



Critical studies of public engagement in science and the environment: Workshop report

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Introduction

This brief report summarises some of the key messages emerging from the first workshop in the ESRC seminar series 'Critical perspectives on public engagement in science and environmental risk', held at the University of Birmingham on Friday 24 April 2009. This was the opening conference in a two-year series that is seeking to move beyond the popular focus on methods and evaluating the effectiveness of public engagement in science-related issues to facilitate the development of a field of critical public engagement studies and practice. It aims to do this through bringing together an interdisciplinary range of social scientists, in collaboration with scientists, participatory practitioners and policy-makers, to build a learning community and consolidate a new research agenda that is more constructively critical about the potentials and pitfalls of public engagement in science and environmental risk. Further information about the seminar series can be found at: www.uea.ac.uk/env/esrcsems.

The opening conference focused on mapping out 'Critical studies of public engagement in science and the environment'. It explored the theoretical, methodological, empirical and practical dimensions of the emerging critical research agenda on participation in science and the environment. The morning session included agenda setting presentations from leading scholars in science and technology studies (STS), geography, and planning alongside reflective commentaries from practitioners in the field, followed by open plenary discussion to draw out connections between them (see Appendix 1). Key themes and research questions to be addressed throughout the seminar series were then mapped out in afternoon workshop discussions.

The seminar was very well attended mainly by social scientists but also included participatory practitioners, policy makers and scientists (see Appendix 2). This level of interest and workshop discussions showed a strong endorsement of the seminar series, its timeliness and importance. In the following report a summary of the key messages emerging from the morning presentations is given first (copies of some of the presentations are available at: <http://www.uea.ac.uk/env/esrcsems/sems/critstud>). The main themes emerging from small group and plenary discussions are then reported, before outlining the set of questions to be considered throughout the seminar series in the final section of the report.

Workshop presentations

Critical public engagement

Dr Jason Chilvers (School of Environmental Sciences, University of East Anglia)

Jason Chilvers opened the conference by providing an overview of the seminar series as a whole, its background, rationale, and overall ambitions (further details of which are available on the project website: www.uea.ac.uk/env/esrcsems). He situated the seminar series in the context of rapid developments in public engagement with science-related issues over the past decade and outlined how almost all work in this area remains channelled towards developing and promoting participatory practices and evaluating their effectiveness. Jason suggested that the major contribution of the

seminar series lies in moving beyond these dominant areas of activity to adopt a more critical and reflective perspective that treats the participatory governance of science as a phenomena in its own right and an object of study in itself. Social scientists have long studied the production and politics of natural and physical scientific knowledge, and have drawn on these critiques to open up spaces for new forms of public engagement in science and the environment. But various forms of public participation are equally susceptible to similar modes of study and critique. While a sociology or geography of social scientific knowledge associated with public engagement has been lacking until recently, a key ambition of the seminar series is to fold critical social scientific questions, concepts, and modes of inquiry back on to the spaces, technologies, and institutions of participation that social scientists themselves have been involved in promoting and creating.

Jason argued that what is needed is a richer analysis of the construction, production, performance, power and discourse of participation in the making that focuses not only on what goes on within specific instances or instruments of engagement but also what goes on beyond them in terms backstage negotiations, their position within wider systems of governance, and the global industry of deliberative goods and services. There are many possible avenues such research could take, as exemplified by a number of studies of this type emerging at the interface between STS, geography, risk research and development studies. Jason explained that a key ambition of the seminar series is to consolidate this emerging research agenda by bringing together social scientists from these different fields in an interdisciplinary conversation. He also highlighted, however, that the emphasis is on building a programme that is 'constructively critical' through collaboration with scientists, participatory practitioners and policy-makers as part of a mutual learning process. This is to be achieved through creating time and space for reflection - and building connections and collective capacity for reflective learning - which has been largely missing from the field of public engagement in science-related issues hitherto.

Publics, politics and participation: some critical reflections from planning

Professor Susan Owens (Department of Geography, University of Cambridge)

The paper by Susan Owens translated perspectives from the field of planning where public participation practice and critiques of it are longer standing. She highlighted three major tensions in the public participation field before presenting a paradox. The first tension was grounded in the confusion that often abounds over 'who the public are' in public participation exercises (the public at large, civil society, organised interest groups, invited or uninvited publics?). The second tension related to the main rationales for participation: normative arguments (which state that participation is ethically the right thing to do); substantive arguments (that participation leads to better decisions through drawing on a wider range of knowledges, values and perspectives); and instrumental reasons (the 'governance virtue' that participation brings about decisions that are more acceptable to the public). Susan observed the common tendency for instrumental purposes about public acceptance of new technologies or environmental policies to be disguised as more meaningful substantive and normative virtues. A third tension centred the 'missing link' of governance – i.e. the relationship between participatory forms of democracy and the representative democratic system on which politics is so often based.

Susan went on to consider some of the lessons emerging from the long history of public participation in planning, including: the practical limits to sustaining participation; the fact that ideal models of deliberation do not simply make issues of power, interests and strategic behaviour disappear (even if they appear more subtle); and the realisation that participation is always framed and constrained by prior imperatives. She went on to consider the paradox that in considering where public participation has made a difference it is public inquiries around infrastructure projects in downstream planning contexts that have provided important apertures for interest groups to contest the wider social purposes of a given policy area, rather than upstream contexts such as nanotechnology where debate has to be engineered and orchestrated by social scientists and other practitioners. In conclusion, Susan noted the importance and the timeliness of the seminar series as well as the need to: explore the implications of public participation across different public spheres; build knowledge and value pluralism into democratic systems; and openly acknowledge and work with the material and political constraints which bound public participation.

'Broadening out' and 'opening up': precaution and accountability in public engagement

Professor Andy Stirling (SPRU and STEPS Centre, University of Sussex)

Andy Stirling situated critical perspectives on participation within wider debates over sustainability and technology choice, drawing on his opening up and closing down thesis while providing some practical insights into what 'critical public engagement' might mean. He began by drawing on normative arguments in the sustainability field that raise questions about traditional notions of progress and work across a number of disciplines that considers the directionality of scientific (or other forms of) progress. Technological progress is all about choice. There are many different pathways for building more sustainable energy futures for instance, but we can't follow all of the many possible courses of action. Choices have to be made. Andy presented the stark reality that, despite this, dominant policy discourses and policy actors most often present technological progress as having no alternatives and no choice, through deferring to the evidence of 'sound science' and portraying dissenting views as anti-scientific 'baby talk'. Particular directions of technological progress become 'closed down' and 'locked in'. This is the context in which attempts at public engagement operate in and have to grapple with.

Within this context Andy went on to highlight the range of analytical methods, discourses and institutional processes relating to the social appraisal of technology and the ways in which these mechanisms are routinely shifted from addressing areas of uncertainty, ignorance and surprise in science policy to consider narrow areas of risk assessment. He argued that participation is vulnerable to exactly the same dynamics and forms of justification. It can't be assumed that either participation or precaution will automatically open things up. The dimensions of this broadening out need to be actively considered: both in terms of a requirement to broaden the inputs to technology appraisal and (importantly) open up its outputs to wider political discourses. This led Andy to consider a series of critical issues for public engagement in conclusion, including: the power and knowledge dynamics in participatory processes (how do we take uncertainties and questions of knowledge seriously?); the framing of participatory processes and the effects of instrumentality; the circumstances under which it makes sense to broaden inputs; the modalities of opening and closing (including issues of method and timing); the potential for Trojan Horse strategies where opening up can be achieved through

technical and quantitative approaches; and the interaction of public engagement with wider political discourses.

The unspeakable in pursuit of the uneatable? science, engagement and the hunt for consensus

Professor Alan Irwin (Copenhagen Business School)

Alan Irwin brought two main things to 'party' throughout his paper: a view from Copenhagen with interesting insights into how national culture matters in public engagement; and a STS perspective which also played attention to the history of public engagement research both in the discipline of STS and in terms of policy practice. He set the scene by considering the history of the relationship between STS and public engagement, which was vibrant in the 1970s when the discipline was driven by concerns over science and democracy. This interest waned in the early 1980s with STS turning to laboratory studies, but also reflected the political climate at the time under Thatcherism. The sensitivities of public engagement to national contexts was also seen as crucial. In Denmark, considered by many to be the home of the consensus conference and public dialogue, the Danish Board of Technology is now in a precarious position since a new government has come in. This raises questions about how substantial the move to public engagement is and its relation to political culture.

Alan went on to consider a series of themes relating to 'critical public engagement' studies. First he considered relations between the 'old' and the 'new' scientific governance and suggested that rather than a shift one to the other what we are seeing is a mixing of both often working in competition. Second, burgeoning critical work in STS was shown to be polarised into two camps: 'saints' who hold a romanticised view of public engagement (exemplified by the 'fairytale of Copenhagen'); and 'sinners' who adopt an over sceptical and cynical view of public engagement as politics by some other means. This leads to stylised academic exchanges of moves and counter moves (much like a martial art) which STS and other disciplines need to move beyond in order to occupy a 'middle ground'. Third, Alan deconstructed the drive for consensus in participatory processes as meaning different things in different (national) contexts. The Danish notion of consensus has deep political roots as a way of establishing national identity, whereas in Britain it is applied in a more instrumental fashion. This again highlights the importance of political and cultural context on the forms of deliberation that get enacted. Fourth, the importance of recognising the 'unpolitics' of participation was highlighted, with the emphasis here being on exploring what is excluded and left out in forms of dialogue and engagement. Fifth, while many critiques of participation take a short term view Alan called for studies to take longer term perspectives that ask: what public engagement means for our sense of living as citizens in a democratic country? How does public engagement reflect, and in turn change, national culture?

Reflective commentaries

Dr Darren Bhattachary (British Market Research Bureau)

Darren Bhattachary offered some personal reflections on the themes of the seminar series from his perspective as a participatory practitioner who has also worked in academia and a science institution. After briefly considering the history of the UK public engagement field he went on to talk about the science in society industry, the actors

involved in it, and their motivations. This includes: academic social scientists, scientists, practitioners working with consensus building approaches, practitioners adopting a social research model, and commissioning agencies. Each of these groups were deemed to have different motivations for engagement. Darren saw academic social science as studying issues relating to the culture and governance of science as well as legitimacy and power. Some practitioners are driven by the need for solutions and reaching consensus, while social research companies are motivated by making better decisions but also making money.

In drawing some reflections out of this Darren highlighted that social scientists have failed to communicate effectively with other actors and that they need to get their hands dirty and work both with and within decision institutions. He was concerned that some social scientists feel that their work is being co-opted. For example, he noted that Brian Wynne has been a huge help to the field but would have mixed views on how his ideas have been used and the inadequacies of institutions in embedding them. Things are getting lost in translation. Considered over a longer time scale, however, change occurs slowly and there has been many successes as well as challenges to progress in the public engagement field.

Professor Kathy Sykes (University of Bristol)

Kathy Sykes offered her own personal reflections on the seminar series as a scientist who has become heavily involved in the field of science communication and dialogue. She has been troubled for years about the distance between scientists, social scientists, practitioners, and policy makers in this arena and saw the seminar series as an ideal opportunity to address this. Related to this, Kathy emphasised the need for scientists to adopt the role of 'honest brokers' who present evidence across a range of options to policy makers, rather than acting as advocates of particular standpoints or as pure scientists shy of the policy world.

Kathy went on to consider a number of successes in the public engagement field which indicates it is maturing. She noted that it is also very fragile however. This is especially evident during the economic downturn where people who had once enthused about public engagement in science can become focused on engaging with business and boosting the economy. She then gave a plea for everyone to engage in making this seminar series matter; to try and get the interaction happening. She also called for social scientists to do critical work but at the same time stay connected and communicate their findings in a clear way. Social scientists have a key role to play, for instance, in relation to the theme of learning and transformation in helping organisational culture change. Kathy ended by observing that all the research agenda setting talks were given by social scientists rather than scientists or policy-makers and asked 'where is the power balance here'?

Workshop discussions: critical reflections, themes and questions

During the workshop it was important to make space for dialogue and debate given the nature of the subject and the diverse range of participants present. Interaction and discussion between participants was facilitated in pre-lunch plenary discussion, afternoon breakout groups, followed by reporting back and a wider plenary discussion to conclude.

The six afternoon breakout groups brought together participants from a mix of backgrounds to reflect on public engagement, consider their own critical perspectives, and develop the themes and questions to be addressed throughout the series. To aid discussion participants were provided with five example themes and sub-questions (see Appendix 3) drafted by the organising committee, which were drawn from across the critical social science literature. These were prompts to support discussion rather than lead it - groups were open to consider or discard them as they saw fit. The intention was to co-produce a set of themes and questions through workshop discussions, the result of which is given in the final section of this report.

What follows is a summary of the main themes, issues and concerns emerging from across all interactive discussions throughout the workshop. The diverse mix of participants with different backgrounds, languages, expectations, and motivations meant that these discussions were often difficult and challenging. Some non-social scientists found the 'overly academic' style of the morning presentations difficult to follow. Most participants found the language of the provisional themes considered in breakout groups to be too technical and full of social science jargon. It was suggested that they should be reworded in a more accessible manner as a result of workshop discussion, which, as noted above, was always the intention.

Amongst other things these exchanges were directly contributing to one of the major ambitions of the seminar series: to reflect critical social scientific concepts and questions back on to social scientists themselves. Amid the noise a number of important themes to take forward in the seminar series emerged. These contained some elements of the example themes but in the spirit of co-production also included other meanings, issues and questions put forward by the range of participants present.

1. Meanings of 'critical public engagement'

Almost all groups touched upon questions relating to meanings of 'critical public engagement', as well as the words 'critical' and 'engagement' in themselves. Is it about research and developing a new field of critical public engagement studies (and if so what sorts of theories, methods and approaches does this entail)? Or is it about critical practice - about the doing of public engagement in a way that is more reflective, responsible and accountable? Either way, what level of critique or critical perspective are we talking about (e.g. audit, evaluation, radical) and for what purpose (e.g. improve the current system, understand the system and alternatives, or challenge and change the system)? Some groups asked: who's critical perspectives? Where do critiques come from and how do they differ? And what governs whether they are aired or acted upon? Meanings of 'engagement' are similarly diverse. For example they can range from: 'invited' institutional engagement through to 'uninvited' processes organised by citizens themselves; and formal facilitated deliberation through to informal public debate occurring in the wider public sphere.

2. The roles and relations of social science and other actors in the public engagement field

The role of social science in participatory governance was a major talking point, as one might expect given the number of social scientists attending the workshop and its sponsorship by the ESRC. Social scientists raised concerns that the role of social science is often equated with 'doing' public engagement. The critical edge of social science is thus blunted through a focus on end users and objectives defined elsewhere. Critical insights are often ignored therefore. What space does this leave for critical social science and how can this space be created? Discussion repeatedly opened out to consider the nature of the social science – policy / practitioner interface and relations between all actors in the public engagement field as a whole: including practitioners, scientists, policy-makers and so on. Participants reflected on how these categories are problematic and on the boundary work that goes into maintaining them. They talked of the need to understand the key sites, roles and purposes of these actors and the rise of the 'facilitator' or 'mediator' as a new category of expert.

3. Building more constructive relations

Despite the above concerns over the 'capture' of critical social science, there was an overwhelming sense from all groups that the relations between the range of multi-disciplinary actors involved in public engagement need to become more constructive, interactive and open. This raises more practical questions about how we can interact and work together more reflectively, or whether it is even possible to do so? The motivation for some participants came from observations of the highly problematic and divided character of the social science – policy / practitioner interface in the participatory governance field. Others pointed to the difficulties and challenges of interacting with others within the workshop: understanding the 'academic' presentations; understanding the language of others in their breakout group; and so on. Participants variously talked about the need for 'bridge making', translation and 'honest brokers'. Non-academics variously called for: social scientists to get out and get their hands dirty; a more interactive and responsive social science; and other strategies of critical engagement such as secondments between academic and non-academic institutions.

It was increasingly realised as the workshop progressed that in addition to providing a forum to debate these questions the seminar series also represents an engagement experiment in itself. It can be seen as process of demonstration and learning about how to build more constructive interactions, exchanges and translations between different actors in the public engagement field. Some participants felt its outcomes could therefore include practical insights into how to do this, as well as playing a role in actually building more constructive relations. A number of practical strategies to facilitate this process were suggested, including: communicating in clear and accessible ways; learning from other examples of interdisciplinary working; co-authored papers between practitioners and academics; providing support to academic and non-academic speakers in advance to help translation; developing a glossary of technical terms; and providing time and space for mutual understandings and common issues to emerge between participants.

4. The expertise, professionalisation and technologies of public participation

Three of the breakout groups noted issues relating to the expertise and professionalisation of public participation (highlighted under example theme 2, Appendix 3) as important questions to take forward in the series. What are the implications of the

increasing commercialisation and professionalisation of participation as part of a burgeoning public engagement industry? What about the political economy of public participation and public engagement expertise? What does professionalisation actually mean - is it a goal or something we are being critical of? Social scientists have studied and problematised knowledge practices in the natural and physical sciences for many decades, but some participants emphasised that social scientific or qualitative public engagement technologies can equally be viewed as elite, technocratic, and as something that gets in the way of 'speaking to the people'. There is a need to study various expertises and technologies of participation 'in the making', the actors, materials, theories and practices that they are made of, how they are constructed and produce participatory and other forms of knowledge, what they exclude, and their implications and effects.

5. Framing

Part of this is about understanding how public engagement is framed, governed and controlled. It also demands reflecting on different instruments of public engagement, their underlying assumptions and purposes, and how they contain, frame and construct alternative visions of science, democracy and 'the public' (as highlighted under example theme 4, Appendix 3). Three groups felt these were important questions to take forward in the series. One group asked how are the public are constructed in public engagement processes? What are the differing constructions of the public? Another group saw the theme of power, knowledge and discourse (example theme 3, Appendix 3) as conflated within these questions of constructions and framings.

6. Learning and reflection

Again, three out of the six breakout groups highlighted the theme of learning and transformation as an important one to take forward in the series (see example theme 5, Appendix 3). It raises important questions such as: does public engagement lead to material changes in the governance of science and the environment? To what extent are actors and institutions learning about participation? Of course, transformational changes resulting from participation may emerge over long time periods, which raises conceptual and methodological challenges that need to be tackled. Furthermore, critical and interactive social science may provide opportunities for engendering learning and reflection within institutions through action-research, ethnography, and related approaches.

7. Understanding and accounting for institutions and their diversity

A strong theme emerging from the pre-lunch plenary and a majority of the groups in the afternoon session highlighted the importance of understanding institutions. A number of participants noted that while social scientists often talk in plural terms when it comes to publics, they often have a tendency to oversimplify and homogenise institutions. There is a need to recognise and account for the diversity of institutions (in science and environmental spheres) and diversity within them, including the perspectives of policy-makers, scientists, and participatory practitioners. This is important given the increasing institutionalisation of public engagement. Furthermore the institutional context, and the ways in which civic institutions reflect pressures to change core values and goals, impacts on and conditions the public engagement that is realised. Better understanding of institutions demands interactive social science, including ethnographic approaches, which feed back into institutions (this overlaps with the learning theme, above). This should also transform social science inquiry, making it more grounded in the practical realities of resource, budgetary and time constraints under which institutions have to make urgent decisions.

8. The importance of context

Institutions are an important example of how context impacts on, shapes, and creates the conditions for possible forms of public engagement. Context emerged as an important theme in itself across all breakout groups and plenary discussion. For example, the economic crisis gripping the world at the time of the workshop led to much discussion of the implications of this for public engagement in different areas. One group coined the phrase 'engagement in a cold climate' to express this. The influence of the prevailing political climate at any one time was also seen as important, with a number of participants looking forward to the imminent UK general election and its implications for the future of public participation. National culture was also seen to matter in shaping deliberation, with one or two groups picking up on this (taking cues from Alan Irwin's earlier talk). Others highlighted the importance of space, place, and time as key contextual factors shaping public participation.

9. The issue in question

Almost all groups expressed the importance of empirically grounding discussions within the seminar series in the context of particular domains or issue areas, as was always planned for the middle three seminars in the series. This was about more than just grounding discussion. It was recognised that the substance and the nature of the issue in question is crucial in shaping the deliberation and engagement that occurs in relation to it. Talking about a nuclear power plant is not like talking about nanotechnology. The difference that the issue makes to public engagement will therefore be explored through out the seminar series.

Seminar series themes and questions

Based on these themes emerging from plenary and group discussions throughout the workshop, the themes and related questions to be considered in the seminar series are summarised below. Further detail on the meanings attached to each question can be found by referring back to the above themes from which they are derived (as identified in brackets).

- *Meanings of 'critical public engagement'.* What do we mean by critical public engagement studies and practice? (theme 1)
- *Actor roles, relations and purposes.* What are the roles, relations, and purposes of social scientists and other actors (scientists, policy makers, practitioners, publics) in participatory governance and how can these relations become more constructive? (themes 2 and 3)
- *The expertise and technologies of public participation.* How do expertises and technologies of participation get made, produced, and mobilised, and what are the implications of professionalisation and commercialisation? (theme 4)
- *Framing.* How is public engagement framed, controlled and governed and how does it construct various visions of science, democracy and 'the public'? (theme 5)
- *Learning and reflection.* To what extent are actors, institutions and wider systems of governance learning about and learning from public engagement and dialogue? (theme 6)
- *Understanding institutions.* What are the patterns of diversity and complexity within and between institutions, and what does this mean for critical public engagement? (theme 7)
- *The importance of context and the issue in question.* How do the prevailing (economic, political and cultural) contexts and the substance of the issue impact on, shape, and condition public engagement? (themes 8 and 9)

Appendix 1 - Workshop programme

Critical studies of public engagement in science and the environment Friday 24 April 2009, University of Birmingham

The opening mini-conference of the ESRC seminar series 'Critical perspectives on public engagement in science and environmental risk' explores the theoretical, methodological, empirical and practical dimensions of the emerging critical research agenda on participation in science and the environment. The morning session includes agenda setting presentations from leading scholars in STS, geography, and planning alongside reflective commentaries from practitioners in the field, followed by open plenary discussion to draw out connections between them. Key themes and research questions to be addressed throughout the seminar series will then be mapped out in afternoon workshop discussions.

Programme

10.00am	Registration, the Undercroft (enter via Geography, R26 on campus map)
10.30am	Welcome and Introduction (Biosciences E102, R27 on campus map) Professor Judith Petts (Pro-vice Chancellor, University of Birmingham) Dr Jason Chilvers (Environmental Sciences, University of East Anglia)
10.45am	Publics, politics and participation: some critical reflections from planning Professor Susan Owens (Department of Geography, University of Cambridge)
11.10am	'Broadening out' and 'opening up': precaution and accountability in public engagement Professor Andy Stirling (SPRU and STEPS Centre, University of Sussex)
11.35am	The unspeakable in pursuit of the uneatable? science, engagement and the hunt for consensus Professor Alan Irwin (Copenhagen Business School)
12.00pm	Reflective commentaries Professor Kathy Sykes (University of Bristol) Dr Darren Bhattachary (BMRB) Plenary discussion
12.45pm	Buffet Lunch, the Undercroft
1.45pm	Workshop Discussions: Critical reflections, themes and questions Critical reflections on participation in science and the environment, and generation of seminar themes and questions which provisionally include: <ul style="list-style-type: none">• Genealogies, epistemologies and the co-production of public engagement• Public engagement expertise, professionalisation, and actor roles/relations• The effects of discourses of participation and power dynamics• The framing, construction and performance of public engagement• Transformational change, learning and reflexivity
3.15pm	Plenary discussion and closing comments (Biosciences E102)
4.30pm	Refreshments, the Undercroft

Appendix 2 - Workshop participants

Stephen Bates	University of Birmingham
Philippa Bayley	Centre for Public Engagement, University of Bristol
Darren Bhattachary	British Market Research Bureau (BMRB)
Karen Bickerstaff	Durham University
Cath Brooks	Environment Agency
Richard Bull	De Montfort University
Kevin Burchell	BIOS, London School of Economics
Jacquie Burgess	University of East Anglia
Catherine Butler	Cardiff University
Jason Chilvers	University of East Anglia
Mathew Cotton	University of Manchester
Alison Crowther	Sciencewise
Sarah Davies	Durham University
Patrick Devine-Wright	University of Manchester
Frances Drake	University of Leeds
Malcolm Eames	Welsh School of Architecture
Robert Evans	Cardiff University
Evelyn Nava-Fischer	BRASS, Cardiff University
John Forester	University of York
Tim Forsyth	London School of Economics
Ray Galvin	University of East Anglia
Joel Hacking	Lancaster University
Steve Hinchliffe	Open University
Alan Irwin	Copenhagen Business School
Kevin Jones	University of Liverpool
Garry Kass	Natural England
Matthew Kearnes	Durham University
Carly McLachlan	University of Manchester
Wendy Miller	University of Plymouth
Alison Mohr	University of Nottingham
Kathryn Monk	Environment Agency
Brigitte Nerlich	University of Nottingham
Susan Owens	University of Cambridge
John Parkinson	University of York
Angela Pereira	European Commission
Judith Petts	University of Birmingham
Nick Pidgeon	Cardiff University
Jay Redgrove	Nuclear Decommissioning Authority
Tom Richardson	University of Exeter
Tom Roberts	CSEC, Lancaster University
Tom Roberts	University of Manchester
Alexia Rogers-Wright	University of Hull
Henry Rothstein	Kings College London
Angela Cassidy	Institute of Food Research
Sigrid Stagl	SPRU, University of Sussex
Jack Stilgoe	Royal Society
Andy Stirling	SPRU, University of Sussex
Suzanne King	People Science & Policy Ltd
Kathy Sykes	University of Bristol
Huw Taylor	University of Brighton
Saffron Townsend	Research Councils UK, Science in Society Unit
Judith Tsouvalis	CSEC, Lancaster University
Paul Upham	University of Manchester
Tom Wakeford	Newcastle-Durham Beacon for Public Engagement
Gordon Walker	Lancaster University
John Walls	Durham University
Diane Warburton	Shared Practice

Katherine Wells
Fern Wickson
Arata Yamamoto
Juliette Young

SPRU, University of Sussex
University of Bergen
University College London
Centre for Ecology & Hydrology, Edinburgh

Appendix 3 – Example seminar series themes and questions

Summary

1. What are the genealogies, histories and epistemologies of different engagement practices and how are they co-produced in relation to social, scientific, and political orders?
2. What are the relations between public engagement, expertise and policy, within and between 'invited' spaces of engagement and more organic citizen-led processes?
3. How do discourses of participation and power dynamics operating at a range of scales serve to open up or close down policy discourses, courses of action, and the types of knowledges, meanings and imaginaries that get heard?
4. How do public engagement technologies become framed and constructed and how do they frame and construct notions of citizenship, democracy, expertise, and 'the public'?
5. To what extent does the performance of public engagement enhance or constrain positive transformational changes, learning and reflexivity at the level of individual actors, institutions and wider systems of governance?

Example themes and questions

1. *Genealogies, epistemologies and the (co-)production of public engagement*
 - What are the genealogies and histories of different participatory practices? What are their underlying epistemologies and associated meanings of engagement?
 - How do technologies of public engagement become established, gain authority in different places, and fade away?
 - What are the personal/institutional motivations, incentives, and rationales that underlie their enactment and use?
 - How is the phenomenon of public engagement as a mode of governance co-produced in relation to social, political and scientific orders?
2. *Public engagement expertise, professionalisation, and actor roles/relations*
 - What is the nature of participatory expertise? What is the role of social science and other actors (e.g. natural/physical scientists, government, industry, civil society) in public dialogue and engagement?
 - What models of the interface between (social) science, policy and society are created by different forms of public engagement?
 - To what extent is innovation possible given increasing professionalisation and commodification of participation and the elicitation of social concerns?
 - How do formal 'invited' spaces of engagement interact with and differ from more organic 'noninvited' processes associated with activism and social movements?
3. *Power, knowledges, discourses*
 - How do discourses of participation and engagement operating at different scales lead to particular interpretations, inclusions and exclusions?
 - What about the manifestations of internal/external power and the dynamics of power relations within and beyond participatory time-spaces?
 - What does this mean for the types of knowledges, meanings, imaginaries and forms of expression that get heard?
 - To what extent do engagement processes open up or close down wider policy discourses and possible courses of action?
4. *Construction, performance and framing effects*
 - How are participatory processes framed and constructed?
 - In what ways do they frame and construct particular meanings and visions of science, citizenship, expertise, 'the public', stakeholders?

- Who or what exerts these framing effects (the materiality of an issue/controversy, incumbent interests, sponsors, facilitators, and/or wider political, economic, cultural and institutional contexts)?
- Public engagement as performance - what work does it do, what effects does it have?

5. *Transformations, learning and reflexivity*

- Does participation enhance or constrain the learning of all actors involved and in what ways?
- What transformations occur during and after engagement processes and are these changes for better or for worse?
- To what extent does participation make institutions more responsive, reflexive and responsible or insulate neo-liberal agendas and science lead progress from public challenge and dissent?