Sciencewise Evaluation Update 2014

July 2014

SUMMARY

The annual evaluation review for 2013 has now been completed. As agreed by the Steering Group, this focuses primarily on the impacts of dialogue projects and related Sciencewise activities (e.g. support, advice, reputation, reach). Evaluation research has included 37 interviews with project managers and policy people in public bodies running projects, a review of recent evaluation reports, follow up to track other impacts and thematic analysis.

Full reports of the findings will be published later in 2013. This note focuses on the evaluation findings on the role of Sciencewise in providing support and guidance to completed dialogue projects (four completed in 2013, plus revisiting 10 completed by 2012). *Numbers in brackets refer to the reference number of the interview cited.*

- **Funding and advice valued**. As in previous years, the funding and advice provided by Sciencewise were both seen as important in enabling public dialogue projects to happen. Funding was slightly more important to people in 2013 than in 2012, with advice remaining very important.

  Some stressed the importance of the funding particularly: "Sciencewise funding very influential in making the project happen ... in current climate funding most important" (Landscapes 17).

  More often, it was both funding and advice that were important; one said what was important was "Money. And advice on how to set up and run a project like this. We were constantly turning to Sciencewise" (SynBio 28); "Funding important - can't do anything without it, but advice, expertise, knowledge, experience" were also vital (PPE 36).

- **Sciencewise support essential to projects**. Many said they would not have done the project without Sciencewise and, as previously, the few that would have gone ahead anyway said the result would not have been as good without Sciencewise input.

  In some cases, Sciencewise prompted the project in the first place (Open data 4); more often it was "very influential in making the project happen" (Landscapes 17), "getting the ball rolling" (Mitochondria 9) and that it "started this idea and put it into action really" (Energy 2050 24).

  Generally, the input of Sciencewise was valued at every stage (Mitochondria 9), with "constant support all the way through ... without funding not sure we could have done it ... but it wouldn't have been nearly so good without the ongoing support" (PPE 11).

- **Most valuable advice and support**. The elements of support mentioned most often were specific advice to help shape the overall direction of projects and clarify the key focus (Cambrian 13), help with procurement (Mitochondria 10), with detailed design and delivery (Mitochondria 10, SynBio 28), with evaluation (Mitochondria 9) and - most often - advice on working with stakeholders (Cambrian 14), particularly establishing oversight groups and other ways to support diverse stakeholder input (Mitochondria 9, PPE 36).

  The neutrality of the third party role was valued (Mitochondria 10), and independence (geoengineering 37), with the external perspective giving 'validity' (Energy 2050, 25), 'kudos internally' (SynBio 26), and making the process 'more robust' (PPE 11), with support being 'invaluable' and 'exemplary' (Water 15).

The style and approach of Sciencewise personnel were valued in terms of flexibility and responsiveness (Water 15), pragmatic, helpful and harmonious (LCCC 29), and making the whole project 'pain free' (Water 30).

People also valued the links Sciencewise provided to previous and other projects, providing a 'UK-wide perspective' (Landscapes 19) and "got us to think beyond our immediate sphere of interest and world" (Landscapes 17).

More generally, several mentioned the assurance that "we were following best practice" (Water 15). The criticisms tended to focus on administrative burdens, such as too much paperwork and contracts (Energy 2050, 24), and the need for simpler language (Landscapes 19).

- **Recommending Sciencewise and public dialogue**. Every interviewee asked said they would both work with Sciencewise again, and recommend them to colleagues. One said "I think an organisation would be silly not to involve Sciencewise even if got a big grant from elsewhere, due to their knowledge and experience" (ACHM 20); "having expert advisers on your side" (Mitochondria 8).

  Not everyone would recommend Sciencewise or dialogue in all circumstances. Sciencewise could be seen as requiring 'gold plating': "offering the best of all possible worlds but not for the particular world of this harassed civil servant ... little bit of a counsel of perfection" (Mitochondria 8).

  The same person, however, also stressed the need sometimes, with a particularly challenging issue, "to pause and do something more deliberatively ... taking time now will save time later e.g. consultation on GM crops - pressure on consultation fatally undermined and put back the policy. Rushing at something had calamitous consequences" (8).

  Several felt that Sciencewise did not make the case well enough about the value of savings later by taking time to do dialogue and do it well. They also said the "virtues [of public dialogue] seen to be self-evident ... [Sciencewise] needs to reach out to the unconverted" (8).

  Building on recommendation, the willingness of some of those who have been involved in projects previously to work with Sciencewise in future to promote public dialogue was tested: 14 individuals were willing to do this in future, including senior policy leads in Government and other public bodies - one said "one good turn deserves another" (Water 30).

- **Sciencewise insufficiently known**. The most common criticism of Sciencewise was that not enough people knew about it. This was felt even more strongly than in past evaluation research - beyond being simply odd that Sciencewise was not well known, there was a real sense that it *should* be better known (a sense of 'why had no-one told me about this before'), and that it was a failing of the programme not to have achieved that.

  People said Sciencewise was "not as well known as it should be" (Open data 4); "people don't know it exists" (PPE 11); "need to make more organisations aware of Sciencewise" (PPE 12); need to raise the profile which is currently "under the radar" (Landscapes 17) and the "problem is that Sciencewise doesn't have a particularly high profile" (SynBio 27).

  In particular, Sciencewise was "not well known at senior levels" (Wellbeing 7) and "Need high level support for this kind of thing so need to ensure that is there" (SynBio 26).

The lack of profile seemed to create some suspicions and uncertainty about what Sciencewise does, with people reporting that they are "confused about its status" and whether it is in or out of Government, as well as it being "slightly obscure" and not very "transparent" (Wellbeing 7). It was described as taking "a while for people to get their heads round it - perhaps a clearer message about what Sciencewise is would be helpful" (LCCC 29).

- **Poor sharing of findings and learning**. The role of Sciencewise in sharing the results and learning from its project work was criticised: "What they are not good at is disseminating the findings ... Sciencewise could be much better known as could their findings" (PPE 36). One asked the direct question: "What is Sciencewise doing across Government in terms of wider learning as a result of this [project]?" (Water 15).

  The failure to build on past findings and lessons was stressed: "Tend to go from project to project as though nothing happened before" (PPE 36).

- **Leadership**. Some felt that Sciencewise should respond to the priorities of other organisations, but there was also interest in Sciencewise taking more of a leadership role itself both in leading on dialogue topics and on the wider message about public dialogue: "Sciencewise should push the agenda more" (Open data 4).

The strength of Sciencewise in supporting public dialogue is based on its continuing reputation, status and independence, and the level and nature of its profile affects how it is seen and is valued. It is already influential in some cases, but becoming more established and recognised, and more transparent and open, could strengthen its reputation and increase the influence that Sciencewise has within and beyond Government.

This summary was circulated to the Sciencewise Steering Group prior to their meeting on 5th February 2014, to feed into the discussions at that meeting on the strategic priorities for Sciencewise activities for the coming financial year 2014 - 2015.

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NOTE ON ABBREVIATIONS AND CODES

Throughout this report, including the Summary, key points and quotes are identified with a number (which identifies the interviewee) and an abbreviated version of the name of dialogue project in which the interviewee was involved. In order to preserve anonymity, individual names are only given where express permission has been given to do so.

The abbreviations used, and related full project names are as follows:

ACHM - Animals Containing Human Material, Department of Health via Academy of Medical Sciences

Cambrian - Cambrian Mountains, Countryside Council for Wales (now Natural Resources Wales)

Energy 2050 - Energy 2050 Pathways, DECC

Geoengineering - as it, NERC

Landscapes - Landscapes and Ecosystems Futures, Scottish Natural Heritage, Countryside Council for Wales, GO-EAST

LCCC - Low Carbon Communities Challenge, DECC

LWEC - Living with Environmental Change Citizen Panel, ESRC / LWEC

Mitochondria - Mitochondria replacement, HFEA

Open data - as is, Research Councils UK

Planet - Planet under Pressure, Research Councils UK

PPE - Patient and public engagement, Health Research Authority

SynBio - Synthetic Biology, BBSRC / EPSRC

Water - Water catchment management, Defra / Environment Agency

Wellbeing - Ways to Wellbeing, Department of Health / new economics foundation

1. BACKGROUND TO THIS REPORT

Throughout the whole of the current programme period, 2012 - 2015, the overarching objective of the Sciencewise programme has remained as follows, to:

improve policy making involving science and technology across Government by increasing the effectiveness with which public dialogue is used, and encouraging its wider use where appropriate.

The Sciencewise programme has also continued to be a major element of the work supported by the Science and Society team in BIS (the Department for Business, Innovation and Skills).

Evaluation has remained an important element across all Sciencewise work, covering independent evaluations of all public dialogue projects co-funded by Sciencewise plus evaluations of the Sciencewise programme. The first full evaluation of the Sciencewise programme was published in May 2011, as a comprehensive evaluation of the whole programme since its formation. A further detailed evaluation, focusing largely on the impacts and lessons from the dialogue projects co-funded by Sciencewise, was undertaken in November 2012 to February 2013, and published in March 2013.

Since then, evaluation activities have been more varied, and this report covers the results of several different elements of evaluation work carried out over the year 2013 - 2014, covering Sciencewise activities reported during that time. There have been three different strands of evaluation activity, each using different research and analysis methods: formal evaluation research, the development of a theory of change, and an interim impacts review.

i) **Formal evaluation research**. The main focus of the formal evaluation work, as described in the paper to the Sciencewise Steering Group for their meeting in October 2013, has been on the impacts and learning from public dialogue projects and related Sciencewise activities (support, advice, reputation, reach).

   The research for this element of the evaluation work largely consisted of 37 new interviews between November 2013 and February 2014. Interviews were with project managers and policy people in public bodies running the four projects completed in 2013, plus revisiting the 10 projects completed by 2012 and covered in the previous evaluation report. Unlike previous years, individual interviews were not undertaken with the Sciencewise team, or with delivery or evaluation contractors.

   Evaluation research also included a review of recent evaluation reports and other documents, thematic analysis and reporting.

   This paper reports on these evaluation findings and aims to provide information on the five critical success factors identified at the beginning of the current programme in 2012, which were:

   1. Positive influence of public dialogue on Government policy and policy making
   2. Increased quantity and quality of public dialogue projects
   3. Increased willingness and ability of public policy bodies to undertake public dialogue (embedding)
   4. Increased awareness and understanding of public dialogue by public policy bodies and other stakeholders
   5. Increased recognition of the value of Sciencewise from key stakeholders.

This paper also draws together the findings already circulated internally on specific aspects of evaluation findings including:

- A summary background note for the Sciencewise Steering Group in February 2014, to feed into the strategic planning for 2014 - 2015. This note focused on the role, reputation and profile of Sciencewise in providing support and guidance to completed dialogue projects. This note was designed to support Steering Group discussions on strategic priorities within the overall Sciencewise budget for 2014 - 2015.

- Evidence summaries on the four projects completed during 2013, which drew together all the evaluation findings from this programme-wide evaluation research as well as the findings from the individual project and evaluation reports. The aim of these documents was to bring together all the detailed findings on individual dialogue projects in one place, and in much more detail than is possible in the project case studies (which also draw on evaluation findings). These were published during 2014.

- A paper on 'what has worked well and less well in dialogue projects' for the regular meeting of the Sciencewise Dialogue and Engagement Specialists (DESs) in April 2014. This was designed to support reflections on the practice of public dialogue, and lead discussions on the need for specific guidance on dialogue project design and delivery in future.

ii) **The development of a Theory of Change**. During 2013 - 2014, the Sciencewise Steering Group proposed that Sciencewise should develop a Theory of Change, to guide Sciencewise strategic planning and future evaluation work. A participatory process, led by the Sciencewise Evaluation Manager, was undertaken during 2013, involving the whole Sciencewise team, Steering Group and Citizens Group in various ways (e.g. workshops, interviews, drafting).

This process led to a Theory of Change framework that was agreed by the whole team in December 2013, and that fed in turn into the strategic planning paper put to the Sciencewise Steering Group in February 2014 and the detailed business plan for Sciencewise for 2014 - 15. The final Theory of Change papers were completed and circulated to all those involved, and published on the Sciencewise website, in April 2014.

One of the conclusions from this process was to identify the need for an independent evaluation of the Sciencewise programme during 2014 - 15. The planning for this was completed in June 2014, with a view to the evaluation starting in September 2014 and being completed by March 2015.

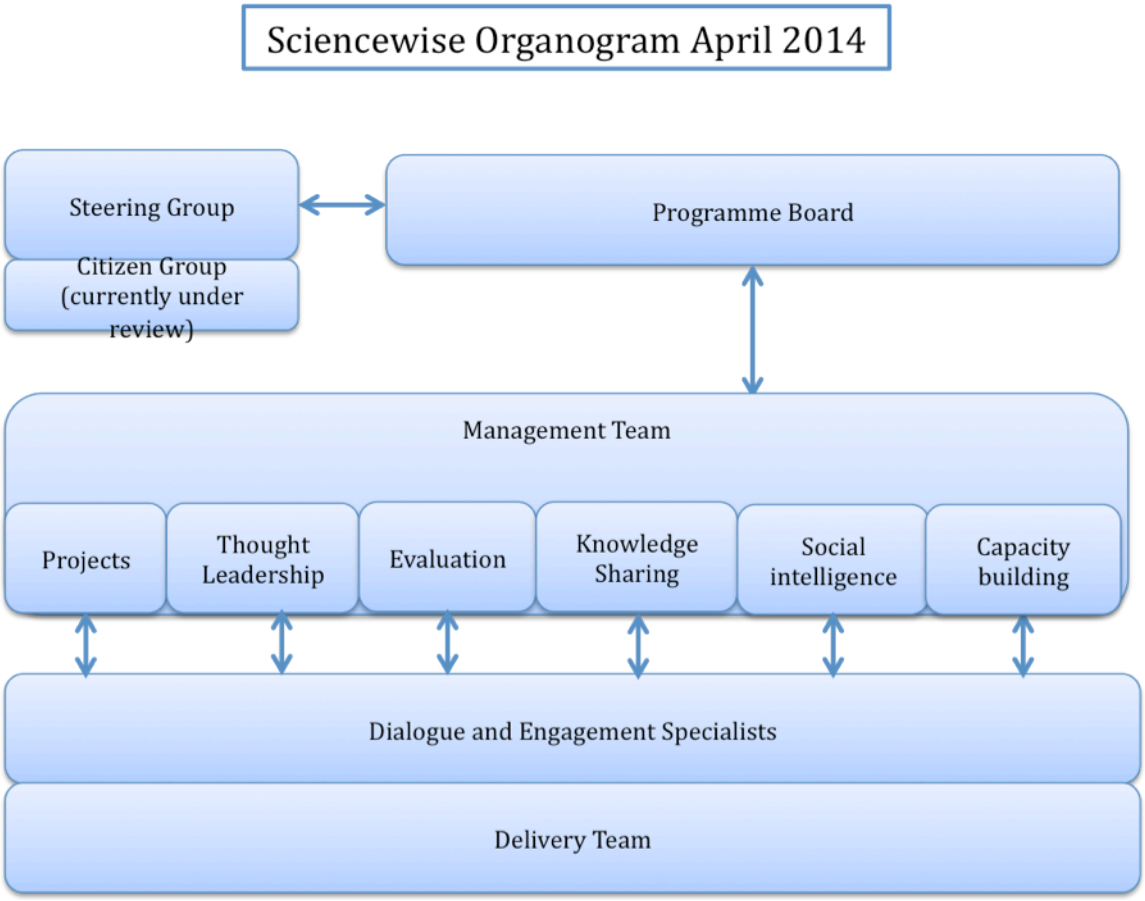
iii) **An interim impacts review**. A quick summary of the impacts of the Sciencewise programme between 2012 and 2014 was undertaken in May - June 2014, to feed into planning for a potential extension of Sciencewise funding from April 2015 to March 2016. This drew on the programme evaluation research in relation to project impacts, and also collated data from the Sciencewise team on other Sciencewise activities (e.g. the website, thought leadership, social intelligence). A report on these findings was provided to the Sciencewise Programme Board and Management Team in June 2014.

The remainder of this report draws together the results of all these activities to provide an overall picture of the Sciencewise programme during the period under review.

2. THE SCIENCEWISE TEAM AND RESOURCES

2.1 The Sciencewise Team

The overall internal structure of the Sciencewise programme is as shown in the following diagram:



The Sciencewise team changed during the year, with original team members Sue Hordijenko of the British Science Association and Edward Andersson of Involve being replaced on the Management Team. By April 2014, the full team was as follows (showing their organisations where the individual is ex officio):

Karen Folkes, Science and Society Team, BIS – Head of Sciencewise
Overall responsibility for strategy and direction for Sciencewise programme

Programme Board:
Sir Roland Jackson – Executive chair
Strategic lead for programme delivery and development
Alan Mercer, Ricardo-AEA – Programme Manager
Responsibility for programme delivery to time, quality and cost.
Simon Burall, Director of Involve – Head of Dialogue
Responsible for ensuring dialogue best practice across programme delivery

Alec Weir / Juliet Aharoni, Science and Society Team, BIS
Review and management across programme activities

Management Team:
James Tweed, Ricardo-AEA – Projects Manager
Projects area management
Amy Pollard, Deputy Director of Involve – Dialogue Manager
Thought leadership and capacity building areas management
Alex Humphris-Bach, Ricardo-AEA – Knowledge Sharing Manager
Knowledge sharing area management
Diane Warburton – Evaluation Manager
Delivery of good practice in programme and projects evaluation
Monica Lobo, British Science Association – Social Intelligence Manager
Social Intelligence area management
Jo Harris, Ricardo-AEA – Project Manager
Coordination and reporting of all tasks and activities

2.2 Overall financial resources for the Sciencewise programme

In summary, the budget for Sciencewise during 2013 - 2014 was £2.7 million: £1.2 million for the programme budget (as below), plus up to £1.5 million for individual public dialogue projects. The projects budget is held by BIS, with funding allocated to individual dialogue projects as each is agreed and approved.

During 2013 - 14, there was a slight shift in priorities in the programme budget (within the £1.2 million), as summarised in the table below that was provided to the Sciencewise Steering Group in February 2013.

Area of Programme Activity	2013-14 % of Management Budget	2012-13 % of Management budget
Implementing Dialogue – projects evaluation, oversight and reporting	16%	13%
Thought Leadership and social intelligence	17%	16%
Programme Evaluation	5%	6%
Raising awareness	23%	26%
Capacity building – support, guidance and advice to policy makers	35%	35%
Governance and Management	5%	5%

2.3 Resources for projects

Each public dialogue project supported by Sciencewise is developed through the following steps, each with specific resource allocations:

- **Stage 1**. This stage covers project development from initial contact (usually by a Dialogue and Engagement Specialist - DES) up to BIS approval to fund the project on the basis of an agreed business case.

  Figures for 2012 - 2013 and to end 2013 suggest an average investment of about 15 days per project in total to agreement on funding, taking account of projects that don't come to fruition, with about five days of Sciencewise support invested in total from initial documentation to agreed funding. The internal estimate for converting leads to projects is

4 leads : 1 project (February 2013 paper, p5). An agreed business case is followed by a Grant Offer Letter from BIS to the commissioning department.

This stage is unpredictable and can take many months (even years) from initial conversations to an agreed project and business case (see table below for some examples). A review of projects in July 2014 shows that:

- For projects approved since April 2012, the average (mean) amount of time from first contact to approval of business case has been 11 months, and this has extended to 31 months.

- For projects approved since April 2012, the minimum time from first contact to publication of the dialogue report has been 10 months, the mean has been 25 months and this has extended to 47 months.

- For projects approved since April 2012, the minimum time from approval of funding to publication of the dialogue report has been five months, the mean has been 13 months and this has extended to 32 months.

Some specific examples of timing from first contact are shown in the table below.

Project title	**Start of DES involvement (with initials of DES)**	**ITTs for delivery circulated**	**Project dialogue report / events completed**
Wales land use	1 June 2011 (DS)	October 2012	March 2013
Space weather	June 2011 (AC)	20 November 2013	Ongoing (2014)
Bioenergy	June 2011 (DS)	June 2012	December 2013
Nature Improvement Areas (NIAs)	June 2011 (DS)	December 2012	Ongoing (2014)
Mitochondrial Transfer	June 2011 (AA)	7 March 2012	February 2013
Stratified Medicine	23 August 2011 (AA)	24 April 2013	Events completed in January 2014

It may be that, in future, a more specific goal is identified for this stage of project development work in terms of capacity building, so that the way the project is developed explicitly provides for mentoring individuals in public bodies, which may in turn provide a clearer outcome for this investment even when the project does not come to fruition. In 2013, a couple of explicit mentoring relationships were developed, one of which led to a new dialogue project and one that did not.

- **Stage 2**. The second stage of project development, following agreement on the Grant Offer Letter, starts with procurement of delivery and evaluation contractors. Sciencewise advises on these stages and is involved in the assessment and choice of contractors, although all contracts are directly with the commissioning department. Even at this stage, there can be delays and sometimes projects approved never actually happen for various reasons - changes of staff, external changes affecting the policy environment etc.

  Following agreement of funding, there is a clearer 'average' amount of resourcing allocated per project to completion: 10 days for the DES and 3.5 days for the Evaluation Manager (plus input from the Projects Manager). This allocation covers all oversight and detailed support and advice on procurement of contractors, project governance (e.g. setting up an oversight group), detailed design planning and delivery, materials, and input and reaction

to formative and summative evaluation including attendance at any events and meetings, and sign off on all interim and final reports. The final evaluation report is usually completed two to three months after the publication of the project report, to allow for final evaluation interviews to cover the use of that report and any short term impacts as a result.

Key governance meetings for all projects include an initial inception meeting and a final wash-up meeting. The wash-up meeting is chaired by the Sciencewise DES and is designed to bring together all those involved in the project to share experience and learning among all those most closely involved. The first draft of the project evaluation report is provided as an input to these discussions, and the independent evaluator attends the meeting. A final project report and evaluation report are published on every project on the Sciencewise website as well as by the commissioning body for the dialogue.

There is some flexibility in this allocation of resources to take account of very large or long term projects but these resources are not seen to be generous. This support and advice continues to be highly valued by the organisations commissioning dialogue projects (see sections 4.4 and 4.5).

- **Stage 3**. After projects are completed, a project case study is published, usually two to three months after the publication of the independent project evaluation report. The production of project case studies is led by the Projects Manager and Knowledge Sharing Manager, with input from the Evaluation Manager and DES and approved by BIS and the project commissioning body.

  On some rare occasions (e.g. when further dialogue seems likely), there is further follow up but in most cases all formal contact between the Sciencewise DES and Projects Manager and those involved in projects ceases after the publication of the case study.

  To date, the final stage of contact with projects has been that the Sciencewise Evaluation Manager commissions follow-up interviews annually with the departmental project manager and those using the results (the decision and policy makers involved), to identify longer term perspectives on the project, especially on learning and impacts. The findings from these interviews are published in an annual summary of Dialogue Project Impacts. This follow up is resourced through the budget for overall programme evaluation.

3. THE IMPACTS OF SCIENCEWISE-FUNDED PUBLIC DIALOGUE PROJECTS

3.1 Introduction

This section summarises the impacts of the dialogue projects supported by Sciencewise, and the impacts of Sciencewise on the quality and quantity of dialogue projects being completed. Of the five key success factors agreed in 2012, all five were related to the impacts of individual dialogue projects directly and indirectly. The five original success factors were, in summary:

1. Positive influence of public dialogue on Government policy and policy making
2. Increased quantity and quality of public dialogue projects
3. Increased willingness and ability of public policy bodies to undertake public dialogue (embedding)
4. Increased awareness and understanding of public dialogue by public policy bodies and other stakeholders
5. Increased recognition of the value of Sciencewise from key stakeholders.

Building on these initial criteria, the analysis below considers the findings from the evaluation research in 2013 - 2014 to explore the impacts of the Sciencewise programme under the following three headings, chosen to meet specific priorities for information from BIS and from the Sciencewise Programme Board for 2014. The four headings are:

- The impacts of Sciencewise-funded public dialogue projects on policy
- The impacts of Sciencewise-funded dialogue projects on public bodies' policy making systems (to embed public engagement)
- The impacts of Sciencewise-funded dialogue projects on public bodies' knowledge and understanding of public dialogue, and
- The impacts of Sciencewise on the quality and quantity of public dialogue projects.

The commissioning, design, delivery and evaluation of individual public dialogue projects remains the largest element of the Sciencewise programme, and the area where it is possible to identify the impacts of the programme most readily. As noted above (section 2), each project is commissioned by the public body that will use the dialogue results, and each project has its own aims and objectives, set by that body in discussion with Sciencewise.

The role of Sciencewise in the individual projects is complex and varied - depending to some extent on the nature of the project, the Dialogue and Engagement Specialist (DES) involved (as each DES has a slightly different style and approach), and the nature of the topic - with the most controversial topics tending to require more input from the DES and others within the Sciencewise programme. The budget and timescale of the project are not always directly linked to the amount of investment Sciencewise is required to make in providing guidance and support to the commissioning body.

All projects result in the production and publication of a final project report, an evaluation report and a short 4-page case study. These continue to be among the most popular of Sciencewise publications (see section 9, especially 9.8).

Evaluation evidence demonstrates that none of these projects would have happened as they did without Sciencewise funding, support and guidance (see section 3.4). Although the projects are formally the responsibility (and therefore achievement) of the commissioning body, there is evidence (section 3.4) that the funding, advice and guidance from Sciencewise significantly affects the quality of the project. It is therefore considered reasonable to suggest that the impacts of the projects are also impacts of the Sciencewise programme through its project activities.

3.2 Impacts of Sciencewise-funded public dialogue projects on policy

Evaluation research during 2013-14 to follow up the impacts of completed public dialogue projects has identified extensive evidence of the impacts of those projects on policy development and decisions. Those findings are presented below, project by project.

Impacts on policy vary, from direct influence on decisions to a more generalised influence on the thinking of those developing policy and making policy decisions. The extent to which public dialogue results in 'better policy' is complex and contested. These debates and the value of public public dialogue in creating better policy, as perceived by those commissioning public dialogue projects, are considered briefly later in this report (see section 4.4).

The information is this section covers all projects completed between April 2012 and November 2013, plus impacts during this period from projects completed earlier. It presents a summary of the evidence gathered from those involved in commissioning the projects and using the results of the dialogue to develop policy, and from the independent project evaluations.

- **Public and Patient Engagement, Health Research Authority (HRA) 2013.** The HRA established this project as a new organisation with a mission to protect patients and the public in health research. The HRA had been tasked by Government to explore streamlining and simplifying the research approval process and removing duplication from the system from the perspective of the researchers. Talking with patients was not particularly new for the HRA, but talking to the general public face-to-face was quite new and different. The impacts on policy were significant.

    - "Feeding into the transparency agenda has been the biggest achievement ... complete consensus of patients and public who expect findings of clinical trials to be published and fed back to participants." (PPE 11) The HRA opened a wider debate on the transparency of research through publication of research findings, and sought further views on the line the HRA should take on the issue; the background paper for that debate built on evidence from the dialogue. The resulting HRA report 'Transparent Research', published in May 2013, refers directly to the public dialogue as informing the paper (p3), and includes a summary of the dialogue findings as an appendix.

    - The findings of the dialogue triggered the HRA development of guidance for researchers on 'Information for Patients at the End of a Study'. The need for more information at the end of studies emerged as a priority during the dialogue. The guidance was developed at the end of 2013 and was consulted on in early 2014 with a view to finalising the guidance. (PPE 11).

    - Patient Information Sheets are used by most health researchers. Dialogue findings have been incorporated into the development of the current HRA template for patient information sheets. Patients suggested that the template produced by the HRA for researchers for the Patient Information Sheet should include a new heading on 'What patient and public involvement has taken place?'. The HRA is now also building that into their guidance to encourage researchers to think about engagement early on. Again, this issue was raised specifically in the dialogue. (PPE 11)

    - The pharmaceutical industry were interested in the findings following the HRA presentation on the dialogue at the European Forum of Good Clinical Practice in 2013. With evidence from the dialogue, the HRA is working with the pharmaceutical industry to inform patients of findings including which arm of the study they were involved in. (PPE 11)

- The HRA is also responding to the issue from the dialogue around publication of research findings, aiming to balance public desire for openness without creating more bureaucratic hurdles for researchers. (PPE 11)

- In the longer term, the dialogue results were expected to feed into the revision of the Governance Arrangements for Research Ethics Committees. (eval report p73) The results have also been incorporated into the Research Governance Framework, being revised in 2014. (PPE 11)

- The findings were also being fed into other projects including HRA guidance following the Caldicott report on the confidentiality of patient data. (eval report p79).

- The National Institute for Health Research, having seen the results of the dialogue, was revising plans on training materials for patients, including recognising the need for more basic material than they had planned. (PPE 11)

The HRA also widely disseminated the results of the project, with the aim of widening the circle of influence beyond their own and their partner organisations. The results were disseminated internally and externally as follows:

- Presentations were made to the HRA Board, the HRA Confidentiality Advisory Board and at a half day session to staff and Research Ethics Committee members (PPE 11).

- Participants at the original dialogue events were invited to attend one of three workshops in September 2013 to hear the findings of the dialogue sessions and the survey.

- The project findings were disseminated widely by the HRA including (PPE 11):

    - an article in Pharma Times Online on 21 May 2013
    - presentation at the European Forum for Good Clinical Practice in London on 24 June 2013
    - presentations were also made at INVOLVE (the health participation organisation)
    - the International Clinical Trials Day in Liverpool on 20 May 2014
    - Great Ormond Street Hospital study day on 30 October 2013
    - Norfolk Public and Patient Involvement Group on 3 December 2013
    - Clinical Trial Service Unit, Participant Panel Meeting, University of Oxford on 4 December 2013
    - Department of Health
    - UK Research Ethics Development Group (UK REDG) covering England, Scotland, Northern Ireland and Wales on 20 August 203
    - R&D champions across the NHS in England.

- **Mitochondrial Replacement, Human Fertilisation and Embryology Authority (HFEA) 2013.** This project was established as the request of the Secretary of State for Health and the Secretary of State for Business, Innovation and Skills, who asked the HFEA in January 2012 to seek public views on emerging IVF-based techniques to prevent the transmission of mitochondrial disease, with support from Sciencewise (email from HFEA).

  As a result, the project fed directly into policy development and decision making, and there have been significant direct impacts on policy. The dialogue findings were a major element of the HFEA advice to Government considerations on whether to change the law to allow

the clinical practice of mitochondria replacement. The stages in the influence and impacts on policy have been:

- The HFEA agreed its advice to Government on 20 March 2013, concluding that the results of the consultation showed broad support for mitochondria replacement being made available to families at risk of passing on a serious mitochondrial disease. The HFEA advice specifically identified a series of safeguards which reflected the three conditions identified in the results from the public dialogue, and drew extensively on all the results from the consultation. The finalised public dialogue and scientific update reports were sent to Government on 28 March 2013.

- On 25 June, there was a debate in the House of Commons during which the Parliamentary Under-Secretary of State for Health (Anna Soubry) described the consultation on mitochondria as follows "In collaboration with Sciencewise, which has a key role in helping the public to understand complex scientific issues, the HFEA took many different approaches to ensure that it gathered public views on the issue", and the HFEA report included "the outcome of its public dialogue". She reported that the HFEA had advised the Government that "there was broad support for mitochondrial replacement being made available to families at risk of passing on a serious mitochondrial disease" and that it also advised that "if treatment were to be authorised by Parliament , it should be under certain conditions such as its being available only in licensed clinics" (Hansard col 64 - 65WH).

- On 28 June 2013, the Chief Medical Officer (Dame Sally Davies) announced that the Government (Department of Health) had decided that "Innovative IVF-based techniques could be made available to patients to help prevent serious mitochondrial disease in the UK". The announcement included specific reference to the public consultation and its conclusion of support, "subject to strict safeguards and careful regulation".

- On 1 July 2013, Anna Soubry made a further statement in Parliament that the Government "largely accept the advice contained in the HFEA's report of 28 March. We therefore propose moving forward towards laying regulations ...to allow mitochondria replacement techniques to prevent the transmission of serious mitochondrial disease, subject to strict safeguards ... We therefore intend to publish draft regulations for consultation in autumn 2013 with the intention that, subject to the views received, these would be laid before Parliament next year." As well as enabling women "who carry mitochondrial disease the choice to have genetically related children without risk of serious and life-threatening conditions. It would also keep the UK in the forefront in scientific development in this area". (Hansard Column 34 - 35WS).

Draft regulations were expected to be published by the Government for consultation in February 2014, followed by the introduction of a final version of the regulations for debate in Parliament later in 2014.

The project contributed significant value to the HFEA's role in policy making on this topic:

- Stakeholders saw "The value of the consultation as a means of reassuring politicians for whom the scientific and ethical complexity of the techniques represents too great a risk in the policy context." (evaluation report p101). The dialogue "produced a credible corpus of evidence facilitating and ... enhancing and enriching, the capacity of government to make an informed decision based on public intervention / input

regarding the regulation of techniques to avoid mitochondrial disease in clinical treatment." (evaluation report p5)

- The dialogue "provided a set of views that will be relied upon for years to come ... becoming a reference point and basis for educational and policy announcements based on evidence, and a model for regulation in other national contexts." (evaluation report p102)

- The project provided "Increased credibility for the HFEA" (evaluation report p102). Dialogue "protects the reputation of the organisation by minimising the chance of an attack on process ... lot of JRs [judicial reviews] are arguments about process ... [Public dialogue] makes the likelihood of a judicial review less ... if you spend a bit more time getting the consultation right you might avoid downstream costs like JRs - very expensive and unpredictable - easy to spend £100,000 on law without trying ... Get the consultation right and much else will follow. Get it wrong and you will be fighting a rear guard action, often with recourse to the courts." (Mitochondria 8)

- "We were able to fully answer the Government's questions on social and ethical issues" (Mitochondria 9)

- Using a variety of methods to engage with the public "Made decision making easier ... More secure because [our Board] felt they had a proper handle on what the public felt rather than relying on one method that might be open to criticism" (Mitochondria 8)

- **Cambrian Mountains Initiative, Countryside Council for Wales 2013.** This project followed up the initial work in Wales as part of the Landscapes and Ecosystems project (completed in 2011).

  This new project provided Countryside Council for Wales (CCW - now Natural Resources Wales) with the clarity needed to move forward, as a result of working closely with local people: The project "has provided clarity in terms of the vision of what we want to do going forward - and has given us the direction we needed in order to trial the delivery of PES [Payment for Ecosystem Services] on the ground". (Cambrian 13).

  More widely, the project has influenced the Environment (Wales) Bill going through the Welsh Government in relation to natural resource management. The Welsh Government confirmed they had used the results of the project, finding it "helps with overall evidence ... part of the background we were looking at in drafting the Environment Bill ... informed ... thinking generally" (Welsh Government 35). The Environment Bill is due to be introduced in 2015, and the White Paper was out for consultation from October 2013 - January 2014 (http://wales.gov.uk/consultations/environmentandcountryside/environment-bill-white-paper/?lang=en).

  The Welsh Environment White Paper focuses strongly on the ecosystem approach, includes proposals on Paying for Ecosystem Services (PES) with special emphasis on trials of new approaches and on water catchments; the ideas of developing pilots and focusing on water catchments emerged in the dialogue as potential priorities: the White Paper summary identifies innovative approaches that could be used as opportunities to deliver: "Potential examples include catchment trading schemes (particularly in relation to Payments for Ecosystem Services), and short-term trials of technical approaches to permitting which allow for technological innovation, and adaptive management approaches." (slide 15 of White Paper Summary, 2013).

The project partners also widely disseminated the results of the project, with the aim of widening the circle of influence beyond their own and their partner organisations. The results were disseminated internally and externally as follows:

- The project report was launched in July 2013 at the Royal Welsh Show, by the Minister for Natural Resources in Wales.

- One of the stakeholders involved in the dialogue hosted a day in July 2013 for the Welsh Government's natural resource management department, using the dialogue report as back up. (Cambrian 14)

- NRW presented the findings, with one of the farmers involved, at the Ecosystems Approach to the Next Century conference in Cardiff on 25 November 2013. This was a Welsh Government high level conference with the First Minister and the Natural Resources Minister. (Cambrian 14)

- The project was also used at an Ecosystems Knowledge Exchange Network meeting in Manchester in December 2013.

- A stakeholder day for the Cambrian Mountains Initiative on 7 November 2013 was attended by the Minister, who referenced the project

- **Geoengineering dialogue, NERC / EPSRC, 2010 - 2011.** Although this project was completed in 2011, and "it would not be valid to claim any cause-and-effect relationship" between the dialogue and recent developments around geoengineering research, "and their direct impact inevitably diminishes with time - yet their can still be 'widening ripples in the pond' on an interactive basis" (interviewee 37). On that basis, wider dissemination and use of the include:

  - The results of the dialogue were fed by NERC into discussions within the UN Convention on Biological Diversity (CBD) and the dialogue report is cited in the CBD 2012 publication on the global impacts of geoengineering on biodiversity, as is the importance of public engagement in the research and policy on the issue.

    In 2014, the Secretariat of the Convention on Biological Diversity (CBD) commissioned an update of their geoengineering review to assist international policy-making in this area, to follow on from the previous CBD Technical Report. Although the focus was primarily on the science "public acceptability and ethical issues were also important considerations - with my initial experience in those areas gained through involvement in the Experiment Earth Dialogue". (interviewee 37, email 24Jan2014).

  - The dialogue is cited in the UK Government View on Geo-engineering Research, issued by DECC in September 2012. This statement stresses that 'Research and ongoing dialogue with the public and other key stakeholders is vital to inform future policy and decision-making'.

  - Although they sponsored the public dialogue, NERC eventually decided not to fund geoengineering as a major research topic. However, the dialogue results are quoted in an internal NERC Scoping Study in 2012 on gaps and opportunities for research on climate remediation (geoengineering) from an environmental perspective. This study was further developed with other Research Councils, UK Government departments and the Met Office Hadley Centre and was published as the LWEC report on geoengineering. The LWEC report cites the dialogue (page 5) and is given as a

reference. Indeed, "the report is definitely within the context of being aware of public views".

In February 2014, LWEC reviewed all the geoengineering research they are currently supporting which "shows the topic continues to be kept under review". (interviewee 37) The LWEC report is Jones, C., Williamson, P., Jaywood, J., Lowe, J., Wiltshire, A., Lenton, T., Jones, A. and Bernie, D., (2013) LWEC Geoengineering Report. A forward look for UK research on climate impacts of geoengineering. www.lwec.org

The dialogue process and results were picked up by Cardiff University School of Psychology who "used it as a foundation for our studies. It is always cited in relevant policy documents". It was "very good and provided a very good foundation for further work" (Geoengineering 32).

- **Synthetic biology, BBSRC / EPSRC, 2009 - 2011**. BBSRC and EPSRC recognised in 2007 that synthetic biology could be an area that could be controversial with the public. Initial work in 2008 on the social and ethical challenges suggested that public dialogue might be an important approach to consider. (SynBio 26)

  The project has had significant impacts both on the developments in the field of synthetic biology and more widely as a significant contributing factor to the increasing focus by Research Councils on the concept of Responsible Innovation. These impacts continue. Specific impacts since April 2012 include:

  - The Chancellor's Autumn Statement 2013 announced a substantial amount of funding for synthetic biology. We "can't link that directly to the public dialogue but we wouldn't have had the confidence to move forward on syn bio without the dialogue" (SynBio 26). However, "The immediate economic benefits were very obvious. The Government stepped up funding for syn bio significantly. The public dialogue had an effect on David Willetts and the Treasury and there was a strong political shift towards this kind of policy area. So it had an impact on the progress and pace of work" (SynBio 28)

  - The Synthetic Biology dialogue fed directly into the Framework for Responsible Innovation, particularly the five key questions identified by the public participants:
    - what is the purpose?
    - why do you want to do it?
    - what are you going to gain from it?
    - what else is it going to do?
    - how do you know you are right?

    The Responsible Innovation Framework was launched on the EPSRC website in 2013 (www.epsrc.ac.uk/research/framework/Pages/framework.aspx). The information on the EPSRC website states EPSRC's responsibility to ensure its activities and research funded are aligned with the principles of RI. (SynBio 27)

    "Responsible innovation is a collective commitment of care for the future through responsive stewardship of science and innovation in the present" (page 36, Owen et al 2013),. "It has four elements: it is anticipatory (considering impacts that might arise); reflective (considering underlying purposes, motivations, uncertainties, risks, assumptions, questions); deliberative (opening up to deliberation through dialogue, inviting and listening to perspectives from publics and diverse stakeholders); responsive (with the pace and direction of innovation set through effective mechanisms of participatory and anticipatory governance)" (p37, ibid). The

development of the concept has been partly driven by "the desire to ensure that the 'mistakes of GM were not repeated again'" (p40, ibid).

'A Framework for Responsible Innovation' by Owen, R; Stilgoe, J., Macnaghten, P., Gorman, M., Fisher, E., Guston, D., in *Responsible Innovation. Managing the Responsible Emergence of Science and Innovation in Society* (2013) by Owen, R., Bessant, J. and Heintz, M. (eds).

- Synthetic Biology Research Centres. The dialogue fed into and directly influenced all EPSRC calls around synthetic biology activity. The dialogue was directly referenced in the reference file for calls to establish six multi-disciplinary syn bio research centres over two years, co-funded by BBSRC and EPSRC, and is shown as a related link on all web pages related to the centres. (SynBio 27) The reference directly cites the five questions that arose from the dialogue for scientists to answer (above).

  Each centre will run for up to five years (three starting in 2013 and three in 2014), with funding of around £15 million each - a total of £40 million spend in 2013 and the same in 2014. Funding was announced in June 2013.

- TSB work on synthetic biology. The dialogue results are feeding into Technology Strategy Board (TSB) work on Advancing the Industrial Application of Synthetic Biology (with EPSRC), with funding of up to £500,000 for collaborative business-led projects designed to help address the challenges of commercialisation. TSB also accept the value of Responsible Innovation, as called for in the Roadmap, including amending the competition application form to require appraisals of potential social, ethical, legal, regulatory and environmental issues. (SynBio 27)

  On 25 November 2013, TSB announced that they, with BBSRC, EPSRC and the Welsh Government, were making up to £3.8 million available to collaborative, business-led projects to develop innovative standard tools and services to help the emerging synthetic biology sector move towards full commercialisation. (TSB website). Projects were expected to range from £100,000 to £350,000.

- The Government's Synthetic Biology Roadmap, which drew directly from and cites the dialogue extensively and is the basis for many of these investment decisions, is still a very live document. A Governance and Engagement sub-group has been established to maintain oversight of the continuing role of engagement in future. The global value of syn bio markets is in the region of £10 billion, according to the TSB website (2013).

  Initially, the dialogue project was influential in informing the broad make up of the independent panel of experts that produced the Roadmap report, the topics covered by the report (e.g. governance), and the dialogue featured as a case study.

- Internationally, the dialogue informed and continues to inform an ERANet in Synthetic Biology - ERASynBio. BBSRC and others have agreed to support around €15 million of research in the field, bringing together researchers from Europe and the US. This was a part of the commitment towards the UK building its leading international role in synthetic biology as recommended in the Roadmap (BBSRC Press Release, 2013).

- BBSRC and EPSRC have provided advice to the Lawrence Berkeley National Laboratory and UC Berkeley as they engage the public around a new laboratory facility for synthetic biology and to SynBERC in the UK and the Observatoire de la biologie de synthese in France as they plan their own dialogue projects. The dialogue was also

featured in the European Science Foundation publication 'Science in Society: a Challenging Frontier for Science Policy'.

The results of the synthetic biology dialogue continued to be disseminated by BBSRC and EPSRC. Since April 2012, examples of the work being done include (data from BBSRC update on impacts, May 2013):

- Presentations and discussions with the European Commission in The Hague, 2012
- ERASynBio First Strategic Conference, Switzerland, 2013

In addition, BBSRC references the dialogue in appropriate synthetic biology-related news stories and features such as 'Biology by design' that highlighted the work of some of the leading synthetic biology researchers in the UK.

- **Open Data, Research Councils UK 2011 - 2012.** The results of this relatively small and quick public dialogue project have been picked up and taken forward in various major developments since the project was completed:

  - The dialogue results were presented in person to the March 2012 meeting of the Administrative Data Taskforce (under the Cabinet Office), chaired by Sir Alan Langlands, on the wider use of administrative data for research and policy purposes. The Taskforce report was published in December 2012. This fed into the design for the establishment of four new Administrative Data Research Centres (ADRCs), which must "engage in training, capacity building and public engagement" (quoted from the call specification - www.esrc.ac.uk/_images/ADRC_Call_Specification_tcm8-26528.pdf). The importance of public engagement is stressed throughout, including the requirement for a public engagement and communications officer in each centre. The specification also refers to the need for "trust between data owners, researchers and other interested parties including the public" (p2).

    The ADRCs are part of the Administrative Data Research Network set up to facilitate research based on linked routinely collected data. The invitations for proposals, one each in England, Wales, Northern Ireland and Scotland, were given a budget of between £4 million and £10 million over five years.

  - The results were also fed into the Research Sector Transparency Board (chaired by the Minister of State for Universities and Science), which advises the government on how to increase access to research data. (RCUK information sent to the dialogue participants, 28 August 2013)

  - Glaxo Smith Kline were represented on the Oversight Group, and provided an expert perspective at two workshops. In October 2012, the company announced plans to enable researchers to request access to anonymised patient-level trial data for further research. The experience of the Open Data project (and other dialogue projects) demonstrated how the public can engage on this topic and influenced the thinking of the staff member involved in developing the GSK initiative. In May 2013 this system was launched and an independent review panel was set up, including a lay member of the public, to review the scientific rationale and relevance of the proposed research to medical science or patient care. (RCUK information sent to the dialogue participants, 28 August 2013).

  - The dialogue results have been used within RCUK to inform their own open data policy, particularly in relation to ensuring the governance and quality of research data. The RCUK policy will have significant influence on the accessibility of any data that

arises from the £3 billion invested annually by RCUK in research. (RCUK information sent to the dialogue participants, 28 August 2013).

- The results are also informing the two-year development process for the research policy of the Higher Education Funding Council for England (HEFCE) (Open data 4).

- The ESRC (with ONS) have run further dialogue events on sharing administrative data, with a report in March 2014[1]. These dialogues were guided by a Steering Group which included a Sciencewise Dialogue and Engagement Specialist, who continued to provide mentoring support on the new dialogues. These dialogues link closely to the establishment of the ADRCs (see above).

- The dialogue results continue to be disseminated and referred to. For example, an interview with Paul Maltby, Director of Open Data and Transparency in the Cabinet Office, In Civil Service World, 2 April 2013, includes a reference to the Open Data dialogue project case study, and a quote from David Willetts.

- **Landscapes and Ecosystems, Scottish Natural Heritage, Countryside Council for Wales and Government Office for the East of England, 2010 - 2011**. This project took place in three different areas in the UK. The results influenced the Defra drafting of the White Paper on the Natural Environment. A presentation of the project findings had been made to Defra during the drafting stages and the project was seen to have "built understanding of the value of local projects. It is not possible to be sure of cause and effect but [the idea of] local nature partnerships partly a result of this influence" (Landscapes 19)

  In Wales, discussions were held after the project concluded with the Welsh Minister for Rural Affairs, feeding directly into the development of the National Environment Framework - Wales, and Glastir, the new Wales Agri-Environment Scheme. The project also directly influenced the Welsh Government, who used the findings from the project and found it "helps with overall evidence ... part of the background noise we were looking at in drafting the Environment Bill ... informed my thinking generally" (Landscapes 35)

  In Scotland, the project influenced the Scottish Government Land Use Strategy (Landscapes 19). It also fed directly into Highland Council's climate change adaptation plan, and into local plans. The features and issues of concern raised by the community during the dialogue in Scotland were put into the plan and highlighted.

  Across the UK, the Ecosystems Knowledge Network, developed during and following the dialogue project by those involved, was launched in January 2012. The EKN was initiated following a Citizens Choices seminar on the dialogue project for Defra policy makers in February 2011, to meet a commitment in the Government Natural Environment White Paper (http://ekn.defra.gov.uk). The EKN is sponsored by Defra and the Scottish Government and shares knowledge about the practical benefits of an ecosystems approach in the management of land and water environments (http://ecosystemsknowledge.net/

- **Low Carbon Communities Challenge, DECC 2009 - March 2012.** This dialogue was itself a direct result of an earlier Sciencewise funded dialogue project - the Big Energy Shift. That dialogue concluded that community-level activities were needed to engage local people in activities to reduce energy use and carbon emissions.

[1] http://www.esrc.ac.uk/files/public-engagement/public-dialogues/dialogue-on-data-exploring-the-public-s-views-on-using-linked-administrative-data-for-research-purposes/

The Low Carbon Communities Challenge was a £10 million programme that provided financial and advisory support to 22 communities across England, Wales and Northern Ireland. It aimed to test community-scale implementation of low carbon energy technologies alongside community engagement and behaviour change initiatives. Each community was provided with £450 on average, of which at least 90% was allocated for expenditure on capital measures. The impacts on policy included:

- The DECC Minister stated that 'Community engagement in the energy sector will be vital to our vision of the development of energy in the UK in the coming decades' (DECC Community Energy Online Portal, November 2012). Examples included:
    - The Local Energy Assessment Fund (LEAF) announced in December 2011, demonstrated continued commitment to community energy projects. LEAF was a £10 million programme covering 236 communities.
    - From 2013, there was to be a greater emphasis on the role of communities in the Green Deal which provides loans for energy efficiency measures, including a pack to enable the delivery of Green Deal through communities. The results of the LCCC programme were passed to the Green Deal team.
- Learning from the LCCC programme has fed into the development of a DECC Community Energy strategy to be published in 2013. This includes the experience of working with stakeholders through a steering group which has fed into the development of the Community Energy Contact Group set up by the Minister.
- In March 2013, DECC published a report on the Role of Community Groups in Smart Metering-Related Energy Efficiency Activities, based on research conducted by the Energy Savings Trust. This report draw on, both, 'Information from DECC's Low Carbon Communities Challenge' and "Evaluation of the Big Energy Shift (DECC, Welsh Assembly Government, the Northern Ireland Executive, and Sciencewise)' (page 12).

- **Animals Containing Human Material, Academy of Medical Sciences (AMS) 2010.** This project was set up as the topic was an emerging issue that the Academy did not feel they could do justice to without some kind of public dialogue. They had done a previous public dialogue (Drugsfutures) and knew what it could provide (ACHM 20).

  The project was an integral part of the AMS work to develop recommendations on the topic. The dialogue results "completely framed the recommendations of the AMS Working Group to government on Animals Containing Human Material. Those recommendations have since been taken forward by the Home Office." (ACHM 20)

  The project was done to address the discontinuity of regulation between human embryo and animal experiments, with the aim of suggesting regulations and guidelines, and specifically to feed into implementation of an EU directive on animal research. Recommendations from the dialogue were broadly incorporated into the Home Office work - including the principle written into the guidance that the Home Office and the HFEA will consult each other rather than going down individual pathways. "The dialogue gave it a political weight it wouldn't have had otherwise." (ACHM 21)

  The Animals in Science Committee (ASC) was established by the Home Office in June 2013. The letter from Lord Taylor (the Lords Minister at the Home Office) setting out the duties of the ASC (under the Animals (Scientific Procedures) Act 1986 (ASPA) as amended by the recently transposed European Directive on animal research. The letter specifically asks the Committee to consider the public dialogue findings in the guidelines and in the

consideration of specific cases of specific cases of human admixed embryos in terms of which are uncontentious, which require greater scrutiny and which should presently not be licensed. New guidelines were due to be presented to Parliament in Spring 2014, into which the dialogue fed directly. (ACHM 34)

The AMS "used the dialogue outputs to frame subsequent discussions on the EU Directive on Animal Research, especially thinking about how animals might be used in future". It also provided "a positive case study from AMS to the development of the Concordat on openness on animal research, and enabled AMS to confidently sign up to that process" and thus strengthen that Concordat (ACHM 20).

More widely, the final dialogue report is cited by the Japanese government in their work on guidelines on the use of admixed embryos in research (e.g. insulin production in pigs), which directly use the categories recommended by the AMS, based on the conclusions of the public dialogue. (ACHM 34)

- **Water catchment project, Defra / Environment Agency 2012-13.** The Water Framework Directive requires the engagement of community stakeholders in planning processes. Defra and the Environment Agency established the public dialogue element of this major series of pilot projects on catchment-based management approaches to test ways of enhancing community participation with dialogue conceptual models. (ACHM 30).

  This was an unusual dialogue project as it was designed to incorporate a public dialogue element into several pilot areas being developed and evaluated in order to test a partnership approach to catchment based water management. The dialogue project funded by Sciencewise supported the work to experiment with methods to involve the public in the process for the first time.

  Richard Benyon, Minster for Natural Environment and Fisheries, saw the project has having "encouraging messages about the Government's aim to encourage engagement at the local level to inform improvements in the water environment both in terms of the Water Framework Directive and wider issues, which are determined by the concerns and priorities of local people" (http://ccmhub.net/category/blog/, 4 March 2013).

  Defra concluded that the project "did change the way in which policy is implemented - but didn't throw up anything that needed a new policy" (Water 15)

  The resulting *Guide to Collaborative Catchment Management*, published in August 2013 by Cascade Consulting, Collingwood Environmental Planning, eftec and YJRees Consulting, included a wide range of tools for collaborative working that future catchment based management planning could use, based on the experience of the pilots. These tools include numerous activities for working with the public including A River Story (providing people with the opportunity to review, comment and agree the outputs of working groups before their inclusion in an overall catchment plan using a multi-media approach), Catchment Line Diagrams (enabling evidence from across the catchment to be presented clearly and visually without needing GIS technical skills), Catchment Walkovers (to promote collaborative engagement with stakeholders and members of the public with diverse interests), Pop-up Workshops (taking engagement work out to the community, rather than trying to bring everyone together in one place at one time), Timelines (to track changes that have happened in the catchment area).

  The learning from all the pilots was also used directly to develop the new Defra policy framework: *Catchment Based Approach: improving the quality of our water environment*, published by Defra in May 2013.

The dialogue also had impacts in terms of affecting confidence that the work met local needs and would therefore continue to attract investment, Defra felt that the project gave "Greater confidence that resulting River Basin Management Plans will reflect local needs, and therefore be more likely to attract funding. The whole project achieved a cost / benefit ratio of 3 to 1 in terms of attracting investment" (Water 15).

In terms of impacts on local catchment plans, the evaluation report (Annex on public engagement, p16-17) suggests some influence to date (p18-19). For 6 pilots there had been significant influence on plans, development of projects and cross referencing to other plans. For example (eval report annex p19-20), the project had:

- "identified what people value about the River, what issues are important to them, how they would like to be involved in future projects"

- "guided the development of projects that are included in the Catchment Plan"

- "been helpful in shaping and prioritising all aspects of the plan"

- "Large influence. A whole new slant on the plan - access to the river was reinforced as a priority that had come up. Stakeholders had put flow and abstraction. What came up from the community was: flooding and draining and access (educational access for children and others). Also all sorts of little connections emerged: a couple of Parish Councils said they wanted to do something locally - this joined up with 'stream bank' work that the stakeholders had identified - engagement provided a way in, emphasising the 'open door' approach"

The overall project developed a Catchment Change Management Hub. Richard Benyon, Minister for Natural Environment and Fisheries, said, at a CIWEM / Defra conference on The Catchment Based Approach in February that the Catchment Change Management Hub was "an excellent example of how we can work collaboratively to share good practice' and that the 25 catchment pilots had made "tremendous progress" in a relatively short space of time. http://ccmhub.net/clare-delighted-with-praise-from-richard-benyon-at-the-ciwem-conference/

The learning from the project has also been disseminated more widely, including being used as an example of best practice in the Nexus Dialogue on Infrastructure Solutions for Water, Energy and Food, which is a joint initiative between the International Water Association (IWA) and the International Union for the Conservation of Nature (IUCN) (Water 30).

- **Ways to Wellbeing, Department of Health / new economics foundation, 2010 - 2011.** This project grew out of the Government Office for Science Foresight work on wellbeing. The two main impacts of the project were to contribute to the decision not to run a major public awareness campaign on mental health and wellbeing, and to feed into the development of a new major public dialogue project:

    - The dialogue was influential in the decision not to proceed with a proposed separate social marketing campaign that was being developed by a public mental health team in the Department of Health, potentially saving significant funds. A similar campaign, Change4Life, spent over £10 million on activities encouraging healthier lifestyles in one year.

"We identified that exhortation does not work to get people to act. Have to take account of the norms that people operate and their personal resources. Can't just superimpose on people. And policy makers did hear this." (Wellbeing 7)

- The new Wellbeing dialogue, started in 2014, is building on the relationships developed earlier with the new economics foundation alongside the Cabinet Office, Department of Work and Pensions and the Department for Communities and Local Government.

3.3 The impacts of Sciencewise-funded dialogue projects on public bodies' policy making systems (to embed public engagement)

The cultural and structural changes needed to embed public dialogue more fully in policy development and decision making systems in public bodies inevitably takes time, and can be affected by many different influences over that time, making it very difficult to prove cause and effect from a single source.

The original evaluation criterion developed in 2012 focused on the impacts of Sciencewise work, particularly funded projects, on the willingness and ability of public bodies to undertake public dialogue. This was seen to be more practical to evaluate against than the much broader concept of 'culture change'. It aimed to address the development of specific understanding of the practice and value of dialogue, alongside specific skills and experience - leading to increased willingness and ability to undertake dialogue. However, it has become apparent more recently that it makes more sense to divide this criterion into two - separating actual changes to public bodies' policy making processes and systems from increased knowledge and understanding of public dialogue.

This section therefore focuses on the impacts of projects on public bodies' policy making processes and systems to embed public dialogue and the next section (3.4) focuses on increased knowledge and understanding of public dialogue in public bodies.

Before considering the impacts of completed projects in turn, the evaluation research found that impacts on public bodies policy making systems were starting to be identifiable even in the planning stages of dialogue projects, particularly in relation to working with other stakeholders with shared interests.

The planning for public dialogue projects has often brings together disparate interests within and beyond a single organisation to work together for the first time. This has happened through the Oversight Group (where this involves wider interests) and through initial stakeholder meetings designed to help plan the public dialogue events (e.g. to advise on scope, key questions, sources for information materials). For example:

- The first Oversight Group of the Environment Agency's Communicating Risk project (early 2014) brought people from various parts of the Agency, Defra and Cabinet Office together, all of whom had an interest in risk management and communications but who had never worked together before. The focus on the public dialogue enabled them to think beyond institutional boundaries and interests and agree to use the dialogue to develop a joint understanding of what works for the public, and ensure that all the various materials are giving coherent messages using similar approaches (e.g. simply using the same colours and words to mean the same things).

- At the start of the Leap Seconds project, a workshop was run on 30 April 2014 which brought together around 20 different stakeholders who have been involved in the conversation about whether to keep or stop adding / taking away leap seconds to keep

time in line with the sun. The aim of the workshop was to help scope the dialogue, and consider the key questions for the public. Participants included people who write the programmes to add leap seconds, write almanacs which take account of leap seconds, people from navigation and astronomy and the person who looks after Big Ben. Although the discussions about Leap Seconds have been going on for 14 years, each participant had only ever met one or two others before. It was certainly the first time all these interests had been in the same room.

It will be valuable to follow these projects through to completion and beyond to assess the longer term impacts of these new relationships on future policy making within the public bodies in question. Some of the impacts of the dialogue projects summarised below also show the impacts of working with different stakeholders on future relationships as part of policy development and decision making systems.

More specifically, the experience of commissioning and running a dialogue often has significant impacts on the organisations involved, especially those commissioning the projects. Examples of these impacts include those provided below (in date order, with most recently completed projects first).

- **Public and Patient Engagement, Health Research Authority (HRA) 2013.** Following the public dialogue projects, the HRA developed a public involvement strategy to guide its own work, drawing on the results of the dialogue (the new strategy is cited in the HRA response to the Select Committee on Clinical Trials, p4). The HRA is also developing their communications strategy in response to the clear lack of awareness among the public about clinical trials. (PPE 11)

  As a result of the dialogue, the HRA has emerged "as a role-model in patient and public engagement" (eval report p71, 73), with the project having "established the HRA as a front-runner in public and patient engagement" (eval report p73).

  The evaluation report states: "At an organisational level, the project was seen to have made a significant contribution to the HRA's knowledge and understanding of *public* views of the approval and governance process in health research. This experience of PPE and the new knowledge it provided was seen as integral to organisational intelligence and the further and future development of the HRA's PPE strategy: '*The project has been massively informative and helpful in allowing the HRA to take PPE forward. It's also enriched all our understandings of communicating with public and patient groups, especially in raising an awareness of research*.'" (eval report p72-73)

  The evaluation report also states that the project's learning had "spread beyond the HRA. Two respondents for instance, spoke of how the learning emanating from the PPE project was prompting discussions in their own organisations in respect of patient and public engagement: '*It's definitely made us stop and think about our own commitment to public engagement and how to do it. It's really helped in that respect*.'" (eval report p73). "The PPE project was consequently perceived as significant not only in influencing and potentially defining the way with which the HRA will work but in showcasing this approach and this level of investment to other similar organisations: '*I'm sure there'll be a trickle effect. Others will sit up and take note of what the HRA has achieved*.'" (eval report p73)

  The evaluation concludes that one of the short-term impacts the project has had is "the influence of the project in engendering enthusiasm and new / further motivation among those who have come into its ambit for involvement in deliberative exercises as related to health research and beyond." (eval report p77).

The HRA learnt that "talking to the public is not a tick box but adds value to what we are doing ... it has enhanced our reputation as an organisation and we want to do more of it as a consequence" (PPE 11)

The HRA believed that the dialogue has "done a lot to raise the overall concept of ppi [public and patient involvement]" and the HRA is now working on a strategy to involve the public and patients more in the organisation's decisions "because of work with Sciencewise we have raised the profile in a real way that people can relate to and see" (PPE 11). "The process and the fact that we did this work has been extremely important for us as a new organisation in terms of establishing credibility. And the fact we got the funding and take ppi seriously. It means those with long standing in the field have bought into us - now see us as a key partner and we have really good strong partnerships" (PPE 12)

- **Cambrian Mountains Initiative, Natural Resources Wales 2013**. NRW has continued to work with one group of farmers that came together through the project to scope what they could do themselves to gain ecosystem benefits. This group has gone on to take the work forward themselves, including making a bid for funds from a new Welsh Government funding stream for active development of co-operative action on ecosystem services across the landscape. The bid was to manage the catchment differently. There are plans to work with another group of the farmers involved on water quality. (Cambrian 13, Cambrian 14) One comment was: "One of the principal benefits to the organisation arising from the dialogue was that it provided kindling for the fire - in the sense that we are in a much greater dialogue with the stakeholders now" (Cambrian 14)

  NRW itself has developed "A different way of doing things. It is subtle. As an organisation we are much more open to feeling all those trends and we always bring together the policy holders, the deliverers on the ground, people on the ground. We don't have silos any more ... That is a result of the Sciencewise model" (Cambrian 13).

  The dialogue has resulted in impacts on the individuals involved in running the dialogue, including: "Striking up relationships is really important ... Now I am facilitating a dialogue with one of the groups to develop a scheme. I have realised the importance of dialogue and how to do it as well as I can." (Cambrian 14)

  The dialogue also affected the approaches of other organisations involved. The Campaign for the Protection of Rural Wales has suggested that the dialogue by the CMI was an example for others, and everyone should be doing the same (Cambrian 14).

  Similarly, the Welsh Government saw the value of the approach: The "methodology would be interesting to use / repeat in future similar dialogues ... The overall approach of getting to grips with what people's attitudes were" (Cambrian 35)

- **Water catchment project, Defra / Environment Agency 2012-13.** The Environment Agency found that "more efficient and effective working at a catchment level would help overcome duplication. Silo working doesn't identify opportunities for synergies and multiple benefits but this project identified an approach that could do that. It achieved widespread acceptance that [we] had made an effective attempt to deliberate with local communities ... driven by the need to demonstrate local engagement can lead to more effective delivery" (Water 30).

- **Synthetic biology, BBSRC / EPSRC 2009 - 2011.** BBSRC has increasingly built public engagement and dialogue into its decision making systems since the Synthetic Biology dialogue and others (often co-funded by Sciencewise).

Public dialogue and engagement is now "a vital part of BBSRC's strategy which recognises that the full impact of bioscience will not be realised unless society is engaged. Actively undertaking public engagement activities and being responsive to public views about research and practice is instrumental to BBSRC as a publicly funded body. It is right not only for BBSRC to tell people about how it invests public money, but also to give them the opportunity to influence how it is invested in bioscience. UK bioscience benefits from a great deal of public and political support, and is trusted to deliver benefits for society, as well as the UK economy. By being open and transparent, allowing the public a voice in decision making allows BBSRC to help maintain this trust." (BBSRC statement on public engagement as part of 20th anniversary series, May 2014).

The public dialogue has also influenced how BBSRC work in a variety of other specific ways including the following.

- **BBSRC grant application processes**. BBSRC has reviewed how it asks its research community to consider its research in a wider context and has introduced new measures to encourage thoughtfulness and reflection as part of its ethical and social issues monitoring processes. All applicants will now consider ethical and social issues when they are applying for grant funding, rather than later in the process. Clearer guidance has been developed to help applicants explore the full range of possible issues.

  BBSRC explored the use of input from members of the public to help shape these changes but this was not found to be a practical option at the time. Adjustments were made on the basis of the findings from this as well as previous dialogues[2], "in direct response to participant feedback" in the synthetic biology dialogue. (SynBio 26).

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- **New public dialogues**. BBSRC has engaged with the public since its formation in 1994, when it ran the first consensus conference on plant biotechnology. Since then, BBSRC has run 14 dialogues and continues to develop the mechanisms by which public views are incorporated into policymaking and strategy including the current distributed Bioenergy Dialogue (also co-funded by Sciencewise), a dialogue led by Rothamsted Research (a BBSRC research institute - again with Sciencewise) and a recent dialogue around one of BBSRC's strategic priorities.

- **Training**. BBSRC have also developed a public engagement training course, open to all BBSRC-funded researchers, which includes elements focussing specifically on social and ethical dimensions of research. The training will help develop awareness within the research community of the social and ethical issues that their work raises and encourage engagement with the public with those topics. It draws directly on the Synthetic Biology Dialogue, for instance by featuring the 'five questions' from the Dialogue Report.

- **Work with research institutes**. BBSRC decisions about strategic investment in the eight research institutes it funds are based on an Interim Assessment Exercise. One of the

[2] All text in this section taken from BBSRC's *Synthetic Biology Dialogue - Impacts* report, May 2013; supplemented where shown by Sciencewise evaluation interview material.
[3] All text in this section taken from BBSRC's *Synthetic Biology Dialogue - Impacts* report, May 2013; supplemented where shown by Sciencewise evaluation interview material.

five key areas assessed was the achievements in, and plans for, public engagement. In recent years, BBSRC has encouraged its research institutes to change their approach to public engagement to be more dialogue-driven. This approach fed into the development of the Rothamsted Research public dialogue project started in 2013 and completed in March 2014, co-funded by Sciencewise, which was the first dialogue undertaken by one of these research institutes.

- **Energy Pathways to 2050, DECC 2010 - 2011.** The dialogue "affected the organisation as we usually push information out but doing this was much more two-way and less directional. More broadly we have taken into account the dialogue learning for future projects" (Energy 2050, 25)

  More specifically, the dialogue project was designed to develop and test My2050 (see below), to see if it was appropriate for public input on energy and climate change.

  My2050 is a simplified representation of the UK energy system, which allows users to explore different supply and demand-side options in order to reduce (by the year 2050) the UK's carbon emissions by 80% compared to 1990. The tool was developed by DECC and Sciencewise to enable the public to use the same data as in the more technically challenging Pathways Calculator. Since the completion of the dialogue project 2013, the My2050 tool was further developed and used:

  - Cardiff University further researched and developed the tool through six one-day workshops around the UK and with an online survey sample representative of the UK population (2,441 people) in August 2012. The Cardiff team concluded that "The My2050 tool is a unique and useful tool for engaging members of the public around energy future and energy transitions. It offers a positive basis for engagement based on solutions, rather than problems." (UK Energy Research Centre Briefing Note 11, December 2012). The research is reported in Transforming the UK Energy System: Public Values, Attitudes and Acceptability. Synthesis report by Karen Parkhill, Christine Demski, Catherine Butler, Alexa Spence, Nick Pidgeon, July 2013, for the UK Energy Research Centre. The research was launched at the Royal Society, 16 July 2013.

  - DECC has an international team working on the development of the My2050 tool to inform the global debate. including in India. South Korea and Taiwan have developed My2050 tools and other countries were also considering it. (DECC interviewee 24) It is also being used by others (including universities): "Can't talk highly enough about the My2050 tool and the activities that came alongside it, and the fact that we've been able to use it" (interviewee 33).

  - The British Energy Challenge was a DECC roadshow in 2013 which attracted 2,000 visitors in eight cities in England, and used the My2050 tool. The Big Energy Challenge was "a roadshow to discuss with communities the challenges facing Britain in powering its future - especially 'low carbon energy'" (DECC Review October 2013. The dialogue project had demonstrated how the My2050 tool could be used and that led to the design of the BEC events. Sciencewise provided mentoring advice on these roadshows (DES - Steve Robinson).

- **Landscapes and Ecosystems, Scottish Natural Heritage, Countryside Council for Wales and Government Office for the East of England, 2010 - 2011**. The Welsh Government concluded that the dialogue project had demonstrated that the "Methodology could be interesting to repeat ... getting to grips with what people's attitudes are" (Landscapes 35).

Scottish Natural Heritage (SNH) used the dialogue processes and resources as the basis for an online community dialogue pack, *Talking about our Place*, published in August 2012. SNH offers support and advice so communities can use the pack to run dialogue themselves, and so demanding fewer resources from SNH. They are now collaborating with the Association for the Protection of Rural Scotland (APRS) to work with 15 pilot communities in Scotland over three years, putting the community at the centre of the process.

The project, and the *Talking about our Place* pack, have raised the profile of SNH work in this field. In addition, two landscape partnerships in Scotland have used the pack as part of their consultation process.

SNH considered the dialogue "Demonstrated the relevance and usefulness of the approach to engagement. Hasn't changed what we do but has provided us with a way of doing it - a model for what we want to do and part of the evidence base for doing that kind of work. It demonstrates that you can engage with communities in this way and it works. We will engage in similar kinds of dialogue in future" (Landscapes 17).

- **Animals Containing Human Material, Academy of Medical Sciences (AMS) 2010.** The Animals Containing Human Material was the second major piece of public dialogue undertaken by the Academy with support from Sciencewise. Both have helped encourage a positive perception of the benefits of public engagement within the Academy. "There has been a shift in expectations of AMS Fellows, and more of them would expect to hear some kind of public views that five years ago" (ACHM 20)

  In 2012 the Academy's five year strategy made a commitment to encourage input from, and dialogue with the public, to ensure the hopes and concerns of wider society help shape its advice and choice of projects in future: "the Academy is very positive towards involving public voices. Shortly after the public dialogue we developed a five year strategy and involving public dialogue in research is one of the objectives of that. So the aim is to have some public dialogue in all policy projects" (ACHM 20)

3.4 The impacts of Sciencewise-funded public dialogue projects on public bodies' knowledge and understanding of public dialogue

Evaluation evidence also shows that there has been significant learning resulting directly from the experience of running dialogue projects, and that policy makers and others recognise the value of public dialogue more when they have been involved personally. Indeed, numerous interviewees described the 'impacts' of dialogue projects in terms of learning about public engagement generally, and public dialogue in particular, as the key impact from the dialogue project they completed.

In this year's evaluation research, the willingness of some of those who have been involved in projects previously to work with Sciencewise in future to promote public dialogue was tested explicitly: 14 individuals offered to do this in future, including senior policy leads in Government and other public bodies - one said "one good turn deserves another" (Water 30). These are being followed by Sciencewise in 2014.

Specific learning identified by bodies commissioning public dialogue included the following, described project by project.

- **Mitochondrial Replacement, HFEA 2013.** This dialogue project resulted in impacts on the HFEA itself, and other stakeholders involved in the project, including:

- The HFEA undertook an internal lessons learned exercise, building from the formal wash-up meeting convened by Sciencewise, to explore and embed learning from the experience (evaluation p92).

- The dialogue provided the HFEA with "a rich source of learning in best practice in public engagement; in effective working with a range of external and contracted parties in fulfilling the objectives and aspiration of public consultation in emergent and controversial science; and an overall template for use in future work." (p101)

- The experience of the public dialogue "Reinforced our broad position [that] ... with the right issue this is definitely the way to do things" (8). It enabled the HFEA to "try out techniques that we might use again in future ... Enabled us to evaluate using those techniques and am sure we'll use them again in the future" (Mitochondria 10)

- **Water catchment project, Defra / Environment Agency 2012-13.** The real value of this project "was in helping Defra learn about the mechanisms for debate; especially support for involving people beyond the 'usual suspects'" (Water 15).

  It also had for the Environment Agency in terms of the "implications for how we might involve the public in future. A key thing for me a a policy maker is that you can sit in a bit of a tower, and it was good to see what people thought. It does have implications for how we might involve the public in future... some broad lessons around engagement on policy here ... this gave a sense of where consensus is and where the difficulties are" (Water 16)

  "Some broad lessons around engagement on policy here. As a policy maker you can get into the mindset where you see things as right or wrong, but this gives a sense of where consensus is and where difficulties are" (Water 16)

  "Its been part of the drive for us to move from a DAD (Decide Announce Defend) to an EDD (Engage Deliberate Decide) approach, moving to a much more bottom-up approach" (Water 30)

  "[It was] The mechanisms for debate that were most interesting ... Learning how to tap into local communities and the process for professionalising that. We wouldn't have done that without Sciencewise's help. For us it was about feeling sure the voluntary organisations leading the [process] follow some due diligence and good practice." (Water 15)

  This project also identified the need for more capacity building to increase public dialogue skills: "To me the need for ... the capacity for community engagement is not a capacity that sits readily in [this organisation] as we tend to be more science-based. The ability to engage and speak with members of the public, to hear their narrative and help translate what's going on in the environment with them, and what needs to be done in response - it's clear this needs to be developed as a ... skill ... I saw new sides to public dialogue" (Water 30)

- **Cambrian Mountains Initiative, Natural Resources Wales 2013**. Natural Resources Wales considered that dialogue "does help to dissipate some of the reluctance - create a sense of goodwill, an understanding about what the end result should be". For them, it was "good to get out and be faced with reality", getting ideas "out into the public domain". "That contact with reality is all important - we live in a bubble if we are not careful - staring at our computer screens, producing all these nice little memos" (Cambrian 13).

- **Geoengineering dialogue, NERC / EPSRC, 2010 - 2011**. It was the first experience of public dialogue for several of those involved in this project, and the learning about working with the public in this way was one of the implicit objectives of the work:

"For me still the most important thing was being involved in one of these things for the first time, It was as much about the process as anything else for me ... I think for a number of people it was their first engagement with this kind of public dialogue. I think the learning was that it was a good idea to do, and if you are going to do it you have to do it right - not just a questionnaire" (Geoengineering 23).

- **Synthetic biology, BBSRC / EPSRC 2009 - 2011**. The learning from this project including showing what could be done with a large scale public dialogue:

  "For the research councils the process was important as it showed dialogue can be done on a very large scale and can be effective. ... It also showed that the experts involved really valued the exercise and got a lot from it - they all said they would carry on doing it, engaging with the public" (SynBio 28)

3.5 The impacts of Sciencewise on the quantity and quality of public dialogue projects

Evaluation planning in 2012 identified a metric to focus on the increased quality and quantity of public dialogue projects in order to allow for the exploration of the extent to which Sciencewise work was leading to more and better public dialogue activity. Increased dialogue activity is an objective in itself for Sciencewise, as well as being seen to improve policy.

Overall, the evaluation findings show that **more new public dialogue projects had been supported by Sciencewise**, and that **Sciencewise has improved the quality of those public dialogue projects in which it has been involved**.

In the 12 months between November 2012 (the deadline used for the previous evaluation report) and November 2013 (the deadline for this evaluation), five public dialogue projects had been completed with funding from Sciencewise - the Cambrian Mountains (with Countryside Councils for Wales), Water catchment based management (Defra), Public and Patient Engagement (Health Research Authority), Horizon Scanning (BIS) and Mitochondria Replacement (HFEA).

These five projects involved nearly 5,000 members of the public (4,998) - 888 in deliberative workshops, plus 1,836 in a wider written consultation, plus 2,274 in opinion polls conducted as part of the overall dialogue project. Many stakeholders from interested bodies were also involved (e.g. 180 in the Defra water catchment project), in a variety of roles including membership of oversight groups for the project.

Funding for a further 17 dialogue projects had been agreed and these were in varying degrees of progress[4]. The feedback below (and the remainder of section 4 of this report) focuses on the five most recently completed projects, as well as revisiting the 10 completed by November 2012.

Projects continued to be run at many different points in the policy process including very upstream in the development of the science, close to application, testing an approach to implementation and focusing on governance and regulation of existing technologies. Projects have also varied significantly in approach, scale, cost, topic and geographical focus (from national to community level).

As in previous years, the funding and advice provided by Sciencewise were both seen as important in enabling public dialogue projects to happen. Funding was slightly more important to people in 2013-14 than in 2012-13, with advice remaining very important. Some stressed the

[4] Internal monthly projects report, 6 November 2013

importance of the funding particularly: "Sciencewise funding very influential in making the project happen ... in current climate funding most important" (Landscapes 17).

More often, however, it was both funding and advice that were important. Comments included:

> "Money. And advice on how to set up and run a project like this. We were constantly turning to Sciencewise" (SynBio 28)
>
> "Funding important - can't do anything without it, but advice, expertise, knowledge, experience" were also vital (PPE 36).
>
> "Not sure if Sciencewise had not put in the funding whether it would have gone ahead. [The DES] was extremely helpful. Good to have someone involved who really knew about the process" (Open data 1)
>
> "The funding was extremely helpful, as was [the DES] who came to the difficult meeting. Sciencewise was positive about doing it, and has then followed through rather thoroughly - the earlier evaluation and now you - this is very good ... Would definitely work with Sciencewise again and recommend them" (Planet 3).
>
> "We would not have done it without Sciencewise funding and support" (Open data 5)
>
> "The funding was an absolute and made the project possible, but [the DES] was very useful throughout the project. He helped us with advice on style and approach and selecting a contractor ... the project would not have gone so well if [the DES] had not been involved." (Wellbeing 7)
>
> "Funding but also some of the advice about how we approached the project was helpful a well. .. They helped me a lot in how I proposed what we should do .. From my perspective all ran very smoothly." (PPE 12)
>
> "To a certain extent funding but it was the focus. We went through a number of iterations of what we would like to do - bedevilled by policy shifts. Focus from Sciencewise - from outside looking in - what the key issues were that we had to focus on." (Cambrian 13)
>
> "Certainly the funding. The way Sciencewise could understand what we were doing and point out what could be done in a different way without being too prescriptive. Their responsiveness was really impressive and helpful. And following through to the evaluation at the end too. It was exemplary ... The way [the DES] engaged really helped us make it really easy - I want to highlight that ... There was a natural alignment between what we were seeking to do and what Sciencewise says on the tin" (Water 15).
>
> "Sciencewise funding was very influential in making the project happen ... in current climate funding most important. ... Helpful on the technical side, very helpful on the funding side and they got us to think beyond our immediate sphere of interest and world." (Landscapes 17)
>
> "The money was good of course. Ultimately we wouldn't have ben able to do it without that. ... [The DES] - it was really useful to have him involved as a sounding board and someone you could chat through things with - someone from Sciencewise but also kind of independent. Have a DES was very handy" (ACHM 20)

> "It was an opportunity to access a useful amount of money to deliver an effective project in a short space of time ... It was a pain free project to work on ... I have been actively recommending it" (Water 30)

> "Most important? Funding important - can't do anything without it but advice, expertise, knowledge, experience" (PPE 36)

Sciencewise was one partner among the many organisations and individuals involved in public dialogue projects. However, evidence from interviewees indicates that very few of the public dialogue projects supported by Sciencewise during this period would have gone ahead at all without Sciencewise support, and none would have gone ahead in the same way.

Many interviewees said they would not have done the project without Sciencewise and, as previously, the few that would have gone ahead anyway said the result would not have been as good without Sciencewise input. As one said:

> "It is a source of funding ultimately but also there is lot of knowledge to be shared. I think an organisation would be silly not to involve Sciencewise even if it got a big grant from somewhere else, due to their knowledge and experience." (ACHM 20)

> "Money. And advice on how to set up and run a project like this. We were constantly turning to Sciencewise and [the DES] and asking 'we're a bit stuck, what would you advise we do here?'" (SynBio 28)

In some cases, Sciencewise prompted the project in the first place (4); more often it was "very influential in making the project happen" (Landscapes 17), "getting the ball rolling" (Mitochondria 9). Other comments included:

> "Sciencewise were the catalysts for the project. It was really important that they came to us and said how important this area was ... if Sciencewise had not come to us, it would not have taken place at all." (Open data 4)

> "Sciencewise pulled everyone together to get it going. Really useful to have [the DES] to give us advice." (Open data 5)

> "For organisations that have not done this kind of thing before, Sciencewise advice is invaluable. For those who have done it before, it is good just not invaluable ... like having expert advisers on your side" (Mitochondria 8)

> "Sciencewise packaged up the different projects and provided a UK wide perspective, including Wales and Scotland. With devolved government things get disjointed - no shared learning" (Landscapes 19)

> "[The DES] started this idea and put it into action really ... The project wouldn't have happened without Sciencewise." (Energy 2050, 24)

The Sciencewise role in the public dialogue projects built on the innovative approach to capacity building through mentoring staff in Government departments and other public bodies developed earlier in Sciencewise. The Sciencewise team of Dialogue and Engagement Specialists (DESs) worked closely with staff in public bodies to develop ideas for projects, leading to jointly agreed business cases for funding to be put to BIS (usually up to 50% of funding), alongside gaining internal departmental / agency approval and funding.

The DES, alongside the Sciencewise Projects Manager and Evaluation Manager, then provided varying degrees of support to staff to help them commission, deliver and evaluate the projects, from the appointment of contractors to fully design and implement the project, and contractors to independently evaluate, throughout the detailed delivery of dialogue events with the public and on to the production of final reports. This support is viewed positively by commissioning bodies. Comments include:

> "[The DES] was very helpful. He was a useful addition to the steering group. There is a risk when doing dialogue with the research councils that you can rely too heavily on the contractor as the source of expertise - having [the DES] there was really important" (Open data 4).

> "It was a very helpful way in which [the DES] helped to take effort away from us, and he showed a great deal of flexibility. His involvement was invaluable." (Water 15)

> "[The most useful contribution] without a doubt, the DES. Obviously the finance helps but we would have funded this anyway, maybe not to the same extent though ... it comes down to [the DES] holding our hand. We would have done it anyway but it would not have been as good I suspect" (SynBio 26)

> "We greatly valued the help for Sciencewise in guiding us through the complexities of running a public dialogue. The involvement of Sciencewise was critical to the success of the project" (SynBio 27)

> "They brought a perspective based on their own expertise and experience which was really helpful" (PPE 36)

> "Sciencewise is good in terms of expertise, knowledge, ability to bring in other partners on a case by case basis to do some really sharp work." (PPE 36)

For some, there was a specific benefit in Sciencewise funding the project - giving the project higher status. For example:

> "It was good to get an external perspective on it and I guess it gives it some validity" (Energy 2050, 25)

> "The internal kudos to say 'this is Sciencewise funded'" (SynBio 26)

> "Sciencewise - their name helped to give the exercise credibility ... Could not have done it without Sciencewise" (PPE 36)

Every completed project produced a final project report, evaluation report and summary case study. The resource implications of this support are described in section 2.3 above.

Evaluation evidence shows that Sciencewise had played a significant role in promoting and improving the quality of dialogue projects (as above). Every interviewee who commented said that Sciencewise advice had improved the quality of their dialogue project, primarily through the one-to-one advice provided by the DES and also by the Projects Manager and Evaluation Manager.

Factors affecting judgements of the quality of dialogue projects included good links to policy; scale, representation and recruitment (mix and numbers of participants); good governance, especially stakeholder relationships; and practical design and methodological issues (e.g. innovative information provision and follow-up with all participants).

The elements of Sciencewise support mentioned most often were specific advice to help shape the overall direction of projects and clarify the key focus (Cambrian 13), help with procurement (Mitochondria 10), with detailed design and delivery (Mitochondria 10, SynBio 28), with evaluation (Mitochondria 9) and - most often - advice on working with stakeholders (Cambrian 14), particularly establishing oversight groups and other ways to support diverse stakeholder input (Mitochondria 9, PPE 36) - including engaging stakeholders "in a correct way" (Cambrian 14). Comments included:

> "Used oversight group of stakeholders to develop content of the dialogue and advise us. Found that a very helpful way of getting buy-in from stakeholders - refer back to that now in terms of setting up new pieces of work ... this oversight group was the best example we have had of brining together an oversight group on an controversial dialogue. [The DES] was a key member of the group and helped us resolve any difference of opinions between oversight group members" (Mitochondria 9)

> "Helped with making sure we engaged stakeholders in a correct way - inclusive to all ... relatively a seamless process. With the aid of Sciencewise it was not a difficult process." (Cambrian 14)

Generally, the input of Sciencewise was valued at every stage (Mitochondria 9), with:

> "Getting the ball rolling at the beginning, helping with the inception meeting, helping to get the right contractor. [The DES] very helpful on the oversight group helping me to weigh up opinions of different stakeholders and what topics to focus on. [Evaluation Manager] very helpful advising on process for evaluation. Generally helpful to have people with that knowledge helping at every stage. Helped with deciding on strands, looking for a contractor, ensuring we get an evaluation report ... We worked well together with Sciencewise. Valued their input at all the different stages" (Mitochondria 9).

> "Helped to select contractors and advised us on assessing them - really useful. Brought experience and insight into selecting contractors that we lacked - really helpful." (Mitochondria 10)

> "Constant support all the way through - down to the detail of how the workshops were organised" (PPE 11).

> "[Sciencewise] enabled it to happen. It is always good input coming from Sciencewise. Changes your perspective because you have to look at it from a different angle when Sciencewise is there ...It has cleared the air a bit in terms of the vision of what we want to do going forward and what we are trying to do. It concentrated the mind and has given us a direction to try. Given us the key - what we need to do to deliver this, what we need to do on the ground ... Sciencewise have shaped our direction and Welsh Government has bought into that" (Cambrian 13)

> "[The Projects Manager] was very helpful and generally advice [was useful], as it was such a new thing" (Geoengineering 22)

> "In general Sciencewise were quite pragmatic and helpful. We may have had some issues with spending all the budget and some changes in course, but I think all that was dealt with in the most harmonious way possible" (LCCC 29)

The neutrality of Sciencewise, the third party role, was also valued (Mitochondria 10), and independence (Geoengineering 37), with the external perspective giving 'validity' (Energy 2050,

25), 'kudos internally' (SynBio 26), and making the process 'more robust' (PPE 11), with support being 'invaluable' and 'exemplary' (Water 15). Comments included:

> "We have developed expertise on this but neutral third party not involved with stakeholder groups always helpful to be sure you have picked the right methods ... We got a good outcome, did it to the planned schedule and delivered a report ministers were happy and findings people believed. They did not challenge - testament to the process Sciencewise helped us to design" (Mitochondria 10)

> "By having a body involved with some experience of these things, it meant that the whole exercise was more efficient and effective. Those sorts of exercises do benefit from independent input and guidance" (Geoengineering 37)

The style and approach of Sciencewise personnel were valued in terms of flexibility and responsiveness (Water 15), pragmatic, helpful and harmonious (LCCC 29), and making the whole project 'pain free' (Water 30).

Interviewees also valued the links Sciencewise provided to previous and other projects, providing a 'UK-wide perspective' (Landscapes 19) and "got us to think beyond our immediate sphere of interest and world" (Landscapes 17). More generally, several mentioned the assurance that "we were following best practice" (Water 15).

The criticisms of the support offered tended to focus on administrative burdens, such as too much paperwork and contracts (24), and the need for simpler language (Landscapes 19).

Every interviewee asked said they would both work with Sciencewise again, and recommend them to colleagues. One said "I think an organisation would be silly not to involve Sciencewise even if got a big grant from elsewhere, due to their knowledge and experience" (20); "having expert advisers on your side" (Mitochondria 8).

Not everyone would recommend Sciencewise or public dialogue in all circumstances. Sciencewise could be seen as requiring 'gold plating': "offering the best of all possible worlds but not for the particular world of this harassed civil servant ... little bit of a counsel of perfection" (Wellbeing 7). The same person, however, also stressed the need sometimes, with a particularly challenging issue, "to pause and do something more deliberatively ... taking time now will save time later e.g. consultation on GM crops - pressure on consultation fatally undermined and put back the policy. Rushing at something had calamitous consequences" (Wellbeing 7).

Several felt that Sciencewise did not make this case well enough - about the value of savings later by taking time to do dialogue and do it well. Another said the "virtues [of public dialogue] seen to be self-evident ... [Sciencewise] needs to reach out to the unconverted" (Mitochondria 8).

Building on recommendation, the willingness of some of those who have been involved in projects previously to work with Sciencewise in future to promote public dialogue was tested: 14 individuals were willing to do this in future, including senior policy leads in Government and other public bodies - one said "one good turn deserves another" (Water 30).

4. THE BENEFITS OF PUBLIC DIALOGUE FOR PUBLIC BODIES

4.1 Introduction

The objective for the Sciencewise programme for 2012-2015, as already stated, has been to:

improve policy making involving science and technology across Government by increasing the effectiveness with which public dialogue is used, and encouraging its wider use where appropriate.

A metric was introduced in 2012 to measure the extent to which there had been 'increased willingness and ability to undertake public dialogue (embedding)', and 'increased awareness and understanding of public dialogue by public policy bodies and other stakeholders'. During the development of the Theory of Change framework, these metrics were subsumed into a new interim goal for Sciencewise for 2014-2015 which was 'Effective Advocacy - creating acceptability for the place and value of public dialogue by decision makers and public participants'. This more accurately reflected the priorities during 2013 onwards.

In order to achieve the overall Sciencewise objective (above), it was agreed that the place and value of public dialogue needed to be understood and accepted - both to increase the effectiveness of the dialogue that takes place - because without accepting the value of dialogue, the results are unlikely to be acceptable to decision makers, and (more obviously) to increase the wider use of dialogue. All the Sciencewise activities are designed to achieve greater understanding and acceptance of the value of public dialogue, and this was recognised in this reframing of this goal. More simply, this can be seen as identifying the benefits of public dialogue to public bodies.

The programme-wide work on thought leadership, knowledge sharing and raising awareness, and capacity building (see sections 3.5 to 3.6) are designed to contribute to achieving this goal. Similarly, the programme-wide and project specific evaluation work is designed to increase knowledge and understanding of the processes and impacts of public dialogue.

There is evidence that the place and value of public dialogue has become more accepted in higher levels of Government over recent years. For example, the Coalition Government Science Minister from 2010 to July 2014, David Willetts, was a supporter of public dialogue throughout his time at BIS. He said:

> "The Government does believe that structured public dialogue on some of the big ethical challenges in science is very important. These dialogues raise very legitimate questions about how far and how fast we go with science."

There is significant evidence that those who have worked closely with a dialogue project - by being part of the team commissioning the dialogue project, being on the Oversight Group for the project, or using the results of the project - do become convinced of the value / benefits of the process for their own work and for their organisation. There is, unfortunately, little evidence of other very senior policy and decision makers in Government having understood and accepted the value of dialogue - they may, but there is currently no evidence available.

Indeed, almost all of those involved in a dialogue project become convinced of the value and are often willing to act as advocates of dialogue afterwards as a result - from the Sciencewise evaluation interviews for this report, 16 individuals agreed that they would work with Sciencewise to promote public dialogue in future (not all interviewees were asked).

The main themes emerging from the evaluation interviews in terms of the value - or more specifically the benefits - of public dialogue for policy development and decision making were (all covered in more detail below):

- Risk management
- Getting beyond entrenched positions and vested interests
- Better policy decisions
- Economic benefits
- Enhanced organisational reputation
- A better way to engage the public
- A better understanding of the role of the public in policy making
- Of particular value in upstream issues, on ethical and social issues, and on contentious issues

4.2 Risk management

Those in public bodies found that public dialogue provided very effective risk management by building internal confidence about policy directions and decisions on the basis that they had investigated all avenues and had a broad evidence base, security that they were moving in directions that would have public support and early warnings about which issues would create public opposition. Comments included:

> "*Makes the likelihood of a judicial review less ... very expensive and unpredictable - easy to spend £100,000 on law without trying ... By taking our time and adopting a variety of techniques, protects the reputation of the organisation. Minimises an attack on process ... gets disagreement back onto the substantive grounds of the issues rather than saying your consultation is second rate. An awful lot of JRs [judicial reviews] are arguments about process masquerading as arguments about substance*." (Mitochondria 8)

> "*The report we made to ministers was undisputed. No arguments over fairness, bias. The way we went about it definitely mitigated against that.*" (Mitochondria 10)

> *"Assessed public opinion via a number of different processes both quantitative and qualitative - a series of snapshots. Celebrated the fact that evidence came in different forms, using different methods. ... Made decision making easier ... More secure because [the Board members] felt they had a proper handle on what the public felt rather than relying on one method that might be open to criticism."* (Mitochondria 8)

> "*Gave a sense of security that [the] report would reflect what the public thought. It gave them a good window on the public views and perspective.... our policy recommendations are stronger because we did it. The fact that the advice was not just shaped by our Fellows but was formulated with input from members of the public - the advice is better because of it*" (ACHM 20)

> "*Above all it gave us some confidence about moving into this area. It is a very controversial area and it helped that we could cite the findings of the dialogue - it gave us some considerable reassurance ... It will help in the short tem around the risk of starting and cancelling projects*" (Geoengineering 23)

> "*The major risk is that at some point the public gets spooked on data sharing and we need to understand the public point of view ... Parliament and other constituencies are really influenced by the privacy lobbies and get really agitated and this is a real danger ... look at the difference in public understanding and attitudes towards GM as compared with stem cells - in the first the public dialogue got out of control, and we got it right with the latter and now have a world lead in the area.*" (Open data 1)

Even finding 'nothing new' from what the public said was reassuring - it meant that thinking to date had covered all the potential future elephant traps on a topic. As one interviewee said "*it reinforced other findings and gave us more evidence to support these. It did not bring up anything new but that was helpful*." (LWEC 2)

4.3 Getting beyond entrenched positions and vested interests

Almost all 'public' consultations and other forms of engagement actually tend to get responses only from those with an existing view and, often, a view from entrenched positions. Similarly, relying on media reports, NGOs or other intermediaries risked public opinions being mediated (and potentially distorted) through particular perspectives.

Public dialogue involving direct contact with ordinary members of the public recruited for demographic diversity has enabled policy makers to have first hand contact with a diverse sample of the British public and hear their views without interference and which is often more 'balanced'. Dialogue has thus provided the 'reality check' that does not come from other forms of consultation. Comments from interviewees included:

> "*[The dialogue results were] a key piece of the evidence. Because they were proper public - didn't have a stake or knowledge already - able to get views of uninformed public*" (Mitochondria 10)

> "*Refreshing to hear from general public that don't have a vested interest or come from a particular health experience ... For the first time finding out what patients and the public think rather than just talking to researchers as our customer base ... realised that talking to patients and public is not just a tick box, that it adds value to what we are doing ... bring parties together who would not normally meet ... It has enhanced our reputation as an organisation*" (PPE 11)

> "*Good to get out and be faced with reality. That contact with other people's reality is all important. We live in a bubble if we are not careful - staring at our screens, producing all these nice little memos*" (Cambrian 13)

> "*It was the mechanisms for debate that were most interesting. The people running the sessions were by and large from NGOs and voluntary organisations. They may not know how to engage 'not the usual suspects*'" (Water 15)

> "*I'm sure if this had purely been scientists making recommendations, there would have been more arguments and heated discussions*." (ACHM 21)

> "*Broadly speaking policy in this area is dominated by one of two voices. One the one hand there are the open data advocates ... The other group are the open data sceptics ... The message from the public dialogue is that we need to find a path between these extremes ... The key benefit from this public dialogue for me is the way in which the findings challenge the extreme positions and encourage us, as policy makers, to find an appropriate balance between competing interests. I think this is a benefit of public dialogue in general. Far from leaving decisions to experts, good policy making needs to encompass a broad range of views to get the best of outcomes*." (Steven Hill, Head of policy at HEFCE; blog on Sciencewise website 4.12.2013)

At the same time, dialogue provided an opportunity for stakeholders to work together, sometimes for the first time, to articulate points of agreement and difference so that these can be feed into the public dialogue. Comments included:

> "Striking up relationships really important ... One of the big benefits to the organisation now was to start that dialogue and put kindling on the fire in the sense that we are in a greater dialogue with the stakeholders now" (Cambrian 14)

> "Pulled together a stakeholder group to enable a range of perspectives - building on that was very useful and they were sensitive to the way in which the science was presented." (ACHM 20)

4.4 Better policy decisions

There are numerous and competing definitions of 'better policy', but more recent developments suggest that "the key test of good policy is the feasibility of implementation", building on 'what works' and 'value for money'[5].

The Institute for Government has suggested that failures in policy design (turning ideas into actions) "can come from multiple causes, but one recurrent theme is the failure to understand the likely behaviours of those whose actions the policy is designed to affect." They suggest that the nature of policy making is changing: "policy makers (and Parliament) will need to move on from the idea that central Government creates fixed designs for policies, and start creating designs that are flexible enough so others can adapt them to changing circumstances"[6].

They go on to suggest that "Good policies successfully combine the political (mobilising support and managing opposition, presenting a vision, setting strategic objectives) and the technocratic (evidence of what works, robust policy design, realistic implementation plans)"[7].

New developments within Government on open policy making (led by the Cabinet Office) are drawing on some of this recent thinking on the nature of good, open, transparent policy making in new guidance for departments which will include public dialogue (in 2014 - 15).

Evaluation interviews have shown that public dialogue has helped test the feasibility of implementation and take soundings directly from those policies are likely to affect - the public. Comments included:

> "*We have done a thorough job and got a much better strategy as a result of it*" (PPE 12)

> "*Where would we have been without it? We wouldn't have the confidence to know we can move forward on synthetic biology, albeit with caveats*" (SynBio 26)

> "*The fact that we could more concretely make recommendations knowing it had public support was great*" (ACHM 34)

Public dialogue also provides a route to address the ethical imperative of consulting those most likely to be affected by a policy. Comments included:

> "[*Dialogue is] essential for ground breaking changes in the law. Any policy to do with human reproduction potentially affects lots of people. Important that they have the opportunity to*

[5] HM Government (2012) *The Civil Service Reform Plan*, June 2012; quote from page 17
[6] Hallsworth, M. and Rutter, J. (2011) *Making Policy Better. Improving Whitehall's Core Business*. Institute for Government, April 2011; quote from page 17
[7] ibid, page 25

express their views. And that their views are taken on board... before any decisions are made." (Mitochondria 9)

"*Public blessing to our plans. Covered a lot of ground ... public had strong views ... Able to build those views into strategy for transparency*." (PPE 11)

It also meets the political imperative of reassuring politicians. As one interviewee put it: "*Cannot overestimate the degree to which that kind of information grabs ministerial interest and it is good to be reminded of that - ministers are very people-focused*" (LWEC 2) Other comments included:

"*Helped enormously to formulate the policy advice we gave government. Provided a serious backbone to that assessment*." (Mitochondria 8)

"*People make a fairly clear distinction between different kinds of experiments - some they are comfortable with and some they felt went too far ... It was very helpful and reassuring ... Both me and my organisation felt more secure having the views of specialists and non-specialists involved ... The dialogue gave it a political weight it wouldn't have had otherwise*" (ACHM 21)

4.5 Economic benefits

Public dialogue has enabled progress to be made by showing the boundaries of public acceptability, so that policy decisions can avoid those areas that would not be acceptable to the public. Such progress can then attract economic investment and generate economic benefits. Comments included:

"*Public support for the new research approval process is estimated to save lots of money, [including] impacts on R & D in local [health] trusts ... [as] also saves money on checks*." (PPE 11)

"*Working to make regulation and governance of research more proportionate and therefore more efficient, so more money goes on actual research rather than getting it approved - dialogue helped support that*" (PPE 12)

"*[It] will provide greater confidence that the [plans] will reflect local needs and will therefore be more likely to attract funding ... The pilots overall demonstrated a value of 3to1 in terms of attracting investment*" (Water 15)

"*It gave us the impetus to get to this point where we are planning to do things on the ground. Moving it along - getting to the stage where we can have an impact and create economic benefits on the ground*" (Landscapes 18)

"*The immediate economic benefits were very obvious. The government stepped up funding for synthetic biology significantly. The public dialogue had an effect on David Willetts and on the Treasury and there was a strong political shift towards this kind of policy area. So it had an impact on the progress and pace of work, for example through the set up of centres of excellence. It is early days but it was a really good foundation for economic growth*" (SynBio 28)

"*More efficient and effective working at a catchment level would help overcome duplication. Silo working doesn't identify opportunities for synergies and multiple benefits, but this project identified an approach that needs to be supported by [our organisation].*" (Water 30)

Dialogue was also seen to provide economic benefits by ensuring that expensive mistakes are not made through policy directions that are not feasibly implementable. Comments included:

> "*[Our organisation] already funded and then pulled a project due to public perceptions. So that's an example of money that was already lost. The public dialogue helped inform future projects and highlights that if we move ... we will need to think carefully ... It will help in the short term for [us] and other research councils around the risk of starting and cancelling projects."* (Geoengineering 23)

Equally valuable, dialogue has been found to reduce the costs created by challenges to policy development and decision making processes including judicial reviews (see above under Risk Management).

Some interviewees also challenged a focus on the costs of dialogue in relation to the benefits, because the benefits of the continuing development in the right way of a new technology was beyond price. One interviewee said it was: "*Impossible to put a price tag on the opportunity to have healthy children*" (Mitochondria 9).

4.6 New insights on policy issues.

It is rare to find evaluation evidence of commissioning bodies reporting that they have found 'new ideas' coming from public dialogue, or indeed that they have heard anything 'new' at all. Where there have been insights they have tended to be around the following:

- **Public appetite for innovation and change**. The most revelatory insights for decision makers have often been around the good sense, balance and motivation of the public to engage with and contribute to often complex policy issues, and to be much less 'conservative' than expected. For example:

  > "*Most surprising was how accepting members of the public were and how they understood the science involved. We were expecting more negative views about techniques and modification of embryos*." (Mitochondria 9)
  >
  > "*As long as conditions met, public reasonably relaxed. Surprised - thought public might be more small 'c' conservative than they were*" (Mitochondria 8)
  >
  > "*Surprised at their appetites for change ... Didn't expect they felt such a low level of influence but willing to change and demonstrate change ... They want to be engaged*" (Cambrian 14)
  >
  > "*Probably [the main finding was] (and this was quite surprising) ... most members of the public were much more accepting of this type of research than we thought. There was less of the 'yuck' factor and once they had talked through the issues and heard from scientists they were much more accepting ... participants were able to have a fairly sophisticated discussion. They were much more positive than expected.*" (ACHM 20)
  >
  > "*The public response to the dialogue showed people make a fairly clear distinction between different kinds of experiment - some they are comfortable with and some they felt went too far"* (ACHM 21)
  >
  > "*The most important findings was that there was not outright opposition to the concept of synthetic biology, and that there was a degree of enthusiasm for the*

science, with caveats. And they were that it should be done safely, and that the scientists themselves should think about the consequences of their work and how to communicate it with the public" (SynBio 28)

- **Public seeing a bigger picture**. Some 'new ideas' from the public have come as a result of the public seeing a bigger picture than the one initially presented. For example:

  "*We have complete consensus of patients and public that they expect findings of clinical trials to be published in ways that other researchers can see, and feedback to those who participate. Historically participants left high and dry and not told anything about results. Now working on guidance to researchers on information to be given to patients at the end of the study, including findings of the study and what arm of the study they were in. ... Public picked up that our entire focus was on the beginning of [health research] studies, and we neglect the end - more attention needed on the end of the study.*" (PPE 11)

  "*[The dialogue showed] That you can have a meaningful public dialogue by taking a holistic view. Public dialogues tend to be single issue, but this showed you can take the holistic issues and have a discussion about it with the public*" (Energy 2050, 24)

  "*The thing I took away, and we as an organisation, was that while there were messages clearly related to synthetic biology, there were broader messages around how research is funded and conducted in a responsible way. It's well documented that as a result we began to develop a process around responsible innovation, and are still developing it*" (SynBio 27)

- **What will work in policy implementation**. There have also been insights for commissioning bodies into what would work in terms of implementing new policy ideas. For example, on the Wellbeing project:

  "*Identified that exhortation does not work to get people to act; have to take account of the norms that people operate and their personal resources; can't just superimpose on people*" (Wellbeing 7)

- **Lack of public knowledge on a topic**. Insights for commissioning bodies have also come from finding the strength of feeling from the public on certain topics, as well as surprise at the lack of basic knowledge on the topic. For example, the HRA project on patient and public engagement found: "*For us, shocking lack of knowledge about what health research is ... really fundamental*", which led the HRA to question the extent to which people with a disease, asked to enter a clinical trial, really understood what they were being asked to do. (PPE 11, PPE 12).

- **Strength of public feeling**. Feedback suggests that commissioning bodies assume apathy from public participants. In practice, they have often been surprised by the strength of both negative and positive views. For example:

  - There have been strongly negative public responses to private sector involvement in public 'goods', such as health care. For example, in the HRA public and patient engagement project they found they were:

    "*Surprised ... at the strength of animosity - consistently all the way through - to the pharmaceutical industry. Even when we were not probing [participants] would spontaneously say how much they disliked the pharmaceutical industry*" (PPE 11)

- There have been strongly positive public responses to environmental issues. For example, the Cambrian Mountains found that there were "*local values that people attach to their landscape - sense of place, diversity of landscape*" (17) which were more specific than those of the commissioning body. Similarly, the Defra / Environment Agency water catchment project found that:

  > "*people were interested in their environment. A key thing for me as a policy maker is that you can sit in a bit of a tower, and it was good to see what people thought. It does have implications for how we might involve the public in future*" (Water 16)

- **Public views different from stakeholder views.** Organisations had sometimes assumed that they knew what the public thought because they involved stakeholders in their work. For example, the HRA Patient and Public Engagement project found that public views were different from patient views and that "*moving forward will ensure that we get this breadth of views*" that are more "*representative*" of those potentially affected (PPE 12).

- **Appetite among participants for more engagement**. Many organisations have been surprised at the level of enthusiasm of public participants for engagement in their specific project, and for future deeper engagement. For example, the Cambrian Mountains project discovered a lot about the levels of influence people felt they had - which was very little: "*They were following land use policy which gave them little influence and they felt affected ... didn't expect they felt such a low level of influence ... they want to be engaged*" (Cambrian 14).

4.7 Enhanced organisational reputation

Several organisations felt that undertaking public dialogue had enhanced their reputation as an organisation. Comments included:

> The HFEA found that dialogue "*protects the reputation of the organisation. Minimises an attack on process and focuses disagreement on substantive issues rather than poor process*" (Mitochondria 8)

> The project "*has provided clarity in terms of the vision of what we want to do going forward - and has given us the direction we needed in order to trial the delivery of PES [Payment for Ecosystem Services] on the ground*". (Cambrian)

> "*[My organisation] realised that talking to patients and public is not just a tick box, that it adds value to what they are doing ... It has enhanced our reputation as an organisation and [the Board] want to more of it as a consequence*" (PPE 11)

> "*The fact that we ... did this work has demonstrated we are taking patient and public involvement seriously. ... Don't want to go it alone or duplicate. Now have really good strong partnership. Established ourselves up there with those leading the way on patient and public involvement not a newcomer ... Now seeing us as a key partner*" (PPE 12)

> "*[We wanted to achieve] Effective delivery of local engagement in interventions, driven by the need to demonstrate local engagement could lead to more effective delivery (for example due to previous criticism from NGOs). It achieved widespread acceptance that [our organisation] had made an effective attempt to deliberate with local communities. [We are] perceived as very good at consulting but not so much at consulting in this form of engagement. It's been part of the drive for us to move from a DAD (decide announce defend) to an EDD (engage, deliberate, decide) approach, moving to a much more bottom up approach.*" (Water 30)

4.8 Better quality of public input

The evaluation research found that dialogue had enabled public bodies to find ways to engage the public that get beyond knee-jerk reactions, to explore deeper public values and concerns.

The value of the dialogue approach was recognised in the Report of the House of Commons Public Administration Select Committee inquiry into 'Engaging the public in national strategy', published in June 2013. This recognised (page 36) that:

> "*National opinion research tests have limitations, however, reflecting the impulsive reflexes of a cohort affected by contemporary media coverage. In order to understand the broader sets of concerns that underlie survey responses, public engagement needs to be deliberative. Rigorous and well-designed opinion polling will get a spread and breadth of views, but other techniques are needed to get beyond a relatively superficial reading of citizens' preferences. ... there are precedents for engaging the public at a national level on complex governance issues, as with the UK's Sciencewise project on emergent science and technology. ... Deliberative forms of engagement can probe interesting conclusions from surveys which highlight differences or apparent contradictions*."

Feedback from Sciencewise co-funded dialogue projects included:

> "*It allows you to get beyond headline responses or ill-informed gut responses ...{The] complexity of this subject suits a dialogue process*" (Mitochondria 8)

> "*It gives a more considered opinion ... If you just do a survey very limited in questions you can ask - no understanding of what lies behind so answers don't mean very much ... We could see the benefits over and above doing focus groups*" (PPE 11)

> "*Demonstrates that you can engage with communities in this way and it works ... Use as a model. Will engage in similar kinds of dialogue in the future*." (Landscapes 17)

> "*One of the first reasons you involve the public is around accountability and responsibility ... Helped me enormously in making the argument with other research organisations of why they should be involving the public at all levels*" PPE (36)

4.9 A better understanding of the role and the value of the contribution of the public in decision making

The evaluation research found significant evidence that those involved in dialogue projects gained a better understanding, and often changed their views, about the role of the public in public policy decision making.

The experience of working closely with the public enabled those involved to gain a different (and more positive) perspective on the role of the public in decision making - recognising the value of the public's contribution and the ability of ordinary members of the public to understand and work on complex topics quickly and sensibly, and to come to sensible and nuanced conclusions.

For example, Clare Craig, Deputy Head, Government Office for Science said in December 2013 (about her involvement in the Drugsfutures project - the public dialogue element of the Academy of Medical Science's work on Brain Science, Addiction and Drugs, completed in 2007 (remembering the experience over five years later):

> "*You may think you know what 'the public' are going to say about some new science or technology. But you usually don't. The first time you use a programme such as Sciencewise,*

you're likely to get insights you didn't expect and without which you'll operate on false assumptions. Give them a chance to engage with the experts and the issues, and peoples' responses are invariably sophisticated and nuanced.

"My personal 'aha' moment was several years ago when running the Foresight project on Brain Science, Addiction and Drugs. The topic of human enhancement, in the shape of future potentially widespread use of drugs to improve cognitive performance (such as memory or focus), was just beginning to emerge in academia and the media.

"The project was led by academics from a wide range of disciplines and we thought we had all the angles covered, but the lead Minister insisted that we get public views directly, so we used structured public engagement with a variety of groups such as former addicts, and parents. The results were, I recall, more nuanced than I had expected. In particular, there were important differences in the ways they approached some of the issues with respect to young people, compared to those potentially affecting adults. The insights helped us frame our work better. It was perhaps an early example of what is now one type of Open Policy Making." Clare Craig, Deputy Head, Government Office for Science, December 2013.

Other comments included:

"*For me, the most important finding was the level of sophistication with which the public approached the issues*" (Open data 1)

"*Most striking was the balanced position of public participants that they came to in the course of the dialogue. It was extremely positive that through the dialogue process we got quite a balanced view*" (Open data 4)

"*We discovered that the public participants thought about the issues in ways that were very similar to discussions we had had within the Research Councils i.e. the public participants were open to data being opened up. Also they did understand the commercial needs and issues around researchers having the opportunity to hold and use data themselves*." (Planet 5)

"*It was interesting to see people's perspectives and that, with a decent briefing, they got the intricacies around that. They dealt with a pretty complex issue in a very sophisticated way. It was impressing to see how far you could take a group*" (Geoengineering 23)

"*It confirmed the public are more than able to engage with complex science"* (SynBio 26)

"*Looking back on the dialogue I continue to be struck by the sophistication of the view that emerged. Although the dialogue was small scale and gave the participants limited time to explore a complex and relatively abstract topic, the findings challenge many of the assumptions made by policy commentators*." Steven Hill, Head of Policy at HEFCE - formerly Research Councils UK, blog on Sciencewise website 4 December 2013. Involved in commissioning the Open Data dialogue for RCUK during 2011 - 2012.

"*We found that you can communicate energy and climate change to the public and get meaningful points back*" (Energy 2050, 24)

4.10 Of particular value on ethical challenges, on upstream and on contentious issues

Dialogue was seen to have particular value where the topic was 'upstream' and where policy and research decisions on a topic are strongly influenced by ethical, social and other wider concerns:

- **Dialogue on upstream issues**. Dialogue has particular value in upstream issues (32). Research by Cardiff University on the Sciencewise funded Geoengineering dialogue summarised the value on upstream issues "*if significant research and development has not begun, public controversy about the topic is not currently present, and entrenched attitudes of social representations have not yet been established*" (Rogers-Hayden and Pidgeon 2007, cited in Adam Corner, Karen Parkhill and Nick Pidgeon (2011) *Experiment Earth? Reflections on a public dialogue on geoengineering*, Working Paper, School of Psychology, University of Cardiff). In these upstream topics, public attitudes and views can be fed into decision making processes before major investment decisions have been made (page 7 of that paper).

  Similarly, the dialogue on Animals Containing Human Material was seen as "*an emerging area [and] we felt we couldn't really do it justice without some kind of public dialogue*" (ACHM 20)

- **Dialogue on ethical and social issues**. Decision making is always reliant on more than science and technology issues and concerns, and dialogue is also seen to have particular value where other issues are at least as important (32) and where decisions are likely to be "*determined as much by social, legal and political issues as by science and technical factors*" (Royal Society 2009, cited in Corner, Parkhill and Pidgeon as above).

  In relation to the dialogue on synthetic biology, Minister of State for Science and Universities at the time, David Willetts, concluded that "*The Government does believe that structure public dialogue on some of the big ethical challenges in science is important ... These dialogues raise very legitimate questions about how far and how fast we go with science*".

- **Dialogue on contentious topics**. Dialogue has also been seen to be of particular value on contentious issues. For example:

  > "*[We were exploring the development of a] unique technique - controversial and ground breaking - needs a solid basis of public being informed and consulted. This was achieved - useful going forward for government to refer to in changing the law ... Were able to fully answer the government's questions on the social and ethical issues*." (Mitochondria 9)
  >
  > "*Above all it gave us some confidence about moving into this area. It is a very controversial area and it helped that we could cite the findings of the dialogue - it gave us some considerable reassurance*" (Geoengineering 23)

5. LESSONS FROM PRACTICE IN SCIENCEWISE-FUNDED PUBLIC DIALOGUE PROJECTS

5.1 Introduction

The evaluation research considered the extent to which the design and delivery of the public dialogue projects worked particularly well or poorly, and the extent to which the quality of the dialogue process affected the credibility - and thus the results - of the dialogue project overall.

This aspect of the evaluation research is related to the critical success factor around "Increased quantity *and quality* of public dialogue projects" (emphasis added). In each individual dialogue project evaluation, the focus on quality has tended to focus on the extent to which the process met the Sciencewise Guiding Principles for public dialogue[8].

More recently, the focus has broadened - while the Guiding Principles remain the core definition of 'good practice', evaluations have also focused more on the perceptions of good practice among those who commissioned the dialogue and wanted to use the results. This was because it became clear from earlier evaluations that there did not always appear to be a direct correlation between the quality of the process (as defined at the time) and the influence of the results, which merited further exploration.

As elsewhere in this report, the analysis below draws on the 37 interviews between November 2013 and February 2014 of project managers and policy users in the dialogue projects, plus an analysis of the findings of the evaluation reports of the four projects completed in 2013:

- the Cambrian Mountains Initiative with Countryside Council for Wales - CCW (now Natural Resources Wales)
- the Defra / Environment Agency project on water catchment based management planning (Defra / EA)
- the Human Fertilisation and Embryology Authority (HFEA) consultation and public dialogue on Mitochondrial Replacement dialogue, and
- the Health Research Authority Public and Patient Engagement project (HRA).

The 37 interviews also covered the 10 projects completed by 2012, reported initially in the 2013 evaluation report, and the analysis below also covers those where appropriate.

Findings emerging from this work include:

- There has been some robust and highly admired dialogue practice, especially where dialogue has been part of a multi-method approach to engagement, around the production and use of information materials, and in bringing specialists into events.

- There has also been some very poor basic practice including poor participant care, facilitation, logistics and time management, and short timescales overall. Different projects run by the same contractors have had very different standards of delivery.

- There is not a direct correlation between a poor quality process and few impacts (and participant trust in the influence of the process) - one of the most heavily criticised processes has had significant impacts and participants with high levels of trust.

The remainder of this section are shown under the headings listed (in alphabetical order):

[8] Sciencewise (2013). *The Government's approach to public dialogue on science and technology.* http://www.sciencewise-erc.org.uk/cms/assets/Uploads/Publications/Sciencewise-Guiding-PrinciplesEF12-Nov-13.pdf

- Design and delivery of project overall
- Governance, oversight and stakeholder engagement
- Information provision / stimulus materials
- Numbers, recruitment and sampling of public participants
- Reporting and dissemination of results (including feedback to participants)
- Scientist / specialist input at workshops

There are then two concluding sections – on Barriers arising from practice to the increased use of public dialogue, and six key lessons from practice.

Please note that the references after findings (e.g. RCUK 4) are the code for the interviewee or the page on the evaluation report where the information comes from. If no number, information comes from other direct personal communications (e.g. emails).

The comments in interviews were all made without prompting. Comments were made in response to general questions about what worked well and less well in the project, and whether there was anything about the way the project worked that enhanced or undermined the extent to which the results could be used in decision making.

5.2 Design and delivery of the dialogue project overall

The aspects of the design and delivery that **worked well** included:

- **Mixed methods:**
  - Mix of qualitative and quantitative methods - poll, deliberative workshops, open meetings, written consultation, focus group (Mitochondria 8 and 9)
  - Triangulated research and consultation methods to achieve "excellence in public engagement activity" - a "perfect example" (Mitochondria eval p5, p7)
  - Multiple methods, enabling the triangulation of quantitative and qualitative data from the dialogue, was appropriate (PPE eval p7)
  - It worked well to have two separate strands of dialogue - with patients and public participants, so could see where there was consensus and where differences between these two groups (PPE 11)
  - Wide range of engagement activities including social media, surveys, walkovers, working with local schools - especially good were pop-up workshops, a River Story, and Agreement meetings (Water eval p26)

- **Reconvening the workshops**:
  - Reconvening very useful - workshops met twice, with all the same participants (Mitochondria 10)
  - Reconvening worked well - workshops were in two sessions, 1 week apart, with all the same participants (PPE 11)
  - Reconvening (Geoengineering 32)

- **Good contractors**:
  - Positive feedback on contractors' performance and abilities (without prompting) from Open Data project (Open data 4 and 5) and Wellbeing project (Mitochondria 7)
  - Contractor very effective, considerate, resourceful and responsive (Mitochondria eval p95)
  - Expertise of contractors in engagement and the topic appreciated (Cambrian 14)
  - Appreciated third party, independent people delivering, without baggage (Landscapes 17)

- **Process design generally**:
  - The open and transparent process was 'really fabulous' (PPE 36)
  - Small groups and informal atmosphere (Mitochondria eval p3)
  - Deliberative workshops were highly successful with good facilitation in a positive atmosphere conducive to open discussion, with good summing up of key points (Mitochondria eval p20, 32)
  - Generated a lot of trust in the process among participants - 55% of public participants thought the dialogue would have influence on HRA's decision making (HRA eval p5), 75% of patient participants thought so (p6); only 11% of public participants thought the process would have no influence (p34).
  - The high visibility of the HRA as a sponsor throughout the public events brought significant added value (PPE eval p67)
  - 10 out of 10 (Open data 1)
  - Planning public engagement provided a goal, and helped pilots see their plans from an external perspective (Water DbyD)
  - Managed expectations well (Cambrian 14)
  - Paying people an incentive meant those involved knew something was wanted from them (Cambrian 14)
  - Very structured deliberative process but with open discussions (ACHM 20)
  - The process design had an outcome focus, backtracking from a future vision, which demonstrated skill and expertise (Water 30)

The aspects of the design and delivery that worked **less well** included:

- **Poor process design and delivery**:
  - Poor logistical control and timekeeping meant that time for discussion was squeezed and lost (PPE 11, eval report p65)
  - Workshop management was poor including starting late with participants arriving before the facilitation team. Poor time management of discussions compounded slippages of time so that events ran so late that some key areas of discussion were very limited by lack of time (PPE eval p59-64, HRA 11)
  - There were insufficient opportunities for participants to verify or contest what was taken down in notes (PPE eval p67)
  - Late night meetings (finishing at 9.30pm) created problems for transport for people (PPE 11; eval p33)

- **Poor facilitation**:
  - The facilitation team kept changing so there was no continuity across events or knowledge built up across the project (HRA 11). The team of facilitators changed between events, with some attending only one event, which was a particular problem given their role in providing information and in linking the two sets of workshops, which hampered the process and annoyed the participants (PPE eval p64, p66)
  - The time allocated in workshops to information provision squeezed time for deliberation; made worse by facilitators presenting information they were not familiar with (PPE eval p60, 64)
  - Providing information challenged the role of facilitators in safeguarding the process. Participants lost confidence in the facilitators when saw they were uncertain about their knowledge (PPE eval p64). Lack of appropriate information was compounded by problems with inappropriate lines of questions (PPE eval p65)
  - Participants identified that 'poor facilitation' was one of the 'worst' aspects of the event that could be improved (PPE eval p31-33)
  - The facilitator team was brought together for the project and took time to work as a team, the negative implications of which were made worse by the short timescales (Water 30)

- **Timescales were too short**:
  - Long timescale to set up which squeezed the time for the dialogue process leaving too little time to get the right expert stakeholders involved especially Government, allow for any reflection and learning during the process or capacity building, or for participants to influence what and how the results were presented to the final stakeholder workshop (Cambrian 14, eval report p10)
  - Tried to do too much in a short timescale (PPE 12); timescales were very tight with real sense of planning being rushed and no time to reflect between workshops (PPE eval p64); time pressures led to topic guides being finalised on the morning of workshops (PPE eval p76)
  - Government always works on very short timescales so need dialogue to be quicker or make the case for why it needs to take longer (Mitochondria 8)
  - Too little time to involve the right people in the process (LWEC 2)
  - Timescale too short (Cambrian 14)
  - Too little time to ensure policy links were made (Open data 4 and 5)
  - Lack of internal staff time to do all that was needed (Cambrian 13)

- **Lack of clarity about aims and objectives**:
  - The strategic aims were too nebulous for the public to engage with (Water DbyD)
  - There was a lack of clarity about the objectives and purpose for public engagement (Water eval annex p26-27)

- **Working with contractors**:
  - Negotiations painful because so many subcontractors (e.g. website), and liaison needed more time than expected (Mitochondria 8 and 9)
  - Contractors expensive for quality of performance (PPE 11)
  - Contractors failed to provide contact details of participants to commissioning body, even after additional payment was offered, so plans for reconvened workshops to share results had to be abandoned (PPE)
  - Delivery team of disparate facilitators - took time to work as a team (Water 30)

- **Pre-project**:
  - The initial project design process was not tough enough on what would be gained that would be different to what had already; agreed funding without careful assessment of value (LWEC 2)
  - The initial set-up takes a long time (Mitochondria 8)
  - Initial procurement and negotiations with contractors took a lot of time (Mitochondria 8 and 9)
  - Because initial setting up took so long, the timing of the actual project became very squeezed (Cambrian 14)
  - The tendering and procurement process was 'painful' (PPE 11)
  - Had to work hard to get the project going initially because of initial constraints of Sciencewise funding (Water 30)

- **Evaluation**:
  - Evaluators very late in delivering report and the evaluation report was initially unsatisfactory although finally good (PPE 11)
  - Awful lot of evaluating (PPE 36)

5.3 Governance, oversight and stakeholder engagement

The aspects of the governance, oversight and stakeholder engagement that **worked well** included:

- **Early work with stakeholders improved the quality of the project**:
  - Early effective work with stakeholders and setting up the Oversight Group helped delivery and achieved good buy-in (Mitochondria 9)
  - Good governance and relationships throughout resulting in the project being managed very effectively (Mitochondria eval report p7, 88, 98, 104)
  - The Steering Group helped get good design (PPE 12)
  - Creating joint objectives and joint vision increased the sense of ownership of the plan and process (DbyD Water)

- **An Oversight Group (OG) with diverse viewpoints strengthened the project**
  - Early meetings with stakeholders and establishing a broad based OG with very diverse perspectives to help develop content and advise throughout was a core component of quality assurance (Mitochondria eval p94)
  - A stakeholder group with a range of perspectives to shape the dialogue and information for the public was a strength (ACHM 20)
  - Worked hard to involve NGOs including a Greenpeace scientist led to robustness because of the diversity of viewpoints (SynBio 26)

- **A strong team working in partnership to run the project**:
  - Sciencewise, contractors and the internal team worked as a really strong partnership to consider all plans and issues, resulting in better questions for the public and better results (PPE 36)

- **A final stakeholder event to discuss the results**:
  - The expert stakeholder group workshop to discuss the results was very effective and rarely possible in other circumstances (Cambrian eval p12)

- **Direct senior involvement**:
  - The direct involvement of decision makers was very important so participants could see the face of the programme and decision makers could experience the process (SynBio 27)
  - The buy-in from the top at the start was critical to the success and impact of the project (SynBio 27)

The aspects of the governance, oversight and stakeholder engagement that **worked less** well included:

- **Insufficient engagement of stakeholders**
  - Not enough engagement with appropriate stakeholders in oversight (Planet 3)
  - Not enough engagement of relevant policy people in shaping the project so they were then not interesting in the findings and thus not enough buy-in at that stage (Wellbeing 7)

- **Some key stakeholders missing from the process**
  - Could not get any policy maker involvement - they were not persuadable (Landscapes 18)
  - Unable to interest the regulators so no ownership built (SynBio 26)
  - Some key stakeholders did not take part (Cambrian eval p12)

- **Hard to keep stakeholders engaged and contributing**
  - Ensuring continued commitment and contribution from stakeholders was difficult (Water DbyD)
  - The Oversight Group and stakeholders found the timeframe too tight and over-rushed, resulting in insufficient communications with the OG, which was under-used (PPE eval p76)

5.4 Information provision / stimulus materials

The aspects of the information provision and stimulus materials that **worked well** included:

- **Innovation in information provision**:
  - Good materials produced with diverse stakeholder input provided an 'example of how to communicate complex science to an inexpert audience in accurate and unbiased ways', including an animated video to explain mitochondrial replacement techniques, handouts / information sheets, posters, presentations by specialists with Q & A, quizzes (Mitochondria 9, Mitochondria eval p103)
  - Case study vignettes of specific health research projects and clinical trials had the potential to work well (PPE eval p57-58)
  - Good props, clear information including photo montages and scenarios (Cambrian eval p3, 13)
  - Actors were used to role play issues (Open Data 5)

The aspects of the information provision and stimulus materials that **worked less well** included:

- **Accuracy essential**:
  - One small piece of information that was found to be inaccurate in a workshop 'completely flummoxed' those present, shook participants' confidence and almost derailed the process (Mitochondria eval p9, 144)

5.5 Numbers, recruitment and sampling of public participants

The aspects of the numbers of public participants, their recruitment and sampling that **worked well** included:

- **Appropriate numbers**:
- 'Saturation point' in terms of numbers of participants (Mitochondria 9)

- **Reached the right people**:
- 'Proper public' without a stake or specific knowledge (Mitochondria 10)

- **Robust sample of people**:
  - Good range of people, so politicians would not dispute the results (Mitochondria 10)
  - The range of people in different geographical locations was robust to decision makers because seen to reflect public views at large, leading to enhanced impacts (SynBio 28)
  - Sampling was good even though the number was small (Open data 4)

- **Separate strands of input**:
  - Separate strands for patients and public so could see where there was consensus and where not (PPE 11)
  - Separate focus groups for specific interests allowed extreme views to be aired and captured (ACHM 20)

The aspects of the numbers of public participants, their recruitment and sampling that **worked less well** included:

- **Not enough people to make process robust**:
  - Not enough participants were involved (LWEC 2)
  - There were questions about sample size and quality - scientists like statistical robustness (Geoengineering 22)

- Small sample size and that presented a dilemma (Geoengineering 23)
- There were big questions about whether the data was representative (Energy 2050, 24)

- **Poor sampling**:
  - The sample was not robust because the participants were not properly selected (LWEC 2)
  - The big caveat methodologically was that it was a self-selecting sample (Energy 2050, 24)

5.6 Reporting and dissemination of results

The aspects of the reporting and dissemination of results that **worked well** included:

- **Good quality recording and report**:
  - There was a 'cogent set of results that faithfully articulate the views and attitudes expressed by participants' (PPE eval p4)
  - Good information collection with tape recorders on workshop tables, participants questions captured on post-its, information recorded on flip charts throughout and through end of workshop questions (Mitochondria eval p22)

- **Transparency**:
  - Holding the final Authority meeting in public to consider the dialogue results demonstrated transparency and accountability (Mitochondria eval p91)

- **Launch of results**:
  - The results of the dialogue were launched at an event at the Royal Welsh Show with the Minister in attendance (Cambrian 14)

- **Dissemination of results**:
  - The findings of the dialogue have been presented to the House of Commons Science and Technology Select Committee on Clinical Trials; an International Clinical Trials Day in Liverpool; Oxford Clinical Trials Unit international meeting; and at Great Ormond Street, Norfolk Public and Patient Involvement Group, the Department of Health, and to development champions across the NHS (PPE 11)
  - The results have been presented internally to the HRA Board, its Confidential Advisory Group and through a whole day session with staff in England, Wales, Northern Ireland and Scotland (PPE 11)
  - The findings of the dialogue were presented at the Ecosystems Approach to the Next Century conference in Cardiff, with the involvement of some of the farmers involved in the project - this high level conference was hosted by the Welsh Government and attended by the First Minister and Natural Resources Minister; at the Ecosystems Knowledge Exchange network meeting in Manchester in December 2013 and a stakeholder day for the Cambrian Mountains Initiative in November 2013, attended by the Minister, referenced the dialogue project (Cambrian 14)
  - The project and its outcomes have been referred to as an example of good practice (Water 30)

- **Good feedback to participants**:
  - The Synthetic Biology and Open Data dialogues both wrote later (one year on) to all those involved (including public participants) on developments following the project
  - The HFEA informed participants throughout the process including when the results were published, and informed and invited them to the Authority meeting to consider the results.

The aspects of the reporting and dissemination of results that **worked less well** included:

- **Poor reporting**:
  - The reporting overclaimed data in ways inappropriate to a qualitative process (LWEC 2)

- **All data from the process was not used**:
  - The dialogue generated more information that could be used which raised questions about how best to filter, analyse, collate and reflect on evidence from the process (Cambrian eval p11)

- **Lack of feedback to participants**:
  - The contractor refused to provide contact details of public participants, even when additional payment was offered, and the evaluation contractor failed to collect information consistently, which meant that a planned reconvened event to feedback on impacts could not be run (PPE 11)

- **Little dissemination**:
  - There was little follow up to promote the dialogue results; it relied on committed individuals (Open Data 1)
  - There was little spread within the sponsoring organisation (Open Data 1)
  - Need to do more follow up (evaluation has been good but need more) (Planet 3)
  - The results were not really used (Planet 6)
  - The dialogue areas were chosen for pragmatic reasons (e.g. timing) without specific strategy to take forward the results, which meant little impact (Landscapes 17)
  - There were a lot of useful results and could have worked harder to spread those (SynBio 26)

5.7 Scientist / specialist input at workshops

The aspects of scientist / specialist input at workshops that **worked well** included:

- **Specialist input at workshops**:
  - Having researchers in the room worked well to make it 'real' for the public (PPE 11)
  - Having scientists at the first set of workshop to present information and answer questions (Mitochondria eval p58)
  - The process involved scientists sensitively and at the right time (ACHM 20)

The aspects of scientist / specialist input at workshops that **worked less well** included:

- **Insufficient specialist input**:
  - The use of video to provide information was inadequate because there were no opportunities to ask questions afterwards, and no-one present to answer any such questions. One video was inappropriate and caused discussions to go off at a tangent (PPE eval p57, p68 - 69)
  - There were no external specialists at the first round of events, so facilitators and the HRA provided information (PPE eval p55)
  - There were no scientists at the second set of workshops (only bio-ethicists), although questions remained (Mitochondria eval p58)

- **Too much specialist input**:
  - There were too many specialists at the second round of events - with 2 sitting in tables of 7-8 public participants, which meant participants left the debate to the experts at times and those experts led debates and questions to participants at times (PPE eval p69-70)

- **Poor differentiation of roles**:
  - There was poor differentiation of roles of experts who were unclear about the parameters of their involvement and lacked understanding of the process (PPE eval p64)

5.8 Barriers arising from practice to the increased use of public dialogue

It was important for the evaluation research to also identify where there were remaining barriers to the increased use of public dialogue. Those running projects were therefore asked about the aspects of the process that enhanced or reduced the credibility of the process, and therefore the extent to which they felt they could use the results with complete confidence.

The single most frequent concern about previous public dialogue projects was the sample size - simply the number of public participants involved. Other concerns raised included questions about the standards used for the recruitment and sampling of participants, so the process could be seen to be robust; and the quality standards applied to the analysis and reporting of dialogue results. However, it was the issue of size that was mentioned most often and most clearly in the feedback. For example, interviewees said:

> "The main thing was that it was expensive, but then you have to do it right ... It meant a small sample size and that presents a dilemma." (Geoengineering 23)
>
> "The big question was whether the data was representative." (Energy 2050, 24)
>
> "It's probably too small a project to say anything significant." (Energy 2050, 25)

Where projects are larger - that has been found to be more credible:

> "It showed dialogue could be done on a very large scale and can be effective ... The way it was done was convincing to policy makers I think because of the range of people in different geographical locations. It was seen to reflect public views at large - so I think that was a way in which the impact was enhanced." (SynBio 28)
>
> "There were resource limitations - they were very small scale dialogue activities and you could not extrapolate. You would have had to have involved thousands of people but actually doing lots of small quick dialogues is a much better way of using the funding. It was good value for money - it offered us lots of insights." (Open data 4)

Sciencewise has recognised that the question of 'how many is enough?' remains, and this will be addressed in the new guidance on identifying the appropriate numbers of public participants in different circumstances is being developed in the coming year.

5.9 Six key lessons from practice

The analysis summarised in this section were presented to and tested with the regular meeting of the Sciencewise Dialogue and Engagement Specialists (DESs) in April 2014. The lessons from the analysis and subsequent discussion can be summarised as follows:

Public dialogue is designed to inform decision-making on public policy issues. The 6 top tips below are designed to maximise the value of public dialogue for policy.

Lesson 1. **A clear purpose.** Start with a clear purpose for the public dialogue, agreed among all project partners - and especially those who are expected to use the results of the project.

A clear set of objectives provides a very valuable foundation for planning - the detailed process can then be designed to achieve the specific objectives most effectively.

Clarity and agreement are also needed at the start on how, when and by whom the dialogue results will be used to inform decision-making.

Lesson 2. **Senior level support and commitment.** Senior level buy-in and support for the process, and the use of the results, needs to be confirmed as early as possible in the project.

Establish an oversight group right at the start with all the relevant senior individuals, including key internal individuals as well as external stakeholders to bring in a range of different perspectives.

This helps achieve internal and external commitment to the objectives, wider credibility for the project, and helps avoid later challenges to the results.

Lesson 3. **The right mix of methods with the right number of the right public participants.** The dialogue needs to have a robust process which is credible to those who are expected to use the results. A mix of quantitative (e.g. polls) and qualitative methods (e.g. deliberative workshops) is generally accepted as the most robust approach.

The process needs to involve a credible number of public participants, recruited to provide a good cross-section of the British public - without expecting participants to be fully representative. The appropriate number depends on the purpose of the dialogue.

Ideally, in the workshops:

- participants are recruited and meet in several different geographical locations
- participants meet together at least twice, to give them time to think
- scientists and other specialists are available in person
- meetings last for a reasonable length of time to give participants time to receive information and deliberate on the issues
- project partners and policy makers attend at least some part of the process in person to hear the public debates first hand.

Lesson 4. **Good reports written and launched .** Accurate, concise, well-written reports need to be produced summarising the results and the process used, and designed specifically for their main target audience - policy makers. Ideally, results should also be presented in person to those who are expected to use those results.

Reports also need to be accessible to the public participants as well as to others who may have an interest but have not taken part, such as other stakeholders, politicians etc.

Launching the reports at major events to a range of different stakeholders, with explicit support from senior level individuals (e.g. Ministers), helps build awareness and credibility.

Lesson 5. **Good relationships with those involved.** Those involved in the project will be the most vocal supporters or detractors.

Ensure the delivery of the project respects the public participants, scientists and other specialists giving input to the project, and the stakeholders involved in different ways. This requires well planned and well delivered dialogue events - good facilitation, good information, clear messages to those involved about their role, good logistics.

Good event management needs to be followed by feedback on the results to all those involved (at least by providing the final report), and subsequently feedback on how their input and the project have informed policy decisions. This all contributes to building greater credibility for the project as well as for public dialogue more generally.

Lesson 6. **Sufficient resources of time, money and people.** Public dialogue is not a cheap or quick option. Dialogue projects can be demanding and resource intensive, and take time to develop and implement.

However, done well, dialogue is the best possible method for in depth work with the public to explore their values, priorities and concerns.

Dialogue design, delivery and evaluation require specialist skills. There are specialist contractors with extensive experience, and increasingly direct experience of running projects within Government.

Early investment of time and money into good quality public dialogue can save significant resources at later stages by ensuring the best and most appropriate engagement methods. This will reduce the likelihood of significant costs and delays as a result of later challenges (e.g. through judicial reviews).

To build on the analysis of learning from good and bad practice, two gaps in Sciencewise guidance were identified, and two initiative agreed to fill those gaps:

- The need for a very basic set of guidelines for delivering workshops. The drafting of this was led by DES Andrew Acland and has now been published on the Sciencewise website as SWP10 Guidelines for running meetings and workshops[9].

- The need for further guidelines on the key issues identified below as most important to the credibility of dialogue processes, particularly with decision makers:

    - the number, recruitment and sampling of participants involved
    - the role of specialists as information providers or part of the dialogue; the role of facilitators in providing information
    - the recording and analysis of discussions - collaborative, data collection etc
    - reporting
    - feedback to participants.

    These issues have also arisen even more strongly in some more recent dialogue projects.

    As a result, a collaborative approach is being developed between social researchers in Defra and BBSRC, together with Sciencewise, to agree some guidelines on quality standards on

[9] http://www.sciencewise-erc.org.uk/cms/assets/Uploads/Publications/SWP10-Guidelines-for-running-meetings-and-events-May14.pdf

public dialogue that could sit alongside Government social research quality standards and wider quality standards (e.g. for stakeholder engagement).

This work is being led for Sciencewise by Diane Warburton as It is expected that this work will be completed by March 2015.

This guidance will supplement the Sciencewise Guiding Principles on good practice (see section 6.1 above), and other Sciencewise guidance documents already available[10].

[10] http://www.sciencewise-erc.org.uk/cms/project-guidance-tools-and-templates/, and http://www.sciencewise-erc.org.uk/cms/learning-resources/

6. EVALUATION

6.1 Introduction

The objective for Sciencewise evaluation work, as defined in the business plan (2013) for the period 2012 - 2015 has been:

"To evaluate the effectiveness and impacts of Sciencewise activity including Sciencewise funded projects."

The rationale for this area of work is, as described in the 2013 - 2014 business plan for the programme, that, "the assessment of impact and the identification of learnings from projects and programme activities will continue as a priority for Sciencewise. Our strategy will continue to be to evaluate each funded dialogue project, to carry out an evaluation of impact towards the end of the year, and to ensure that the learnings feed back into the delivery of dialogue and the programme."

The evaluation work is divided, in terms of budgetary accountability, between involvement in the commissioning and oversight of the independent evaluations of every public dialogue project co-funded by Sciencewise, and the 'programme evaluation', which undertakes evaluation research as well as drawing together the learning and impacts from across all the dialogue projects and other Sciencewise activities (resulting in reports such as this present one).

This section also reports briefly on a collaboration between Sciencewise evaluation work and a PhD student at the University of East Anglia who is researching Sciencewise as a learning organisation.

6.2 Projects evaluation

Sciencewise provides oversight to the independent evaluations of all projects co-funded by Sciencewise, to ensure that the evaluations provide the data on impacts and lessons that Sciencewise requires to develop its evidence base on public dialogue. A budget of 3.5 days per project is provided to the Evaluation Manager to undertake this work.

The evaluation activities on projects starts formally with involvement on the Invitation to Tender (ITT) for the project evaluation, with the Evaluation Manager role depending on the requests of the commissioning body - this can range from the minimum of commenting on draft ITTs and participating in the assessment of tenders and decision on appointment, to running the whole procurement process up to appointment.

After appointment of the evaluation contractor, the Sciencewise evaluation input then involves commenting on the full evaluation plan, evaluation questions (questionnaires, interviews) and on interim and final evaluation reports.

In the individual dialogue project evaluations, Sciencewise has increasingly stressed the 'formative' role of evaluation, to provide evidence and feedback to the commissioning body throughout the project and not just at the end. In several recent dialogue projects, it has been apparent that the simple presence of an evaluator with a brief to look at learning and impacts has made those involved in delivering more conscious of these issues, and allows others to push for evidence of impacts.

Evaluators have also recently played an important role in helping commissioning bodies clarify their objectives at the beginning of projects - evaluators need to have clear objectives so they

have a clear framework against which to evaluate achievements. The often tight timescales once a project starts limits the extent to which objectives are likely to be discussed and clarified without this input from evaluators.

Later in 2014 (July), the role of clarifying project objectives (both in terms of whether they can be evaluated against, and whether they will meet the Sciencewise Guiding Principles), has been more formally built into the input from the Evaluation Manager as business cases are agreed. It will be interesting to see the impacts of this new approach on the evaluations and success of those projects.

There is growing evidence of improvements to the quality and impacts of projects while in progress. For example:

- In the Natural England NIAs project, the interim evaluation research and report identified concerns about lack of progress in the three pilot areas. Although challenging, the report was seen as a "fair reflection of progress" by those involved in delivering the project.

  The report and subsequent meetings focused on its findings prompted a re-grouping of the project and active consideration of what could and should be achieved by the project end date, including a specific response to the interim evaluation from one of the areas with detailed plans for delivery. More specifically, one of the NIA areas developed a steering group to improve governance as a result of questions from the evaluators.

  One of the delivery contractors responsible for one NIA area said "I think your evaluation has been most helpful". The Sciencewise Projects Manager said (email to evaluator, 20 March 2013) felt that "the interim evaluation report has been effective in challenging the project to date and leading to parties both reflecting on what has happened to date (to learn for other occasions) and reassessing what is planned for the future. I think the project is likely to be more successful than it would have been without the interim evaluation report."

- In two recent project wash-up meetings, the commissioning body for the dialogue project has stressed the value of the evaluation throughout the project:

  - "Defra found it was very valuable and useful to have the evaluator pitching in and commenting during the process rather than just at the end, but didn't overstep the mark." (Defra Bovine TB wash-up meeting, 7th May 2014)

  - "The evaluation has been very valuable for the credibility of the project, and there were questions about the reasons for the evaluation budget being limited to 10% of the delivery budget. That doesn't reflect the value of the formative evaluation input during the project, for contributing to the quality of the project throughout, as well as now, at the end. Evaluation has really improved in SW projects, particularly having evaluators involved from the beginning, so they understand the project. Really worth additional resources, perhaps especially in some specific projects, to make the evaluation much stronger. The formative approach in particular can be very valuable." (Rothamsted Research wash-up meeting, 16th May 2014)

Evaluation activity has also had a role in improving public dialogue practice as a result of project evaluations and sharing learning. Every project co-funded by Sciencewise now (almost) always has a wash-up meeting, to enable those most closely involved to reflect on their experience of public dialogue through the project. These meetings help share reflection and learning about what works well and less well, and therefore feeds into improved practice by those involved.

These are Sciencewise-led meetings, organised and facilitated by the DES. The draft evaluation report is made available in advance and the evaluator always attends to contribute, and to take further evidence from the discussions. These meetings are becoming increasingly effective and useful for commissioning bodies, contractors, evaluators and Sciencewise. The meetings have been described as "useful and constructive" (Defra, 8 May 2014) and "an interesting and constructive discussion" (delivery contractor).

Wider improvements to practice take time to work through, although project evaluations have become clearer about where projects have failed to meet basic standards. As formative evaluation continues to grow in importance, the scope for evaluations to contribute to supporting improvements to the quality of the design and delivery of projects also grows.

A summary of poor practice in projects completed by December 2013 has been produced and shared with the DES team (see section 5). As a result, a new good practice note has been produced on basic workshop practice. DESs report that having the research and analysis written up in this way has strengthened their position in supporting dialogue projects to follow good practice, enabling them to improve the quality of projects.

Evaluation experience has also fed both learning and examples into other dialogue project activities including templates for project inception and wash-up meeting agendas, and a note on working with specialists in dialogue events. It is planned that the use of these notes will support individual DES advice and raise standards in the design and delivery of dialogue projects.

More specifically, evaluation findings have driven an interest among practitioners and commissioning bodies to identify and agree clear and widely acceptable (and accepted) standards of good practice, based on existing standards (e.g. in stakeholder dialogue, qualitative research), that can be used in future. This will be completed during 2014.

This knowledge has also been provided to a specific project. A briefing was provided at the request of the Environment Agency to the project team for the EA Communicating Risk project so they could learn from the evaluations of previous projects. A short presentation was made early in the project (27 January 2014) by the Sciencewise Evaluation Manager, based on what worked well and less well in previous projects using the findings from the programme evaluation (including updates on projects) in 2013-14. The presentation was followed by questions and discussion of the issues of specific relevance to the project.

Wider learning has also been promoted through the establishment of a system of providing observer places at public dialogue events. All evaluation evidence suggests that the most effective learning about dialogue in the first instance is through observing events first hand. Initially developed as 'barefoot evaluation', these opportunities also enable additional input to the evaluation through careful briefing and de-briefing of these observers.

Reflection and learning has also taken place within the Sciencewise evaluation work, and the support and guidance on evaluation provided to individual projects (both to commissioning bodies and contracted evaluators) has been constantly developed, reviewed and refreshed. For example, two years ago project evaluations focused almost entirely on the processes within the dialogue events / workshops. However, it became clear that the success and impacts of the projects were at least as much affected by much wider factors such as the involvement of relevant stakeholders in governance and decision making. Questions of the recruitment and sampling of public participants, the balance of costs and benefits across the project, recording and reporting what is said by dialogue participants, the credibility of the process with decision makers and the extent to which that affects how they take dialogue results into account, have all become much more important. All these factors are now identified as essential elements of

project evaluations, alongside the quality of the dialogue events and feedback from the public participants and others involved.

The scale, scope, content, reporting and use of evaluation findings continues to be considered and new developments identified. Demands for data on the impacts and learning from Sciencewise projects from the Sciencewise Steering Group, Programme Board and others also continues to grow. However, Sciencewise has only limited influence on project evaluations - these are commissioned and contracted by the body commissioning the dialogue. The view of commissioning bodies on the success of an evaluation may focus more on whether the project is shown to be successful, especially in terms of the delivery of the process. They are generally much less interested in what worked less well and lessons for future practice, or indeed impacts. Sciencewise can request that these things are considered in individual project evaluations, and they usually are, but to varying degrees.

At present, this approach of Sciencewise providing support and guidance on evaluation, but the actual commissioning of project evaluations remaining with the dialogue commissioning body, is likely to continue. The theory behind this approach is that this builds more capacity as the commissioning body takes full responsibility for the evaluation. However, there may come a point where the capacity building benefits are outweighed by the wider learning that may be achieved.

Practice in procurement processes for the evaluation of public dialogue projects has also been improved, through the development of templates and support in invitations to tender (including building a list of 25 experienced contractors in evaluating participatory working), assessment of tenders, feedback to those tendering and oversight of evaluations in practice.

In terms of the impacts of Sciencewise evaluation work on good practice in evaluating dialogue, individual support and guidance to individual project evaluators is supported by regular updating of written guidance (e.g. SWP07 on Evaluating Public Dialogue projects). The improved standards in evaluation of public dialogue resulting from this oversight is becoming recognised, to the extent that commissioning bodies have suggested increasing the resources provided for project evaluations: "Evaluation has really improved in SW projects, particularly having evaluators involved from the beginning, so they understand the project. Really worth additional resources, perhaps especially in some specific projects, to make the evaluation much stronger." (Rothamsted wash-up meeting, 16 May 2014).

6.3 Programme-wide evaluation

Beyond the learning from individual dialogue projects, the evaluation work has fed into improvements to programme plans. At the request of the Sciencewise Steering Group, evaluation activities led the strategic planning process for Sciencewise for 2014-15 through a Theory of Change process. This provided a widely accepted process through which to identify goals and work backwards by then identifying the activities to achieve the agreed goals. A paper (Alan Mercer, 1 April 2014) summarised exactly where the business plan for 2014 - 15 drew on the Theory of Change and subsequent team strategy day, and explained where it diverged from those conclusions and why. The process ensured broad buy-in from the whole team for the resulting business plan for 2014 - 15.

In addition, a summary of the findings of the 2013 - 14 evaluation research, presented to the Sciencewise Steering Group in February 2014, significantly influenced the business plan for 2014-2015 which focused on the key findings of the evaluation in relation to maintaining Sciencewise funding, advice and guidance to projects and giving new priority to the Sciencewise profile (to increase the profile and make Sciencewise organisation and activities more transparent), better sharing of the findings and learning from dialogue projects, and taking a

leadership role. As a result, the final business plan for 2014 - 15 identifies five new challenges for the year:

- Increase the visibility of Sciencewise with policy makers, especially at senior decision maker levels.

- Be more proactive in encouraging policy makers to consider involving the public in the development of new policy, especially on cross-Departmental and contentious issues.

- Maximise the value across Government of the knowledge arising from public dialogue projects and other programme activities.

- Lead the sharing of understanding of best practice for involving the public in policy.

- Match programme support to the needs of Departments and other public bodies.

Evaluation activities have supported the extent to which the programme can improve its longer term contact with past public participants. Contact details for 200 public participants have been gathered by evaluators (at Sciencewise's request), which has provided the data from which participants in the Citizen Group have been selected. These contact details have all been added to the Sciencewise database and all receive the monthly digest. 136 public participants remain as active contacts on the subscription list.

These contacts were also used as the basis for the research into the longer term impacts of participation in public dialogue, reported in the publication *Revisiting Past Participants*, by Tim Hughes and Diane Warburton, and published by Sciencewise in 2012.

The evaluation research and analysis on the programme overall feed information about the impacts of the work into various programme activities, including evidence for BIS in relation to future funding.

Evaluation work has also created an evidence base from project and programme evaluations to demonstrate the effectiveness and value of public dialogue. Evaluation research has also identified 'champions' who are willing to work with Sciencewise to promote public dialogue (15 individuals identified from the most recent evaluation interviews 2013 - 14).

Since April 2012, evidence from evaluations have been used to strengthen the evidence base for the following:

- All Sciencewise project case studies
- Production of the *Frequently Asked Questions* and *What is Sciencewise?* publications
- Revisions to the Sciencewise Guiding Principles, 2013
- Co-drafting of *Revisiting Past Participants* (2012) and the 'Overcoming Disengagement' chapter of the Sciencewise anthology *Mapping the new terrain* (2013)
- RCUK summary of impacts of the Open Data project, September 2013
- Briefing on the costs and benefits of public dialogue for Defra, March 2014
- Briefing for the Open Policy Making team at the Cabinet Office on the Theory of Change approach and indicators for measuring impacts, 2013 - 14
- Briefing for Department of Health on measuring the impacts of engagement, August 2013
- Briefing for discussions with Mark Walport, Government Chief Scientific Adviser, November 2013
- Input to Sciencewise evidence to parliamentary committees:
- Public Accounts Select Committee inquiry into engagement, 2012

- House of Commons Select Committee Inquiry into Climate Change: public understanding and policy implications, April 2013

Those who have been involved in Sciencewise evaluations, and created evidence of the value of dialogue, have gone on to recommend public dialogue to others. For example, having reviewed the value of dialogue projects as part of the overall Sciencewise programme evaluation, reading Sciencewise evaluation reports and seeing dialogue in practice through a project evaluation, one evaluator has recommended public dialogue as the best approach to public engagement by the European Union in considering the future of Europe. Before involvement with Sciencewise, she would have recommended public engagement but had not previously considered public dialogue as a feasible option. (Sarah del Tufo, phone conversation, 4th June 2014)

More widely, there has been significant interest in Sciencewise publications relating to evaluation. 4 of the top 20 publications downloaded from the Sciencewise website in 2013 - 2014 were about evaluation (total of 199 downloads); and 4 of the top 20 downloads in 2012 - 2013 (total of 151 downloads). The most popular publications on evaluation, according to download figures since 2012 (up to May 2014), are as follows:

1. Sciencewise Evaluation report 2011 (138 downloads)
2. Sciencewise Evaluation report 2013 (115)
3. SWP08 Evaluation in Sciencewise (104)
4. SWP07 Evaluating Sciencewise public dialogue projects (87)
5. Evidence Counts (62 downloads)

6.4 Sciencewise as a learning organisation

In February 2013, Sciencewise was approached by the University of East Anglia to collaborate with a PhD student, Helen Pallett, who had specific interests are in public participation in UK science policy and organisational learning about participation. Her master's thesis (completed 2011) looked at the historical trends of organisational learning 2000-2010 around Sciencewise's initial creation and later re-launching as Sciencewise-ERC.

This research is fully-funded by a PhD studentship from the Economic and Social Research Council (2010-2014) and is supervised by Dr Jason Chilvers. The links with UEA were co-ordinated by the Sciencewise Evaluation Manager, and the work is due for completion later in 2014.

The main questions for the research were, initially:

- **What are the main mechanisms for organisational learning in the Sciencewise organisational network?** Are they always the same or do they differ between contrasting projects, sites and groups?

- **What is involved in these learning processes?** Which actors and objects? Which practices? Which visions of policy-making and public dialogue? Does learning happen slowly over a long period of time or does it happen only at specific times and in particular situations?

- **How might organisational learning be further promoted or its quality improved within Sciencewise and other organisational networks?**

This research was designed to involve following several key sites of learning and innovation within the Sciencewise network January-December 2013, and exploring how these interact with and influence other parts of the organisational network. Research methods have included:

analysis of relevant documents from Sciencewise and other sources; interviews with key Sciencewise staff and contractors, and related actors; and observation of relevant meetings and events.

The focus on organisational learning ensured that the research was clearly distinct from but complementary to the programme evaluation being undertaken by Diane Warburton. Whilst learning is included in the programme evaluation, this research would be able more deeply explore instances of learning within the Sciencewise network and reflect on this learning with the aid of the academic literature. It was also expected to allow for the consideration of themes related to but outside of Sciencewise's direct remit, such as the potential to promote culture change in favour of public dialogue within government departments, which potentially then be drawn upon in future evaluations and inform future organisational practices and initiatives.

7. KNOWLEDGE SHARING AND RAISING AWARENESS

7.1 Introduction

The objective for Sciencewise knowledge sharing (previously called 'raising awareness') work, as defined in the business plan (2013) for the period 2012 - 2015 has been:

"To maximise the influence of Sciencewise by raising awareness of the benefits of dialogue and of the support available by engaging with more public servants, in more Departments, in more Networks and where possible at more senior levels."

The rationale for this area of work is, as described in the 2013 - 2014 business plan for the programme, that "the evaluation in 2012 has shown that awareness of Sciencewise is in general low across Government and the public sector. Our strategic priority in 2013-14 is to build on the high level contacts and networks established in 2012-13 and to create an enhanced top down support for consideration of dialogue."

There are numerous activities within this area of work including thought leadership, social intelligence, the monthly digest, website, Twitter, events, webinars, high level networking, Sciencewise publications and blogs. Each of these is covered below, in turn.

7.2 Thought leadership

The objective for Sciencewise thought leadership work, a defined in the business plan (2013) for the period 2012 - 2015 has been:

"To achieve the status as a respected and leading resource through thought leadership that meets the needs of policy-makers for the development of dialogue best practice and understanding."

The rationale for this area of work is, as described in the 2013 - 2014 business plan for the programme, that, "in order to influence those involved in policy making and wider stakeholders, Sciencewise has to have credibility and influence as a respected source of information and guidance."

During this period (from April 2012), Sciencewise commissioned and published four thought leadership pieces - all published during 2013 - 14. These were available for download from the Sciencewise website. The titles, and total numbers of downloads to June 2014 (recognising that some had been published earlier than others) were:

1. Which Publics? When? by Alison Mohr, Suhjatha Raman and Beverley Gibbs, 2013 (260 downloads)
2. In the Goldfish Bowl: science and technology policy dialogues in a digital world, by Susie Latta, Charlotte Mulcare and Anthony Zacharz, 2013 (142)
3. Experts, publics and open policy making: opening the windows and doors of Whitehall, by Simon Burall, Tim Hughes and Jack Stilgoe (50)
4. Dialogue for governance and regulation: Engaging citizens in the long-term, by Ingrid Prikken and Simon Burall, published August 2013 (41)
5. Mapping the new terrain: public dialogue on science and technology, an anthology, edited by Simon Burall and Tim Hughes, published September 2013 (not figures on downloads available to date)

Earlier strategic research (including papers focused around good dialogue practice, published in 2009) continued to generate interest on the website, especially the Departmental Dialogue Index. In order of popularity, the figures for downloads of these documents since 2012 (and up to May 2014) are as follows (covering full and summary reports):

1. Departmental Dialogue Index, report and tool, by Lindsey Colbourne, 2010 (201 downloads)
2. Evidence Counts: understanding the value of public dialogue, by Diane Warburton, 2010 (62)
3. The Use of Experts in Dialogue, by Suzannah Lansdell, 2010 (58)
4. International Comparison of public dialogue, by Richard Wilson, IZWE, 2010 (41)
5. Widening public involvement in dialogue, by Pippa Hyam, 2010 (36)
6. Public Dialogue Review. Lessons from public dialogues commissioned by the RCUK, by Robert Doubleday and Rachel Teubner, July 2012 (32)

   What is public dialogue?, written by Tim Hughes, 2012 (32)
7. Working with the media, by Melanie Smallman, 2010 (29)
8. Enabling and Sustaining Citizen Involvement, by Diane Beddoes, 2010 (26)
9. Revisiting Past Participants, by Tim Hughes and Diane Warburton, 2012 (25)
10. Future Directions for Scientific Advice in Whitehall, edited by Robert Doubleday and James Wilsdon, April 2013 (21)

During 2013, Sciencewise also ran an open process calling for proposals, referring to it as a 'crowdsourcing' experiment. This generated 25 submissions from which three were selected and commissioned (authors paid fees of £5,000 per paper), all published in the summer of 2014:

- Responsive Research: putting the innovative back into agenda for innovation, by Dr Sujatha Raman and Dr Mike Clifford, University of Nottingham

- The Role of Social Media in Public Dialogue and Policy: Theory, Research and Evaluation by Dr Eric Jensen and Dr John Parkinson, University of Warwick

- Convincing the public of the merits of dialogue: a hard sell? by Dr Richard Watermeyer and Dr Gene Rowe.

In addition, other recent thought pieces published include:

- Changing hats: how deliberation impacts citizens, by Tim Hughes and Amy Pollard, April 2014. This paper generated positive feedback from Matt Leighninger (Executive Director of Deliberative Democracy Consortium): "Great piece! I'm going to tweet/post about it today. I also see lots of quotes I can use in the textbook that Tina Nabatchi and I are working on". In addition, Sciencewise was asked to write a blog for the LSE's Democratic Audit site on Changing Hats. Positive feedback on the piece from Sean Kippin, Managing Editor (23 May 2014)

- Public futures: using public dialogue to develop policy options on emerging, cross-cutting issues, by Sonia Bussu, April 2014. This paper received warm feedback the Centre for Science and Policy at Cambridge University, GO Science; BBSRC; RCUK; and UCL. News of the paper was cross-posted by online the British Neurological Association (27 May 2014)

7.3 Social intelligence

The objective for Sciencewise social intelligence work, as defined in the business plan (2013) for the period 2012 - 2015 has been:

"To research, analyse and share understanding on the views of the public on emerging areas involving science and technology, and to use that information to identify areas for future dialogue."

The rationale for this area of work is, as described in the 2013 - 2014 business plan for the programme, that, "following guidance from the Steering Group, Sciencewise has introduced a programme of research and knowledge sharing to gather information on available information on the views and values of the public on emerging areas of science and technology."

The new Sciencewise activities led by the British Science Association to produce 10 Social Intelligence briefing papers have become popular Sciencewise products.

Since the first one was published in June 2013, five of these now figure in the Top 20 downloads from the Sciencewise website. In order of popularity, these are:

1. Public Views on Advanced Materials - nanomaterials and graphene (2013): 109 downloads
2. Robotics and Autonomous Systems: what the public thinks (2013): 105
3. Public views on Open Data (2013): 87
4. Public Views on Synthetic Biology (2013): 80
5. Public Views on Energy infrastructure (2013): 71

More recently published Social Intelligence papers cover:

- Public views on the commercial application of space (2013)
- Public views on energy storage (2014)
- Public attitudes to quantum technology (2014)
- Big Data (2014)
- Public views on regenerative medicine (2014)

The blogs on these Social Intelligence papers on the British Science Association website have also created interest:

- Relating to robots: 226 unique page views
- Graphene revolution: 106
- Public views on the great eight technologies: 82
- Public attitudes to killer robots: 72
- Space: the final frontier: 76

The Big Data report has been disseminated online via Twitter (using relevant hashtags such as #bigdata, #datasharing, #personaldata) and on the blog of the data sharing open policy process (www.datasharing.org.uk). It has also been shared with over 100 individuals working on data issues via the data sharing mailing list. It has also been referred to in Data sharing open policy workshops; Data sharing open policy blog; Twitter (author, email 4June2014)

One of the 'critical friends', who review specific social intelligence pieces as part of the development process, has recommended the report to "My colleagues at Imperial [College] [and] conference delegates I met at the Royal Society." (critical friend, Imperial College quantum technology SI piece, email 22May2014)

A tweet from Hetan Shah, Executive Director of the Royal Statistical Society said:
"What is public's attitude to use of personal data? @Sciencewise has published most comprehensive review of this yet - sciencewise-erc.org.uk/cms/big-data/", (author, email 4June2014)

The use of Social Intelligence papers to support Sciencewise development activities is relatively new, and is growing as more papers on new topics become available. There is however some clear evidence of impacts, including:

- The Parliamentary Office of Science and Technology (POST) has produced several briefings on big data that have drawn on the Sciencewise work, particularly the SI paper on big data. They have asked to talk to Sciencewise about the issues in more depth, asked Sciencewise to review some of the POST briefings on big data drawing on the Sciencewise work, and inviting Sciencewise to the launch event for the POST work on big data in Parliament in October 2014.

In addition, social intelligence pieces have stimulated debate. For example:

"I heard the Public Views on Energy Infrastructure SI report being mentioned at a Making Energy Publics workshop...at the University of East Anglia on 3rd April this year." (author, Energy Storage, email 28May2014)

The wider impacts of social intelligence pieces on contributing authors and their organisations include:

"The big data social intelligence piece has informed Involve's work coordinating an open policy process on data sharing with the Cabinet Office. It has allowed us to feed in public views on the use of personal information by government in meetings and via the www.datasharing.org.uk blog." (author, email 4June2014)

"The value to me was in reflecting on public attitudes to robotics - and that in turn informed my public engagement work." (critical friend, University of West of England, email 17May2014)

More generally, the value of social intelligence pieces to key Sciencewise stakeholders includes the following:

"Inclusion of our work in these publications provides an example of implications from our research, and impact, which it is useful to have documented evidence around. In addition, I recommended the reports to the wider Unit in which I am based, and also encouraged some colleagues to consider contributing to a later report of a similar nature. Such resources are also helpful in teaching, when students can find overviews and/or clear guides helpful as a summary." Dr Clare Wilkinson, Science Communication Unit, University of West of England. (critical friend on robotics SI piece, email 20May2014)

"The main value of the work was to illustrate a lack of public awareness of the issue. It is after all a really important issue and without better technology for storage it will be very difficult to move away from fossil fuels" (author, Energy storage, email 28May2014)

7.4 Monthly digest

The monthly digest contains a summary of some of the main Sciencewise recent news. The number of subscribers to the digest has increased significantly since April 2012:

- Number of subscribers increased from 831 in April 2012 to 1138 in April 2014; an increase of 307

- Of the 1138 subscribers in April 2014, 80 were civil servants, 73 were policy makers, 42 were dialogue practitioners, 176 were science communicators, 131 were scientists / science experts, 136 were past public participants, 16 were from business and 28 were citizens. Remainder were 'unknown'

A survey of those receiving the digest was undertaken during 2014, but the responses were so few (less than 5%) that the results have not been seen to be sufficiently representative to be used in future planning. However, there is some information from the data available on the digest to suggest that it is being well used. For example, the number of people opening the digest to read it has also increased significantly since May 2012:

- The number of people opening the email with the link to the digest has trebled since April 2012: in March 2014, 288 people (26%) opened the email with the link to the digest, compared to 52 (8.5%) in May 2012.

- The number of people following through a particular item to 'Read More' has risen nearly ten-fold since April 2012: In March 2014, 73 (26%) clicked through compared to 21 people (3.4%) in May 2012.

7.5 Sciencewise website

The Sciencewise website was updated during 2012, and a significant updating was undertaken during the summer of 2014 including major improvements to the search functions and some restructuring of the information to make it more accessible. The figures below cover the period before these latest changes and reflect an already growing use of the website since April 2012:

- The number of unique visits to the website per month has increased from 845 in April 2012 to 1,600 in March 2014 (almost double)

- The number of page views has more than doubled - from 3,025 in April 2012 to 7,219 in March 2014, with an average of 6,066 page views per month

The website is proving increasingly popular within and beyond the UK. Web monitoring data for the period from 2012 - 2014 shows there have been website visitors from 166 countries including Vanuatu, Libya, Montenegro and Moldova. The table below shows the number of sessions per country, with the UK separated from the Top Ten other users from overseas.

Country	**Number of sessions**	**New users**
UK	29,653	15,611
Top Ten other countries		
1. United States	3,553	2,912
2. India	1,918	1,767
3. Canada	789	576
4. Australia	620	506
5. Germany	552	425
6. Japan	419	271
7. France	358	305
8. Netherlands	329	278
9. Spain	316	204
10. China	282	229

7.6 Twitter

The number of Twitter followers has increased from 1,763 in April 2012 to 3,071 in April 2014. The programme is now attracting an average of 54.5 new Twitter followers per month.

7.7 Sciencewise-led events

Sciencewise has started to organise a range of different events in order to share information about public dialogue with new audiences. The main events during the period were as follows.

- **Open Policy Making and public dialogue event, 20 February 2014**

  Sciencewise ran this event in partnership with the Open Policy Making team at the Cabinet Office. The impacts included:

  - 50 participants all civil servants / policy makers. Sold out event, with waiting list.

  - Positive feedback from participants. 83% said the session was good or very good (scoring from 1-5). 96% said they would recommend similar events to a colleague (yes/no answer). Feedback (on evaluation forms) included:
    - Please send slides so we can get in touch!
    - Very informative and thought provoking.
    - Good speakers pitching at a reasonable level of competency for those new to the concept of OPM and those with more experience. Practical examples were good too to see what has happened already using those good practice.
    - Interesting topic and useful.
    - Useful pointers to say and use in my work.

  People particularly liked the introductions: 'Best bit was initial talks', 'Liked Roland's presentation', 'Found cabinet office introduction useful. This could be used at work within small teams.' They also liked the case studies: 'Break-out groups hearing about case studies in more depth', 'Presentations by the civil service practitioners'. The interaction and groups discussions were popular. Some liked the action planning, and action planning: 'The action plan was an excellent idea'; others didn't: The action planning session didn't seem entirely relevant and more related to capturing participants for future activity.' There were no comments in answer to what was 'worst'.

  Follow up to the Open Policy event included:

  - Email from DWP (11 April 2014) reporting that there had been internal discussions about the possibility of being a negative case study with managers. Although decided not to do this, it has prompted them to think about issues that had arisen from not including public, which suggests that attending the event has prompted reflection on missed opportunities to include public voice.

  - Sir Jeremy Heywood highlighted the event in communications with all civil servants (Cabinet Office, 29 April 2014)

  - The report and videos of the event received 116 unique page views on the Sciencewise website within two weeks of being online.

- **National Science and Engineering Week at BIS, 22 March 2013. 10 - 11am.**

  This was a short event to provide a 'dialogue taster' for civil servants, focused on the Bioenergy dialogue and using the Democs cards, which were used in the dialogue project. Patrick Middleton, from BBSRC, attended, 11 people took part. Impacts included:
  - 6 new contacts were made, in five different departments
  - Feedback included:
    - "Interesting to see first hand how it works"
    - "Useful to consider a different approach to developing policy through engagement"

- **Event at BIS. 19 September 2013, 12-3pm.**

  Face to face event at the BIS Conference Centre, to explore the changing landscape of open policy making and will explore issues such as open data, localism, transparency and complexity.

- **House of Lords event. Sciencewise - Public Dialogue in Policy. Experts, publics and open policy. 15 January 2013, 5 - 7pm**

  The aim of this event at the House of Lords was to raise awareness of Sciencewise among policy makers, and gather new contacts. There were three speakers, and 80+ participants - the event was over-subscribed. Impacts included:
  - 21 contacts made: 1 civil servant, 3 policy makers, 5 scientists / experts, 12 unknown
  - "I enjoyed the seminar and was impressed by the turnout ... I thought it was a very good event with a good format...Many thanks for inviting me to take part" Professor Lord Krebs, email (to SB), 18 January 2013

- **Low Carbon workshop, Scotland 7 March 2013**

  Sciencewise (Steve Robinson) facilitated this event with Minister for Environment and Climate Change at the request of Ben Dipper, Scottish Government (and Sciencewise Steering Group member).

  The aim of the meeting was to consider how to achieve a shift in behaviours for a low carbon future. The meeting was attended by Paul Wheelhouse, Minister for Environment and Climate Change in the Scottish Government plus four officers from the Scottish Government, and 12 external stakeholders.

  The Low Carbon Behaviour Team confirmed that they would draw out the themes of the workshop "in future dialogues and events" (email Scottish Government, 30 May 2013. At the end of the meeting, the Minister said that he "looked forward to continued engagement on this topic" (from the notes of the meeting from the Scottish Government).

7.8 Sciencewise involvement with events organised by others

The main events to which Sciencewise made a contribution during this period were as follows.

- **Science Communication Conference, 16 May 2013**

  Sciencewise ran a workshop at this conference involving Edward Andersson, Pippa Hyam, Suzannah Lansdell and Roland Jackson, and with support from Nanasha Oyofo. The impacts included:

- 43 people attended the workshop, and we have feedback from 47% of those (good response).

- Those attending were highly qualified - 14 had postgraduate degrees and the remaining 5 who answered had a degree; 5 were (PhD or research) students.

- About half of participants gained 'a lot' of value from the event including Appreciation of the benefits and value of public dialogue (10 a lot, plus 8 a little), Ideas on how dialogue can be used in practice (11 a lot, plus 7 a little) and Understanding of Sciencewise (10 a lot, 6 a little and 2 'not much). Comments about the value included: "I knew quite a bit about dialogue itself but this was v. useful for thinking about helping others use dialogue", "Experience of how others experience dialogue materials - interesting" and "Being through it as a 'dialogue participant' was very useful - realise how tricky it is!"

- All participants found the session informative, participative and were satisfied with it.

- The most interesting aspects for participants were insights and trialling methods and resources, and open discussions. Other comments included "Learning how it is structured. Thinking about how I might apply it", "Talking with a range of people about an interesting concept" and "Experience of 'doing' a dialogue exercise and insight into how things work in practice". The main improvement suggested was 'more time'.

- As a result, 16 said they would 'Use the kit in their own organisation' (3 definitely, 13 maybe); 16 said they would 'Find out more about public dialogue' (6 definitely, 10 maybe); 12 said they would 'Contact Sciencewise about a possible project (5 definitely, 7 maybe, 3 uncertain and 2 probably not); and 11 said they would work with Sciencewise to trial the kit in their own organisation (3 definitely, 8 maybe, 5 uncertain and 2 probably not).

- 6 people said they would like to know more and keep in touch with Sciencewise: 6 signed up for the Bulletin, 6 said they were interested in training, 5 said they were interested in the Community of Practice, 2 asked to meet with a specialist adviser and 4 said they'd like to be considered as a possible case study for using the kit in their organisation.

- **Government Science and Engineering network (GSE) Annual Conference, 5 February 2013**
  Sciencewise ran a session at this conference, for 1.5 hours. The session provided an introduction to public dialogue - the Open Data dialogue - with input from Roland Jackson, Daniel Start and Edward Andersson. About 30 participants, mostly with very limited prior knowledge of dialogue. Impacts included 28 contacts made, of which 2 were policy makers and 1 scientist; remainder unknown

- **Government Science and Engineering network (GSE) Annual Conference, London 5 March 2014**
  No specific Sciencewise session; the team attended a stand at the event and met individual conference participants. The impacts were:
  - 19 contacts made: 6 civil servants, 1 policy maker, 1 science communicator, 9 scientists / experts

- **British Science Festival, Aberdeen, 4 - 9 September 2012**
  Sciencewise did not run any sessions but distributed material and generated online and social media activity.

- **British Science Festival, Newcastle, 12 September 2013**
  Sciencewise ran a session at the festival jointly with the Environment Agency to provide a 'live' example of dialogue focused around flooding and extreme weather. Attendance was disappointing; 35 public participants pre-registered but only 16 attended, plus 10 facilitators, 1 Sciencewise DES and 1 from BIS. Feedback forms were returned from 25 people, which therefore included the facilitators. Nevertheless, the feedback was very positive:

  - All 24 respondents to this questions= said they had gained understanding of the project being discussed (21 had gained 'a lot' of understanding); 23 had a lot of opportunity to discuss and give their views; and all 24 who answered had gained understanding of Sciencewise (16 gained 'a lot') and all 25 said they had gained an understanding of flood risk information.

  - All 25 respondents agreed that the event was well-organised and well-structured (of which 18 agreed strongly), and all agreed they were satisfied with the session (17 agreed strongly). This is very positive feedback indeed. All agreed there was enough information to enable them to contribute, that they understood the purpose of the discussions and that they understood how the results would be used. The only disagreement was that some (2) disagreed that there was enough time.

  - The most interesting things for participants were listening to the views and experiences of others, and meeting others (8 mentioned this), and the flood maps (7 mentioned these).

  - 13 contacts made, of which 1 was a civil servant, 3 were scientists; 6 were public participants

- **Cheltenham Science Festival, 7 June 2013, noon - 2pm.**
  Sciencewise ran a major workshop called Farming for the Future? at this conference, attended by the Science Minister, David Willetts. The event drew on work by Sciencewise and Research Councils UK, and was designed to inform the forthcoming Agri-Tech Leadership Council. Sciencewise and BBSRC provided facilitators for the event.

  27 people attended the session and the wider impacts included very positive feedback from participants:

  - 21 out of 27 gained understanding of the Government's proposals for Agri-Tech (7 'a lot' of understanding), 26 said they had the opportunity to discuss and give their views (18 'a lot' of opportunity), and 19 said they had gained understanding of Sciencewise (6 'a lot'). There was less understanding about the Agri-Tech Strategy (15 were either unsure or disagreed that they understood that).

  - 25 out of 27 were satisfied with the session (no-one disagreed); 24 said they thought it was well-organised and well-structured, that there was enough information to enable them to contribute and that they were able to put forward their views. Some felt there was not enough time (11 said they disagreed or were unsure there was enough time).

  - The motivations for choosing to attend this session were mixed: 16 said it was because of the topic, 13 said it was to have their say / discuss the issue and 10 said it was to hear the Science Minister.

  - In the event, the most popular 'best' thing about the session was meeting other people and hearing their views (identified unprompted by 11 people), and discussion (4

people). 2 people said the best thing was hearing the Minister. Two suggestions were made for improvements (apart from 'more time'): 2 people wanted to know more about what would be done with the results of the session, and 2 wanted more information on Government policy / actions.

20 contacts made, of which 1 was a politician, 1 was a scientist.

- **CSaP workshop, 26 - 27 March 2013, dinner followed by full day, Cambridge 2013**
  This was a major workshop event, led and organised by the Centre for Science and Policy at the University of Cambridge with funding from Sciencewise. This stakeholder workshop was followed by a public dialogue, funded and commissioned by Sciencewise (project report published in August 2013). The impacts of the workshop included:
  - 83 contacts made, of which 5 were policy makers, 1 was a civil servant, 4 were dialogue practitioners, 3 were science communicators and 27 were scientists / experts; remainder unknown

- **CSaP / POST workshop, 22 October 2013, 12.30 - 2pm, London**
  This event was organised by the Parliamentary Office for Science and Technology (POST) with CSaP, to review the emerging issues from the CSaP workshop, and the headline findings from the public dialogue. The session resulted in some good parliamentary contacts for Sciencewise: five MPs and 10 researchers).

- **Civil Service Live 2013**
  Sciencewise main input to this event was a session focused around the Sciencewise publication 'In the Goldfish Bowl', with three speakers: Anthony Zacharzewski, director of Demsoc and co-author of the report; Marilyn Booth, digital engagement at Department for Business, Innovation and Skills; and Claire Craig, deputy head of the government office for science (and Sciencewise Steering Group member). Impacts included:

  - 80 contacts: 47 policy makers, 26 civil servants, 4 business and 3 unknown

  - An article in The Guardian's Online Public Leaders Network by Helen Crane, 9 July 2013. The article drew attention to the Sciencewise session and the Sciencewise report, and summarised the key points from the three speakers.http://www.theguardian.com/public-leaders-network/2013/jul/09/succeed-wikistyle-policymaking?CMP=&et_cid=41502&et_rid=4867683&Linkid=How+to+succeed+at+wiki-style+policy+making

- **ITA Forum on Citizen Participation in 2013 in Berlin in May 2013.**
  Presentation on Sciencewise by Steve Robinson to a breakout session the annual ITA Forum; about 25 participants.

7.9 Webinars

Sciencewise has run a series of webinars, often associated with the publication of a new thought piece. Up to May 2014, there had been six webinars, as follows. The numbers of participants shown are usually the number who booked a place to participate; the final two show actual numbers participating.

- 27 June 2013: 12-1pm. Launch of Sciencewise's new publication "In the goldfish bowl: science and technology policy dialogues in a digital world", by Susie Latta, Charlotte Mulcare and Anthony Zacharzewski. 8 participants booked.

- 25 July 2013, 12-1pm. Discussion of Sciencewise's new publication "Which Publics? When? Exploring the policy potential of involving different publics in dialogue around science and technology", by Alison Mohr, Sujatha Raman, Beverley Gibbs. 84 participants booked. Linked In feedback showed 'likes' from:
  - Elizabeth Raney Burman, Director of Community Engagement and Outreach, University of Tennessee
  - Rebecca M. Townsend, Communication Professor and Faculty Co-ordinator of International Cultural Exchange Organisation, Manchester Community College, Massachusetts, USA

- 22 August 2013, 12-1pm. What do we know about what the public think about innovations in energy infrastructure and storage? How can the public best be engaged about this crucial area? This webinar looks at the results of Sciencewise's Social Intelligence Gathering to help understand the public's attitude to one of George Osborne's Great eight technologies. 36 participants booked.

- 6 October 2013, 2 - 3.30pm. Open Data and Dialogue. Tim Davies, Harvard Berkman Centre for Internet and Society and open data research co-ordinator with the Web Foundation, on connections between public dialogue and the transparency and open data agenda. 35 participants booked.

- 30 January 2014, 12.30pm to 1.30pm. Responsive research and public dialogue in a global context. Sujatha Raman and Mike Clifford from the University of Nottingham. 24 participants.

- 8 April 2014. Making Responsive Research Matter. Sujatha Raman and Mike Clifford from the University of Nottingham. This event had 21 participants.

7.10 High level networking

133 high level contacts have been made between April 2012 and May 2014 - 71 in 2012-13, 54 in 2013-14, and 8 so far in 2014. Of these, 96 are policy makers, 11 are scientists / experts, plus there is one civil servant, 3 politicians and 2 NGOs, 2 from business, 1 science communicator and 1 dialogue practitioner; the rest are other or unknown.

7.11 Sciencewise publications

All Sciencewise publications are available on the Sciencewise website. These can be separated (and usually are) into project publications and others.

- **Project publications**. Project publications remain popular sources of information, with regular downloads even after some years. The figures since 2012 are:

  - 867 case studies (from 24 projects) have been downloaded
  - 655 project reports (from 30 projects - recognising that some recent projects do not have case studies yet)
  - 419 project evaluation reports (from 26 projects)

  Demand for project publications, in many cases, also continues to grow over time - even if by relatively small amounts:

  - Downloads of project reports all published before or during 2012 increased from 196 in total to 222 in total. For example, downloads of the Nanodialogues project reports (from 2007) increased from 14 in 2012-13 to 28 in 2013-14; and downloads of

Synthetic Biology project reports (from 2011) increased from 8 in 2012-13 to 38 in 2013-14.

To date, and recognising that some of these documents have been on the website for far longer than others, the most downloaded case studies are:

1. Open Data (74 downloads)
2. Big Energy Shift (69)
3. Wellbeing (67)
4. Nanodialogues (59)
5. Synthetic biology (57)

The most downloaded project reports are (interestingly, the Openness in Animal Research is one of the most recent projects to be completed):

1. Openness in Animal Research (88 downloads)
2. Science, Trust and Public Engagement (51 downloads, including 15 of the Literature Review)
3. Horizon Scanning (48)
4. Synthetic biology (46)
5. Animals Containing Human Material (42)

The most downloaded project evaluation reports are:

1. Wellbeing (37)
2. Democs (35)
3. Sciencehorizons (29)
4. Living with Environmental Change (28)
4. Synthetic Biology (28)

The guidance documents relating to projects are also well used, both as pdf files and Word documents. The Guiding Principles remain among the most popular items on the website, but other guidance is also used. The figures since 2012 are, in order of popularity:

1. Guiding principles (399 downloads)
2. SWP01 Guidance for funding applicants (107)
3. SWP08 Evaluation in Sciencewise (104)
4. SWP02 Requirements for projects (98)
5. SWP07 Evaluating Sciencewise public dialogue projects (87)

- **Sciencewise publications generally**. Project publications and guidance continued to feature in the more recent figures on downloads of Sciencewise publications, alongside other publications including thought leadership paper and Sciencewise programme evaluation reports. Overall, The numbers of publications downloaded from the Sciencewise website continues to increase significantly - with the rates of downloads of the Top 20 most popular publications almost doubling from 2012-13 to 2013-14:

  - Total of top 20 downloads in 2013 - 2014 = 1,703

  - Total of top 20 downloads in 2012 - 2013 = 901

  The top 20 downloads in 2013 - 2014 (excluding the newsletter, reported elsewhere) were as follows:

Rank	Title	Number of downloads	Type of document
1	Sciencewise Guiding Principles	261	Guidance
2	Which Publics?	260	Thought Leadership
3	In the Goldfish Bowl	142	Thought Leadership
4	Departmental Dialogue Index (DDI) Tool	110	Good Practice Research
5	SI - Advanced Materials	109	Social Intelligence
6	SWP01 - Project guidance	107	Guidance
7	SI - Robotics	105	Social Intelligence
8	What is Sciencewise?	94	Sciencewise info
9	SI - Open Data	87	Social Intelligence
10	SWP08 - Evaluation in Sciencewise	104	Guidance
11	SWP02 - Project requirements	98	Guidance
12	Openness in Animal Report project report	88	Project report
13	SWP07 - Evaluating Sciencewise projects	87	Guidance
14	SI - Synthetic Biology	80	Social Intelligence
15	SI - Energy Infrastructure	71	Social Intelligence
16	Crowdsourcing Thought Leadership	68	Invitation to apply
17	Open Data - case study	60	Case study
18	Sciencewise Evaluation report 2013	42	Evaluation report
19	Dialogue Projects Impacts Summary 2013	41	Evaluation report annex
20	The Road Ahead (collection)	39	Collection of essays

The evidence of feedback or follow up to these publications is limited, although the following has been noted:

- The Departmental Dialogue Index (DDI) Tool has been translated into Swedish and turned into an app by the Swedish Association of Regions and Local Authorities.

- The Which Publics? report featured in the Editorial (b**y Dr Scott Steedman CBE FREng** Editor-in-Chief) of the September 2013 issue of Ingenia, the magazine of the Royal Academy of Engineering. The article concludes:

  "What next for the engineering profession? Should we set new targets for public engagement activity? Perhaps we need to reflect on what we mean by 'the public'. Sciencewise, "the UK's national centre for public dialogue in policymaking involving science and technology issues", recently published an interesting report, *Which Publics? When?*, which explains that every dialogue involving science and technology has to reach 'multiple publics'. ...

  "As the scale and complexity of national infrastructure projects grows, and the UK's international competitive advantage relies more and more on a technological backbone, so too will the engineering profession need to be more visible and more active in presenting its work in a framework that these multiple publics find accessible and robust. Only when the profession is seen to be both communicating widely across society and reflecting its genuine concerns will we know that our public engagement activity is on target."

  This report also gained support from Dr Alexandra Plows, University of Bangor, who said "Report looks really good - nice and clear and readable too!", on PSCI-COM, 16 July 2013.

The top 20 downloads in 2012 - 2013 (excluding the newsletter, reported elsewhere) were as follows:

Rank	Title	Number of downloads	Type of document
1	Sciencewise Guiding Principles	138	Guidance
2	The Road Ahead (collection)	113	Collection of essays
3	Departmental Dialogue Index (DDI) Tool	91	Good Practice Research
4	SWP01 - Grant guidance	55	Guidance
5	Sciencewise Evaluation Report 2011	56	Evaluation report
6	Talking about GM (SW Sub-group)	43	Learning
7	SWP07 - Requirements for Evaluation	41	Guidance
8	SWP02 - Funding requirements	40	Guidance
9	International public dialogue - IZWE	36	Thought leadership
10	Evidence Counts. Understanding the Value of Public Dialogue	34	Good Practice Research
11	Big Energy Shift - case study	33	Case study
12	What is public dialogue - FAQs	32	Thought leadership
13	Ways to Wellbeing - case study	30	Case study
14	What the public say report v4	31	??
15	Energy 2050 Pathways - case study	31	Case study
16	Sciencewise Evaluation Report 2011 - Annex	30	Evaluation report
17	Animals Containing Human Materials - case study	29	Case study
18	SW Steering Group Minutes Feb 2011	28	Steering Group Minutes
19	Science Governance and Public Engagement	28	Project report
20	Synthetic Biology Dialogue Overview	26	Project Report

7.12 Sciencewise blogs

Sciencewise initially invested significant time in producing blogs, which were published on the Sciencewise website. A total of 152 blogs have been published by Sciencewise since 2012.

Although interest has grown a little over time, the level of interest (demonstrated by numbers responding to blogs) has been low. More blogs were responded to in 2013 - 14, by more external people, than in 2012 - 13: a total of 47 external comments from 36 different people over the two years to 24 different blogs. - but no comments at all on the remaining 128 blogs. In summary, in 2013 - 14, there were 26 comments on 10 blogs; in 2012 - 13, there were 21 comments on 7 blogs.

8. CAPACITY BUILDING

8.1 Introduction

The objective for Sciencewise capacity building work, as defined in the business plan (2013) for the period 2012 - 2015 has been:

"To build the capability of those involved in policy making to understand, to assess and to implement public dialogue."

The rationale for this area of work is, as described in the 2013 - 2014 business plan for the programme, that "A continued priority is to ensure that we are building the knowledge and understanding of dialogue and its benefits. By helping policy makers, we are focussed on their development of new projects in the short term, whilst we are also building their knowledge, ability and confidence to undertake more dialogue in the future."

There are two major elements to capacity building within Sciencewise, funded through entirely separate budget allocations: firstly direct capacity building through support from Dialogue and Engagement Specialists (DESs) throughout the development and implementation of individual public dialogue projects co-funded by Sciencewise; secondly, through events to introduce the idea of public dialogue to public bodies, through specific mentoring arrangements and through the Community of Practice. All these areas are described below.

It is important to note that capacity building is one of the areas of Sciencewise work that crosses simplistic boundaries of budgetary and management responsibility, as do many areas of Sciencewise work. For example, capacity building is supported by evaluations, knowledge sharing and raising awareness activities as well as by the more specific activities described below in this section.

8.2 Capacity building through support to public dialogue projects funded by Sciencewise

The main contribution from Sciencewise activities to capacity building, certainly in terms of demonstrable impacts, is through the support and guidance provided by the Dialogue and Engagement Specialists (DESs) to the individuals in public bodies who commission specific public dialogue projects. As noted above, an average of around 10 days of DES time, plus 3.5 days on evaluation, are provided to help, support and guide these public bodies throughout the project. There are two elements to the rationale for the way in which projects are funded and supported by Sciencewise:

- **'Learning by doing'**. This is a core element of the work that Sciencewise does to build capacity for future dialogue work in public bodies. Projects are co-funded by Sciencewise, and funding depends on the design meeting the Sciencewise Guiding Principles for public dialogue, but the responsibility for the delivery of the project remains with the public body commissioning the project. That body receives funding from Sciencewise to deliver the project and has final responsibility for contracting both the delivery contractor and the evaluation contractor. Sciencewise advises and guides that work. That responsibility for delivery ensures that the commissioning body is fully engaged throughout in making the project as effective as possible. The capacity building through support to projects has always been implicit in the way Sciencewise works, but it has recently become more explicit.

- **Strengthening the likelihood of impacts on decision making**. The thinking here is that public bodies are much more likely to take account of the results of public dialogue if they have been running it - that creates ownership of the process and (hopefully) of the results,

and thus buy-in to those results and willingness to take account of the results of the public discussions.

The impacts of the capacity building achieved through the projects can be measured in terms of one of the five key success factors identified for the evaluation in 2012: the metric relating to an 'increased willingness and ability of public policy bodies to undertake public dialogue (embedding)'. See section 3.3 for details.

8.3 Mentoring and introductory events

Beyond the support to individual public dialogue projects, Sciencewise Dialogue and Engagement Specialists (DESs) have also provided mentoring and training activities for a range of public bodies, which has encouraged the use of public dialogue and have occasionally led to the development of new public dialogue projects, co-funded by Sciencewise:

- Nesta: mentoring to advise on engagement related to Nesta initial planning on the Longitude Prize. This led to the development of the Longitude project, with Sciencewise co-funding.

- Rothamsted Research: mentoring led to the establishment of a public dialogue to feed into the development by Rothamsted of overarching principles to govern their relationship with industry.

- Administrative Data, ESRC / ONS. Sciencewise provided support through DES participation in the Steering Group for a series of public dialogues run by the ESRC and Office for National Statistics on Administrative Data which was launched in June 2013. The DES facilitated a session for the Steering Group on main reflections from the work, and supported ESRC.

  Although not directly related to the Open Data project co-funded by Sciencewise, that work provided part of the context for the ESRC / ONS dialogues, and the same DES was involved as on the original Open Data project. The ESRC / ONS project was linked to the BIS Public Attitudes to Science survey in 2013, and the final reports of the project were published on 14 March 2014.

  At the workshop to launch and discuss the reports, 'Public views on using administrative data for research', "all speakers seemed struck by the value of the public dialogue" and the Sciencewise definition of Sciencewise was stated at the beginning of the workshop. The Administrative Data Research Network (ADRN) recognised that there needed to be some public representation in decision-making including lay members on the governing board. The dialogue influenced the Independent Approvals Panel, the approach to commercial use of data, and processes of data linkage. Continuing dialogue is likely on more controversial areas.

- Care.Data. Sciencewise facilitated a workshop to consider the potential for public engagement in the future planning for Care.Data. Feedback from Tim Kelsey, National Director for Patients and Information at NHS England and responsible for Care.Data. Subsequently, meetings were held with indications that future deliberative work with the public (and Sciencewise) was possible.

- Global Food Security, BBSRC. A DES has taken part in the steering group for this initiative since the completion of the Synthetic Biology dialogue. The group has commissioned a small public dialogue (not funded by Sciencewise) as well as survey work. Feedback to the

BBSRC was that the dialogue was "really influential in framing the issues ... very much affected their internal thinking".

- Big Energy Challenge roadshows, DECC. DECC ran a series of roadshows, which followed on from the My2050 project and used the My2050 tool. The mentoring took the form of guidance on the engagement activities at the initial roadshows, to feed into future planning. Feedback from DECC was that the advice was "very helpful in terms of planning future sessions" (DECC, 24 September 2013).

- DECC team and one-to-one mentoring in 2013 including sessions for the Office for Unconventional Gas and Oil and other teams (including the Green Deal teams) in November 2013 and January 2014. The mentoring manual, developed by Sciencewise in past years (by Lindsey Colbourne and Penny Walker) had been incorporated into internal DECC guidance, although not directly credited to Sciencewise.

Beyond the work on specific projects and requests for mentoring, individual Sciencewise DESs have, since April 2012, had responsibility for building relationships with specific Government departments and other public bodies eligible for Sciencewise funding. The aim was to build knowledge and understanding of public dialogue within these bodies to enable them to better understand the place and value of dialogue, how Sciencewise can help, and increase their willingness and ability to commission public dialogue themselves.

DESs made one-to-one contacts throughout the period and also ran introductory events within these bodies. The impacts of these activities are hard to definitively identify, as resulting dialogue activities may take months or years to come to fruition, and the origin of the motivating drivers may be forgotten.

However, the events did clearly stimulate sufficient interest in public dialogue as evidenced by numbers of participants seeking more information after the events.

The events undertaken since April 2012, and what we know of the impacts, are as follows:

- 15 October 2012, Defra, London. Meeting with Defra Social Science team. Semi-formal discussions about the concept and dialogue (Daniel Start, Sciencewise DES) and questions from social science. Led to initial contacts that developed into dialogue projects with Defra including Bovine TB (completed 2014) and a concept note on animal welfare (2014).

- 25 October 2012, noon to 1pm. Department of Energy and Climate Change, London. Public Dialogue in Policy. Led by Steve Robinson, Sciencewise DES. 12 DECC staff attended including the Chief Scientific Adviser and the Head of Social Research.

  Feedback was very positive, with two-thirds of respondents saying they had learnt 'a lot' about the benefits of public dialogue, about how dialogue could be used in policy making and about Sciencewise. 4 participants signed up to receive further information from Sciencewise, including the Head of Social Science.

- 7 November 2012, 12.30 - 1.30pm. Department of Health, London (with link to Leeds). A Spoonful of Dialogue Helps the Policy Go Down. Led by Andrew Acland, Sciencewise DES. About 25 DH staff attended, including organisers.

- 25 March 2013, 3 - 4.30pm. Department of Transport, London. Public Dialogue - Helping you get from A to B. Led by Suzannah Lansdell, Sciencewise DES. 11 participants from DfT, relatively senior, including 2 organisers, plus 2 Sciencewise.

The feedback from participant was very positive, especially about how dialogue might be used in the department and colleagues ideas for projects. 7 people asked for further information and provided contact details.

- 3 July 2013, 12.30 - 1.30pm, Defra Evidence Forum, London. Public Dialogue in Policy. Led by Daniel Start, Sciencewise DES. There were 7 participants.

  Feedback was very positive, with all 7 saying they had gained a lot of understanding of Sciencewise, and all also having gained understanding of the benefits of public dialogue and ideas on how dialogue could be used in policy making. The most interesting thing for participants were the examples of previous dialogues and, for one, opportunities for funding that may be picked up.

- 17 July 2013, 11am - 3pm. Health and Safety Executive (HSE Policy Community), Bootle, Merseyside. Developing Effective Policy - Understanding Public Dialogue. Led by Alison Crowther, Sciencewise DES. Introductory and training session.

- 4 March 2014, Research Councils UK Awayday. Public Dialogue in Policy, Swindon. Led by Alison Crowther. Training session for Research Councils UK staff, attended by 21 people.

  Feedback was very positive indeed, with all 21 agreeing that they had gained understanding of how dialogue cold be used in policy making (14 of those gained 'a lot'), and 19 of the 21 agreeing that they gained appreciation of the benefits of public dialogue. There was less understanding of Sciencewise gained (10 felt they had gained not much or no understanding of Sciencewise).

  The elements that were most interesting to participants were the techniques given to turn negatives into positives during dialogue (8 mentioned that without prompting), and 3 mentioned techniques for dealing with difficult people. Four mentioned the high quality facilitation: "Alison is a fantastic facilitator. She has obviously taken her own training on board, well done!" and "Fantastic enjoyable day with the right level of participation".

- Training sessions were also run in March 2014 at the Health and Safety Laboratory, in December 2013 at the Health and Safety Executive (HSE) Hazards Forum and in April 2013 at the meeting of STFC (Science and Technology Facilities Council) Fellows in April 2013. These sessions were all led by Alison Crowther, Sciencewise DES. Although no direct link can be demonstrated from the training event, the DES then developed a project on space weather with STFC which began in 2014.

8.4 Community of Practice

The capacity building work in the programme since 2012 was also initially focused on the establishment of a community of practice as the means to share understanding and build the skills of policy makers, alongside a "a reactive approach to specific mentoring and bespoke training opportunities."

The Community of Practice took some time to establish and has not generated as much active interest as had been initially hoped especially from senior policy professionals. The CoP is currently being re-thought. However, the CoP did grow from zero members in April 2012 to 38 members in March 2013 and 69 in April 2014 (of which 15 were Sciencewise team members). Most of the CoP activities were online, with the main focus on updates sent out fro Sciencewise.

One face to face event was held for CoP members, on 21 November 2013 from midday to 2.30pm, London (BIS). The programme for the event was in two halves: case study presentations

and discussions covering the Bioenergy Dialogue and the Mitochondrial Replacement Dialogue; and some training on dialogue thinking. 17 participants attended. The feedback from participants was very positive:

- 8 of the 17 scored the event as 5/5; 6 said 4/5 and the remaining 3 said 3/5.

- Both sessions were highly valued, with 11 respondents mentioning the training specifically and 6 mentioning the case studies. Within the training session, the two elements mentioned most frequently were the stakeholder analysis, and the difference between DAD (Decide, Announce, Defend) and EDD (Engage, Deliberate, Decide).

- Specific comments included:
  - "Really interesting on how decision making in science is handled"
  - "Training sessions was extremely useful"
  - "Particularly nice to hear first hand about others' dialogue projects"

9. SCIENCEWISE REPUTATION , PROFILE AND GOVERNANCE

9.1 Introduction

The role and reputation of Sciencewise in supporting and increasing the quality of individual public dialogue projects is covered above (section 4.5). This section focuses on the wider reputation, profile and reputation of Sciencewise.

9.2 Governance and management

The internal management structure has been shown in section 2.1. The chart in that section also shows the Sciencewise Steering Group and Citizen Group, which have both played an important role in Sciencewise governance - the Steering Group in various forms since the very beginning of Sciencewise in 2004, and the Citizen Group since 2012. More details about both these groups, including membership, is available on the Sciencewise website (http://www.sciencewise-erc.org.uk/cms/governance/)

The Citizen Group met five times between October 2012 and October 2013. During 2014, the role of the Citizen Group was reviewed and no further meetings have been held since. Alternative approaches to involving citizens in Sciencewise work remain under consideration.

The full evaluation of Sciencewise, published in 2011, reviewed feedback from the Steering Group on their role and their perceptions of the priorities for Sciencewise. Subsequent evaluations have not follow up this initial review.

9.3 Current reputation and profile of Sciencewise

Overall, the evaluation research showed that Sciencewise had a very good reputation among those that know it, but that not enough people do know about it. From evaluation feedback, this positive reputation rests almost entirely on the support (advice as well as funding) given to individual dialogue projects (see section 4.5). More general positive comments included:

> "Sciencewise brings a real professionalism and should sell that a bit more" (Open Data, 4)
>
> "[Sciencewise is viewed] relatively positively - of all the BIS funded work it is the most respected activity." (Open Data, 5)
>
> "Sciencewise is a thoroughly good thing, and would be good if public sector used these kind of approaches where relevant" (Mitochondria, 8)
>
> "I think it has a well-established channel and a clear brand. I have heard others refer to it and I know what it means now too. It is well regarded. " (Water 15)
>
> "I think it is very important programmes of this sort do get grounded with some sort of public dialogue element. And that would not have happened without the support and funding of Sciencewise - or we would have been a lot poorer for it. And I hope it continues" (Animals containing human materials, 21)
>
> "I think it has a good reputation ... It is important to have the high level conversations. Without that top down explicit or implicit support for this kind of work nothing would happen, so do more of that." (Synthetic biology, 26)

The most common criticism of Sciencewise was that not enough people knew about it. This was felt even more strongly than in past evaluation research - beyond being simply odd that Sciencewise was not well known, there was a real sense that it *should* be better known (a sense of 'why had no-one told me about this before'), and that it was a failing of the programme not to have achieved that.

Interviewees said Sciencewise was "not as well known as it should be" (4); "people don't know it exists" (11); "need to make more organisations aware of Sciencewise" (12); need to raise the profile which is currently "under the radar" (17) and the "problem is that Sciencewise doesn't have a particularly high profile" (27). Other comments included:

> "It is viewed well by people who know of it but not widely known. Action is underway to remedy this. [Sciencewise] is building networks and engaging people" (1)
>
> "I had not heard of Sciencewise - a colleague suggested it and that I make contact ... For me, Sciencewise very effective from when I made that contact. Had not been on my radar" (Patient and public engagement, 12)
>
> "Don't hear of it being talked about in my organisation. A few people know about it but not many" (Ecosystems, 19)
>
> "Part of the problem is the profile of Sciencewise - it doesn't have a particularly high profile but then why should it? Sometimes you have to be more forceful - you have to lead people there. Perhaps greater direction from BIS on the value and nature of dialogue would help" (Synthetic biology, 27)
>
> "I don't think they are particularly well known about and at the moment relies on a network of individual people for whom this sort of thing is part of their job" (Low Carbon Communities Challenge, 29)
>
> "May be known about in specific areas of science but not known widely ... Sciencewise could be much better known as could their findings" (Patient and public engagement, 36).

In particular, Sciencewise was "not well known at senior levels" (7) and "Need high level support for this kind of thing so need to ensure that is there" (26).

The lack of profile seemed to create some suspicions and uncertainty about what Sciencewise does, with people reporting that they are "confused about its status" and whether it is in or out of Government, as well as it being "slightly obscure" and not very "transparent" (7). It was described as taking "a while for people to get their heads round it - perhaps a clearer message about what Sciencewise is would be helpful" (29). More detailed comments include:

> "I am slightly confused about its status. I thought it was a government agency but it turns out it is a programme administered by a private company. I am not sure what is the decision making process or how involved BIS is in the decision making. It is slightly obscure abut do not know if it is possible for it to be more transparent. I was really surprised at how little Sciencewise was known at a senior level in the civil service." (Wellbeing, 7).
>
> "I think it still takes people a while to get their heads around it ... so perhaps a clearer message about what Sciencewise is would be useful" (Low Carbon Communities Challenge, 29)

However, others felt that the reputation of Sciencewise meant that its funding gave the project being supported more credibility and validity (see section 4.5).

9.4 Extending Sciencewise role in future

A great deal of the feedback was positive about Sciencewise current role, and there were no suggestions that the existing focus should be lost. However, there were three particular areas where interviewees felt that Sciencewise could and should offer more:

- **Sharing of findings and learning**. The role of Sciencewise in sharing the results and learning from its project work was criticised:

  "What they are not good at is disseminating the findings - no broad dissemination to people who don't know about it. ... there had never been an attempt to bring together the findings of all these [health research] projects together which might tell us where the public is on health research ... Tend to go from project to project as though nothing happened before it" (Patient and public engagement, 36).

  One asked the direct question: "What is Sciencewise doing across Government in terms of wider learning as a result of this [project]?" (Water, 15).

- **Leadership**. Some felt that Sciencewise should respond to the priorities of other organisations, but there was also interest in Sciencewise taking more of a leadership role itself both in leading on dialogue topics and on the wider message about public dialogue. Several suggested that a focus should be put on research councils and research institutes (19, 28). Other comments included:

  > "Sciencewise needs to drive the agenda a bit more. I understand that you need a policy customer for the work, but on the other hand it is important they try to raise issues more" (Open Data 4).
  >
  > "It could be more effective if it did more awareness raising with social science research groups so as to up the amount of dialogue work undertaken" (LWEC 2)
  >
  > "I think we are still quite some way from embedding public dialogue in institutions. We're getting there ... but there is still away to go. There is still a bit of evangelising that needs to be done" (Synthetic biology, 28)
  >
  > "Could be funded better, given more political support by Ministers, could look at their overall strategy ... always seems a little bit half-cooked" (Patient and public engagement, 36)

- **Clear about the limitations of public dialogue**. A few interviewees felt that Sciencewise was sometimes in danger of 'overselling' dialogue - and lacking clarity that small scale dialogues could be useful to provide insights into public views and how they approaches the issues, but were not generalisable (LWEC 2).

The strength of Sciencewise in supporting public dialogue is based on its continuing reputation, status and independence, and the level and nature of its profile affects how it is seen and is valued. It is already influential in some cases, but becoming more established and recognised, and more transparent and open, could strengthen its reputation and increase the influence that Sciencewise has within and beyond Government.

10. CONCLUSIONS

The annual evaluation review for 2013 has now been completed, based on interviews with dialogue project managers and policy people in public bodies running projects (*numbers in brackets refer to the reference number of the interview cited)*, a review of recent evaluation reports, follow up to track other impacts and thematic analysis. The findings are, in summary:

- **Funding and advice valued**. As in previous years, the funding and advice provided by Sciencewise were both seen as important in enabling public dialogue projects to happen. Funding was slightly more important to people in 2013 than in 2012, with advice remaining very important.

  Some stressed the importance of the funding particularly: "Sciencewise funding very influential in making the project happen ... in current climate funding most important" (Landscapes 17).

  More often, it was both funding and advice that were important; one said what was important was "Money. And advice on how to set up and run a project like this. We were constantly turning to Sciencewise" (SynBio 28); "Funding important - can't do anything without it, but advice, expertise, knowledge, experience" were also vital (PPE 36).

- **Sciencewise support essential to projects**. Many said they would not have done the project without Sciencewise and, as previously, the few that would have gone ahead anyway said the result would not have been as good without Sciencewise input.

  In some cases, Sciencewise prompted the project in the first place (Open data 4); more often it was "very influential in making the project happen" (Landscapes 17), "getting the ball rolling" (Mitochondria 9) and that it "started this idea and put it into action really" (Energy 2050 24).

  Generally, the input of Sciencewise was valued at every stage (Mitochondria 9), with "constant support all the way through ... without funding not sure we could have done it ... but it wouldn't have been nearly so good without the ongoing support" (PPE 11).

- **Most valuable advice and support**. The elements of support mentioned most often were specific advice to help shape the overall direction of projects and clarify the key focus (Cambrian 13), help with procurement (Mitochondria 10), with detailed design and delivery (Mitochondria 10, SynBio 28), with evaluation (Mitochondria 9) and - most often - advice on working with stakeholders (Cambrian 14), particularly establishing oversight groups and other ways to support diverse stakeholder input (Mitochondria 9, PPE 36).

  The neutrality of the third party role was valued (Mitochondria 10), and independence (geoengineering 37), with the external perspective giving 'validity' (Energy 2050, 25), 'kudos internally' (SynBio 26), and making the process 'more robust' (PPE 11), with support being 'invaluable' and 'exemplary' (Water 15).

  The style and approach of Sciencewise personnel were valued in terms of flexibility and responsiveness (Water 15), pragmatic, helpful and harmonious (LCCC 29), and making the whole project 'pain free' (Water 30).

  People also valued the links Sciencewise provided to previous and other projects, providing a 'UK-wide perspective' (Landscapes 19) and "got us to think beyond our immediate sphere of interest and world" (Landscapes 17).

More generally, several mentioned the assurance that "we were following best practice" (Water 15). The criticisms tended to focus on administrative burdens, such as too much paperwork and contracts (Energy 2050, 24), and the need for simpler language (Landscapes 19).

- **Recommending Sciencewise and public dialogue**. Every interviewee asked said they would both work with Sciencewise again, and recommend them to colleagues. One said "I think an organisation would be silly not to involve Sciencewise even if got a big grant from elsewhere, due to their knowledge and experience" (ACHM 20); "having expert advisers on your side" (Mitochondria 8).

  Not everyone would recommend Sciencewise or dialogue in all circumstances. Sciencewise could be seen as requiring 'gold plating': "offering the best of all possible worlds but not for the particular world of this harassed civil servant ... little bit of a counsel of perfection" (Mitochondria 8).

  The same person, however, also stressed the need sometimes, with a particularly challenging issue, "to pause and do something more deliberatively ... taking time now will save time later e.g. consultation on GM crops - pressure on consultation fatally undermined and put back the policy. Rushing at something had calamitous consequences" (8).

  Several felt that Sciencewise did not make the case well enough about the value of savings later by taking time to do dialogue and do it well. They also said the "virtues [of public dialogue] seen to be self-evident ... [Sciencewise] needs to reach out to the unconverted" (8).

  Building on recommendation, the willingness of some of those who have been involved in projects previously to work with Sciencewise in future to promote public dialogue was tested: 14 individuals were willing to do this in future, including senior policy leads in Government and other public bodies - one said "one good turn deserves another" (Water 30).

- **Sciencewise insufficiently known**. The most common criticism of Sciencewise was that not enough people knew about it. This was felt even more strongly than in past evaluation research - beyond being simply odd that Sciencewise was not well known, there was a real sense that it *should* be better known (a sense of 'why had no-one told me about this before'), and that it was a failing of the programme not to have achieved that.

  People said Sciencewise was "not as well known as it should be" (Open data 4); "people don't know it exists" (PPE 11); "need to make more organisations aware of Sciencewise" (PPE 12); need to raise the profile which is currently "under the radar" (Landscapes 17) and the "problem is that Sciencewise doesn't have a particularly high profile" (SynBio 27).

  In particular, Sciencewise was "not well known at senior levels" (Wellbeing 7) and "Need high level support for this kind of thing so need to ensure that is there" (SynBio 26).

  The lack of profile seemed to create some suspicions and uncertainty about what Sciencewise does, with people reporting that they are "confused about its status" and whether it is in or out of Government, as well as it being "slightly obscure" and not very "transparent" (Wellbeing 7). It was described as taking "a while for people to get their heads round it - perhaps a clearer message about what Sciencewise is would be helpful" (LCCC 29).

- **Poor sharing of findings and learning**. The role of Sciencewise in sharing the results and learning from its project work was criticised: "What they are not good at is disseminating the findings ... Sciencewise could be much better known as could their findings" (PPE 36). One asked the direct question: "What is Sciencewise doing across Government in terms of wider learning as a result of this [project]?" (Water 15).

  The failure to build on past findings and lessons was stressed: "Tend to go from project to project as though nothing happened before" (PPE 36).

- **Leadership**. Some felt that Sciencewise should respond to the priorities of other organisations, but there was also interest in Sciencewise taking more of a leadership role itself both in leading on dialogue topics and on the wider message about public dialogue: "Sciencewise should push the agenda more" (Open data 4).

The strength of Sciencewise in supporting public dialogue is based on its continuing reputation, status and independence, and the level and nature of its profile affects how it is seen and is valued. It is already influential in some cases, but becoming more established and recognised, and more transparent and open, could strengthen its reputation and increase the influence that Sciencewise has within and beyond Government.

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