no funding that would be an issue – if Sciencewise was ring fenced with funding for public dialogue that would be great." (departmental project manager interviewee 11)

For some, the key focus of activity needed to make the case and develop thinking more widely was around the need to provide an overview of knowledge and consolidate existing expertise. For example:

"I think consolidating expertise. There is good stuff out there and we need to build on that" (departmental project manager interviewee 7)

"There are always lots of dialogue activities going on and there is a huge benefit to getting an overview – for example with the NEG [Nanotechnology Engagement Group]. It hugely improves the value of the individual exercises." (policy maker interviewee 21)

...an intellectual convening role would be great – very similar to what Involve used to do and what Demos do very well. And a less parochial view of what dialogue is." (DES interviewee 40)

"...collecting information on the big issues like governance of science and equity." (DES interviewee 32)

There was also a sense among some interviewees that Sciencewise already had many assets and resources that it was not using effectively. One DES said simply *"It has to make the most of what it has already got"* referring to the good practice reports already produced. There was some sense that there was constant activity, and moving on to the next thing, rather than really drawing on and using the resources it already has.

For others, the role of Sciencewise in evaluation had been valuable in helping demonstrate the impacts of public dialogue, but could contribute more:

"Use the evaluations from Sciencewise to demonstrate in a really tangible way the impacts that these projects have had and the usefulness to policy making. So, mine the evaluations I would say." (Sciencewise Steering Group interviewee 3)
"Demonstrate where it has worked – that evaluation of impact is absolutely crucial." (Sciencewise Steering Group interviewee 6)

"I think it would be interesting to develop something about the long term impact. Not necessarily a way of measuring it as that's not always possible or appropriate. But it would be useful for the public dialogue community to be better informed especially about evaluation – a lot of stuff coming out of Sciencewise is really useful for that" (practitioner interviewee 30)

"... there have been a number of evaluations which indicate there has been some impact but nowhere as much as could be" (external stakeholder interviewee 43)

Activities around creating the evidence to make the case for public dialogue have been part of the work of Sciencewise-ERC, especially during 2009. However, there is clearly demand for more to be done, and for the results of that work to be communicated more widely.

6.2.2 Embedding public dialogue in government policy making

There was feedback from several evaluation interviewees about the importance of embedding public dialogue in government policy making processes and structures, often framed as a need for 'culture change' in government. For example:

> *"[Sciencewise] don't need to continue testing new kinds of engagement but they need to look at embedding and identifying the barriers. ... Embedding the need for the culture of this in government. Sciencewise shouldn't be the only organisation doing this but it needs to be contributing."* (Sciencewise steering group interviewee 1)

> *... culture change within government. People still have to be proactive in approaching Sciencewise; Sciencewise could be more proactive in outreach for culture change."* (Sciencewise steering group interviewee 2)

Embedding public dialogue into policy processes can involve less ambitious aims than broad culture change, and activities to develop awareness, understanding and skills, and making the case for public dialogue, as described above, can be part of that. These activities have been continuing through Sciencewise-ERC, with varying degrees of success (see sections 5.6.5 and 5.6.6).

Specific suggestions were made by evaluation interviewees about potential embedding activities including working with some key stakeholders in government (e.g. chief scientists) to integrate public dialogue more effectively in planning. For example:

> *"A more integral presence. It should be working hand in glove with, say, chief scientists in government departments. It's not Sciencewise... it's as well integrated as you would expect at this stage in its lifecycle, but there is room for it to be more"* (DES interviewee 33)

6.2.3 Working more with others

Feedback from evaluation interviewees stressed the need for Sciencewise to take more of a lead in the whole field of public dialogue, and public engagement more generally, by working more closely and collaborating more with other stakeholders. Sciencewise-ERC was seen to be in a strong position to take this leadership role in encouraging wider stakeholder collaboration. For example:

> *"Increase the interaction or exchange between different people in the field. One thing that Sciencewise has not done enough. Very policy focussed but it is a big field out there. Sciencewise should take more of a partnership based approach in not just delivering dialogue but looking at the field of public dialogue more broadly. It is an important body. It could do more in this area and open up spaces for interaction and exchange."* (external stakeholder interviewee 43)

In particular, it was suggested that there should be more sharing of experience and learning, both overall and by opening up, sharing information and collaborating more on individual public dialogue projects. For example:

> *"More opportunities to take part, more topics, more sharing of information coming out of Sciencewise-ERC would be useful."* (departmental project manager interviewee 16)

> *"It would have been good if they had been more open as well in terms of other dialogue projects they were involved in ... More explicit sharing of experiences. Both in terms of process and outcomes."* (external stakeholder interviewee 46)

Particularly valuable constituencies with which Sciencewise was seen to be able to build stronger and more extensive relationships included academia (especially social scientists), science communicators and the science community. For example:

> *"Sciencewise could do better at relating to academia, social science and [science] communicators... It has not done well at getting its message into academic communities "* (DES interviewee 32)

> *"...it needs to be more embedded in the scientific community itself. There has been a focus on engaging with policy makers at the expense perhaps of the scientific community."* (DES interviewee 36)

Beyond sharing and learning, there were interviewees who felt that Sciencewise needed to demonstrate, in its own ways of working, the transparency and accountability being promoted to government policy makers. For example:

> *"...demonstrate being an engaged organisation itself through contact with our stakeholders and the public. It's also openness and transparency – for example asking the public what they want to talk about through the website – its about a shift in the way the public engage with science."* (DES interviewee 36)

As mentioned above, working with stakeholders has become a higher priority for Sciencewise-ERC since the beginning of 2010, and these specific points have been fed into planning for that work.

6.2.4 Develop awareness, understanding and skills

The continuing need to develop awareness, understanding and skills, particularly within government, was raised by several evaluation interviewees. For example:

> *"They need to go into government departments, look at what's going on and the barriers, and look at training"* (Sciencewise steering group interviewee 1)

> *"Having training packages for civil servants or public servants, to explain the landscape of public dialogue, the background and benefits, that kind of thing"* (Sciencewise steering group interviewee 2)

> *"Capacity building in the understanding of engagement to ensure a more intelligent client."* (DES interviewee 31)

The initial impacts of the Sciencewise-ERC programme on awareness and understanding of public dialogue are outlined above (sections 5.6.5 and 5.6.9). The feedback on priorities for future activities particularly identifies 'training' within government, which has not been fully developed before and which could be a priority for the future.

Several interviews specifically raised the issue of developing capacity and skills within the practitioner community to extend the numbers able to design and deliver public dialogue projects. For example:

> *"...capacity building. It is the same four or five people winning contracts, so broadening that skills base so there is more competition."* (DES interviewee 41)

> *"The other thing that would be useful is marrying emerging good practice with getting the people delivering (winning bids) up to speed and skilled up ... If Sciencewise is trying to push the envelope on public dialogue and be innovative it should look to share knowledge."* (DES interviewee 34)

The extent to which Sciencewise has already contributed to professional development are described elsewhere in this evaluation (see section 5.6.9). This is a contentious issue, as there is also feedback to the evaluation about the dangers of too much professionalisation of this field (see section 5.7.6). However, the demand in the wider feedback to this

evaluation for Sciencewise to support greater sharing of experience and learning may enable approaches to professional and practitioner development to be developed that would gain acceptance across the field.

6.2.5 Develop practice through projects and evaluation

There was quite a lot of feedback from evaluation interviewees about the importance of developing more and better practical public dialogue projects, and developing practice on that basis, including through evaluations. For example:

> *"[Sciencewise] should focus on high quality projects feeding into specific decisions and add value. Focus efforts rather than trying to connect the science communications and research communities"* (practitioner interviewee 26)

> *"...there is a need for corporate memory. If Sciencewise can act as a repository then great and if we read all the independent evaluations and use them to shape future events. Sciencewise has an important role in helping [departments] take what they might see as risks but things that are based on evidence in evaluations. So it enables more useful and innovative approaches to dialogue ... developing more understanding – taking the findings and thinking through the implications for writing invitations to tender, the way projects are designed and the messages they are sending out ... You need case studies or guidance on things like that, helping them to be less risk averse in their approaches." (*practitioner *interviewee 25)*

> *"Evaluation itself is meant to make public dialogue better. But what we see is evaluations done very early as soon as the public dialogue is finished. Very few evaluations reflect or are acted upon. Its impact is really limited. It is used in an instrumental fashion to justify the quality of the process by the sponsoring organisations"* (external stakeholder interviewee 43)

There were some specific suggestions for developments in the practice of public dialogue including defining more clearly when public dialogue is most appropriate (or not), developing a panel of experts / scientists who would be wiling and able to take part in public dialogue projects, and considering smaller more streamlined approaches to public dialogue that reflect reducing budgets. Comments included:

> *"... panels of experts in a certain [topic] area who you can call on so you aren't starting from scratch all the time."* (external stakeholder interviewee 46)

> *"Getting better clarity on when and at what stage in the research process this sort of methodology is appropriate. I don't know if anyone's really assessed when this works well and what the different conflicts might be at different stages. You would have a very different conversation depending on what stage in the development of the technology the government are at – that hasn't really been unpicked."* (Sciencewise steering group interviewee 5)

> *"Sciencewise should align to a more streamlined approach which takes account of smaller budget, timescales and greater urgency."* (external stakeholder interviewee 46)

> *"Brokering discussions with practitioners on what dialogue is appropriate for what circumstances"* (practitioner interviewee 24)

A couple of interviewees mentioned that Sciencewise should not be constrained by science and technology, and that the approach to dialogue and the model of central support that Sciencewise has developed had the potential to be used more widely in public dialogue projects on new and wider topics, especially around medicine and health. Comments included:

> *"... with advances in terms of science I would like to see them involved in medicine and health if they are not already. For example [around the] ageing society and increasing sophistication of drugs. Huge area for dialogue around understanding this very difficult tightrope between investing in better drugs but also what can we afford as a country. Very interesting mix of understanding the implications of new treatment and also a health and cost point of view."* (external stakeholder interviewee 46)

"There are medical issues that are important to talk about but [also] a bundle of others things e.g. care, pensions. There is potential for Sciencewise to do something like this ... Sciencewise approach has application across policy areas. There is great potential. But the emphasis on science itself remains something of a limitation... But [the issues] are all about what sort of society we want and the role of science and technology in this society...[Public] views are not specific to that issue but they are about the general role of science in society ... there are general issues that people are concerned about e.g. openness, transparency." (external stakeholder interviewee 44)

Both the comments above show that there is interest in the use of public dialogue on issues beyond a traditional understanding of science and technology. Some of the new projects being supported more recently by Sciencewise were identified by interviewees as illustrating the potential: for example, the Big Energy Shift was mentioned by several interviewees as showing the way forward for looking at the wider uses of science and technology rather than the development of the specific science.

6.3 Key messages to Government

Feedback to the evaluation suggested that the key messages about public dialogue that needed to be given to Government were that dialogue would save time and money later, that it was a practical way to hear authentic public voices on key issues, that it resulted in better public policy decisions, and that it was an essential element in a healthy democracy (including by providing accountability and legitimacy). Each of these is explored in more detail below.

6.3.1 Dialogue saves time and money in the long term

Although not the message identified most often by evaluation interviewees, the argument that public dialogue can save both time and money in the long term was very clearly made. For example:

"It saves you a lot of difficulty further down the line if you do public dialogue early on." (departmental project manager interviewee 7)

"That it might seem an unnecessary expense in this age of austerity but not doing it can have larger costs further on. Also there are underlying social and ethical reasons for doing it." (practitioner interviewee 26)

"...if you use public dialogue you will save yourself a fair bit of money in terms of PR and comms down the line." (DES interviewee 38)

"Dialogue can help you get it right first time and avoid unnecessary costs further down the line." (DES interviewee 41)

6.3.2 Dialogue is a practical way to hear authentic public voices

There was a strong utilitarian message about public dialogue suggested by evaluation interviewees. They argued that dialogue is a practical way of managing the essential task of hearing public views on public policy issues. The practical benefits identified included that dialogue provides the 'authentic' public voice, that it provides good 'quality' outputs in terms of information for policy, and that the content of public views is sensible and valuable to policy. For example:

"It is useful. People want information on the hot topics going on in science. Public dialogue is a fairly cheap way of giving people lots of information and helping them to work through it and feed back." (departmental project manager interviewee 11)

"It's one of the better ways to hear the public voice and get quality information rather than the broader brush approach which might give you lots of information but less meaningful." (departmental project manager interviewee 14)

"It is the most authentic view you are ever going to get. People in government will be citizens tomorrow. If you are going to create the kind of society we want to live in you have to listen to people's opinions. Having this authentic voice is the most important thing. Only public dialogue can provide that and I don't think that is realised enough." (departmental project manager interviewee 19)

"I think there needs to be an understanding that by engaging with the public you can trust you will get good quality, useful outputs and that it's not just a tick box. That's a challenge. Every project we do, people always say they are surprised at how quickly the public pick up concepts and ideas. It's about trusting the process and trusting people to give sensible input." (practitioner interviewee 28)

"It's essential. How else do you hear the views of informed public except through public dialogue. And we need to hear them – sometimes there have been surprises when we do." (practitioner interviewee 29)

Some suggested a whole package of practical benefits from public dialogue, alongside added benefits of transparency and partnership:

"It's around those four things: evidence, value for money, innovation and risk mitigation – that's the business case for public dialogue in government. At the end of the day if people don't want it it'll fail. Transparency and partnership are also important and I guess that's where public dialogue is different from uber market research – it's that element of scrutiny." (DES interviewee 40)

6.3.3 Dialogue results in better public policy decisions

There were more comments from evaluation interviewees arguing that public dialogue resulted in better public policy decisions than any other issue. For some, the need for public dialogue in policy was urgent:

"There is a lesson about the urgency of this in terms of serious societal challenges and far-reaching technological changes." (policy maker interviewee 21)

"Urgent need for better decisions about science and particularly about research and involvement. Spending taxpayers money wisely and accountably, and dialogue can help policy makers to do this. Can highlight the pros and cons of different processes and to take on wider range of views." (external stakeholder interviewee 47)

For some, the arguments were simply that public dialogue created more 'robust' public policy decisions. For example:

"I think Ministers know they can't make policy without talking to people. You get more robust decisions. Ministers need to understand the aspirations and needs of the people they serve and that is better served through dialogue than market research." (departmental project manager interviewee 13)

"...the link between dialogue and robust, informed policy...public dialogue can help more informed, better, creative, brave policy and strategic decisions. Also in terms of industry and science for the future. If you are going to have a successful industry and science base in the future then it needs to be in line with public thinking and public dialogue is the way to make sure that is the case." (DES interviewee 34)

"Policy or services will be effective and have more longevity if they are based on robust dialogue with public stakeholders. Avoid costly mistakes." (external stakeholder interviewee 46)

For others, the key improvements to policy decisions and processes as a result of public dialogue came from the essential 'evidence' of public views being included in the policy development process. For example:

> *"I would say it's a crucial part of the evidence stream for informing not only policies or regulations for a particular topic, but also to look at the whole way science is done and what citizens want from science. It's unethical not to include it but by the same token it shouldn't be the only thing."* (practitioner interviewee 30)

> *"I guess it's recognising that you can't make policy in a vacuum. Even with a constrained budget, a targeted and well thought through dialogue can deliver results you never thought possible."* (practitioner interviewee 23)

> *"If your role is to deliver smart public policy then you should encompass elements of public dialogue, as it's the process of really engaging people that can make a huge difference to delivering that smart public policy on a whole range of topics, and that's needed now more than ever."* (DES interviewee 37)

For some, the input from the public was partly about ensuring the policy process had access to the widest possible range of views, and getting buy-in to policy decisions when the public had been involved in them to some extent. For example:

> *"If you involve a wide group of people with different personalities in conversations about the future the chances of coming up with solutions that work are greater."* (DES interviewee 35)

> *"Good decisions need input from a wide range of stakeholders and that input is best done through dialogue. That message applies in tough times as much as or more than in easy times because if people are involved in those decisions they're more likely to be happy with them."* (departmental project manager interviewee 18)

6.3.4 Dialogue contributes to a healthy democracy

The contribution of public dialogue to a healthy democracy was also a common message that evaluation interviewees felt needed to be given to government. For example:

> *"This is the future of democracy. It is not reinventing democracy but enhancing it; a way of improving democracy from where we are now. I think politicians actually get it more than their senior civil servants"* (DES interviewee 31)

> *"This is something that a healthy democracy would and should automatically do. Why not? You can see it in terms of risk management. Policy people's views of the public can get transformed through this process. They think 'I just didn't know that the public was this intelligent. I thought they just watched Big Brother'. The two things are not mutually exclusive. There are great benefits to individuals and to policy"* (external stakeholder interviewee 44)

> *"...this sort of thing [should] be seen by society like jury service. You do your bit on juries and you do your bit on [public dialogue]. You get signed off from work and you get your expenses. The application of the law has always been seen as something that should involve the public but it is a different approach with policy. That is in the hands of representatives. But the deliberative route is important there too"* (external stakeholder interviewee 44)

For some, there were specific messages that needed to be given to government about how public dialogue could be part of improving the accountability and legitimacy of government and the way policy decisions are made. For example:

> *"As the world gets more complicated, resources more constrained and competition for them more acute, so governments... will need to reflect more completely and profoundly the interests, fears, opinions and values of the publics who underwrite their legitimacy."* (DES interviewee 39)

Public dialogue was also seen to be able to contribute to current significant gaps in democratic accountability and trust between the public and government. For example:

"If you want people to be behind and confident in policy, especially after the expenses scandal, you need to do more public engagement in order to increase public confidence." (departmental project manager interviewee 16)

"My personal view is that there's a tension in public dialogue. If you think about democratic accountability… the growth of public engagement is a sign of the failure of democratic accountability. There is a huge and contested area over the degree of political control over scientific funding. Public engagement gives another route into setting priorities that still fits with the Haldane Principle." (policy maker interviewee 21)

"Don't be afraid. Have confidence in what the public are saying to you. It's a structured way of talking to the public. Policy issues have become divorced from the traditional way of talking to people at the doorstep. Public dialogue is a highly structured doorstep really." (DES interviewee 33)

One interviewee saw wider impacts of public dialogue, a ripple effect from involvement in dialogue resulting in citizens becoming more willing to get involved in society in other ways:

"If you want engaged citizens - public dialogue has a knock-on effect. Like economic benefit - it accrues outside of the thing you are actually doing e.g. make a bus service more accessible = revenue but also get older / disabled / push chairs into town spending money in local cafes and supporting local suppliers. So it can have a wide impact but which is less measurable. Dialogue is similar. Get good public dialogue and people recognise their own capacity to influence government and policy and ripple effect ... and get involved in something else - trustee in a local organisations, local appointment, campaigning." (departmental project manager interviewee 8)

This final point reflects evaluation findings from individual dialogue projects (see section 4.5.5), which show the extent to which public participants are enthused about participation more widely as a result of their experience with public dialogue.

Overall, it is interesting to note the levels of conviction in the feedback from all types of evaluation interviewees. It is clear that many of those involved in this field, within government and outside, enthusiastically support the concept of public dialogue in public policy, and the need to establish more effective ways to build on that commitment in future.

6.4 Summary and conclusions

The analysis in this section has covered the feedback to the evaluation on key activities for the future in promoting public dialogue, and key messages to government. In summary, the findings are as follows:

- **Key activities for the future**. There were many positive suggestions for future activities, and the feedback overall from stakeholders interviewed again reflects a significant commitment to the ideas behind Sciencewise, and a real interest in seeing and contributing to future development.

  As with all such questions and answers, there is a danger that suggestions are no more than an unrealistic wish list. However, in this case, there are both strategic directions proposed, as well as some very specific activities, that are quite practical.

  The key area for future activities for these interviewees is around making the case for public dialogue and Sciencewise - especially demonstrating value and impact of public dialogue through practical examples, case studies etc. This is not a new area of work for Sciencewise-ERC. Case studies have been produced on all completed dialogue projects funded by Sciencewise (14 to date), and evaluation studies have been completely reviewed and impacts identified.

However, the lack of knowledge about this work among stakeholders interviewed for this study suggests that further development is needed to ensure that future products are fit for purpose with the priority intended audiences and that they are used in the most effective ways, potentially by involving some key stakeholders in considering content and dissemination.

Linked to this is a suggestion that evaluation in Sciencewise should do more to provide guidance on considering long term impacts and good practice, including by joining wider debates considering how best to do this. Associated with this is the more general point that Sciencewise actually has a lot of good resources already, but makes too little of them - not disseminating them widely or well enough to maximise their impact, and that this could be a priority in times of limited funding rather than the constant emphasis on producing something new.

There were priorities expressed for future activities around the need to develop the practice of public dialogue through running more and better projects, and evaluating them. There were also specific suggestions made for developments in practice, including defining more clearly when public dialogue is most appropriate (or not), developing a panel of experts / scientists who would be wiling and able to take part in public dialogue projects, and considering smaller more streamlined approaches to public dialogue that reflect reducing budgets.

For some, practice could be developed more widely, with new topics addressed beyond the strict confines of science and technology, especially around medical and health issues. Conversely, the importance of Sciencewise continuing to work on innovative science and technology was also stressed, given what was described as the urgent need to consider extremely important potential societal implications of some new scientific developments.

There are also suggestions that more needed to be done to develop awareness, understanding and skills, both within government and among the practitioner community. Although this is a continuing element in the work of Sciencewise-ERC, with varying degrees of success, the emphasis in this feedback on more formal 'training' within government suggests a new approach could be added.

There was also a strong emphasis in the feedback on the need to embed public dialogue in government policy making, including suggestions for work with specific stakeholders (e.g. chief scientists).

Finally, there was an emphasis in the feedback on future priority activities on the need to work more closely with others, both institutional stakeholders and the public. Specific target constituencies were identified including academia (especially social scientists, science communicators and the science community). There was particular emphasis on more sharing of experience and learning, and also mention of the need for Sciencewise to demonstrate in its own ways of working the principles of transparency and accountability it promotes to government. More effective collaborative working with stakeholders was seen to be one important way of meeting those objectives.

- **Key messages for government**. Interviewees suggested that the key messages for government were around the extent to which public dialogue saves time and money in the longer term, that it is a practical way to hear authentic public voices, it results in better policy decisions and it contributes to a health democracy. Key points included:

    - do public dialogue now and save time, trouble and money later; get it right first time and avoid costly mistakes

    - public dialogue works well to engage citizens; because when it works well there is a distributed impact, like ripples on a pond

- public dialogue is a cost effective way of working with the public on hot topics in science and technology
- public dialogue works better than other methods to enable policy makers to understand public aspirations and needs
- public dialogue is the best method to get public and stakeholder input which is a critical part of the evidence needed for better decisions, and robust informed policy
- done properly, public dialogue creates accountability and legitimacy for decisions about science and technology, and builds public confidence and trust in government decisions
- public dialogue provides the 'authentic' voice of the public on complex and contentious issues
- just do it: it is not frightening and provides an easy structured way to talk to the public
- trust the public and they will surprise and impress you with how quickly they understand even complex technical topics, with the quality of what they say and their commitment to the process
- it is unethical not to do it
- this is the future for enhanced democracy; governments need to reflect the interests, fears, opinions and values of the publics who underwrite their legitimacy
- you are more likely to find solutions that work if you involve and listen to a wide group of people
- resourcing public dialogue helps decentralise power and control
- public dialogue helps delivery transparency and partnership with the public.

There was also feedback in terms of how such messages need to be disseminated. Interviewees hoped for individuals in government who would champion public dialogue, and stressed the need to use convincing evidence (including practical examples) of where it has worked and the benefits, as well as the risks of not doing it. The importance of evidence, value for money, innovation and risk management in arguments for public dialogue were stressed.

It is interesting to note that these positive messages came from all types of stakeholder interviewees, some reflecting real passion and commitment to the whole concept of supporting and doing public dialogue. The focus of the content of these messages is on the actual concept of public dialogue, but there is also emphasis on getting evidence for the messages (especially from the evaluations of projects that are now available) and in working with government to get these messages across to the right people in the right ways.

In future, the engagement of stakeholders in constructing and disseminating these messages may grow in importance, and can build on the enthusiasm demonstrated in the feedback to this evaluation study.

7. SUMMARY AND CONCLUSIONS

7.1 Introduction

The purpose of this evaluation study was to collect and review evidence of the value of the new Sciencewise-ERC programme, capture the history of the Sciencewise programme overall, and to capture the learning from Sciencewise-ERC.

The focus of the evaluation was on the two key types of activities which form the basis of the Sciencewise programme:

- the good practice and innovation, lessons and impacts of Sciencewise-funded dialogue *projects*, including the longer term impacts

- the effectiveness and value of the advice, guidance and other services since the launch of the new Sciencewise Expert Resource Centre (Sciencewise-ERC) *programme* in April 2008.

The evaluation was therefore intended to provide:

- evidence of the history, effectiveness, impact and value of the programme and projects, to increase accountability, credibility, legitimacy, openness and transparency

- lessons from the dialogue projects and the programme model of support, to feed into the improvement of support in future for public engagement on science and technology across government.

This study was therefore intended to be a practical review, similar to an internal audit by the in-house Evaluation Manager, although using various conventional process evaluation methods such as interviews with stakeholders. The focus throughout is on practical analysis of what has worked well and less well in the Sciencewise programme and projects, the impacts and achievements of that work, and emerging concerns and challenges.

This section summarises the findings from the analysis throughout this report, and some of the key issues that have emerged. It covers the key impacts and achievements, and the key issues for the future. It begins, however, with a brief assessment of the achievements of the programme against the agreed objectives, to show the extent to which Sciencewise-ERC has achieved its stated purposes.

7.2 Assessment of activities and impacts against objectives

7.2.1 Introduction

The analysis in much of this report has been based on themes and issues raised by stakeholders interviewed for the study, and analysed and reported on the basis of the issues they raised. However, some analysis is also needed of the extent to which evidence from stakeholders, and other reviews undertaken as part of this study (see section 2 for details of the research methods), demonstrate whether and to what extent the Sciencewise-ERC has met its stated objectives.

The analysis below is based on the short version of the objectives, agreed by the Sciencewise-ERC Steering Group in May 2009. Evidence of both activities and impacts are used to demonstrate whether and to what extent the various objectives have been met.

7.2.2 Summary of Sciencewise-ERC aims and objectives

The aims and objectives of Sciencewise-ERC are as follows:

Aim:

To create excellence in public dialogue to inspire and inform better policy in science and technology.

Objectives:

1 **Innovation and good practice**. Stimulate and support innovation and the development of good practices in public dialogue on science and technology.

2 **Capability, skills and learning**. Identify and maximise learning opportunities at national level, in collaboration with others, to ensure best use of shared knowledge, expertise and resources on public dialogue in science and technology in order to build the capability and desire in Government departments, agencies and other organisations to carry out good quality public dialogue activities and effectively disseminate results.

3 **Resources**. Create a 'one-stop-shop' to ease access for policy makers and wider stakeholders to information, advice and practical resources that support good quality public dialogue on science and technology (e.g. mentoring, training, case studies and evidence-based guidance).

4 **Awareness and cultural change**. Raise awareness and demonstrate the benefits of public dialogue in science and technology in order to help promote a culture across Government and wider political debate that understands and values public dialogue as part of evidence-based policy making and embeds dialogue within Government policy making processes.

5 **Collaboration**. Engage with relevant stakeholders to support and develop the Sciencewise approach and principles of good practice in public dialogue in science and technology (e.g. science community, academic community, science communicators, policy makers, public).

7.2.3 Analysis against objectives

Objective	How objective has been met (or not)
1 **Innovation and good practice**. Stimulate and support innovation and the development of good practices in public dialogue on science and technology.	**Activities**: • By June 2010, 14 public dialogue projects had been completed, stimulated at least in part by Sciencewise support; 5 more projects had started and funding had been agreed for three more. There was a growing pipeline of further 69 projects potentially seeking support. • Analysis of the evaluations of the nine later public dialogue projects has identified numerous elements of innovation and good practice in all nine projects (see section 4.6 and below, and Annex 1). • Innovation in projects is evaluated to assess what works well and less well in practice; every project funded by Sciencewise-ERC is now independently evaluated. Evaluations are supported and published by Sciencewise, to contribute to the development of understanding of good practice. • Sciencewise now requires that all projects it funds abide by Sciencewise guiding principles, as a condition of funding

	• Research, development and publication of six good practice reports by practitioners, drawing on work by Sciencewise and beyond. This work was designed to fill gaps in knowledge in public dialogue practice. Research and stakeholder engagement took place in 2009; reports published in 2010. **Evidence of impacts**: • Evidence from this study shows that at least half of the 14 completed projects would not have happened at all without Sciencewise support, and almost all would not have had the quality and success they did without Sciencewise support • Every Sciencewise funded dialogue project includes elements of innovation and good practice, as shown in the analysis of evaluations of completed projects in Annex 1. Innovation and good practice includes: • moving public dialogue upstream in many cases (e.g. nanotechnology), and into dialogue on implementation of new technologies at the other end of the spectrum in others (e.g. Big Energy Shift) • the involvement of external as well as internal stakeholders in the oversight of dialogue design (through steering groups), and in providing diverse views on the topics to public dialogue events • innovation in process as the public dialogue approach has been developed and consolidated since 2008, with new methods introduced within and beyond deliberative dialogue • Evidence from this study of the success of the innovative Sciencewise model of support for innovation in public engagement through the work of the DESs, managed through the programme, to provide one-to-one support on the design, delivery and evaluation of each Sciencewise funded project **Concerns**: • Feedback to this study that the approach to public dialogue promoted by Sciencewise is no longer innovative. However, other feedback suggests that public dialogue is still very new for many people, it is still being developed, and it remains relatively rare in government which still tends to rely on formal written consultations and other conventional approaches to public engagement • Some argue that the approach is too narrow, and is used too inflexibly, and that other approaches to engagement could also be promoted. **Conclusion**: • Continuing potential to increase innovation in methods, and to consider development of the approach to public dialogue, but objective being met at this stage of the programme.
2 Capability, skills and learning. Identify and maximise learning opportunities at national level, in collaboration with others, to ensure best use of shared knowledge, expertise and resources on public dialogue in science and technology in order to build the capability and desire in Government departments, agencies and other organisations to carry out good quality public dialogue activities and	**Activities**: • Capacity building is at the core of the Sciencewise model of support both within and beyond individual dialogue projects. The approach to project support is to ensure Government departments and agencies 'own' the dialogue projects, and are provided with comprehensive support from a Sciencewise Dialogue and Engagement Specialist (DES) who guides them through the process of commissioning, delivering, evaluating and communicating about the project. • 17 introduction to dialogue sessions have been held. These were initially designed to attract participants from across government, have been increasingly designed and delivered within specific departments (6 sessions held in 2009-10: 1 in Defra, 4 in DECC and 1 in HM Treasury) designed specifically to build awareness and capacity in government departments.

effectively disseminate results.	• A system of 'learning through observation' was established in 2010 to provide opportunities for those unfamiliar with public dialogue to observe Sciencewise-ERC funded events. • Sciencewise has held several national events to share learning, knowledge and expertise (e.g. workshops to discuss the six good practice reports) • Sciencewise team communicate and collaborate with other individuals in stakeholder bodies, both through formal events (joint events e.g. with Hansard Society) and individual meetings • Evaluation reports of each dialogue project identify lessons for future public dialogue, to help share knowledge; reports are published on the Sciencewise website for wider use **Evidence of impacts**: • Increased desire to carry out public dialogue since Sciencewise started, as shown by feedback to this study and increased demand for support from Sciencewise from government policy makers • Feedback to this study from the departmental project managers who have received support from Sciencewise that it has improved the quality and success of their projects, and that they would recommend others to use Sciencewise support services. • Feedback to this study shows growth in skills in government although generally only where the individuals have had personal experience of public dialogue projects through participating in the design and delivery of a dialogue project or observing a dialogue event • Feedback to this study shows capacity building among practitioners (contractors and DESs) who find that working with Sciencewise contributes to professional development and broadening experience. **Concerns**: • Little focus in the period under review, beyond formal evaluation reports, on identifying or sharing learning from projects, either within the Sciencewise team (AEA, DESs, BIS etc) or more widely. This is being addressed in plans in 2010, including increasing opportunities for learning through observation. • Very limited examples of collaboration and networking with others to share learning to develop wider capacity building • No activities to date (beyond introduction to dialogue sessions to build early awareness and interest) to specifically build understanding and skills in public dialogue in government **Conclusion**: • Specific activities related to dialogue projects successful in capacity building with individuals in government • Useful events and other activities to spread awareness and understanding • Greater emphasis needed on wider networking, sharing learning and collaborating more widely. • Objective largely met at this stage of the programme, but with room for further development.
3 Resources. Create a 'one-stop-shop' to ease access for policy makers and wider stakeholders to information, advice and practical resources that support good	**Activities**: • The Sciencewise DES system provides a single person to act as a mentor to the managers of dialogue projects in government, and a single point of contact and access to other resources. • Extensive range of resources and access mechanisms (e.g. website, enquiry line) established

quality public dialogue on science and technology (e.g. mentoring, training, case studies and evidence-based guidance).	• Case studies produced of every completed dialogue project funded by Sciencewise; the format and content of these case studies currently (2010) being revised to take into account new information from completed evaluations • Detailed written guidance for those seeking Sciencewise support available through the Sciencewise website, increasingly drawing on evidence from experience (DESs and AEA Projects Manager) and from formal evaluation reports • Good practice reports (researched and written throughout the period under review and published in 2010) provide guidance, based on new research, to fill identified gaps in practical knowledge about delivering and evaluating public dialogue • Introduction to dialogue sessions have provided an initial point of contact, and access point to Sciencewise resources • Activities designed to promote the resources Sciencewise has available including through attendance at Sciencewise's own national events and numerous third party events **Evidence of impacts**: • Feedback to this study shows that the Sciencewise model of support and advice for dialogue projects, through DESs, is well established, highly regarded and in increasing demand • Feedback from departmental projects managers shows all those interviewed felt the advice and support they were given improved the quality and success of their project, and would recommend Sciencewise to others **Concerns**: • Feedback that the website was not attractive, difficult to use and not including sufficient relevant information, creating frustration among those seeking access to information through that source, so not seen as portal to one-stop-shop • No evidence of training undertaken, beyond introduction to dialogue sessions to raise awareness • Written guidance limited as specifically designed to advise those wanting Sciencewise to fund and provide advice for their dialogue projects • Support and advice limited to those wishing to run a full-scale public dialogue project • Sciencewise not yet seen as a one-stop-shop for resources on public dialogue **Conclusion**: • Some valuable and successful activities but some major omissions, so objective only partly met at this stage of the programme.
4 Awareness and cultural change. Raise awareness and demonstrate the benefits of public dialogue in science and technology in order to help promote a culture across Government and wider political debate that understands and values public dialogue as part of evidence-based policy making and embeds dialogue within Government policy making processes.	**Activities**: • 17 introduction to dialogue sessions held specifically designed to spread awareness to participants from across government. • Significant level of other activities to raise awareness of public dialogue including Sciencewise newsletters, events (participatory workshops, other events) and attendance and participation at third party events. • Analysis of evaluation reports for Sciencewise-ERC Steering Group to identify benefits and impacts of Sciencewise public dialogue projects; analysis used for communications products. • '*What is Sciencewise-ERC?*' leaflet published in 2010 promoting the benefits and impacts of public dialogue and Sciencewise support.

	Evidence of impacts: • Feedback to this study from Sciencewise-ERC Steering Group to this study that the summary of impacts and benefits of public dialogue projects from analysis of evaluation reports has been valuable • Feedback to this study that awareness among government policy makers has grown, and their attitudes have become more positive to public dialogue as part of policy making, since Sciencewise was launched. General view that Sciencewise has played a (possibly major) role in these changes, but changes also due to activities by others. **Concerns**: • Although it is recognised that achieving major cultural change in government is extremely difficult, there is little evidence that any activities specifically focused on culture change (or even smaller scale practical changes to decision making structures and processes) have been undertaken • Feedback to this study that cultural change has not been achieved, and that significant further effort needs to go into increasing the amount and effectiveness of embedding work to influence cultural change **Conclusion**: • Numerous activities to raise awareness, and evidence that awareness has been raised across government • Very few activities to systematically embed public dialogue and address cultural change, and cultural change has not been achieved. • Again, therefore, objective probably partly met at this stage of the programme.
5 Collaboration. Engage with relevant stakeholders to support and develop the Sciencewise approach and principles of good practice in public dialogue in science and technology (e.g. science community, academic community, science communicators, policy makers, public).	**Activities**: • Sciencewise-ERC Steering Group brings together key stakeholders (scientists, academics, policy makers, science communicators) to support and help develop the Sciencewise approach • Stakeholders involved in the research and development of the six good practice reports through interviews and two participatory workshops to consider emerging findings and draft guidance • Numerous national Sciencewise events to which stakeholders invited, plus some events in partnership with stakeholders (e.g. Hansard Society) • Participation and attendance at numerous events run by other stakeholders, with Sciencewise input ranging from full involvement as a participant (e.g. facilitating workshops and rapporteur at academic ESRC Critical Engagement seminars and practitioner IAP2 conference), attending conference workshops, providing exhibition stands at science events and festivals • Collaboration with academic, science, policy maker and other stakeholders to produce *The Road Ahead* collection of essays • Event to share experience and find opportunities for future collaboration with the Association of Science and Discovery Centres (science communicators) **Evidence of impacts**: • Some information about numbers and types of individual stakeholders reached through publications and events • Feedback from practitioners (contractors and DESs) that working with Sciencewise can enable a mutual learning process and continuing development of practice

	Concerns: • Feedback from external stakeholders that there are insufficient opportunities for networking and sharing learning and experience • Evidence of contact with stakeholders but less evidence (beyond the Steering Group and a few specific events) of deeper engagement or collaboration with stakeholders **Conclusion**: • Limited evidence of deep engagement or collaboration with stakeholders, so objective probably partly met at this stage of the programme.

7.2.4 Conclusions on achievement of objectives

This evaluation has been undertaken as the Sciencewise-ERC programme continues to develop and be delivered. Achievement of objectives can only be fully assessed once the programme is completed. At this stage, however, the evidence and analysis above shows that there were activities undertaken to meet all objectives, and that some were more successful than others in already achieving the impacts sought.

However, it should be noted that some objectives are certainly easier to achieve than others. It is, for example, very difficult to achieve cultural change in government, whereas it is possible to achieve capacity building (and that has been achieved).

Overall, all the objectives have been addressed, and all met to varying degrees at this stage of the programme. The objectives related to the support and advice for dialogue projects (leading to innovation and good practice as well as capacity building) have been most fully met, whereas those relating to embedding public dialogue in government policy making and cultural change in government have shown least progress.

Perhaps more surprisingly, the objective relating to collaboration with stakeholders and work to share learning also appears to require further activity before it is met. The reason for that appears to be prioritisation of work on dialogue projects - to meet other targets set between BIS and AEA (with support from the Steering Group) to focus on project development, which has been seen as essential in itself as well as feeding into a wider strategy for establishing reputation, profile and a sound foundation of real experience.

In that, the strategy appears to have been highly successful. Feedback shows a good profile and reputation within the field of public dialogue in policy related to science and technology, greater demand for Sciencewise funding and advice, and more projects being developed successfully than before. In addition, the plans starting to be developed at the end of 2009, for the period 2010-2011, make working with stakeholders and sharing learning much higher priorities than they have been to date.

The conclusions of this review of the extent to which the objectives have been met should therefore be seen as an interim report. It will be important to see progress over the coming months on the areas where there has been less progress to date. In the meantime, the achievements have in many ways been impressive in the timescale, and there are strong foundations for future work.

7.3 Key impacts and achievements

7.3.1 Introduction

Sciencewise-ERC has made good progress towards meeting most of its objectives, with some areas identified as needing further work (section 7.2). For many stakeholders interviewed for this evaluation, however, the most obvious impacts of the programme are as a result of the specific public dialogue projects funded by Sciencewise, and the main impacts are seen in relation to the influence of those projects on policy.

There is evidence in this evaluation report of clear influence on policy and policy makers, as well as other impacts of both projects and the Sciencewise programme as a whole. This study has separated analysis of the Sciencewise funded projects and the advice, capacity building and awareness raising.

In practice, the impacts of the Sciencewise-ERC programme and projects are very closely linked. For example, on the one hand the advice and support provided by the Sciencewise Dialogue and Engagement Specialists (DESs) has been seen to improve the quality and success of the projects, and around half the projects would not have happened at all without Sciencewise input; on the other, work on the projects has contributed significantly to capacity building and awareness in government and resulted in the creation of a range of publications as well as feeding into other activities.

This section summarises the key impacts and achievements described in detail elsewhere in this report.

7.3.2 Impacts of Sciencewise-ERC funded projects

Analysis of evaluation reports on all nine public dialogue projects shows the following impacts on policy, those involved in the projects and more widely, and on good practice, as outlined below.

- **Influence on policy and policy making**. The study found that Sciencewise-ERC funded projects had achieved five main types of **impacts on policy and policy making**:

    - **direct impacts on policy decisions**, through policy going ahead and/or changed, or policy stopped

    - **contributions to policy outcomes**, that can be logically linked to the priorities or activities of a dialogue project, although not necessarily directly caused by them such as by feeding into a longer term process, influencing the tone and language of policy decisions, where public input was part of the evidence base, and where the public dialogue led to changes in policy relationships

    - **increased robustness and credibility of policy decisions**, because the policy was more open and transparent, and/or because it was more socially informed

    - **influence on plans for future public engagement**, by building on the priorities emerging from public dialogue to engage the public further

    - **influence on the wider debate** - changing the weather around policy issues and raising public awareness and understanding of the issues.

- **Impacts on policy makers and policy organisations** including giving greater confidence to policy makers in taking difficult decision in controversial areas by working with the public to find effective solutions that were widely acceptable.

    In addition, involvement in public dialogue has helped policy makers build better relationships with stakeholders, better relationships with public participants, enhanced their organisation's profile and reputation for good practice, improved future communications planning, created synergy and integration across government by bringing together internal stakeholders.

    Policy makers have also increased their understanding of the place and value of public and stakeholder engagement, and increased their practical experience and knowledge of public engagement.

- **Impacts on public participants** including increasing public participant awareness and understanding of the topics being discussed (usually at least 90% of participants report learning something new), spreading knowledge to others about the topics and about being involved, gaining skills and increasing enthusiasm for future participation (again, usually at least 90% report being more positive about future participation).

  Public participants have also developed greater trust in public policy-making processes and bodies, changing their thinking on the issues, feeling valued as citizens, and gaining increased understanding of different types of people through working together on difficult issues.

- **Impacts on scientists, experts and other stakeholders** including enabling them to develop new skills, experience and confidence in communicating with the public, provided opportunities to learn about public views, fears and questions first hand, increased their respect for the quality of the potential public contribution to science and technology, and enabled them to gain a higher personal profile and build new relationships and networks.

- **Benefits for government and wider society**. This study also shows that Sciencewise-funded projects could be seen to have wider impacts in relation to government and society, including contributing to:

  - **Increased transparency and openness** in government policy and decision making, and thus increasing trust in government and public institutions

  - **Strengthened democratic accountability** by providing effective new ways for citizens to engage in, and influence, policy decisions

  - **Strengthened civil society**, by building skills and enthusiasm for public engagement through direct experience

  - **Building social cohesion and social capital** through enabling people from different backgrounds to meet and work together on a joint enterprise.

- **Impacts on good practice**. Sciencewise funding within the clear guidelines articulated in the Guiding Principles has enabled innovation in public dialogue projects within a clear approach and framework, and for good practice in design, delivery and evaluation to continue to be developed.

  Examples include developments and innovation in good governance in projects, stakeholder engagement, communications and transparency, engagement of scientists and other experts, appropriate numbers and diversity of public participants to ensure credible results for policy influence, increasing emphasis on measuring costs and benefits in evaluations, an expanding mix of engagement methods and techniques, and good approaches to ensuring diversity of views covered in dialogue projects.

In summary, over the past five years, Sciencewise-ERC funded dialogue projects have:

- **Influenced public policy** by providing evidence of the richness and strength of public views and ideas (e.g. influenced priorities for investment in nanotechnology research, and the extent and conditions for the use of hybrid embryos for research). By June 2010, 14 major Sciencewise-ERC projects had worked with 12,595 public participants, providing immediate face-to-face feedback to policy makers, as well as reports summarising the public views, concerns and aspirations.

- **Influenced practice** by supporting development and innovation in good practice and helping Government learn from practical experience by providing extensive one-to-one mentoring, general advice and guidance that demonstrate how dialogue can build legitimacy and accountability with the public and contribute to greater trust in science-based decision making. By June 2010, 10 full evaluations had been completed of the 14 Sciencewise-ERC projects.

- **Enabled progress to be made on strategically significant, sometimes highly contentious topics** by supporting policy makers to find ways forward that go with the grain of public views, and avoid the conflicts and entrenched positions that can result in the complete rejection of new technologies.

- **Improved the quality of communications between Government, scientists and the public** by providing a rich understanding of the public's potential concerns and aspirations on new science and technologies. Policy makers are then better prepared to discuss the implications with the media and the wider public.

- **Increased public awareness and understanding** of science and technology issues, both among immediate participants and their contacts. Evaluations show that each dialogue participant is likely to talk to 30 others. This 1:30 ratio of spread of public interest, enthusiasm and knowledge means that Sciencewise-ERC dialogue participants will talk to and influence approaching 400,000 members of the public.

- **Created synergy and integration across Government** by bringing together different departments and agencies to work on dialogue projects. For example, a Sciencewise-ERC funded dialogue related to energy use and climate change, led by the Department for Energy and Climate Change, also involved Defra, the Welsh Assembly Government, Scottish Government, and the NI Assembly.

7.3.3 Impacts of the Sciencewise-ERC programme as a whole

This study shows that the Sciencewise-ERC programme overall has had the following impacts:

- **Created more public dialogue on science and technology**. Sciencewise had agreed funding 22 projects between 2004 and June 2010, 14 of which had been completed and evaluated by June 2010. Only one of these completed projects would have happened in the same way without support from Sciencewise; at least half would not have happened at all.

  In addition, demand from government to run public dialogue projects has grown significantly: during the 12 months from mid-2009 to June 2010, eight projects were agreed for funding, compared to 14 projects over the five years from 2004 to 2009, and the pipeline had increased significantly from 45 further potential dialogue projects in 2009 to 69 at 30 June 2010.

- **Increased investment in public dialogue**. Since 2004, Sciencewise has stimulated additional investment by government in public dialogue of £2.7 million; in 2009 alone, Sciencewise investment of £1.1 million stimulated additional investment of £1.5 million.

  In addition, over 12,500 public participants, plus over 1,000 civil servants, scientists and other experts from NGOs, industry and other institutions have taken part in the planning and implementation of public dialogue projects: a major investment of time and effort in public policy on science and technology.

- **Improved the quality and success of public dialogue projects**. Most interviewees from government, and practitioners delivering projects, said that the advice and support from Sciencewise had improved the quality and success of their projects.

  Quality and success were seen to have been improved in terms of getting stakeholders involved, value for money, getting tangible benefits from the dialogue, giving government staff more confidence to be transparent and open with their policy development work and experiment with new approaches, broadening the scope of the dialogue and pushing dialogue more upstream (earlier) in the policy process. Advice was particularly valued at the beginning of projects, with defining the project and commissioning contractors.

- **Increased awareness, understanding and skills in government for public dialogue**. Awareness and understanding of public dialogue among policy makers in government has grown, and that their attitudes to public dialogue have become more positive. Sciencewise-ERC is seen to have made a significant contribution to these changes, although other influences have also had an effect. In addition, skills and knowledge for public dialogue have grown, particularly among those policy makers with direct experience of dialogue projects. Feedback suggests that it is the dialogue projects that have contributed to this growing understanding and skills, although other awareness raising activities by Sciencewise (e.g. introduction to dialogue events in government, learning through observation, other events and good practice publications) have also made a contribution.

  Overall, many interviewees felt that, although there had been important progress made, there was still a long way to go and public dialogue was far from fully and systematically embedded in policy making processes across government.

- **Built support for public involvement in government policy making**. Sciencewise has had a significant role in creating willingness within government to engage with the public on major national policy issues, and in creating practical projects to provide a highly effective mechanism that delivers public dialogue in practice. However, wider change is seen as limited, particularly in relation to democratising the policy process.

  Overall, there was a strong sense from all the feedback that Sciencewise was doing valuable work and had made a significant contribution to increasing support in government for public engagement in the development of national policy, but that more needs to be done, by building on and extending from current activities.

- **Created evidence of the value of public dialogue**. Several interviewees (particularly Sciencewise-ERC Steering Group members) felt there were solid achievements in the Sciencewise work of gathering evidence from evaluations to demonstrate the impacts of projects individually and as a broader programme.

  However, messages about impact and value have not been seen by wider audiences, even many of those interviewed for this evaluation (including departmental project managers, practitioners, DESs and external stakeholders). That gap is a challenge for the future.

- **Established a new centre of excellence on public dialogue**. Sciencewise-ERC has created a centre of excellence for public dialogue by developing and providing a valuable package of resources and services. New products have been created, including reports and case studies on all 14 projects funded, and detailed evaluation reports on 10 of those projects, as well as eight major reports that have taken the principles and practice of public dialogue forward. For some stakeholders, the mere establishment and continued existence of the Sciencewise-ERC has been an achievement, especially in a relatively short time.

Overall, Sciencewise is seen to have built a good reputation and profile (within a limited field) that results from and underpins its services, created new resources, and built relationships with stakeholders that provide the foundations for new work to build capacity and embed public dialogue further into government.

- **Increased capacity for the design and delivery of public dialogue**. The Sciencewise approach to public dialogue, through commissioning external contractors and supporting government staff to manage projects, had helped increase capacity for the design and delivery of public dialogue projects in the field. Sciencewise was seen to be providing opportunities within dialogue projects for innovation and experiment, supported by an experienced DES team which knew what was likely to work in different circumstances, and could therefore extend and develop good practice.

  Capacity building extended to professional development for practitioners (contractors and DESs), through reflection and shared learning, was seen as a valuable impact of the programme. The increased professionalisation of the field was a contentious issue, with some arguing that there was a need for more skilled professionals to delivery high quality dialogue, and others identifying dangers with increasing professionalisation (such as potentially excluding those committed to the wider drivers for dialogue such as social justice).

- **Created a new model of support for innovation in public engagement**. Sciencewise-ERC has created a unique model of support which has helped encourage and support innovation in building public engagement into government policy making. The mix of funding, advice and support, and the way the two are connected in order to maximise learning and capacity building in government through the development of practical projects, seems particularly effective in developing understanding and skills in government for public engagement, as well as increasing the quality and success of public dialogue projects.

  There was very clearly significant satisfaction with the package of support and advice available from Sciencewise-ERC as part of this model. All the government departmental project managers and policy makers interviewed would work with Sciencewise again, and all said they would recommend Sciencewise to others interested in public dialogue.

  The most valuable elements of the Sciencewise-ERC package were seen to be access to funding, the Guiding Principles as a framework and other good practice guidance, the independence and status of Sciencewise-ERC and the system of Sciencewise Dialogue and Engagement Specialists (DESs) in providing advice. The Sciencewise DES system was seen to have several particularly valuable elements, particularly one DES being the key point of contact, the personal qualities, skills and experience of the members of the DES team, flexibility, and effective co-ordination by a separate project manager.

  Overall, the feedback from all those involved strongly indicates that the package of support has worked very well. The funding has been a key incentive and in many cases a vital element for government departments doing public dialogue projects, but the advice and guidance has been at least as important. The links between the provision of funding alongside advice and guidance have been key to building capacity in government for public dialogue in future.

Overall, there was a high level of enthusiasm and support for the work of the Sciencewise-ERC, and strong indications of the positive impacts the programme had achieved. There were caveats to this, as shown in this summary and also below, but overall the feedback was significantly more positive than had been expected, which suggests a strong foundation for future development.

7.4 Current gaps and challenges for the future

7.4.1 Introduction

Evaluation analysis has revealed some significant concerns and challenges both in relation to the Sciencewise-ERC programme and the way it has been delivered, and also on the design and delivery of public dialogue projects in practice. Some of these concerns and challenges are relevant to the survival and development of public dialogue in the UK including but also beyond Sciencewise-ERC. Some are more closely related to the future development of the Sciencewise-ERC programme itself, to ensure that future support is robust and effective. All are summarised below.

7.4.2 Increasing the impact on government policy-making systems

Embedding public dialogue into public policy making structures and systems in Government is one of the Sciencewise-ERC's five main objectives (Awareness and Culture Change), as well as a key priority for Sciencewise work identified in this study. The rationale for embedding is that, for public dialogue to have influence, it must be a formal part of the policy making system to ensure it happens, plus clear processes are needed for the results of the public deliberations to be considered alongside other evidence in coming to a policy decision. Without these changes to policy making structures and systems, the influence and value of public dialogue is likely to remain peripheral and fragile.

This evaluation study has found little or no evidence that there have been any significant structural changes in government policy making systems to integrate public dialogue. Formal public consultations, asking for written comments on a published consultation document) are perhaps now part of the furniture of policy making, but public dialogue is far less understood and accepted.

There is concern that the case for the value of public dialogue still needs to be made but also that strategic work is needed to take that case to specific parts of government. Suggestions made in this study include ensuring evidence about the value of public dialogue is targeted at specific influential policy advisers, such as departmental chief scientific advisers. Others suggested that public dialogue should be integrated into formal guidance on government policy making (including from HM Treasury).

There is likely to be a growing need to prioritise strategic work with government to embed public dialogue as an integral part of policy and decision making systems in future, both to sustain the practice of public dialogue and to ensure it has appropriate influence on policy and policy making. Further work is needed to systematically embed public dialogue as part of good practice in policy making, and in the formal structures of decision-making in mainstream policy making.

7.4.3 Extending engagement with stakeholders

Collaboration with relevant stakeholders to support and develop the Sciencewise approach and principles is also one of the five main objectives for Sciencewise-ERC, and one where there has perhaps been least progress. Working well with stakeholders is seen as not just useful to the work of Sciencewise but also a reflection of the principles of openness and transparency that Sciencewise promotes to others and should be seen to be demonstrating in its own work.

In feedback on the programme overall, suggestions were made that Sciencewise could do much more in terms of networking, building broader constituencies of support for public dialogue among a wider set of stakeholders, providing opportunities for sharing critical reflective learning and experience, bringing together those with common interests

to create more of a movement for change to better integrate public engagement in government policy making, and simply providing opportunities for stakeholders to stay in touch with Sciencewise and others in the field.

In feedback on individual public dialogue projects, there were suggestions for increasing efforts to ensure effective working with NGOs and other stakeholders in the design and delivery of dialogue, including representation on advisory groups. Whether NGOs are campaigning for or against scientific and technological developments, their engagement in public dialogue projects is likely to become more important.

As well as institutional stakeholders, there were also suggestions of the need to open up Sciencewise work to the public. This relates both to continuing engagement with people who have participated in specific dialogue projects, and to opening up topics for discussion with the public more widely (e.g. through discussion forums on the website on current dialogue topics).

The evaluation research took place at a time when there was beginning to be increasing work with external stakeholders. Early in 2010, a full stakeholder analysis was undertaken and a new strategic approach developed to identify key stakeholders and the most appropriate ways of joint working in future. In addition, Sciencewise-ERC has participated in several external stakeholder processes including the implementation of action plans from the BIS Science and Society strategy expert groups, particularly the groups with most focus on public and stakeholder engagement: the Science for All and Science and Trust groups. Sciencewise-ERC has co-ordinated the development of a common framework to describe the different types and purposes of engagement with the Science for All group.

There remains potential for further development of collaborative working with stakeholders, especially in terms of networking, building broader constituencies of support for public dialogue among a wider set of stakeholders, providing opportunities for sharing critical reflective learning and experience, bringing together those with common interests to create more of a movement for change to better integrate public engagement in government policy making, and simply providing better opportunities for stakeholders to stay in touch with Sciencewise and others in the field.

7.4.4 Increasing evidence of the value of public dialogue

Sciencewise-ERC has increasingly invested resources in full independent evaluations of dialogue projects, and in analysis of those results (on costs, longer term impacts and cross-project impacts). However, a need for more evidence is seen to remain including:

- evidence of the value of public dialogue to policy making and more generally, to demonstrate the need for continued investment
- evidence of the cost effectiveness of dialogue, particularly the extent to which dialogue can save time and money in the longer term, and whether results and impacts of equal quality can be achieved with lower levels of funding
- evidence of the use and influence of dialogue results, to demonstrate how and to what extent decisions have been influenced by public views, and
- evidence of the longer term impacts of dialogue particularly on 'better' policy.

Without this evidence, there remains a level of suspicion about the real influence of public dialogue and thus the extent to which it is both valuable and ethical, as well as worthy of the investment of public funds.

More evidence is needed from project evaluations and elsewhere, and more resources are needed to examine longer term impacts on policy. A more fundamental gap is in the next step of translating raw evidence into clear messages about the influence and value of public dialogue, and to consider how 'better' policy is demonstrated in terms that resonate with government and that can be fed back to past public participants and other stakeholders in projects.

7.4.5 Strengthening the integrity of public dialogue

The Sciencewise-ERC Guiding Principles, and statements on the Sciencewise-ERC website explicitly state that dialogue does not "seek endorsement of decisions that have already been made"[27]. Questions have been raised in this study over the dangers of Government potentially using public dialogue to test and develop messages to sell new scientific and technological developments to the public, to change behaviour or to rubber stamp decisions already made or sought.

The dangers of misuse are practical as well as ethical: without clarity about the boundaries and purpose of dialogue processes, the struggle with public cynicism in public dialogue projects will continue. Legitimate public dialogue opens up space for debate with no preconditions, and ensures there are opportunities for influence on decisions. It is honest about what can, and cannot, be changed as a result of the dialogue. It does not hide information about what cannot be changed, nor is it structured simply to go through the motions to close down debate in order to blunt opposition or manipulate public opinion.

There remains continuing, and possibly growing, pressure for public dialogue processes to demonstrate that they are open and legitimate to help increase public trust and willingness to participate in public dialogue and in society more widely.

7.4.6 Strengthening good practice in the design and delivery of public dialogue projects

The need for better follow up to public dialogue projects and more effective engagement with NGOs and other stakeholders are addressed elsewhere in this section. Five other issues were identified as needing attention in the future development of the design and delivery of public dialogue projects, as outlined below.

- **Effective governance of projects**. Evaluations have rarely assessed the governance of public dialogue projects, although the importance of effective advisory and oversight groups - increasingly involving external as well as internal stakeholders - has grown. In addition, the decision making processes between government departments, contractors, advisory groups and Sciencewise have become more complex and often need greater clarification.

  Good practice in the governance of projects is increasingly important, not least because of the greater scrutiny of the neutrality, effectiveness and influence of public dialogue projects.

- **The role of public dialogue in generating new thinking**. Policy makers have sometimes seen that 'nothing new' emerging from public dialogue is a sign of the success of their policy development, as it is reassuring to know that there is nothing they had not considered. However, in terms of taking the debates on science and technology forward, the lack of new thinking to emerge from public dialogues can be seen as a missed opportunity.

[27] www.sciencewise-erc.org.uk/cms/why-do-dialogue/

New dialogue methods to encourage a focus on solutions as much as identifying concerns and aspirations could stimulate new thinking and for new ideas to emerge.

- **Neutrality / balance / avoiding bias in dialogue design and delivery**. Evaluations identify the problems of ensuring that public dialogue processes include a diversity of views from experts and aim for neutrality in the process (i.e. not promoting a particular view on the topic). The difficulties of ensuring that all expert speakers at dialogue events are equally convincing communicators, or that all interests are represented in person or in the information materials produced for public participants, are recognised.

  However, there is growing pressure to justify the choice of experts taking part in public dialogue, the input they make, and the ways that input is used in the dialogue design, including through effective governance arrangements that fully involve appropriate stakeholders.

- **Capturing the diversity and richness of public views**. Evaluations have drawn attention to problems in the recording and reporting the full complexity of public views, especially minority views. Given the resources invested in public dialogue, there is likely to be increasing pressure for the results of public discussions to be more fully and transparently recorded and reported, including showing where consensus emerged and where conflicts remained, as well as a summary of key issues and overall results.

- **Enabling fully deliberative dialogue**. Effective deliberation requires face-to-face discussions among participants with sufficient time for in depth discussions and, ideally, time between events to allow participants to go away and reflect on the implications of the issues. Some projects have focused on information giving and a 'question and answer' approach to facilitation that is more about harvesting views than encouraging and supporting inclusive and questioning discussion, which undermines the value and rigour of the dialogue approach.

  The value of the results from public dialogue is directly related to the depth of consideration given to the issues by public participants. Those results enable policy makers to understand the deeper values underpinning concerns and aspirations, so they learn not just 'what' people think, but 'why' they think that. The nature of effective deliberative dialogue is well understood by many practitioners, but further dissemination of good practice may be useful.

7.4.7 Considering greater independence from Government

Sciencewise-ERC is a government programme, run by the Department of Business, Innovation and Skills (BIS), and delivered by a private contractor (AEA). However, it is seen by many stakeholders as more than that, with an independent identity and wider mission. There are several issues about the independence of Sciencewise-ERC, and the dialogue projects it funds, from government raised in the study:

- Questions about the extent to which independence from government reduces the policy influence of public dialogue. The Sciencewise approach is that the process is managed and 'owned' by a government department so there is an implicit commitment to using the results in policy making, and to maximise capacity building within government. That commitment and learning is seen as potentially weakened if dialogue projects are more independent from government.

- Questions about the extent to which the Sciencewise-ERC relationship with Government limits the role that Sciencewise can take in pushing for Government action on the conclusions of public dialogue, ensuring that responses are made to the public, and agreements on policy are followed through.

- Questions about the extent to which Sciencewise-ERC can develop activities that contribute to the development of a wider movement around public engagement in public policy, beyond the specific focus on public dialogue related to national government policy in science and technology.

- Questions about the extent to which Sciencewise-ERC itself can develop projects and programmes that are less closely linked to Government current policy priorities. To gain Sciencewise-ERC funding, dialogue projects need to be linked to a specific policy in a specific Government department, which is seen as potentially limiting the opportunities for wider and more upstream topics to be the subjects of public dialogue.

- Questions about the use of independent contractors to deliver Sciencewise-ERC funded projects. The Sciencewise approach has been to use this mechanism to demonstrate the independence of dialogue processes from government, not least to reduce suspicion of government manipulation and distrust of the process. For some, the lack of government involvement in direct delivery reduces the potential for capacity building.

Independence from government was seen to compromise influence as much as closeness to government was seen to risk neutrality. This is another issue that affects public and stakeholder trust in Sciencewise-ERC and the projects it funds. It may be that development work with stakeholders to clarify and develop working practices is needed, to ensure that whatever the level of closeness to government provides the desired results and avoids the dangers.

7.4.8 Extending approaches to public dialogue

Sciencewise-ERC has developed a specific approach to public dialogue to meet its overall aim of inspiring and informing public policy on science and technology. There is strong evidence of the success of public dialogue projects based on the Sciencewise-ERC approach 'informing' policy, although less evidence of 'inspiring' policy.

Questions have been raised in this study about the rigidity of the way the Sciencewise-ERC approach to dialogue has been delivered. Suggestions and questions include:

- Suggestions for greater flexibility in design and delivery to allow for more creative dialogue methods that enable the public to work more collaboratively with experts and policy makers to come to joint conclusions, rather than experts simply providing input to dialogue and policy makers simply listening and using the outputs of dialogue.

- Suggestions for moving beyond a sole focus on government convened processes to find ways to link more effectively with other participatory processes that could bring in new and different ideas from different publics (e.g. grassroots activities).

- Suggestions for a focus on topics which specifically contribute to changes in the governance of science and technology to make it more open to scrutiny and publicly accountable, such as consideration of priorities for research spending, risk and regulation.

The existing approach to public dialogue promoted and supported by Sciencewise-ERC has clearly been successful in its own terms, and there is a great deal of enthusiasm among stakeholders for the way it has been operating, but there is clearly also pressure to build on that approach to continue innovation and development to meet changing needs and expectations.

7.4.9 Strengthening Sciencewise-ERC support for public dialogue projects

Overall, the Sciencewise-ERC support for public dialogue projects was highly regarded and seen to have added significantly to the quality and success of projects, as well as contributing to capacity building in government and among practitioners. The model of support developed by Sciencewise-ERC, of funding plus one-to-one advice from an experienced Dialogue and Engagement Specialist (DES) is also seen to be highly successful.

The problems identified need to be seen within that wider context, and understood as a need to address some specific problems and build on what has worked well. The problems include:

- **Better follow up after dialogue projects**. The concerns here were twofold. First, the need for follow up with public participants after the dialogue events to explain the influence of their input and to take engagement forward. Second, the need for follow up on the influence of the dialogue results on policy, to identify influence (or not) and report back to public participants and other stakeholders. Good follow up was seen as an effective way of tackling distrust and cynicism about public dialogue.

- **DES influence on dialogue projects**. Currently, the DES acts as a mentor, advising the departmental manager who is responsible within government for the management of the project. There is some lack of clarity about the extent to which the DES can insist on good practice, using Sciencewise-ERC funding as leverage, or whether the DES role is limited to advice, which the departmental manager may take or not. The extent of the DES role in relation to ensuring policy influence and on the involvement of experts and NGOs have been particular concerns.

  The nature of the DES role is linked to Sciencewise encouragement of departmental 'ownership' of dialogue projects funded by Sciencewise-ERC to encourage responsibility and capacity building in government. DES involvement in projects has extended significantly over time; initially, the DES stepped back once the external contractor was appointed but they now stay involved until the dialogue events have been completed. However, clearer guidance on DES influence and longer term links, particularly on policy influence, may now need to be developed.

- **DES and practitioner conflicts of interest**. Potential conflicts of interest were identified between DESs who were developing projects with government, being commissioned by Sciencewise to advise government on projects and (sometimes in parallel on other projects) being part of teams assembled by external contractors to deliver dialogue projects. Although it was recognised that public dialogue is a small field with few experienced practitioners, there is a growing demand for clarity, transparency and safeguards to avoid conflicts of interest. Since the evaluation research was completed, actions have been taken to address DES and practitioner conflicts of interest.

- **Better links to government departments and policy**. There was interest in Sciencewise identifying topics of policy interest and targets for policy influence, being more explicit about the need for policy makers to be involved in public dialogue projects, and doing more to ensure wider acceptance of public dialogue across government.

  Although priority topics were identified when Sciencewise was established, in practice Sciencewise has responded to requests for help rather than promoting ideas. More effective links with policy makers in government, both within and beyond individual public dialogue projects, are likely to be needed in future.

- **Better provision of back up resources**. The Sciencewise-ERC website and communications activities were identified as having particular problems: the website in particular was seen as difficult to use and not holding sufficient relevant information. Work on improving these services was considered vital both to supporting projects and to enhance Sciencewise-ERC reputation and visibility more generally to support awareness-raising and capacity building. While extensive developments of the website were undertaken during and after the period of the evaluation research, there remained scope for more emphasis on the 'knowledge hub' role for Sciencewise-ERC.

7.4.10 Strengthening strategic planning for Sciencewise-ERC

Three main factors were identified in the evaluation research as requiring attention in future strategic planning for Sciencewise-ERC:

- Uncertainty about funding and therefore contractual arrangements have led to a degree of short-termism in planning.

- Lack of monitoring and evaluation of the reach (audience types and numbers) or value of Sciencewise-ERC events and publications.

- Lack of leadership, particularly on issues of good practice and future directions for public dialogue on science and technology policy issues.

Initial problems for Sciencewise-ERC around a lack of leadership on good practice and on future directions for public dialogue were addressed by the appointment in December 2009 of a Head of Dialogue, the establishment of new initiatives to consider the role and nature of public dialogue in the changing policy and funding context in 2010, and more effective working with the Sciencewise-ERC Steering Group. Early practical problems around the monitoring of the reach and value of Sciencewise-ERC events and publications have also been addressed with the establishment of new systems. A lack of certainty about funding continues to hamper long term planning.

7.4.11 Potential future threats to public dialogue

By far the biggest threats to the future of public dialogue identified in this study were the related issues of reduced funding (as a result of general public sector funding cuts), and lack of political will to make the case for public dialogue (including the importance of continued funding). For some, however, reduced public funding was an opportunity: public dialogue being seen as particularly valuable in helping policy makers manage risks effectively by making the 'right' decisions in difficult times.

7.5 What have we learnt from this evaluation that is new?

This evaluation has identified significant new evidence about the impacts and effectiveness of the Sciencewise-ERC programme and of the dialogue projects supported by Sciencewise. This evidence comes from new analysis of the independent evaluations of dialogue projects, and feedback from a wide range of Sciencewise's stakeholders. In particular, there is new evidence about the role of Sciencewise-ERC in increasing the quality as well as quantity of projects, and in spreading awareness, understanding and support for public dialogue in government.

The establishment of the Sciencewise-ERC as a centre with a specific model of support for innovation in public engagement in policy (particularly through the one-to-one support to project managers from Sciencewise DESs) was also valued in its own right.

The study has also resulted in a number of key new insights, particularly:

- The impacts of Sciencewise projects on creating 'better' policy in some highly contentious areas of new scientific and technological development
- The impacts of Sciencewise projects on policy makers, public participants, experts, scientists and other stakeholders involved in projects
- Good and innovative practice, as well as challenges and lessons learnt, in developing, designing and delivering public dialogue projects
- The impacts of the Sciencewise-programme on the number, quality and success of public dialogue projects on science and technology
- The value of Sciencewise support, in terms of funding but also advice and guidance, to those involved in designing and delivering the projects
- The growing demand, awareness and skills for public dialogue in government
- The growing links and relationships with stakeholders beyond dialogue projects
- A growing profile and reputation for Sciencewise-ERC
- The Sciencewise role in championing public dialogue and developing the field
- Increasing evidence of the impacts of public dialogue.

The evaluation has also identified a number of key gaps and future challenges (summarised in section 7.4) which need to be addressed in the near future, both for Sciencewise as a programme and for the field of public dialogue more generally.

There are four issues that have emerged from the evaluation research and analysis that seem genuinely new, and provide unexpected insights into views on Sciencewise-ERC activities:

- Evidence of the extent of positive support for Sciencewise-ERC and its work across all types of stakeholders, within and beyond government. Day to day feedback tends to focus on complaints and concerns, so the strongly positive feedback overall was unexpected.
- Evidence of the level of commitment and enthusiasm for Sciencewise principles and the approach to public dialogue as a way of enabling the public to influence national policy, especially from practitioners and external stakeholders. This enthusiasm is a resource that could prove invaluable if Sciencewise is able to build on that in future.
- Evidence from departmental project managers and senior policy makers that the support and advice provided by the DES team, and the Dialogue and Evaluation Managers, is valued at least as much as the funding. Funding is clearly an incentive for government departments to work with Sciencewise in the first place, and the extent to which support and advice would be valued with no funding would need to be confirmed, but it is unexpected feedback that the advice is valued so highly. This too could be useful in planning and prioritising future developments in Sciencewise services.
- Evidence that Sciencewise is not just contributing to the number and quality of public dialogue projects, and to making public dialogue more visible and acceptable in government, but is also contributing to the development of the field through support to practitioners. The support is valued by practitioners both through the Sciencewise advice and support, and thus acting as a 'critical friend' on project design, delivery

and evaluation, but also in providing opportunities through these projects (and supporting departmental projects managers to take some manageable risks) to innovate and experiment with methods and framing.

These somewhat unexpected findings may help in prioritising activities within the next stages of Sciencewise development.

7.6 Recent changes and next steps

The research for the evaluation was concluded in September 2010. Planning and development for Sciencewise-ERC has continued, with some changes to the arrangements outlined in this report. The main structural change to the programme was the appointment in December 2009 of a new Head of Dialogue (Lindsey Colbourne), to work alongside the Programme Director in AEA (Alan Mercer) in the Sciencewise-ERC management team. This new role was to provide strategic direction and leadership particularly on good practice and future directions for public dialogue.

The Head of Dialogue developed a set of priority objectives to provide focus for the work from 2010 to March 2011, as outlined below.

The overall aim for Sciencewise-ERC remained the same: to create excellence in public dialogue to inspire and inform better policy in science and technology in the UK.

Objective 1:
Support the current five public dialogue projects and stimulate 4-8 new flagship public dialogue projects of different types.
The 'current' five dialogue projects: Synthetic Biology (BBSRC), Food-GM (FSA), Geo-engineering (NERC), Low Carbon Communities Challenge (DECC), Animals with human material (DH & AMS).

Objective 2:
Become an opinion leader and trusted source of information in the role of public dialogue (the process and outcomes) in evidence-based policy making involving science and technology

Objective 3:
Have started to embed appreciation of public dialogue in the day to day work of up to six Whitehall departments, government initiatives, devolved administrations and agencies through provision of a range of tailored guidance, tools and support

Objective 4 (overarching):
Good governance and accountability of the Sciencewise-ERC initiative, particularly through the website and communications that reflect the needs of users (government, science, engagement and public)

It will be noted that these priority objectives directly address many of the issues identified throughout this evaluation study as requiring further activity in future. The detailed findings from this study have been fed into various internal discussions including presentations to the Sciencewise-ERC Steering Group (in July 2010) and the Sciencewise-ERC Management Team (August 2010). Findings have also been presented at various Sciencewise-ERC stakeholder workshops during 2010.

Further evaluation studies will be undertake over the coming months to monitor progress on these objectives, and on the concerns and challenges raised in this report.

7.7 Conclusions

In general, the evidence in this study is clear that Sciencewise-ERC has had major impacts on the number and quality of public dialogue projects in science and technology and their influence on policy, and has raised the profile of public dialogue in government. The impacts of the projects and the wider programme activities are clearly very closely linked, especially in relation to spreading awareness and capacity building around public dialogue to improve public policy in science and technology.

Overall, the Sciencewise-ERC is seen as a remarkable programme that has achieved a great deal in a relatively short time. The challenge, for many stakeholders interviewed, was how this work could continue to develop and be built on in future.

Feedback from stakeholders has been a mix of highly enthusiastic support for the impacts and achievements of Sciencewise-ERC in general, and quite trenchant specific criticism, often from the same people. Although there are many suggestions for change and improvement, they are largely around building on what Sciencewise has achieved and is doing, rather than proposals for significant changes.

There are some difficult dilemmas here, including how best to influence policy and achieve capacity building without being compromised by being too close to government, and how to ensure that public dialogue is not used to manipulate public opinion or justify existing policy positions.

These dilemmas continue and can be tackled within the context of the overall findings of this study that suggest that Sciencewise-ERC is already achieving a great deal in establishing public dialogue as an effective way of hearing authentic public voices on highly controversial subjects. It is still very early days, there are changes and improvements that need to be made, but there are already achievements to celebrate, and some strong foundations on which to build.

The continuing development of Sciencewise-ERC remains work in progress. We therefore welcome comments and suggestions on this report and the issues it raises. Please contact Diane Warburton, Sciencewise-ERC Evaluation Manager, at diane@sharedpractice.org.uk; and Alan Mercer, Sciencewise-ERC Programme Manager, at alan.mercer@aeat.co.uk.

Diane Warburton
May 2011

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