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UK ENERGY RESEARCH CENTRE

Engaging the public in climate change and energy demand reduction

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Workshop Report

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Recorded by:

*Irene Lorenzoni
Saffron O'Neill
Lorraine Whitmarsh
Jennifer Otoadese
Sarah Keay-Bright
Karyn John*

Reviewed by:

*Sarah Keay-Bright, UKERC Meeting Place
Jennifer Otoadese, UKERC Meeting Place*

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Tyndall°Centre
for Climate Change Research

This document is a report by the organiser of a technical meeting set up as part of UKERC's research programme. It is believed to be an objective record of the meeting but has not been separately reviewed by the participants

THE UK ENERGY RESEARCH CENTRE

Operating at the cusp of research and policy-making, the UK Energy Research Centre's mission is to be the UK's pre-eminent centre of research, and source of authoritative information and leadership, on sustainable energy systems.

The Centre takes a whole systems approach to energy research, incorporating economics, engineering and the physical, environmental and social sciences while developing and maintaining the means to enable cohesive research in energy.

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THE UKERC MEETING PLACE

UKERC also acts as the portal for the UK energy research community to and from both UK stakeholders and the international energy research community. The National Energy Research Network (NERN), supported and facilitated by UKERC, acts as an umbrella network for energy researchers across all disciplines. The UKERC Meeting Place, based in Oxford, is a key supporting function of UKERC that aims to bring together members of the UK energy community and overseas experts from different disciplines, to learn, identify problems, develop solutions and further the energy debate.

TYNDALL CENTRE FOR CLIMATE CHANGE RESEARCH

The Tyndall Centre is one of the UK's leading centres undertaking integrated research that contributes to the development, evaluation and promotion of sustainable options for responding effectively to climate change. To accomplish these aims it recognises the importance of working across a range of scales in space and time, from household to global and from the present through to the distant future. The Tyndall Centre brings together scientists, economists, engineers and social scientists, who together are working to develop sustainable responses to climate change through trans-disciplinary research and dialogue on both a national and international level, with the research community, as well as with business leaders, policy advisors, the media and the public in general.

Core Organising Team

Nick Eyre, Programme Leader, Environmental Change Institute, Oxford University

Karyn John, Events Manager, UKERC Meeting Place

Irene Lorenzoni, Lecturer in Environmental Politics and Governance, School of Environmental Sciences and Tyndall Centre for Climate Change Research, University of East Anglia

Yacob Mulugetta, Research Group on Lifestyle, Values and Environment (RESOLVE), University of Surrey, UK

Saffron O'Neil, Climate Change Tutor and Research Fellow, Climatic Research Unit and Tyndall Centre for Climate Change Research, University of East Anglia

Jennifer Otoadese, Co-Manager, UKERC Meeting Place

Sarah Keay-Bright, Co-Manager, UKERC Meeting Place

Bas Verplanken, Professor of Social Psychology, University of Bath
Lorraine Whitmarsh, Senior Research Associate, Tyndall Centre for Climate Change
Research and University of East Anglia

Executive Summary

The aim of the workshop was to bring together academics and practitioners from different disciplines and backgrounds in order to ultimately inform more effective approaches to public communication of, and engagement with, climate change and energy reduction. The overarching question to be addressed by the workshop was, *"What can empirical and theoretical studies of communication and behaviour change tell us about how we might move towards a more 'climate-friendly' (low-carbon, climate resilient) society?"*. More specifically the workshop objectives were to: share cutting-edge research and practice; foster learning across disciplines and contexts; identify gaps in understanding; form new interdisciplinary contacts and networks; consider and generate new insights; stimulate novel collaborations; provide the contents for a book and a workshop report that would be useful for academics, practitioners and policy-makers.

Central to the workshop were three sessions relating to the overarching question: models, messages and media. These sessions involved 10 minute presentations from each of three presenters and a 10 minute response from an invited discussant. The presentations are available on the UKERC Meeting Place website: <http://tinyurl.com/4uz386>. The rest of the time was largely dedicated to facilitated group-work designed to deliver the workshop aims and anticipated outcomes.

Models:

Thomas Webb from the University of Sheffield defined 'self-regulation' as 'how a person directs their thoughts, actions, and feelings towards achieving a goal' and discussed the three main reasons why good intentions are often not translated into action: 1) intentions are often not viable; 2) intentions are not activated; 3) intentions are not elaborated in sufficient detail. Thomas highlighted how individuals can be helped to act on their intentions by formulating 'if-then' plans (i.e., IF situation Y, THEN behaviour Z). Thomas summarised by stating that to promote behaviour change interventions need to supplement motivation with volitional interventions, such as planning.

Bas Verplanken from the University of Bath argued that a key factor influencing behaviour is habit which has three features: frequent behaviour; automatic performance; habit is cued by a stable context. Habits lead to 'tunnel vision', a lack of interest in new information and shallow information processing. Bas made the case for using the power of habits' to promote pro-environmental behaviour: prevent unsustainable habits forming; break habits through 'windows of opportunity' when the individual's context changes e.g. moving house, economic downturn.

Andrew Darnton, a freelance researcher, described examples of linear and non-linear models. Drawing on these models, Andrew offered nine principles for designing and developing behaviour change interventions: (1) Identify the audience groups and target behaviour; (2) Identify relevant behavioural models; (3) Select the key influencing factors; (4) Identify effective intervention techniques; (5) Engage the target audience as 'actors'; (6) Develop a prototype intervention; (7) Pilot the intervention, and monitor; (8) Evaluate: adapt, extend or abandon; and (9) Gather learnings and feed back in. Andrew worked with DEFRA to model public behaviours using a segmentation approach which divided the public into seven 'types' according to their underlying values, beliefs and characteristics. Behaviour change approaches can then be tailored to each type.

Discussant Edward Maibach pointed out that although many people say in surveys that they will act, they are saying what they think they should say. He also suggested that people often set symbolic or trivial goals rather than high-impact goals. He argued we should link the implementation intentions literature with other techniques for behaviour change. Ed argued that habits are vital cognitive short-cuts to dealing with day-to-day information overload; but often they are not in our long-term interests. Changing habits is about changing the incentives and reinforcements that generate behaviour; producing environmentally-friendly behaviour requires making it 'easy, fun and popular'. He pointed out that different approaches to behaviour change are appropriate at different levels and that upstream interventions are generally the most important for changing behaviour.

Messages:

Using examples, Tom Crompton of WWF-UK highlighted the emerging consensus on social marketing approaches to motivating pro-environmental change. This is based on an appeal to 'simple and painless steps', audience segmentation, and indifference about the reasons to which appeal is made in the course of motivating change. Tom pointed out three main challenges posed by these approaches. Firstly, he drew attention to the lack of empirical support for foot-in-the-door approaches—particularly as applied to more difficult pro-environmental behaviours. Secondly he highlighted evidence that the *reasons* given to motivate behavioural change are critically important in: managing the rebound effect, in encouraging 'spillover' to other behaviours (where this represents a useful strategy), and in the quality and persistence of motivation. On the last point, he highlighted research on self-determination theory which argues that behavioural change is more persistent when it is done in pursuit of intrinsic goals (e.g., self-development or sense of connection to people and places), rather than extrinsic goals (e.g., financial rewards or social status acquired through possessions). Tom suggested that unless alternative strategies are implemented focused on engaging other societal values, the changes that the environment movement will achieve will remain small and piecemeal. He pointed to the need to change social structures and public and political discourse in order to better legitimise and support the pursuit of more intrinsic goals.

Brigitte Nerlich, University of Nottingham, described her project 'Carbon Compounds' which explores the recent linguistic explosion of 'carbon compounds' - lexical combinations of at least two roots - such as 'carbon footprint' or 'carbon credit' in debates about climate change mitigation. She pointed out that a whole new language is evolving that needs to be monitored and investigated in order to discover how climate change is framed by various stakeholders, how public attitudes and perceptions are shaped and what solutions to climate change and global warming are proposed. The talk then focused on the lexicon and creativity displayed by grass-roots CRAGs (Carbon Reduction Action Groups) activities. The observed linguistic creativity around carbon as a lexical hub seems to provide a focus for social cohesion and the behaviour by social collectives, but can also be appropriated and used by policymakers and other actors (such as the media). Brigitte's concluding message was that the creative use of language in the context of changing climate change behaviour is important but should be accompanied by examples of direct actions people can take that are practical. For example, smart-metering and carbon labelling can be used to automatically trigger behaviour through particular symbols or words.

Gill Ereaut of Linguistic Landscapes, underlined the shift in UK media climate change discourse, moving from chaos to consensus during the period Spring 2006 to Summer 2007. That is, the media began in 2007 to treat a number of things as uncontested, or given: that climate change is happening, it is partly our fault, and we have to act. Some key questions are still being treated as debatable, though e.g.

the consequences of climate change and what should be done about it. Local discussions about climate change are different to national and potentially offer some useful models for communications: they are characterised not by symbolism and abstraction but by real and concrete messages, arguably enabling people to feel a greater sense of agency. Gill recommended that communicators: seize the apparent consensus but be aware of the debate; break up complexity but do not trivialise; harness real communities, provide sense of agency; be contemporary; use all possible routes to engagement; engage people through a positive vision, rather than through the language of duty.

Discussant Julie Worrall, University of East Anglia, pointed out how discourses about climate change were now interested in the mundane, day-to-day practices, with a focus on barriers to engagement, emphasising the holistic community approach. Her current and previous work supports the value of a sustained and holistic neighbourhood approach and the need to engage with a diversity of communities. She mentioned the difficulty of connecting between individuals and communities, raising the question of how this may be additionally facilitated. Local government could have an important role here – people taking the lead are also individual citizens and it is this relationship that also needs to be fostered.

Media:

Trewin Restorick explained how Global Action Plan (GAP) has teamed up with a major national media form (Sky) to upscale the work of GAP. The Sky-GAP collaboration is hoped to provide leadership for the advertising industry helping them to reduce their carbon footprint. It's also hoped the collaboration can change childrens eating habits towards sustainable ones through the Appetite for Action programme. Further the Sky-GAP collaboration will see GAP's EcoTeams programme employed within Sky, and Evergreen programme expanded to areas around Sky employee centres. The GAP approach – which has impressive evidence of success – rests on the three main approaches of innovative and engaging communication, group work and group discussion relating to in groups, social norms, irrational thought confrontation etc, and finally measurement and feedback of impacts. They are currently seeking to build on previous academic research into their programmes with new academic partners.

Dennis Cunningham from the International Institute for Sustainable Development described the work he has done to engage policy-makers with climate change. including the 'Inuit observations of climate change' video which provided a clear, tangible message. However, he warned that marketers are doing an even better job of communicating unsustainable messages (e.g. social networking sites for children). Dennis argued that effective climate change communication requires: identifying a key message, and a soundbite; knowing your audience, speaking to them clearly, and providing a call to action; keeping control of your message.

Max Boykoff of Oxford University's Environmental Change Institute explained: there has been a convergence in the mass media over the message that CO₂ is warming the Earth; while the majority agree about the human contribution to climate change, there are alarmists and denialists at each end of the spectrum of beliefs; and opinion remains divided over whether increase in hurricanes are due to anthropogenic climate change. Max also outlined important contextual factors which both influence and are influenced by media coverage: technical capacity of journalists; weather events; cultural issues; journalistic norms and pressures; policy and politics; power relations. He also pointed out the extent to which the media conflate issues. Max finished by outlining the challenge of mobilising metaphors to increase the public's 'caring capacity' for energy demand reduction.

Discussant Sarah Darby, also from the Environmental Change Institute, suggested that climate change and energy are different issues which demand different

communication approaches. She argued that 'we can't expect people to engage with climate change as they do with energy use'; we can experience feedback from our energy use. Sarah agreed with Dennis that we need a climate change narrative, but felt people will be unlikely to engage with climate change unless it directly impacts them and they need to adapt to it. She also agreed with Max that we need metaphors to better communicate.

Key discussion points

The three sessions generated much discussion from the floor which is summarised below:

Alarmism: It was suggested that alarmist messages could be dangerous and result in paralysis and inaction. Another participant suggested that alarmism misrepresents science and can unhelpfully close debate about climate change and distance people from the issue.

Fear vs. empowerment: There was some disagreement about the role of fear in climate change communications. One participant argued for the need to emphasise to the public that climate change is bad for all people (not only polar bears and ice). However, others argued that it is disempowering to say climate change is bad, and empowering visions for the future should be the focus.

Metaphors and myths: One participant was sceptical about the need for new metaphors, but several argued that many people cannot see why climate change is happening so we need to destroy old metaphors and create new ones.

Uncertainty, learning and stories: It was suggested that individuals find it difficult to deal with uncertainty, e.g., UK policy-makers' demand for a single climate change scenario. Climate change is problematic because there is uncertainty about the type of future wanted. It was suggested that uncertainty and risk about climate change should be turned into a positive messages about opportunities.

Facts, 'instruction' and meanings: There was some disagreement around the question of whether more explicit instructions and leadership are needed from policy-makers for people to change their behaviour; currently there is too much complexity to know what to do. Some argued that it is not necessary to 'instruct' people on what to do, but to link climate change with narratives about economics, trade and health effects. Other argued that people should be empowered enough to identify their own, specific goals and policy-makers should provide opportunities for action.

Upstream policy change: Following up on the idea of 'upstreaming' behaviour change interventions, one participant asked how we can get policy to lead and broaden the parameters/options for action. A participant pointed to tobacco legislation, which has been successful in changing behaviour and reframing smoking as an addiction, without imposing a ban on sales of tobacco.

Mass media: One participant argued that it was unhelpful to tell journalists they are 'wrong' and what they should be saying, since they have professional rules and interests which constrain/dictate what they produce. Some success stories have gone unreported (e.g. ScienceWise), but when the media does pick up on a story (e.g. Starbucks wasting water), the impact can be significant and immediate. Weather broadcasters should also be engaged, as weather is only a step removed from climate. Studies on mediated communications highlight the limited impact of these media in fostering behaviour change, whereas interpersonal communication is more effective.

Bottom-up vs. top-down change: There was optimism about continued government support for engagement: the shift in new Labour to support public engagement

programmes was mentioned, as was the lack of support by Tories for legislative approaches to behaviour change. However, it was suggested that sustainable change would be not possible if corporations lead on communication and public engagement. Another suggestion was to work with trade unions (as COIN are doing), since unionism is the narrative of workers.

Funding and evaluation: it was argued there is a need for support to up-scale effective examples of public engagement like GAP. It was also mentioned that there is a need for more outcome-based assessment: it's a powerful tool for participants (as well as funders/communicators), producing feedback and further behaviour change.

Ideas café:

Participants took part in an 'ideas café' to discuss key questions relating to public engagement on climate change and demand reduction with a view to drawing out insights from collective knowledge and experience. The following key themes, relating to how to achieve better public engagement and higher carbon reductions, emerged as a result of this process:

1. Communication of positive futures
2. Inspiring leadership
3. Empowerment and agency to influence policy and/or change behaviour.
4. Engagement as a means for creating political space
5. Two-way not unidirectional public engagement
6. Engage via groups
7. The paradox of engaging the masses versus specific publics
8. Behaviour before motivation
9. Maintaining and sustaining engagement and desirable behaviour
10. Sustainable consumption: decoupling consumption from happiness

Successes template:

Participants shared information on a successful public engagement project or initiative they were familiar with. Over 50 cases (including brief description of initiative, provider and funder, evidence of and conditions for success, scale up potential) are detailed in Appendix 3 of the full report.

Areas of interest for discussion and collaboration:

On the second day, participants self-organised to discuss or collaborate on issues of particular interest to them. Groups self-organised around the following themes: uncertainty and risk; messages and technology; beyond green consumerism; and equality, worldviews and the marginalised; learning and sharing projects and actions.

Coordination and publication of book:

The Tyndall Centre is coordinating the selection of abstracts for a book on communicating climate change and energy demand reduction. Many abstracts were received prior to this workshop and some joint abstracts have resulted from this workshop. A follow-up workshop to review and discuss selected papers may take place if required in 2009.

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Organisation of the report

The report begins with a backgrounder explaining the rationale for the workshop. The rest of the report chronologically reflects the programme of the 2-day workshop. A considerable proportion of the workshop time was allocated to small group work, much of the output for which is available in the Appendices.

Throughout the document there are process notes, highlighted in shaded boxes with the following symbol:



Throughout the report, spellings have been standardised, abbreviations spelled out and punctuation inserted where it may help to clarify meaning.

Workshop Background

In recent years, and particularly since the publication of the Stern Review and the developments of the Climate Change Bill, the UK has positioned itself at the centre of international efforts to address climate change. The limited attention given to behavioural change in the UK's climate change policies (DoE, 1994¹; DETR, 2000²; HM Government, 2006³) focuses primarily on voluntary reduction of energy use by individuals, encouraged through provision of information and economic measures. To date, however, this approach seems to have had little or no impact on individual behaviour. In the UK, energy demand is in fact rising in domestic and transport sectors (DEFRA, 2007)⁴.

Yet, while the UK aims to be at the forefront of climate change action, much of the academic work to improve communication of climate change has taken place in the US (e.g., Moser and Dilling, 2007)⁵. Much can also be learnt from practitioners who are applying techniques to educate and foster behaviour change (e.g., Futerra, 2005)⁶. The proposed workshop is therefore timely in broadening the geographical field (beyond the US) as well as transcending disciplinary and academic boundaries to inform the debate about societal responses to climate change and energy use.

Aim

The aim of the workshop was to bring together academics and practitioners to share cutting-edge research and practice, form new interdisciplinary contacts and networks,

¹ DoE. (1994). *Climate Change: The UK Programme*. London: HMSO.

² DETR. (2000). *Climate change: The UK programme*. London: HMSO.

³ HM Government. (2006). *Climate Change: The UK Programme 2006*. London: HMSO.

⁴ DEFRA. (2007). *e-Digest of Environmental Statistics*.
<http://www.defra.gov.uk/environment/statistics/globalatmos/gagccukem.htm#gatb3> DEFRA, London.

⁵ Moser, S. C., and Dilling, L. (2007). *Creating a climate for change: Communicating climate change and facilitating social change*. Cambridge: Cambridge University Press

⁶ Futerra. (2005). *The rules of the game: the principles of climate change communication*. London.

and stimulate novel areas of research, in order to ultimately inform more effective approaches to public communication of, and engagement with, climate change and energy reduction. The overarching question to be addressed by the workshop was, *"What can empirical and theoretical studies of communication and behaviour change tell us about how we might move towards a more 'climate-friendly' (low-carbon, climate resilient) society?"*

Anticipated Outcomes:

- Cutting-edge research and practice shared in respect of public communication of climate change and engagement in energy reduction;
- Gaps in current understanding about engaging the public in climate change, adaptation and energy reduction identified and responses proposed;
- Experience and theory from across disciplines and contexts will help address these gaps;
- Novel collaborations stimulated and learning fostered across disciplines and contexts; and
- Contents for a book and policy-focussed (downloadable) summary booklet of key findings/lessons produced.

The workshop was structured around three key themes - message, methods/media/tools, and models.

1. Messages: *What should we communicate to the public about climate change and energy reduction?*

For example, how can we effectively communicate uncertain and controversial issues like climate change? How can we communicate adaptation messages, and should these be integrated with mitigation messages?

What opportunities exist to integrate climate change into personal concerns (e.g., health) and everyday decisions (e.g., travel to work)? How does the concept of 'energy services' (for housing, travel, etc.) help us understand and foster public engagement? How can we engage marginalised groups with climate change and energy reduction?

2. Methods, media and tools: *How should we communicate with the public about climate change and energy reduction?*

For example, how can we use new technologies and fora, such as social networking, web communities and virtual reality, to (a) effectively communicate climate and energy messages? (b) engage citizens with climate change? How can tools like smart meters and eco-labelling be used to communicate climate change messages and foster behaviour change?

3. Models: *How can different theoretical perspectives help us understand and develop effective communication and behaviour change strategies?*

To what extent should policy-makers and communicators be aiming to change attitudes, values and identities; or should they (we) primarily focus on changing behaviours?

How can we draw on different models of behaviour (psychological, economic, sociological, etc.) to inform interventions to change environmentally-significant behaviour? To what extent can these behaviour models be applied to climate change, specifically?

How can we learn from other contexts in changing energy behaviour, such as changing health behaviour? How far can we take the analogy of changing health behaviours and changing climate-relevant behaviours?

Introductions Context Setting

Co-chairs Lorraine Whitmarsh, Saffron O'Neill and Irene Lorenzoni welcomed participants and introduced the aims, objectives, expectations and anticipated outcomes of the workshop as set out in the 'Workshop Background' section above.

Sarah Keay-Bright and Jennifer Otoadese of the Meeting Place were facilitators for the two days. Sarah introduced participants to UKERC, the Meeting Place and set out the process for the workshop.

Participants were invited to do table introductions following the process noted in the box below.



Participants spent 3-4 minutes introducing themselves to the rest of the people seated at their table by providing the following information:

- 1. Name and Affiliation**
- 2. Why I care about public engagement and climate change/energy demand**
- 3. What makes me think change is possible?**

After everyone had introduced themselves, each table was challenged to find something they all had in common.

Session 1: Public Engagement Successes



Participants were asked to share information on a successful public engagement project or initiative they are familiar with. Large poster templates were displayed in the room. Each participant was invited to stick post it notes with information relating to each heading on this template. For each project (just one is expected) participants gave the following information on separate post-it notes:

Name	1 Approach, case- study description	2 Objectives covered	3 Evidence of success	4 Conditions for success	5 Scale up potential

This information can be found in Appendix 3.

Participants shared information on a successful public engagement project or initiative they were familiar with. Over 50 cases are detailed in Appendix 3. Co-chair Irene Lorenzoni summarised some of the key messages and themes emerging from the data gathered. This summary was presented to participants at the beginning of Day 2 but is documented here for convenience:

Behaviour change:

- "Using the power of habits" as well as changing goal-directed action
- Individual characteristics and engagement with climate change
- Changing values or social marketing?
- Change as continuous process not single event
- Diverse models and perspectives on behaviour change
- Drawing on historical examples of social/behavioural change (e.g., smoking, slavery)
- Targeting specific behaviours vs. holistic lifestyle change
- Role of opinion leaders and social norms
- Role of language and communication; language is powerful but information is insufficient for behaviour change

Politics and policy:

- Role of democracy in addressing climate change?
- Governance / upstream vs. downstream interventions
- Power relations between different interests
- How unique is climate change (and energy); to what extent can/should they be integrated into other sectors, policies, interventions?

Providers:

- Policy, NGOs, academics, grassroots

Methods:

- Mass media, information technology / internet, dressing up, art and literature (e.g., poems), installations, gardening, open-house exhibition, etc...
- Linking to existing practices and concerns/interests (e.g., gardening, Christmas)

Effect:

- Ranging from small-scale value change to large-scale policy change

Upscaling:

- Potential in many cases

Session 2: Models Theme



Three presenters had 10 minutes to give their perspective on 'models' for public engagement. Following the three presentations, a ten minute response from an invited discussant was given. The presentations are available on the UKERC Meeting Place website: <http://tinyurl.com/4uz386>

Thomas Webb from the University of Sheffield gave the first talk in the session, entitled 'Trying to reduce energy consumption: Self-regulatory problems translating good intentions into action'. Thomas defined 'self-regulation' as 'how a person directs their thoughts, actions, and feelings towards achieving a goal' and discussed the three main reasons why good intentions are often not translated into action. The first of these was that intentions are often not viable. For example, individuals may have unrealistic expectations about the likely speed, ease and consequences involved with trying to change behaviour. Second, Thomas argued that may be difficult to act on good intentions because the intention is not activated. For example, it may be forgotten or reprioritised. Last, he focused on the role of elaboration – if in the original intention the required sequence of action is not specified in sufficient detail, then individuals may fail to perform the intended action.

Thomas highlighted the work of Gollwitzer (1999) on 'implementation intentions' to demonstrate how to help individuals to act on their intentions by forming 'if-then' plans (i.e., IF situation Y, THEN behaviour Z). For example, "IF I leave a room, THEN I will think 'light off!'. Implementation intentions have proved effective in promoting goal attainment across a wide range of behaviours (see Gollwitzer & Sheeran, 2006, for a review) and have been demonstrated as an effective approach to overcoming the intention-behaviour gap for environmental issues. For example, Thomas referred to Holland et al's (2006) research which applied implementation intentions to recycling and resulted in significant changes in behaviour. Thomas summarised by stating that motivation is important, but not sufficient, in order to enact behavioural change. Motivation needs to be supplemented by volitional intentions such as the implementation intentions described.

Bas Verplanken from the University of Bath gave the second session talk, 'Old habits and new routes to sustainable behaviour'. Bas started by showing the many influences driving behaviour, demonstrating some of the perceived costs and benefits one may associate with a particular travel choice. Bas described the widely used Theory of Planned Behaviour (TPB), which assumes behaviour is driven by conscious motivation and intention. However, Bas went on to argue that a key factor influencing behaviour is, in fact, habit (which is not consciously motivated). He stated the three features of habits to be a frequent behaviour, an automatic performance, and that a habit is cued by a stable context.

Like Thomas, Bas highlighted the common disconnect between behavioural intentions and behaviour. Bas argued that this disconnect is often because behaviour is habitual. Furthermore, the presence of habits explains why traditional behaviour-change interventions tend to fail. Habits lead to 'tunnel vision', a lack of interest in new information and shallow information processing. Furthermore, habits remain cued by stable contexts.

Bas went on to show how this knowledge of habits and their influence on behaviour could be used to encourage energy demand reduction. First, it is important to prevent unsustainable habits forming using long-term interventions such as education, infrastructural changes and smart technology. Second, habits may be temporarily broken – at the point of 'windows of opportunity' when the individual's context changes. Such times can include moving house or even economic downturn, which can allow different behaviours to be considered. Bas concluded by stating that the formation of sustainable habits through, for example, incentives management and legislation, should be an explicit goal of behaviour-change interventions. Thus, he argued we should 'use the power of habits' to promote pro-environmental behaviour!

Andrew Darnton, a freelance researcher who has conducted various research projects for DEFRA and other government departments, was the final presenter in

the session. His paper entitled 'Making use of models' summarised the findings from his recent cross-government commissioned review of models of behaviour and theories of change. He started by describing the Theory of Planned Behaviour (Fig. 1), which is 'consequentialist' and linear, that is you read from left to right (from attitudes, through intentions, to behaviour). The similar model by Triandis is 'dual-path', in that intention can be guided by either attitudes or emotions. It also adds a role for habit and facilitating conditions. Yet, Triandis' model is still linear - there is a single end-point (namely, behaviour) to the process.

Figure 1.
Behavioural Model 1:
Ajzen's Theory of Planned Behaviour (1986)

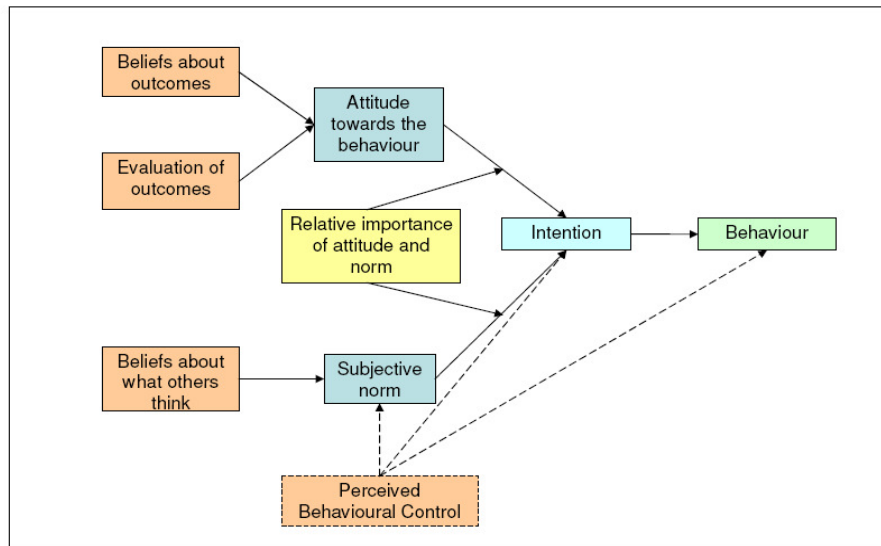
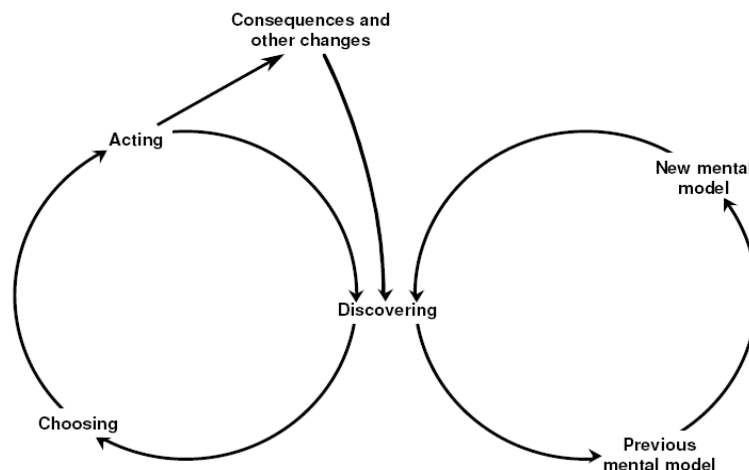


Figure 2.
Theory of Change 1:
Argyris and Schon's Double Loop Learning (1978)



On the other hand, a more ecological model of behaviour is provided by Vlek et al. Their Needs-Opportunities-Abilities (NOA) model shows an outcome of behaviour is a feedback to social conditions. This portrays change as an ongoing process (rather than a single event). Similar feedback loops are evident in other models of change,

such as Argyris and Schon's model of 'double-loop learning' (Fig. 2) which describes learning and change as intertwined, learning and doing as linked, and change as ongoing. This model also describes the 'discovery' process in terms of a change of 'mental models' (i.e., paradigms). A final, highly complex, non-linear model was presented: the Foresight obesity system map. This huge model is specific to understanding the influences on and outcomes of obesity, and includes psychological, biological and infrastructural variables which cannot be fully quantified. Nevertheless, Andrew argued that it highlights the vast complexity and multiple feedbacks involved in any particular behaviour (or set of behaviours).

Drawing on these models, Andrew then offered nine principles for designing and developing behaviour change interventions: (1) Identify the audience groups and target behaviour; (2) Identify relevant behavioural models; (3) Select the key influencing factors; (4) Identify effective intervention techniques; (5) Engage the target audience as 'actors'; (6) Develop a prototype intervention; (7) Pilot the intervention, and monitor; (8) Evaluate: adapt, extend or abandon; and (9) Gather learnings and feed back in. He also described examples where behaviour change interventions have modelled behaviour. This includes the FRANK drug use project, which focussed particularly on social factors, such as peer pressure, to foster behaviour change. Finally, Andrew mentioned the work he has done with DEFRA to model public behaviours in relation to the environment, using a segmentation approach. This divides the public up into seven 'types' according to their underlying values, beliefs and characteristics. This approach can (and will) be used to tailor behaviour change approaches to each type.

Edward Maibach was the discussant for this theme. With reference to Thomas Webb's presentation, Ed questioned the extent to which people actually have goals for climate change action. Although many people say they will act, much of this is a 'social desirability' response in surveys (i.e., they are saying what they think they should say). Further, Edward questioned what sort of goals people identify for climate change action; often they will be symbolic or trivial rather than high-impact goals. The challenge remains how to engender significant change. Here, he argued we should link the implementation intentions literature with other techniques for behaviour change, such as those of Bandura and McKenzie-Mohr.

Next, Edward discussed Bas' presentation on habits, and argued that habits are vital cognitive short-cuts to dealing with day-to-day information overload; but often they are not in our long-term interests. Changing habits is about changing the incentives and reinforcements that generate behaviour; producing environmentally-friendly behaviour requires making it 'easy, fun and popular'. Edward also drew on his own experience from public health and argued that different approaches to behaviour change are appropriate at different levels (from individual through societal). 'Downstream' in the process of behaviour formation, psychological or person-based interventions can target individuals; 'midstream' approaches can focus on opinion leaders and social norms; while 'upstream' interventions focus on contextual factors including products and services, physical structures, policies, and cultural/media messages. Edward argued that upstream interventions are the most important for changing behaviour, although he also cited examples (e.g., farmers in India) of the power of diffusion through populations in which certain individuals are key sources of information and influence.

During the Q & A session which followed, a number of issues were raised:

- In relation to using opinion leaders to influence others, one participant mentioned that climate change is more difficult a case than small-scale farming to influence people, as too many people influence our behaviour in the case of climate change. Another participant pointed to the relevance of power issues

and vested interests when trying to use opinion leaders to change behaviour in relation to the environment (away from prevailing social norms to consume).

- Several comments related to the merits of different models. One participant commented that norm-based models were not mentioned in the presentations, but there is much literature on how norms and values influence environmentally-relevant behaviour. Others suggested the role for values is minor. Further, which model is best suited to deal with the uniquely urgent and distributed nature of climate change? Some felt a multi-pronged approach is needed, which uses multiple variables in the Needs-Opportunities-Abilities (NOA) model or, even, all models described.
- Following up on the idea of 'upstreaming' behaviour change interventions, one participant asked how we can get policy to lead and broaden the parameters/options for action. In response, another participant pointed to tobacco legislation, which has been successful in changing behaviour and reframing smoking as an addiction, without imposing a ban on sales of tobacco. It was also suggested that more explicit instructions and leadership are needed from policy-makers for people to change their behaviour; currently there is too much complexity to know what to do. However, others disagreed that explicit instructions are needed; rather people should be empowered enough to identify their own, specific goals and policy-makers should provide opportunities for action.
- Others were concerned about the social barriers to changing behaviour: people are unwilling to change their behaviour when others do not. It was suggested we need a social contract or pact to engender widespread social action. Here, the WWF/National Trust/B&Q Report 'We will if you will' was mentioned as a useful source.

Session 3: Messages Theme



Three presenters had 10 minutes to give their perspective on 'messages' for public engagement. Following the three presentations, a ten minute response from an invited discussant was given. The presentations are available on the UKERC Meeting Place website: <http://tinyurl.com/4uz386>

Tom Crompton, Change Strategist, WWF-UK, highlighted the emerging consensus on social marketing approaches to motivating pro-environmental change. He evidenced this by reference to several recent reports aimed at improving communication with the public with a view to "persuade and help people to adopt 'green behaviours'". For example, communication guidelines (e.g. Futerra's rules of the Game), studies (e.g. DEFRA's framework for pro-environmental behaviours) and initiatives in the UK, (e.g. "Painting the Town Green", 2006, by Stephen Hounsham),

Recurrent themes in these proposals are an appeal to 'simple and painless steps', audience segmentation, and indifference about the *reasons* to which appeal is made in the course of motivating change. Adopting a marketing analogy, environmental communicators often attempt to 'market' green products or commoditised behaviours, with an insistence that we should 'go with what works', remaining indifferent about type of motivation to which appeal is made.

However, Tom pointed out three main challenges posed by these approaches:

1. Foot in the door: encouraging behavioural change incrementally, through reliance upon 'simple painless steps' in the expectation that these will lead people to adopt more ambitious behavioural changes. The evidence that this effect works is scant – particularly for more difficult and significant behavioural changes, and there is evidence under some circumstances of 'negative spillover' when people adopt a simple change and then 'rest on their laurels'..
2. Rebound effect, recently studied in relation to climate change by Steve Sorrell, consists of increasing demand of certain products/facilities with reduced environmental impacts but cost/time savings are spent elsewhere which has greater overall environmental impact (e.g., people using points from Tesco recycling to fly abroad; people driving further in their hybrid cars; shared ownership at fractionallife.com which encourages people to buy part-shares in performance cars, holiday home abroad and yachts). Adopting behavioural changes in pursuit of financial savings or social status may be more likely to lead to rebound than when these are adopted in pursuit of a set of environmental goals.
3. Self determination theory, which argues that behavioural change is more persistent when it is done in pursuit of intrinsic goals (e.g., self-development or sense of connection to people and places), rather than extrinsic goals (e.g., financial rewards or social status acquired through possessions). The difference in levels of motivation generated by appeal to intrinsic as opposed to extrinsic goals is greater for more difficult behaviours, suggesting that as we move towards trying to motivate more significant and difficult behaviours, an examination of the types of motivation to which we appeal will be increasingly important.

Drawing on studies in political science and cognition (Lakoff, 2004), Tom emphasised the importance of any progressive movement (such as the 'environment movement' achieving clarity about its values, and integrity in reflecting these. He suggested that there were significant long-term costs associated with an opportunistic appeal to whatever motivations may be found to work best for encouraging the adoption of a particular behaviour. This risks leading to piecemeal results, and may actually backfire, undermining attempts to nurture the emergence of other (existing but often less prominent) societal values. The environment movement, Tom argued, should place far more emphasis upon developing strategies to encourage the emergence and strengthening of these other values in public and political discourse.

The second presentation was by Brigitte Nerlich (Professor of Science, Language and Society, Institute for Science and Society, University of Nottingham) who presented her work on communication of climate change in the context of collective creativity change. She firstly questioned the contents of climate change messages (who do they address: 'we'? 'public'?) and conflicting evidence from the plethora of existing studies on climate change communication. Brigitte outlined the main starting points of her work: public engagement as an emergent property of actions and language; and engagement cannot easily be imposed through communication. Brigitte described how environmental issues are being interpreted creatively by a host of disciplines and the arts, enabling messages to be framed (both verbally and visually) to overcome fear and apathy. She also explained how creativity also lends itself to analysis of how framing is happening and how it may be made to resonate with public conceptualisations.

In relation to her project 'Carbon Compounds', Brigitte explained the explosion of use of terms related to carbon dioxide (especially in the media), formed by the lexical

combinations of at least two roots: 'CO2' and 'carbon'. These are centred around religion/ethics, diet and finance (e.g., carbon budget, carbon credits, carbon diet). The study then focused on the lexicon and creativity of grass-roots CRAGs (Carbon Reduction Action Groups) activities analysed through their websites and as reported in newspapers. Main findings were:

- From the study of a CRAGs website page in March 2008, it was evident that lexical carbon compounds were being created and used alongside derivations (e.g., 'footprinting') and truncations (e.g., 'emissions'), demonstrating that such compounds have become productive in language use as well as entrenched in language and cognition. In turn, these processes enable 'Craggers' and readers to use the words more readily, leading to greater saliency of climate change and inter-group solidarity.
- From the study of 19 media articles (up to 1 March 2008) it emerged that print 'green speak' made use of some of the Crag compounds but also created an additional one centred on 'lifestyles'.

The analyses indicate that in these two contexts examples are found of climate change activism framed as moral, financial and dieting discourses. The creation of this lexical hub around carbon provides social cohesion, linguistic creativity and a focus for behaviour by social collectives, but can also be appropriated and used by policymakers and other actors (such as the media). Brigitte's concluding message was that language and lexicon in the context of climate change behaviour are important but they should be accompanied by examples of actions people can take that are practical. For example, smart-metering and carbon labelling can be used to automatically trigger action through particular symbols or words.

The third speaker in this session, Gill Ereaut (Principal and Founder, Linguistic Landscapes) assessed the changing media discourse on climate change in the UK and its implications for communication, based on work by Nat Segnit and herself for IPPR (Warm Words and Warm Words II). She underlined the shift in UK media climate change discourse, moving from chaos to consensus during the period Spring 2006 to Summer 2007, proposing that this change may have been in part mediated by the publication of the Stern Review, the draft Climate Change Bill and the IPCC's Fourth Assessment Report. In 2006 the media discourse had presented the climate change debate as completely open, but by 2007 it was treating a number of things as uncontested: that climate change is happening, it is partly our fault, and we have to act. Some key questions were still being treated as debatable, though, like the consequences of climate change and what should be done about it.

In many respects, Gill argued, this shifting discourse is a move from alarmism (in 2006) to alarm (in 2007). This transition can be seen in a moderation in language; in 2006 extreme language forms describing climate change were set alongside mundane descriptions of the very small actions people could take. In 2007 the language in which climate change was described was more sober, and the actions open to people more complex – the potentially paralysing disparity was reduced.

Gill emphasised how discursive observations might lead to rethinking climate change communication, taking local discussions of climate change as a starting point. The local discourse is different to national, and some items offer useful models for communications: these are characterised not by symbolism and abstraction but by connection to real (or at least imaginable) actions and effects, arguably enabling people to feel a greater sense of agency. Individuals are addressed as members of a community, rather than citizens of the planet, also offering a greater sense of self-efficacy. The good models of communication are based on a 'peer-to-peer' voice: not top-down, but dialogic, conversational, horizontal. This 'voice' provides advice and facilitates, rather than telling people what to do. Other language features contribute to a greater sense of energy and positive engagement, for example in the innovative

language used by Transition Towns (Totnes website). Some communications also use the creative, informal, fun language of popular culture, rather than that of politics or campaigning.

Based on her work, Gill recommended that communicators:

- seize the apparent consensus but be aware of the remaining debate
- break up complexity for people, but do not sink into the trivial or mundane
- harness real communities, provide sense of agency
- be contemporary in language; move away from outdated 'top-down' forms
- engage people through a positive vision, rather than through the language of duty.

Julie Worrall (Project Director, CUE East, University of East Anglia) provided some reflections bringing together these presentations. She mentioned how discourses about climate change were now interested in the mundane, day-to-day practices, with a focus on barriers to engagement, emphasising the holistic community approach. Her current work with CUE East and previous low authority work supports the value of a sustained and holistic neighbourhood approach and the need to engage with a diversity of communities. However she also mentioned the difficulty of connecting between individuals and communities, raising the question of how this may be additionally facilitated. Local government could have an important role here – people at the lead are also individual citizens and it is this relationship that also needs to be fostered.

The more open questions and answers that followed related to:

- The nature of the 2006-07 language transition in the media. One of the participants suggested he had a different recollection of this, moving from representing climate change as a big problem to an issue needing big solutions. If this were so, he questioned how such an emphasis could lead to practicable options? One suggestion was that clear mental messages and guidance/steering for individuals would be worthwhile considering. These need not be delivered necessarily through institutions. Gill provided a point of clarification pointing out that the social representation of climate change differs substantially from that in the mainstream media. The former is still vitriolic and bogged. In the mainstream, scepticism was becoming less defensible.
- Appropriateness of messages. One of the workshop participants mentioned the "Act on CO₂" campaign arguing that although it dumbed down the environmental message it would seem currently relevant as it links climate change messages to cost savings at a time of credit crunch concerns. However, another participant asked about more difficult actions, and how to move beyond simple cost-saving measures to more significant changes further up the action 'hierarchy'.
- The variety of carbon lexicons produced and used. Recognising this diversity and potential complexity or misuse, a glossary is currently being produced by DEFRA outlining the appropriate application of such words and their meaning, aimed at publics and practitioners.
- Perceptions of climate change. A participant questioned whether individuals really know about and understand climate change, despite more than a decade of this term being actively used in public discourses. Hence the relevance of work with beacon councils and application of segmentation (useful from a topline perspective) to draft messages aimed at engagement. The above message on the relevance of cost-saving actions was supported.
- Risk of premature introduction of environmentally-friendly technologies (e.g., low-energy lightbulbs), which can put people off choosing these options in future.

Session 4: Ideas Café



Ideas Café - The Ideas Café consisted of two lots of 7 tables. Each table had a host and a question, both of which stayed with the table. Participants had 20 minutes per table at three different tables. The conversations were intended to build on each other as participants moved between three of the seven groups, connecting ideas and revealing insights into the seven pre-defined questions. Following report backs from table hosts, the whole group was invited to take a few minutes of silent reflection and consider, "What deeper questions are emerging as a result of our conversations?". Fully transcribed findings from the fourteen groups can be found in Appendix 4.

Seven questions were discussed by two groups of seven tables working in parallel. These were:

1. What do we still need to learn?
2. What are the dilemmas?
3. What is emerging that is new for you? What new connections are you making?
4. What are we not seeing? Where do we need more clarity?
5. What hasn't yet been said, but is needed for deeper understanding of public engagement?
6. What would facilitate increased public engagement?
7. What do we mean by public engagement on climate change and energy demand reduction?

The following ten themes emerged from the conversations:

1. Positive futures

Several pointed to the need for communicators (including politicians) to create and communicate positive and powerful images and stories of the future as well as how change could happen; this needs to be communicated in such a way that different publics can relate to and emotionally connect with. Some are re-framing the problem of climate change with this in mind. Short-term links to long-term policy objectives are needed as many people struggle to see long-term when they have immediate (e.g. credit problems) issues to address.

2. Inspiring leadership

Politicians need to be visionary, lead by example and be courageous in approach. Many people understand the need for change but think it is for Government to bring about and see that little is happening. Politicians are often not trusted by the public and inconsistent decision-making reinforces this. Inspiring people is necessary but it is not enough.

3. Empowerment and agency to influence policy and/or change behaviour.

Some participants believe that individuals do not feel able to influence policy. It was suggested that people may need to relearn that they can affect policy. There is evidence of a highest common denominator phenomenon with local 'heroes' or 'champions' inspiring others to join in. By delivering bottom-up through the use of local and appropriate initiatives or tools which are innovative and interactive, local organisations can empower, inspire and motivate individuals and groups to get involved.

4. Engagement as a means for creating political space

Several pointed to the fact that public engagement can assist with making policy decisions more acceptable. Some decisions will be unpopular and individuals will need supportive legislation/policy, information and advice to help them buy or do the right thing. As with diets and smoking, people know what they should do but struggle to do so. There is a tension between focusing downstream on voluntary behavioural change and focusing upstream on policy to support or enforce behaviour change; some suggested a critical mass had been reached downstream and attention should now shift upstream.

5. Multi-directional not unidirectional public engagement

There was considerable agreement that much public engagement is unidirectional and communicators need to facilitate a dialogue-societal debate or emergent-creative narratives and practices.

6. Engage via groups

Individuals are considerably influenced by their peers; it can be argued that consumption patterns are driven by peer pressure. It will be more effective to engage with groups, communities and existing networks and to go to where they are. Desirable activities/behaviours could become normalised in communities.

7. The paradox of engaging the masses versus specific publics

Methods and messages applied must be appropriate to particular publics, taking into account differences e.g. worldviews; education; values; priorities. At the same time engagement of the masses is needed, particularly as there is considerable time pressure to prevent dangerous climate change. New mass communication tools such as Facebook provide a way forward in this regard. On the other side, does everyone need to be engaged?

8. Behaviour before motivation

Several questioned the need for individuals to have a good understanding of climate change before feeling empowered or motivated to reduce energy consumption. Some energy demand experts pointed to the fact that people reduce their energy consumption for many different reasons. There was a suggestion to 'engage by stealth' by engaging an individual on issues of personal interest in order to later engage them about climate change or energy reduction.

9. Maintaining and sustaining engagement and desirable behaviour

There was considerable discussion on the need to maintain public engagement where initiatives have been successful, and to think of ways to sustain desirable behaviour. The credit crunch may have positive effects on behaviour; need to identify ways to lock-in these behavioural changes.

10. Sustainable consumption: decoupling consumption from happiness

The issue of sustainable consumption surfaced several times with participants suggesting that public engagement be used to develop a conserving ethic based on an intrinsic pleasure in not wasting resources as one way of decoupling carbon and credit from happiness. Climate change is a symptom of the disease.



It was agreed to adjust the agenda for the second day to make time for more in-depth discussion on the three themes: models; messages and media. Participants were later asked to consider what they would prefer to focus their time on for the remainder of the workshop: a) an idea for collaboration; b) particular topic for discussion c) development of key messages relating to public engagement that could be communicated to policy-makers. Participants wrote down ideas for a) or b) on to post-it notes and displayed them on the wall. The facilitators created a metaplan by organising ideas and topics into themes; this enabled groups to self-organise. Participants organised themselves into the following groups to follow up ideas for collaboration and topics for further discussion: uncertainty and risk; messages and technology; beyond green consumerism; and equality, worldviews and the marginalised. No participants opted for c).

Session 5: Media Theme



Three presenters had 10 minutes to give their perspective on 'media' for public engagement. Following the three presentations, a ten minute response from an invited discussant was given. The presentations are available on the UKERC Meeting Place website: <http://tinyurl.com/4uz386>

Trewin Restorick of Global Action Plan (GAP) argued that the urgent challenge posed by climate change was not matched by scale-scale grassroots approaches like that of GAP, who work with small groups to change environmentally-relevant behaviour; consequently GAP have teamed up with a major national media form (Sky) to upscale the work of GAP. The GAP approach includes:

- promoting realistic, positive, simple actions which are measured to provide feedback and positive reinforcement to participants
- encouraging group support and feedback via social interaction
- demonstrating that individuals and small groups make a difference (empowerment)
- breaking habits and confronting irrational thoughts (e.g., via the 'carbon gym')

These principles link with theories of behaviour change, social identity and norms.

Detailed evaluations of the GAP approach show notable changes in behaviour, e.g., a 19% reduction in household waste; 14% decrease in CO₂ emissions, and new habits sustained beyond the end of the intervention. Trewin pointed out that people involved with GAP were changing their habits but that there were some actions individuals were not prepared to take. Further attention should be devolved to understanding these in more detail.

Trewin then described the work GAP will be going with Sky, which will involve a public campaign around food waste. This is a major issue as, for example, the UK throw away 1m sausages and 4m apples per year. Trewin explained the penetration

potential through Sky, as it reaches about a fifth of UK households. The Sky-GAP collaboration is hoped to provide leadership for the advertising industry, building on existing examples of firms who are greening their marketing (e.g., B&Q have stopped selling patio heaters to demonstrate their environmental credentials); it will also involve an element of research and evaluation. Trewin left us with the prospect that we might ultimately see a shift in advertising based on what firms are not doing.

Next, Dennis Cunningham from the International Institute for Sustainable Development described the work he has done to engage policy-makers with climate change. He pointed out that it is hard to tell climate change as story: it is uncertain and therefore hard to embed in people's lives or give a personal message; cultural 'codes' for climate change are still emerging and not yet normalised.

Dennis argued that effective climate change communication requires:

- identifying a key message, and a soundbite
- knowing your audience, speaking to them clearly, and providing a call to action
- keeping control of your message

Dennis mentioned examples of the climate change communication work his organisation has undertaken, including the 'Inuit observations of climate change' video which provided a clear, tangible message. However, he warned that marketers are doing an even better job of communicating unsustainable messages, such as the social networking sites for children which teach them to consume from a very young age.

Finally, Max Boykoff of Oxford University's Environmental Change Institute presented his work on media representations of climate change. He pointed out that mass media is a key source of information on climate change, and introduced his interest in the 'cultural politics of climate change' (i.e., who speaks for climate?; who defines action?; etc.) Max's analysis shows has been a massive growth in mass media coverage of climate change, particularly since 2006 when the Stern Report was published. He described the areas of divergence and convergence in media portrayal of climate change: there has been a convergence over the message that CO₂ is warming the Earth; while the majority agree about the human contribution to climate change, there are alarmists and denialists at each end of the spectrum of beliefs; and opinion remains divided over whether increase in hurricanes are due to anthropogenic climate change.

Max also outlined important contextual factors which both influence and are influenced by media coverage; these include: technical capacity of journalists; weather events; cultural issues; journalistic norms and pressures; policy and politics; power relations. He also pointed out the extent to which the media conflate issues which creates problems for public engagement. Max finished by outlining the challenge of mobilising metaphors to increase the public's 'caring capacity' for energy demand reduction.

Sarah Darby, also from the Environmental Change Institute, acted as discussant on the session. She suggested that climate change and energy are different issues which demand different communication approaches. She argued that 'we can't expect people to engage with climate change as they do with energy use'; we can experience feedback from our energy use (as is used in the GAP approach). Sarah agreed with Dennis that we need a climate change narrative, but felt people will be unlikely to engage with climate change unless it directly impacts them and they need to adapt to it.

She also agreed with Max that we need metaphors to better communicate climate change; she suggested the metaphor of climate change as a closed system, but acknowledged that this risks people thinking it is a zero-sum game ('if I lose, someone else is winning'); some metaphors can be too powerful! In thinking about

new metaphors to change thinking, Sarah linked this to the idea of moving from 'single-loop learning' (how we use existing infrastructure) to 'double-loop learning' (changing infrastructure). She reminded the workshop that things or technologies can 'write the script' for behaviour and can have a major impact on how people behave, sometimes over long periods of time.

The session generated many questions and discussion points from the floor:

- Alarmism: One participant questioned whether the media shift from alarmism to alarm was a good thing; the last year has seen less attention being given to climate change and more to economic issues. Alarmism can be useful to increase public attention and concern. Anti-nuclear groups were very effective in highlighting the nuclear problem through fear, which hits the left-hand-side of the brain in terms of basic emotion. It was observed, though, that longer-term it may not be effective as we still have nuclear weapons. It was also argued that recent alarmist messages - including John Schellnhuber's recent PNAS article 'Shall we start panicking now?'; and James Hanson's statement that if we do not act on climate change in the next 10 years it will be 'too late' - are dangerous and could result in paralysis and inaction (e.g., if decision-makers feel little could be done within the next 10 years so decided not to act at all). Another participant argued that alarmism misrepresents science and can unhelpfully close debate about climate change and distance people from the issue.
- Fear vs. empowerment: Related to the above, there was some disagreement about the role of fear in climate change communications. One participant argued that four beliefs make people engage in and commit to action: (a) climate change is real; (b) it is human-caused; (c) it is bad for people; and (d) it is solvable. So we need to emphasise to the public that climate change is bad for all people (not only polar bears and ice). However, others argued that it is disempowering to say climate change is bad; e.g., Winchester council is working with scientists and communicators to develop empowering visions for the future. Others talked about emphasising the role 'I' - as an agent of social change - play in stories of the future; and argued that apocalyptic rhetoric is unhelpful whereas an alternative myth could be The Hero's Journey.
- Metaphors and myths: One participant was sceptical about the need for new metaphors, stating that rivers are drying out which should be visible evidence enough to mobilise action. Several people responded to this point, by arguing that many people cannot see why climate change is happening; and that we need new ways of thinking (we need to destroy old metaphors and create new ones to tackle climate change). In relation to effective communication, it was suggested that a valuable aid is the book 'Made to Stick: Why Some Ideas Survive and Others Die'. It was also felt that the idea of 'transition' was very powerful: whereas climate change can result in denial and dissonance, we need to examine the myths we live by and create new myths
- Uncertainty, learning and stories: It was suggested that individuals find it difficult to deal with uncertainty, e.g., UK policy-makers' demand for a single climate change scenario. On the other hand, it was mentioned that Transition Town members have developed stories around peak oil futures, which they were better able to do than had been assumed, and helped them think about what type of future we want. This relates to a limitation in the Argyris and Schon 'double-loop' learning concept which comes from organisational management, in which those involved know the type of change they want; climate change is different because there is uncertainty about the type of future wanted. Related to this, it was suggested that uncertainty and risk about climate change should be turned into a positive messages about opportunities using, for example, adventure stories (as used in Oxford ClimateXchange) and creative writing (as used by CUE East). Others asked about to what extent uncertainty should be

exposed or downplayed in communications about climate change - there is a 5% chance that climate change is not caused by humans, so our certainty and knowledge about the issue should not be overstated. It was also suggested that there is much that can be learnt from the risk literature on how people deal with uncertainty and why discourses on climate change have shifted in recent years.

- Facts, 'instruction' and meanings: There was some disagreement around the question of whether the public should be given clear 'instructions' for how to respond to climate change and change their behaviour. It was felt important to know your audience and distil information into clear messages for non-experts that links with what they care about, e.g., no-one knows what a 'kg of CO₂' means! So need to provide 'building blocks' of knowledge so they can incorporate climate change in their daily behaviours and choices; don't need to 'instruct' people on what to do, but do link climate change with narratives about economics and trade. On the other hand, the distinction was drawn between 'denotative' meaning (i.e., the dictionary definition) and 'connotative' meaning (i.e., the association and feeling evoked) of climate change: while the public do not know the former, the latter is associated with melting ice (which few are affected by) and ozone depletion (which is metaphor confusion), but no-one associates climate change with human health impacts, yet they state they would be most concerned about such impacts. Thus, we need to correct these unhelpful or incorrect connotations with better metaphors. Another participant queried whether, in fact, we should talk directly about climate change at all, and rather tap into other motivations and bigger concerns that drive behaviour.
- Mass media: The example was given of the ScienceWise project involving scientists and citizens and resulted in a u-turn in science policy but newspapers will not print engagement/policy change success stories (e.g., Transition Towns, GAP). On the other hand, it was mentioned that The Archers radio drama is currently including issues around climate change; and The Sun newspaper printed the story of Starbucks wasting water, which led to them immediately changing their water use policy. One participant argued that it was unhelpful to tell journalists they are 'wrong' and what they should be saying, since they have professional rules and interests which constrain/dictate what they produce. On the other hand, journalists often accept climate change but want to know what we should be doing about it. Weather broadcasters should also be engaged, as weather is only a step removed from climate, so they provide an important medium through which climate change could be communicated. More fundamentally, the question of what the appropriate use of the mass media is in engaging the public with climate change: studies on mediated communications highlight the limited impact of these media in fostering behaviour change, whereas interpersonal communication is more effective. This point was reinforced by the observation that media impacts are very short-lived ('today's news is tomorrow's chip-wrapper!') It was also mentioned that 'the media' is very diffuse: people can select their sources of information, and it is very hard to reach people in such a fragmented scene.
- Bottom-up vs. top-down change: There was optimism about continued government support for engagement: the shift in new Labour to support public engagement programmes was mentioned, as was the lack of support by Tories for legislative approaches to behaviour change. However, it was suggested that sustainable change would be not possible if corporations lead on communication and public engagement. Another suggestion was to work with trade unions (as COIN are doing), since unionism is the narrative of workers, and 'we' is more common than 'I', this can be harnessed to encourage collective action on climate change.
- Funding and evaluation: it was argued there is a need for support to up-scale effective examples of public engagement like GAP. It was also mentioned that

there is a need for more outcome-based assessment: it's a powerful tool for participants (as well as funders/communicators), producing feedback and further behaviour change.

Other comments included: we need to look at how words and things interact (are they in synergy?); there is a difference between the philosophy/theory and the practice of communication; what about the behaviours that GAP participants are unwilling to undertake?; why doesn't GAP just get Sky to advertise GAP's work? (answer: a first, important step is to change the culture of advertising which is, in itself, difficult); one participant had used Twitter to ask how to engage the public with climate change and responses included the need for grassroots action, not scaring the public, politicians should 'shut up and act!'; get scientists to think about the role of research in society (e.g., CUE East's 'what is the point of research' public-scientists debate); there is a need for a developmental psychology perspective to shed light on how individuals and the drivers of their behaviour change over their life course.

Collaboration and discussion group work

Groups self-organised around the following themes: uncertainty and risk; messages and technology; beyond green consumerism; and equality, worldviews and the marginalised. The full details relating to the discussions are set out in Appendix 5 and are briefly summarised here.

1. Communicating uncertainty and risk

The group agreed that it is desirable to communicate uncertainty to avoid the danger of being seen to 'cover up' which would lose trust. However, the existence of uncertainty should not prevent action. Uncertainty can be broken down to 'environmental uncertainty' relating to condition of resource and 'social uncertainty' relating to behaviour. The group considered how to communicate the low probability of catastrophic warming and the low probability of a warming of less than 2C. It was agreed that point estimates are difficult to make e.g. if we say there is a 95% chance of a 2C warming, what does the other 5% mean? The group also considered how stakeholders will use probabilistic forecasts and what messages and media would be appropriate for communicating to these stakeholders. Anticipation and resilience (e.g. strategies for adaptation) are needed to deal with uncertainty.

2. Messages and technology

The group discussed the following:

- how words can act as things and vice versa e.g. Act On CO₂ websites etc;
- how things or technologies can act as scripts for behaviour or not – e.g. same house used differently by different people;
- energy systems, infrastructure, gadgets, buildings, smart meters, ubiquitous technology, the embodiment of technology in everyday life on the one hand and the decoupling of technology and behaviour on the other.
- socio-technological assemblages
- possible scripts for a low carbon society, instruction/prescriptive vs embodied scripts
- issues of control that people have over buildings or technology and the possibility of using the technology explosion to tell people different things in different situations.

3. Green consumerism

The general discussion looked at the links between consumerism and perceptions of happiness and wellbeing. Although feelings of wellbeing have levelled since the 1950s despite exponential economic growth, there seems to be an ever increasing link between perceptions of happiness (however short lived) and what we buy for ourselves and others. The group felt that much of this is driven by the messages that are bombarded at us by sophisticated marketing techniques on a daily basis. If we are to really create a sustainable future and to change the 'myths' by which we live we need to address the fundamental questions about happiness and how we achieve it. There were those in the group who felt that green consumerism and a more sophisticated approach to social marketing which worked within but challenged the traditional marketing paradigms was the way forward. Others, however, felt that we needed to remove the mechanisms which lock us into the consumerism and happiness myth altogether (such as marketing to children, the pressure to buy presents to show 'love' at Christmas etc) and through their absence a new sustainability could emerge. Whilst others felt that it is essential to replace the consumption/happiness myth with another sustainable myth/story to shape our behaviours and attitudes.

4. Equality, worldviews and the marginalised

- a. How do we change our relationship with the public?
 - 2-way; meaningful; draw on community wisdom and expertise; listen
 - Multiple scales of the issue: local and global
 - Deliver programs that address immediate needs within a larger framework of climate change and energy reduction
 - Knowledge doesn't just belong to universities
 - Do we need to reach them all OR just those with high emission lifestyles
 - Not always clear in policy terms what priorities are
 - Social justice climate change message – better to not use per capita message
- b. The role of world views in communicating about climate change (worldviews include values, understanding, attitudes and mindsets etc)
 - Longer term deeper transformative changed values and world views
 - Shorter term ongoing translation of climate change and energy reduction of existing values and world views
- c. Climate change will affect all people but not equally
 - Finding links between communities
 - Empowering communities
 - Learn from approaches of developing countries
 - Vulnerable groups are difficult to reach and focussed on more immediate survival issues and concerns
- d. How to engage the less/non-engaged segments / Or should we bother / To what extent / Lessons from other fields
 - Communication strategies? Framing! (e.g. fuel poverty= affordable warmth)
 - Consider power issues
 - Accessibility to rich
 - Lack of invitations to dialogue

Feedback



In plenary, participants were invited to provide feedback on what they liked about the workshop, what they learned and what they would do differently. All points were recorded on flipchart paper and can be found in Appendix 6. Individual feedback forms were also distributed.

Concluding Remarks

Lorraine thanked the Meeting Place, St. Hugh's College, the Steering Committee and all participants for contributing to a lively and engaging workshop. Further information on submission of abstracts for the book proposal will be sent within one week of the event. Participants were invited to share any research outputs or future collaborations resulting from this workshop with the UKERC Meeting Place. Lorraine invited participants to a closing reception prior to departure.

Appendix 1: Workshop Programme

Engaging the public in climate change and energy demand reduction

7-8 October 2008, St. Hugh's College, Oxford, OX2 6LE

A two-day workshop to bring together academics and practitioners to share cutting-edge research and practice, form new interdisciplinary contacts and networks, and stimulate novel areas of research, in order to ultimately inform more effective approaches to public communication of climate change and engagement in energy reduction.

PROGRAMME

Day 1 (7th October)

- | | |
|-------|--|
| 09:30 | Arrival and registration; refreshments |
| 10:00 | Welcome and context-setting (UKERC and Chairs) |
| 10:30 | Introductions |
| 11:00 | Individual and Group Work – Public Engagement Successes (with refreshments) |
| 11:45 | <p><i>Session 1: Models theme</i></p> <ul style="list-style-type: none"> • Tom Webb, <i>Psychology Lecturer</i>, University of Sheffield • Bas Verplanken, <i>Professor of Social Psychology</i>, University of Bath • Andrew Darnton, <i>Independent Researcher</i>, AD Research & Analysis Ltd <p><i>Discussant followed by Q&A:</i></p> <ul style="list-style-type: none"> • Edward Maibach, <i>Professor, Department of Communication; Director, Center for Climate Change Communication</i> George Mason University |
| 12:45 | Reflection and Key Questions |
| 13:00 | Lunch (St Hugh's, Maplethorpe Building) |
| 14:00 | <p><i>Session 2: Message theme</i></p> <ul style="list-style-type: none"> • Tom Crompton, <i>Change Strategist</i>, WWF-UK • Brigitte Nerlich, <i>Professor of Science, Language, and Society</i> at the Institute for Science and Society, University of Nottingham • Gill Ereaut – <i>Principal and Founder</i>, Linguistic Landscapes <p><i>Discussant followed by Q&A:</i></p> <ul style="list-style-type: none"> • Julie Worrall, <i>Project Director</i>, Community University Engagement East (CUE East), University of East Anglia |

15:00	Reflection and Key Questions
15:15	Refreshment Break
15:45	Small Group Work - Statements of agreement, controversies, and gaps
17:15	Interactive poster session and Collaboration Wall
20:00	Dinner (St. Hugh's Dining Hall)

Day 2 (8th October)

08:30	<i>Refreshments on arrival</i>
09:00	Welcome and Announcements
09:30	<i>Session 3: Media theme</i> • Trewin Restorick, <i>CEO</i>, Global Action Plan • Dennis Cunningham, <i>Climate Change and Energy</i>, International Institute for Sustainable Development • Max Boykoff – <i>Departmental Lecturer</i>, Environmental Change Institute
	<i>Discussant followed by Q&A:</i> • Sarah Darby, <i>Research Councils' Energy Programme Research Fellow</i> Environmental Change Institute
10:30	Reflections and Key Questions
10:45	<i>Refreshment Break</i>
11:15	Group Work – Key Messages for policy-makers, practioners and academics
11:45	Plenary – Key Messages
12:30	Plenary - Outputs, Funding Opportunities and Next Steps
12:45	Table Groups – Future Collaborations brainstorm
13:15	<i>Lunch (St Hugh's Maplethorpe Building)</i>
14:00	Group Work – Future Collaborations
15:15	Feedback
16:00	Closing Remarks
16:15	<i>Drinks reception</i>

APPENDIX 2: Workshop Attendee List

First name	Surname	Email	Organisation
Jillian	Anable	j.anable@abdn.ac.uk	Aberdeen University
Timothy	Baster	tim@coinet.org.uk	Climate Outreach Information Network
Anders	Biel	Anders.Biel@psy.gu.se	University of Gothenburg, Sweden
Fiona	Brannigan	Fiona.Brannigan@groundwork.org.uk	Groundwork Lancashire West & Wigan
Max	Boykoff	maxwell.boykoff@eci.ox.ac.uk	University of Oxford - ECI
Catherine	Butler	butlercc1@cardiff.ac.uk	Cardiff University
Anabela	Carvalho	carvalho@ics.uminho.pt	University of Minho
Tom	Crompton	tcrompton@wwf.org.uk	WWF
Alison	Crowther	ali.crowther@ntlworld.com	Sciencewise
Dennis	Cunningham	dcunningham@iisd.ca	International Institute for Sustainable Development
Savita	Custead	savita@bnhc.org.uk	Bristol Natural History Consortium
Sarah	Darby	sarah.darby@ouce.ox.ac.uk	University of Oxford - ECI
Andrew	Darnton	ad@andrewdarnton.co.uk	AD Research & Analysis Ltd
Scott	Davidson	Scott.Davidson@globalactionplan.org.uk	Global Action Plan
Christina	Demski	demskicc@cardiff.ac.uk	Cardiff University
Patrick	Devine-Wright	pdwright@manchester.ac.uk	University of Manchester
Julie	Doyle	j.doyle@brighton.ac.uk	University of Brighton
Gill	Ereaut	gill@linguisticlandscapes.co.uk	University of Bath / Linguistic Landscapes
Nick	Eyre	nick.eyre@ouce.ox.ac.uk	University of Oxford - ECI
Brooke	Flanagan	B.Flanagan@ippr.org	Institute for Public Policy Research (ippr)
Simon	Gerrard	s.gerrard@uea.ac.uk	CRed
Jo	Hamilton	jo.hamilton@ouce.ox.ac.uk	Oxfordshire ClimateXchange
Henry	Hicks	HenryHicks@Futerra.co.uk	Futera
Gail	Hochachka	gail@drishti.ca	JFK University/Drishti-Centre for Integral Action
Corina	Höppner	corina.hoppner@ouce.ox.ac.uk	University of Oxford - ECI
Rachel	Howell	rachel.howell@ouce.ox.ac.uk	University of Oxford - ECI
Kathryn	Janda	Katy.Janda@ouce.ox.ac.uk	University of Oxford - ECI

Andrew	Jenkins	andrew.jenkins@boots-plc.com	Boots UK Ltd
Kay	Jenkinson	kay.jenkinson@ukcip.org.uk	UK Climate Impacts Programme (UKCIP)
Erica	Jobson	erica.jobson@nationaltrust.org.uk	The National Trust
Nelya	Koteyko	nelya.koteyko@nottingham.ac.uk	Institute for Science and Society, University of Nottingham
Anthony	Leiserowitz	anthony.leiserowitz@yale.edu	Yale University
James	Lloyd	lloydjam@hotmail.com	Liberal Democrats
Irene	Lorenzoni	i.lorenzoni@uea.ac.uk	School of Environmental Sciences and Tyndall Centre for Climate Change Research, University of East Anglia
Ed	Maibach	emaibach@gmu.edu	George Mason University Center for Climate Change Communication
Laurie	Michaelis	laurie@livingwitness.org.uk	Living Witness Project and Transition Oxford
Asher	Minns	a.minns@uea.ac.uk	Tyndall Centre for Climate Change Research / Climatic Research Unit
Susanne	Moser	promundi@susannemoser.com	Susanne Moser Research & Consulting, University of California-Santa Cruz
Yacob	Mulugetta	Y.Mulugetta@surrey.ac.uk	University of Surrey
Brigitte	Nerlich	brigitte.nerlich@nottingham.ac.uk	University of Nottingham
Michael	Nye	m.nye@uea.ac.uk	University of East Anglia
Kenneth	O'callaghan	kenneth.ocallaghan@defra.gsi.gov.uk	Defra
Saffron	O'Neill	s.o-neill@uea.ac.uk	Tyndall Centre for Climate Change Research / Climatic Research Unit
Yael	Parag	Yael.Parag@ouce.ox.ac.uk	ECI – Oxford University
Catrina	Pickering	catrina@coinet.org.uk	Climate Outreach and Information Network
Nick	Pidgeon	pidgeonn@Cardiff.ac.uk	Cardiff University
Matt	Prescott	matt.prescott@gmail.com	Energy Saving Day (E-Day)
Gemma	Regnierz	gemma.regnierz@defra.gsi.gov.uk	Defra
Trewin	Restorick	trewin.restorick@globalactionplan.org.uk	Global Action Plan
Peter	Serjent	peter.serjent@defra.gsi.gov.uk	Defra
Katherine	Shepherd	katherine@mea.org.uk	Marches Energy Agency
Michael	Simpson	mike@onesky.ca	One Sky: Canadian Institute of Sustainable Living

Heather	Squires	heather.squires@uwe.ac.uk	National Coordinating Centre for Public Engagement
Linda	Steg	e.m.steg@rug.nl	University of Groningen
Helen	Stockton	helen.stockton@nea.org.uk	National Energy Action
Tracey	Todhunter	traceyt@fireflyuk.net	Low Carbon Communities Network
Bas	Verplanken	b.verplanken@bath.ac.uk	University of Bath
Thomas	Webb	t.webb@sheffield.ac.uk	University of Sheffield
Lorraine	Whitmarsh	l.whitmarsh@uea.ac.uk	Tyndall Centre for Climate Change Research
Julie	Worrall	julie.worrall@uea.ac.uk	University of East Anglia

APPENDIX 3: Public engagement successes

Code for objectives covered: A - raised awareness (with whom); B - changed behaviour; C - changed values/attitudes; D - changed technology; E - changed organisations; F - changed policy

Name	1 Approach, case-study description	2 Year, funder, provider	3 Objectives covered	4 Evidence of success	5 Conditions for success	6 Scale up potential	8 Questions Ideas Comments
Julie Worral	Science Horizons Community Exchange (East Anglia). Focus groups on climate change. Disadvantaged groups e.g. homeless. Scientists e.g. Dr Laura Bowater, UEA Knowledge providers e.g. Simon Gerrard, CRED. Suffolk Environmental Group, Constabulary.	2006 Science Horizons Tom Workeford, Newcastle	A F B C	Dissemination via Science Horizons/BA Focus groups deemed a success but beyond the immediate impact?	Recruitment of marginalized disadvantaged groups	Yes - the model represents a positive move in developing ways of engaging with marginalized groups	I have not previously worked in the climate change area but am aware of this initiative. Useful to cite as it was deemed a successful way of engaging and is cited as a case study. However, the evaluation concluded that working with marginalized groups was a greater challenge than expected and I would question as to whether or not the project achieved a sustainable outcome of behavior change.

	- using social networks to deliver a home insulation intervention programme - diagnosis of neighbourhood in terms of type, extent, quality of social interactions - identifying opinion leaders - making the community and run the programmed	Dutch government Mid-80s Note; don't forget what has already been done in the past! Research paper published by Weenig & Widde in 1992 in Journal of Personality and Social Psychology	Energy saving in low-income households	Energy measurements	Relative coherent communities in terms of social networks	Yes, but expensive and labour intensive	
Saffron O'Neill	Chelsea flower show climate change garden, 'the 2050 garden'.	2008 Tyndall centre, Natural Environment Research Council and Economic and Social Research Council	A (3) gardeners/horticulturalists C (1) certainly some attitudinal change but not measured D (2) interaction with business/industry on climate change impacts and need for adaptive solutions	Lots of visitors (20,000) interactions between citizens and scientists - very engaged debate and ideas exchange. As with any approach, formal quantification would be valuable.	Funding, enthused scientists who wish to and can participate in public engagement	More of a starting condition for future interaction with these forms of publics	
Saffron O'Neill	'Iconic' approach to representing climate change and engaging the public	2004-08 UEA PHD project	A (3) Individuals (citizens) C(3) value change towards engagement with icons	Statistically significant movement in individuals perceptions and attitudes towards climate change (increased levels of engagement)	Funding! A committed interdisciplinary approach	Potentially: certainly lessons learned could be applied in other situations (e.g. around role of values in engagement, fear as a communications tool).	

Nelga Katyko	Focus group discussions with members of the public about probiotics A variety of stakeholders - middle-aged, retired - Low income - higher education/students - Young professionals - mothers of young children	ESRC funded project 2007-8	A (4) Raised awareness with variety of stakeholders B (?) changed behaviour but no evidence C (4/5) changed values	In the process of group discussion it became evident that some members changed their opinion and became more aware about probiotics. E.g. those that did not believe in health benefits became less skeptical after talking with peers (and vice versa)	Peer-to-peer communications. An open discussion setting, not researcher to group communication	Putting people in conversation with each other in physical space or online	Interviews with participants are necessary to find out about possible behaviour change
Bridgitte Nerlich	Test-Tube: Engagement with science/chemistry Bryand classical science communication Videos of 'real' scientists at work Plea: one video for every "element" Videos posted on u-tube			Got an award. Huge amount of hits. Performed well in terms of communication and engagement with science			
Bridgitte Nerlich	Foot and Mouth disease: interaction with farmers; photographers; artists; teachers. Studied artistic output, especially poems. Collaborated in exhibition of poems/photos	ESRC and Defra together with charity Littoral		People enjoyed exhibition.			

Laurie Michaelis	Living Witness Project: national network of local groups of Quakers with strong support, resources and residential gatherings, twice a year developing their own approaches to sustainable living.	2002-2008 continuing. Initially Joseph Rowntree Charitable Trust, then participatory meetings and small grants	Building community Improving personal quality of life Reducing environmental impacts and improving social justice Taking collective action	Growing network (now 65 groups) and demand for meetings and support. Some individuals with radically changed lives (impact evaluated with GHG footprint calculator, also specific changes e.g. adopting vegan/veg diet; giving up flying and driving; insulating homes, adopting alternative energy, reducing heating.	Personal approach and mix in groups is critical: shared leadership; emphasis on fun, social events rather than guilt; inclusion of people with diverse concerns; best if it's a group of people who see each other often; emphasis on listening rather than telling; time - change takes several years.	Probably mainly in other networks or groups with shared values e.g. WI.	
Andrew Jenkins	Product sustainability foot printing; carbon foot printing of consumer products/labelling; customer engagement through 'you can help too' messages. See poster.						
Christina Demski	This specific project took place in Oman to encourage and raise awareness for recycling behaviour. There was little or no awareness of waste issues or protecting the environment in the wider society at the time. Started as an international school project to encourage recycling of cans and was in cooperation with a company in Dubai. The project was later expanded	Unknown: specific scheme across schools; organized by a panel of interested school teachers; approx 8 yrs ago; self-financed, profit from recycled cans provided funding for the project.	To encourage recycling of cans; to create awareness of the importance of recycling and eventually change behaviour; to encourage student participation to get the local population involved in recycling.	The school eventually made a profit by selling cans to a company who later recycled them. The scheme was later adopted by other surrounding schools. A link between Dubai and Oman was made to provide infrastructure to enable recycling in the future.	Government support is needed to widen this success to the wider community (not sure if this has happened yet). Interested people need to keep the project running.	Potential to create awareness of importance of recycling and environmental protection in the wider society of the country. Would need funding and people to invest on long-term scale.	

	out to wider society.						
Corina Hoppner	Landscape development concept: integrative land use planning at local level	2003-2006 Switzerland		Success measured: Changes in trust and efficacy beliefs and willingness to participate: one way communication - no change; dialogical communication results in less of (?) in local authorities and increased trust in fellow participants.			
Asher Minns	"Switch On to Switching Off". TV ad and documentary and info campaign with CSV Media and Anglia TV	2003-4. Funders: CSV Media and Anglia TV, Government Office East of England. Provider: Tyndall and CSV Media		Huge interest via hotline. Loads of carbon saved.	Using TV, entertainment, leisure time, mass media, partnership of different strengths.	Is ongoing on a small scale with diverse activities and so potential for more, bigger and better. RHS has a theme of 'climate change and gardening'.	

Simon Gerrard	NESTA (National Endowment for Science Technology and the Arts - UK NGO funded through National Lottery Endowment) Big Green Challenge	£1m prize fund for communities that can reduce their carbon footprint most significantly. Focus on community level action, innovation (social and technological) and carbon reduction.	2 years funding. NESTA funded. 2007-09 370 initial entries reduced to 10 finalists battling it out.	A (4) with communities UK-wide B (3/4) ongoing but carbon reduction is measured C (3/4) estimated D (5) New technologies in some projects E (3) Some new community organizations established. F (1/2) little evidence of policy shifts so far.	Ongoing project but qualitative/quantitative evaluation since the outset. Carbon reduction being measured post/pre studies.	£1m prize fund as incentive. High profile (expensive) communication campaign.	Prize fund ideas could be scaled up. Scaling up as one of the criteria for a successful BGC project.
Irene Lorenzoni	CORWM: Committee for radioactive waste management. Public stakeholder engagement with question of radioactive waste management in the UK	UK Government 2004-6	A raised awareness among public and stakeholders. Promoted exchange between members of public and stakeholders (scientists, policy-makers) on a very controversial issue	CORWM recommendations published and considered by Government. Some disillusionment on the long-term influence on Government policy of CORWM processes and outputs	Carefully planned participatory workshops and discussion. Support (funding/endorsement) by government of the CORWM process. Honest, transparent and rigorous process. Academically facilitated participation (issues of independence, evaluation etc). Engagement (participation buy-in) from publics and stakeholders.	This was a UK wide process so provides an example of how (with adequate resources, backing and participation) wide-scale can be developed. But caveats in terms of its influence within institutions and changing policy context.	
Katherine Shepherd	Community of Place/Location: Finding communities with individuals willing 'to do', supporting them, empowering them, and setting them free. Bottom-up approach, community ownership - enables use of trusted, established networks, collective volunteer-led in community - local	Own examples, 1998 ongoing. Funders include local authority, regional (RRZ), Defra, Energy Saving Trust, European (e.g. ERDF, Intelligent Energy Europe), community	A 5 B 4 C 3 D 1 E 4 F 3	Community taking ownership. Involvement of new societal groups. Development of locally relevant ideas and initiatives. Dissemination into new communities. New communities joining the journey.	Local access to local support and resources (information, practical) (form local energy agency). Community (and individuals) wanting to make a difference - can't ignore. Resources (financial/practical). Understanding what can	Communities (and few individuals within) must WANT to go on low carbon journey. Needs local support to enable and empower and be locally relevant. Community could be street, estate, and village. On resource efficiency involving local	

	organizations support e.g. sharing and delivery of innovative, interactive methods and techniques. Going beyond the giving of information. Involves all sectors.	fundraising, and project generated income and innovative funding mechanisms.			do and communication of real stories. Having a vision.	organizations and communities means much less intensive than imposition.	
Brooke Flanagan	Sydney Water (Australia). Household water demand reduction through: awareness/information; water restrictions regulation; pricing; labelling of appliances; products (give away low flow showers etc)	2004-08 Funder: New South Wales state Government. Provider: NSW Government; water utility, local government.	A - public/households B reduce water use C valuing water and not wasting it F implemented policy	Daily household water demand increased. Water storage levels maintained for longer.	Sever drought (tangible). Resilience. Visible and personal impacts. Measurable success. Coordinated approach. Used variety/package of measures.	Could be replicated or scaled up with modification and coordination.	
	Food standards engagement, EU food labelling for animal welfare. Use of labelling to inform decision making. Contrast with expert views that were informing current policy and new labelling processes. Public and expert decision-makers had very different ideas of what 'animal welfare' meant. Project brought together and shifted their conceptions and decision taken. Brining together insights, differing conceptions led to change of labelling/standards.	EU 2007-8	A raised awareness with public and experts C Changed values and attitudes. F String potential to change policy E Potential to change organism ions	Still ongoing but both experts and public(s) engaged in learning and shifting their views - still some basic disagreement and working to understand this.	Long-term processes that participants are motivated to engage in - several meetings and open discussions.	Already across 4 EU countries but number of people involved relatively small for long-term deliberations - costly.	

Henry Hicks	Promoting green behaviour in Islington. A campaign to engage 'hard to reach' groups (council housing residents). Specifically to raise awareness of environmental issues and motivate and encourage people to make changes to their lifestyles (waste, water, transport, healthy eating, energy). Residents were asked to undertake a range of 'entry level' green behaviours. It centred on a doorstep engagement campaign by trained local residents who explained the residents and asked residents to pledge to undertake a variety of actions and conducted surveys.	2007-8 Funder: Islington Council. Provider: Futerra Sustainability Communications and Groundwork.	A (4) Raised awareness with local 'hard to reach' residents. B (5) Changed behaviour C (5) Changed values/attitudes	CO ₂ energy reduction: 1219 residents switch off appliances - 137 tonnes 1256 replaced light bulbs with CFLs - 47.5 tonnes 560 walk or cycle one more journey per week - 13 tonnes Water saving: 2348 residents pledged to put a water saving device in their toilet - 25, 710, 600 litres of water 441 pledged to shower instead of taking a bath - 7, 243, 425 litres saved.	We used Futerra's rules for attitude and behaviour change especially: change groups; keep it personal; help people to help. Residents were recruited from the council estates and trained to engage their neighbours, explain the actions they could take, conduct surveys and collect pledge cards from participants. This local, personal, peer-to-peer approach was crucial in showing participants that green behaviours weren't just a middle class issue but for 'people like me'. A poster campaign to feed back the pledges made by each ward reinforced the sense that others in the area (neighbours/friends) were taking action. Community events were organized and a handbook produced as a thank-you for participants and a guide for new residents.	The approach is scaleable but it is essential to use local peer groups and it must be conducted on as personal and local level as possible.	
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Rachel Howell	Carbon Rationing Action Groups (CRAGs) www.carbonrrrationing.org Grassroots groups of people who set themselves a carbon ration for the year. Some set themselves a financial penalty for exceeding the target; other groups are simply focused on info, sharing and encouragement and hope that the 'weight-watchers' effect will make a difference without need for penalty.	First groups started 2006 - more groups formed all the time. No funding.	Reducing individual carbon footprints (including non-carbon emissions from flying).	Many participants reduced C footprint since starting - though not clear to what extent this can be attributed to involvement in a CRAG. Almost all I've interviewed (23) have learned more about where emissions come from and relative importance of different behaviours and possibilities for cutting footprint.	Large enough group (many are 8-112 people; smaller groups struggle a bit); sociability of group - so people want to go to meetings and stay involved etc. members of group sharing info; encouraging atmosphere rather than finger-pointing; one or two people prepared to coordinate group, do admin, remind people to stay involved etc.	At the moment it is 'he usual green suspects' who are involved. One workplace CRAG suggests a model that could be adopted more widely but it is less radical. To scale up it would possibly be best to develop a greater number of groups rather than make the groups bigger. For it to become a widespread movement would probably require less radical targets.	
Julie Doyle	Teach MA students how environmental issues are socially, scientifically and politically shaped on MA module 'Mediating the Environment' (available on MA Creative Media).	2008 - university of Brighton	Objectives: to introduce students to the relationship between media, science, politics and culture in communications and action on environmental issues; to break down the unnatural distinctions between nature and culture; ; to make students think about different ways to communicate and engage with the environment.	MA student became involved in organizing University of Brighton sustainability awareness week. From the theories/concepts studied on the module - potentially problems with communicating climate change and environment issues through the visual - the student produced an auditory installation to try to engage people on the environment in a different way. Got feedback from people visiting the exhibition. Made the student think about what she would like to pursue as a career as interested in environment/sustainability work. Now works on	Requires financial support from University to help fund awareness raising campaigns. Required policy investment from university in promoting sustainability and climate change issues. Support from university lecturers for student development.	Big interactive exhibition on climate change - auditory and tactile, not just visual forms of engagement.	

				sustainability issues for the University.			
Heather Squires	Public/stakeholder engagement re. Reaching consensus on policy change re. Sustainable fisheries, marine and regional economies.		C A F B? E?		Must build trust. Must be clear in managing expectations of outcomes. Must have time for co-learning if output requires mutual understanding. Must provide format/structure to get to know adversaries as real people. Must involve policy makers.		
Andrew Jenkins	Boots 'Change one thing campaign'. In-store advice campaigns run post-Xmas: smoking cessation; weight-loss; healthy living (exercise). Through: in-store leaflets and advice; help-line, website; consumer pledges; personalized advice; product offers.	Funder and provider: Boots. Run each year since 2006	A (5) (over 50,000 gave up smoking) B (5) C 5 D 3 E 4 (staff participated) F 3	Over 50000 gave up smoking Around 1 million weight loss advice packs given	Build on 'trust' in Boots brand; timing (post-Xmas when people feel over-weight and unhealthy); tools provided to help people make changes themselves.	Scale-up: yes, has potential to include energy/sustainability issues.	

	Tailored information on household energy conservation via the internet	2001-05. Funder: Senter-Novem, Ministry of Economics, Netherlands.	Reduce household energy use. Increase knowledge on effects of behaviour change on energy use.	5% reduction in energy use (control group 1% increase). Increase in knowledge.	Involve public. Find participants.	Scale-up potential is large provided you can find people to participate.	
Helen Stockton	Domestic energy management in action: How does the amount and format of information influence behaviour change regarding domestic energy and water use?; What impact can/do smart meters have?; to what extent to interventions stimulate other sustainable behaviours?	Evaluation funded by EAF 2007-08 Partners: EAF, GLEEN	A 4 B: 4 energy; 3 water; 3 other.	Households that received advice and smart meter intervention more likely to change behaviour when compared to control for energy rather than water. Car use reduction was most difficult to influence.	Community based with local support re advice, information, services to provide measures to reduce energy and water consumption,	Yes, if rolled out on community level with adequate support and information services.	
Nick Eyre	Council tax rebate in several English local authorities to incentivize installation of cavity wall insulation.	Funder/provider: British Gas (Centrica) as part of their Energy Efficiency Commitment obligations, operating through the local authority. 2004-7	C - Changed technology only. Very significant in homes within scheme, as cavity wall insulation is the single biggest energy saving opportunity in the home. No attempt to change behaviour or attitudes.	Budgets fully spent. Measures accredited as part of EEC. Extensive publicity.	Regulatory regime to provide resources. Local authority involvement to provide credibility locally. Unpopular tax to rebate against.	Highly scaleable - in principle across whole UK. Potential for other funding providers.	

Jo Hamilton	Eco-renovation open days: 2 open house weekends in Oxfordshire, 18 homes with over 1000 visits - people learning from 'people like them' in 'houses like theirs' - learning from experiences of peers.	2007/8 funded by Oxfordshire Climate Exchange and Climate Outreach Network and local authority support. Now funded by Fund for Environment and Urban Life.	A (4) raised awareness with home owners who wanted to take the next step, potential eco-renovators and suppliers B(2): don't know but have signposted to where and how to make changes C(3) people know what is possible and that all levels of change can be achieved F (0) not yet, but feeding into local authority strategies	- local property consultants are interested Reached people in an inspiring way Feedback shows the experience is valued Too early to say how and in what way this leads to behaviour change and energy consumption reduction	Enablers: local knowledge; eco-renovators who are willing to share experience Local organization to coordinate Funding. Interplay between individuals, research, practitioners and suppliers.	Scale-up: yes, other areas have done similar initiatives so rolling out across UK. Scale-up locally - building the suppliers network; identifying barriers.	Plenty of scope for research here.
	Food for thought: A group of women on a new housing estate who did not previously know each other. Got together to share recipes. Many different cultures and backgrounds.	Initially no funding. Then funding to pay for use of a shared kitchen in a community centre. Local business sponsorship/support.	Objective: to have fun and get to know one another.	- unplanned outcomes - More cohesive community. Began a community garden - successfully lobbied local transport exec to provide buses to local town for market day - Replicated in other areas			

Gail Hochaka	Integral Community Development: in a coastal region of El Salvador in which we engaged four key domains: systems, behaviour, culture, consciousness. The first two relate with exterior changes in societies and individuals (i.e. community economic development, policy changes, sustainable resource management). The latter two address interior domains of change (i.e. social norms, values, worldviews, self-identity). Mixed methodology used.	1999-2003: with subsequent interventions 'scaled-up' to build capacity with other NGOs in this approach. Funded by Canada's International Development Research Centre. Carried out in collaboration with El Salvador's most active environmental NGO, CESTA, in a region vulnerable to climate change.	A (4) raised awareness with community people particularly self-empowerment of women. B (3) C (4) women and other community people taking leadership roles in new ways and regarding community sustainability. D (3) E (5) new women's cooperative, women in local council F (3)	Community level: 5 years after project community leaders making more sustainable choices/decisions Regional level: This approach is solicited by other NGOs as an important framework for fostering social change and behavioural change International level: Certain key researchers in climate change are interested to learn more about this approach for adaptation.	Conditions: - right balance of need and energy to engage in change process on behalf of community - openness of mind and capacity to engage multiple methodologies that extend beyond individual disciplines (i.e. truly inter-disciplinary) - presence of partnership with local NGOs - funding provided - a context in which framework for change are sought	Scale up: potential exists and scale-up occurring. We'd like to take this approach further in a specifically climate change adaptation project in vulnerable regions of El Salvador or/and Peru, Nigeria. Current scale-up occurring more in the general area of sustainability, conservation and leadership for change.	
Matt Prescott	Ban the Bulb: Reduce demand by making use of available technologies. Propose practical steps that would result in technologies being taxed, phased out or banned.	Self-financed (£50 over 3 years but loss of personal time)	D and F	30 countries announced plans to phase out or ban domestic incandescent light bulb	Energy efficient alternative technologies and approaches were being overlooked. Energy demand reduction had not yet been made very accessible to general public audience before. Simple effective message.	Massive scale-up effects and potential. Minimal effort. Strong, memorable campaign, name and goal.	Apply regulation and choice editing to other technologies. Used new media to reach opinion-forming audiences and public

Catrina Pickering	Winchester Action on Climate Change (WINNACC): According to WWF, Winchester has the highest carbon footprint in the UK. WINNACE is a group/coalition of individuals and organizations in Winchester committed to reducing their carbon footprint.	Funders: Winchester County Council; Hampshire County Council; Ernest Cock Trust; Southern Cooperative. Established: October 2007	Objective: to reduce the carbon footprint of Winchester by 30% by 2015 relative to 2007	WINNACE has 13 of the largest 20 organisations in the steering group, all of whom are local leaders in reducing their carbon footprints. It has a further 80 or so active individual supporters all of whom give considerable time to developing action groups etc. Regular local press coverage. Approx 15 new enquiries per week.		WINNACE will soon be launching its membership scheme in Nov 08 which will ask for individuals, organizations and households to reduce their carbon footprint. We aim to have 500 households/individuals/organisations signed up by March 09.	
Ed Maibach	Tobacco Control: Legislation to prohibit smoking in public spaces	1990 to present. Funder: various in many nations. See campaign for tobacco-free kids for further info	Build public support and increase public signs of support to ban smoking in public. Enact legislation in cities, countries to ban public smoking.	Smoking bans have been widely adopted in the west and are now being considered in the East. Rates of smoking drop in every community/nation that adopts a ban.	Frame smoking as an addiction not a habit. Frame smoking as a threat to others, not just the smoker.	Scale up potential: A+	Research on framing that works across national boundaries
Jillian Anable	Individualised Travel Marketing: measurement of household travel behaviour and personalized feedback	Various e.g. Sustrans; Social Data, transport for London; Department for Transport.	B C	Before/after travel: about 15% drop in car trips; about 100% increase in cycling and greater acceptance of 'harder' transport policies e.g. parking rates.	Individual/personal feedback. Two-way conversations. Pledges, incentives e.g. travel vouchers.	All households	Is this really behaviour change? problems of measurement; problems of rebound; sustaining change; expensive; need infrastructure in place so people can change. Apply to domestic energy use?

Mike Simpson	Socio-centric competition, municipal scoring, score cards, to reveal best practices. Canadian Hockleyville competition that leads to small town competition on reducing energy footprint			Participation by municipalities in the competitive approach to public engagement (i.e. we are leading the way to Green Fleet technology)	Keep it fun. Keep it positive. Make people feel good (i.e. best practices not fear)		
Lorraine Whitmarsh	Visioning workshops on sustainable transport and housing: deliberative workshops with public in Norfolk; asked participants to describe ideal transport / housing in 2025; expert input and Q&A; discussion and voting on preferred options; evaluation and feedback.	2006-7. Funder: Mostly EU FP6 with support from BA and Forum Trust. Provider: Tyndall, UEA and invited speakers.	Deliberation 3/5 Learning (raised awareness, changed attitudes) 3/5	Questionnaire at end measured attitudes and knowledge; also observational evidence: two thirds changed attitudes; most learned something (about others viewpoints)	Pre- and post-discussion i.e. got people to think and discuss about the future. Then gave expert info. Then deliberated about new info - many changed ideas and opinions.	Scale-up: not good for wider roll-out, as intensive approach with small groups Too much time and effort for most people to participate	
Alison Crowther	Clunk Click Every Trip: schools, police, government and advertising. Videos in school - shock, worry, a real person to talk to - physical training, props	Government - 1970s		Road deaths came down	Moral need to reduce deaths by driving. Not wearing seatbelt penalties £50+	UK wide	

Alison Crowther	Food up Front: Street by street help to plant food (1 mentor per street); matching space with people who want to grow veg.	Ongoing. Food up Front is a charity	A B - people started growing veg, learning and talking about it C talking at street and community level, value others differently 9lawyers growing terrible potatoes and 11 yr olds growing amazing pumpkins	Food for more people. Growing networks	Enthusiastic planters and monitors; something (space/hope) to offer; something to learn; obvious what's in it for me.	Yes, every street in UK possible. And then get them talking about climate change, easy!	
Gemma Regniez	Think! Road Safety teen Campaign: use of filming on mobile phones; media partnership with MTV; focus on youth friendship groups; focus on empowering citizen	2004-07. Funder: Dept for transport. Partners: transport Research Lab; MTV; Leo Burnetts; local authorities; Murmur Research.	A - raised awareness with 11-16 year olds, 76% prompted awareness B - 95% reported it would make them be more careful on roads C as above D made use of new technology - media tools to get message across F altered way in which we communicate to 11-16 year olds	Engaged teen audience: mobiles; MTV - 1000s of entries, ran from March to August continuously 22% fall in deaths and serious injuries among 11-16 year olds in Sept - Oct 05	Collaborative working with Government, local authorities, private sector. Teen participation. Funding.	Yes, method could be used for other messages.	Questions: How to maintain momentum? How to bridge gap between market and academic evidence?
Anthony Leiserowitz	Entertainment-Education: The Impact of the Day After Tomorrow film on the American public. National survey assessment of influence of this disaster movie (depicting an abrupt climate change) on American risk perceptions, policies, preferences and behavioural intentions	2004 national Science Foundation PI: Anthony Leiserowitz	A (5) B (4) changed intentions - did not measure actual behaviour C (4) changed risk perceptions and attitudes towards climate change but not values F (0) but changed support for policy	National surveys conducted: 1 - a week before film premiere 2 - 3 weeks after film premiere 3 - 4 months after premiere Significant difference found between movie watchers and non-watchers even after controlling for	1 - large well funded marketing campaign 2 - vicarious experience of abrupt climate change using vivid images, character development and emotional impact 3 - low baseline awareness among many within American public 4 - engages people through emotion and experience - not overt	Entertainment-education approach has enormous potential for wider application and scale-up. Has been demonstrated as a very powerful technique (using serial dramas) in developing and developed worlds on health, women's rights, reproduction issues.	

				demographics and political values. Results not the effect of self-selected, biased audience	information.		
Tom Webb	Holland, Arts and Lingdendam (?) 2006, Journal of Experimental Social Psychology: used implementation (?) (specific plans) to promote recycling	2006	B, E Small scale N-109 employees of teleworking company	More material recycled 2 moths later	- theoretically based intervention - delivered to motivated individuals - organization supported change - simple intervention	Yes	
Susanne Moser	Climate Champions: Engaging, training and enabling high school students to become Climate Champions in their schools and communities. Started in 2005 in UK, in Canada in 2006/7 and in US/CA in 2008; ongoing for 3+ years	British Council and OneSky (Canadian Partner) and Californian Resources Board. Ongoing 3+ years	Selected students re already highly motivated on energy and climate change issues. Project succeeded in: educating them more on climate change science and in communication; supporting and sustaining motivation to initiate a change in their schools/communities; deepening their commitment and skills; leading to some	Feedback from students participating in programme. Increased communication skills (evident in presentations, films, media interviews); evidence of activities they are engaging in within schools, communities. Networking and ongoing communication with fellow champions. Changes made in schools: recycling program; energy metering; change in	Committed programme to foster student leaders. Program funding. Engaged science teachers. Good workshop experience including effective communication, networking, creative problem-solving ideas etc for and from other students. Student energy, enthusiasm and commitment. Parental support - ground laid by commitment to good education; environmental values;	Yes, needs money, good trainers and teachers (but not huge commitment needed). Could potentially be replicated far more widely in many other schools.	

			concrete changes.	curricula; change in admin attitude	social justice and political engagement values.		
Erica Jobson	National Trust light bulbs: NT changed all light bulbs across properties. Used as opportunity to communicate and inspire visitors around this issue and bust myths that: they are not as good; they damage heritage interiors. Achieved by: national print + TV + radio, PR; interpretation at property; shops selling bulbs.	2008 - costs covered internally	Reduce environmental footprint. Cost saving. Myth busting. Inspire through example. Normalise green behaviour.	Reduced bills. Press coverage. Sales of low energy light bulbs.	Media pickup. Integrity and reliability of product. Effective informal communication to coordinate activity and give one coherent message. Simple accurate inspiring message.	Follow up in media with savings one year on. Passing on lessons learnt and methodology to other organizations to do the same e.g English Heritage.	
Savita (?)	Bristol natural History Consortium Project, "Think or Swim". Young people in the South West making films about climate change for other young people.	2006-7 Funder: Defra. £130,000K	Young people learning about climate change 'for a reason'. Skill building in scientific issues and media. Engagement of young people not traditionally involved in science/environmental /political/local issues. Wide opportunity for dissemination.	Feedback from participants. Feedback from audience. Opportunity to bring issues into new arena (film festivals, screenings, schools). Project legacy. New stakeholder partnerships for BNHC.	Funding. Buy-in from local communities. Film-makers had to get it. Schedule and opportunity for funding. Young people signing up.	Aiming to repeat success of project and build on learning over 2009-2010 in project called "Wild, Wild, West". Filming in all 86 SSI's in Bristol. Documentation raise form 7 sites to 16.	

Scott Davidson	Global Action Plans Eco-teams, Environmental Champions, Action on Schools, Evergreen Programmes. Each based on social discussion within a group, measurement and feedback and positive, fun, and engaging messages. Each programme tackles energy, waste, water and CO ₂ reductions. Ecoteams - households. Enviro Champs - Corporations. Evergreen - hard to reach communities.	Each programme funded from 1995 to present, except Evergreen which is over 2 years.	Behaviour change: Water, waste, energy, transport, CO ₂ reduction. Social impacts: empowerment; knowledge, health, attitudes, sense of community, sense of safety.	Large % measured reductions: 19% CO ₂ reduction per household per annum; 27% reduction in water consumption; 4.5 % increase in recycling; 11% decrease in waste.	A willing community, group, school, corporation, workplace. Funding.	Huge potential, but because it's not as workable or visible as large media campaigns there is reluctant uptake. Intensive small group campaigns did not pass the cost benefit analysis test. Further research into efficacy would help scale up potential by revealing positive CBA when compared to mass media efficacy.	
Asher Minns	Climate Change and Gardening: Shopping centre dialogue events began 2004 and ongoing with other activities.	2004 to present. Funder: Tyndall, NERC, ESRC, Arts Council, Royal Horticultural Society. Provider: Tyndall.	Uses gardening and leisure interest to smuggle in climate science and changing environment. Science communication relating to practice and interests.	Considerable interest: huge crowds, lots of questions, media coverage, follow up.	Tapping into a leisure and fun activity. The location (public spaces) very important.	Considerable potential. Granada TV pulled the plug on CSV otherwise could have become nationwide.	
Anders Biel	Experiment on environment labelling in particular 'negative' labels and the effect on product choice	Based on promotion versus prevention focus, show why 'must not's' may work i.e. working 'negative' labels could be more effective than positive.		Less environmentally concerned participants reacted to negative but not to positive labels. Hence they did not prefer positively labelled products to neutral but stayed away from negatively labelled products.	Environmental values and attitudes are activated at the moment of choice. People don't act under time pressure.	Conditioned on a mandatory system giving producers time to adopt.	

Anabela Carvalho	Use of plastic bags in supermarket chain in Portugal.	2006 supermarket chain	B	Reduction of use in plastic bags by over 50%	Introduction of charge for plastic bags which became bigger and stronger than previously	User pays for everything where energy is involved except for basic public rights. No freebies where carbon emissions are involved.	
Tim Baster (?)	Climate Outreach Information Network "speaker training". A day long training to give participants the skills to speak confidently in public (in their community or not) on climate change	Started in 2006 and ongoing. Over 1000 participants. Self-funded by participants plus some external funding.	Unpublished research shows wide divergence of objectives. Some participants say they attend to find out more about climate change, others say they attended to become climate change speakers.	Some participants used training to speak to 100s of others about climate change. Some did not.	Enthusiastic people	Being scaled up now.	
Katy Janda	People, Prosperity, ?, (P3) The Planet Student competition (Environmental Protection Agency) and Solar Decathlon. These two projects sort of did the same thing. Students apply for funds for sustainable design project to be shown in Washington DC (technology demo projects)	P3 funded by USEPA: 2004. 2005, 2006 ongoing. Solar decathlon: 2002, 2005, 2007 funded by US Dept of Energy	P3: A C D (B) Solar decathlon: A C D	Lots of public attendees (more for Solar Decathlon than P3). Lots of student practical learning.			

Catrina Pickering	Climate Action Groups: formed on themes of people's choice during a 2.5 hour open space matchmakers meeting. Climate action groups then meet at least once a month over six months to take forward action on their themes. Current groups in Reading include a home energy group, car free day group etc.		To mobilize grassroots action on climate change issues that matter to the groups and individuals in question	Evaluation undertaken on 2007 Sheffield and Camden CAGs. Evaluation available on www.coinet.org.uk To some extent successful but limited due to: some CAGs not ever really taking much action; short life span; some aims would only have little impact.		Now doing another CAG in Reading and trying to address some of the weaknesses in the previous evaluation including providing more support throughout the process, regular meetings, newsletters; increased planning and publicity, including trying to get those not involved.	
Patrick Devine Wright	Community Renewables Initiative: aimed to enable communities across England to deploy renewable energy locally. PDW was involved as a member of the National Advisory Group.	2001-2006 Instigated and funded by Countryside Agency, with extra funding from Defra, DTI, EST, Forestry Commission.	CRI aimed to increase: awareness of RE and climate change; take up of renewable energy technology. It aimed to do this through changing behaviours in terms of participating in local energy supply.	CRI was evaluated independently showing scale of support given to communities and number of local projects arising from the initiative. Was this successful? How should this be defined?: 10 new projects? 1000?; specific reductions in GHGs; sense of empowerment?; changed attitudes or behaviours.	Local enthusiasm and commitment for change. National vision and support but although Countryside Agency championed the scheme, DTI was less enthusiastic. Ultimately CRI was discontinued - a failure?	Great potential - much enthusiasm in community, on the ground. But limited potential, industry commitment to change conventional energy systems: large scale preferred; market-based preferred; hard to push community-orientated energy system.	
Alison Crowther	Animal/human hybrid embryos experiments (chimeras)	Dept of Health, Sciencewise, 2006-7	F - Changed policy 180 degrees, from "we are minded not to allow research" to a grant being given for research. Based on public dialogue with a number of citizens using the Sciencewise guiding principles on public dialogue	Changed policy from no to yes.	Live policy - a decision to be made. Active (angry) scientists. Bemused MPs and Ministers (generally happy to guess what the public think) but they do need to get it right.	Could be done at local level then fed up - more thought - better	

Mike Nye	Global Action Plan Eco-teams. Groups of 6-8 householders from the same community meet once a month for 7 months in facilitated discussion about living greener. This is not info provision, this is about changing lifestyles amongst local systems of provision.	2006-08. Funder Defra and Global Action Plan	Drivers for durable change in domestic waste/energy behaviour.	1. Outcome based assessment - surveys of all participants in regards to changed behaviour in immediate and long term. 2. Qualitative analysis of role of social processes, team dynamics in shaping intentions and change.	1. Lifestyle examination - consideration of joined up inputs of everyday routines 2. Social support and scrutiny 3. Behavioural economics of scale - fitting new behaviours into an existing lifestyle and identity 4. commitment, longer term programmes (4 months) - people try out new behaviours and incorporate them into everyday activities.	Potential to scale up - somewhat limited or the full scale, facilitated project due to cost and resource constraints. Using volunteer community champions could be the way forward.	See www.globalactionplan.org.uk
Tom Crompton	Awakenings: academics, environmentalists, marketing executives, psychotherapists ask: what are the stories we tell ourselves, collectively about who we are and what we aspire to? what can we learn from the tools and techniques of the marketing industry to promulgate alternative myths/stories?	2007/8/9 WWF and Forum form the Future	A C E	Level of participation, growth of network		High potential: rapidly growing, interdisciplinary participation - people say that they like the fact that this isn't an environmental project	
Max Boykoff	Save Santa's Workshop. Stop (anthropogenic) global warming in California. Get the CA legislature and Governor Schwarzenegger to back assembly bill 32 to reduce GHGs on a scheduled basis	Cliffbar Inc. Greenhousenetwork.org	A - CA public to pressure their legislators F - 32 in 2006/7	Postcards delivered by key legislators to desk of Schwarzenegger	A lot of people power. Timing. Costumes - dressed as Santa's Elves to ask for help to save North Pole from ice melt.	Yes - US policy.	

Dennis Cunningham	Vehicle anti-idling campaign. Sign distribution to local schools couples with student outreach and education program	2002 to present. Funded by Government of Manitoba, Canada.	A B C Vehicle idling reduction outside schools. Attitudinal shift in a cold climate where idling almost considered a necessity. Communicate environmental and health benefits associated with idling reduction.	Observations of idling practices declining through locational study. Surveys of drivers outside schools.	Increased awareness of negative impacts of idling accomplished. Myths busted. Continuing evidence produced on economic costs of idling. Relatively low-cost to administer. Demand for signs steady.	Program has scaled up to include sign distribution to other public locations as well as business locations. Demand for signs and educational material remains strong.	
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APPENDIX 4: Ideas café

Two lots of seven tables addressed the following seven questions (one question per table):

1. *What do we still need to learn about engaging the public in climate change and energy demand reduction?*
2. *What are the dilemmas in public engagement around climate change and energy demand reduction?*
3. *What is emerging that is new for you in engaging the public? What new connections are you making?*
4. *What are we not seeing? Where do we need more clarity on public engagement?*
5. *What hasn't yet been said, but is needed for deeper understanding of public engagement?*
6. *What would it take to create change on public engagement?*
7. *What do we mean by public engagement on climate change and energy demand reduction?*

CAFÉ 1 – table findings

1. *What do we still need to learn about engaging the public in climate change and energy demand reduction?*
 - clarity around public engagement processes
 - staying power/sustainability
 - bringing together behaviour and technology
 - role of civil society
 - consumer marketing
 - linking
 - reversing consumption
 - keep up with GDP
 - success is happiness
 - work
 - simplistic
 - tools
 - radical enough
 - how we learn about where we are
 - past history examples
 - climate change big issues: breakdown?; is big picture essential?
 - Is personal carbon trading the solution?
 - Background energy awareness
 - We are also part of the public
2. *What are the dilemmas in public engagement around climate change and energy demand reduction?*
 - Given different worldviews, is it necessary to have understanding of global climate change in order to take effective action? Acknowledge difference and development – make messages meaningful at different levels/worldviews.
 - Messages – fear?

- Mobility: relationship between inflexibility of infrastructure and performance of infrastructure
- Problem of the commons versus the tragedy of CBA
- Addressing climate change in the short time space available
- Political space: laying foundations that allow politicians to implement policies (long term).
- Governance issues – targets etc moving in same direction
- How bring initiative together – needed now?
- Need for political space: unpopular but initiatives needed
- Hard to reach groups: consumptive, how to tackle
- How do we know if successful? – foundations mislaid
- Power of interest groups
- Power balance: addressing aligning

3. *What is emerging that is new for you in engaging the public? What new connections are you making?*

- Language studies were new and valuable – new perspective on 'lexical creativity'
- importance of local communities, agency and understanding
- behaviour first and motivation second
- good progress in last 2 years but reached a critical mass
- time to go upstream – work at all levels to prepare ground for change
- quality versus quantity – need to shift emphasis
- developing intrinsic pleasure in not wasting resources; importance of intrinsic motivation and developing a 'conserving' ethic
- indirect and embedded energy – start thinking
- importance of strong, durable statements of values; don't go for short-term arguments e.g. cost savings
- decouple carbon and credit from happiness

4. *What are we not seeing? Where do we need more clarity on public engagement?*

- public engagement is a process not a goal
- consultation fatigue
- need for clarity
 - data labels: simplicity vs meaning
 - messages: values based
 - problems and solutions: clear for experts, confused public
 - public not yet reached effectively
 - more sustained multi-pronged efforts needed, including: educational effort; basic building blocks of knowledge; practical assistance; personalised approached; reliable, trusted advice and assistance
 - ignoring labels: assuming need and knowledge; building performance label – static vs dynamic; over-complicated engagement is a problem; little understanding of infrastructure – coal gives light; assumption that present always existed; links between energy and climate need to be clearer.
- what is needed:
 - longer term effort
 - greater budgets

- bring policy-makers together with public – empowered decision-maker, risk taking
- realistic targets
- adequate infrastructure/monitoring
- short term links to long term objectives, strategic plan (as simple as possible)
- public role in plans
- supporting measures, well thought out

5. *What hasn't yet been said, but is needed for deeper understanding of public engagement?*

- policy is a missing dimension: how to change?
- Leadership versus acceptability
- Technological innovation
- Labelling and logos
- public – segmentation models
- Measurement – how and what, methods, units
- Read-across other disciplines
- Future visions – new world
- Buy less stuff – sustainability, not just climate change - mechanism needed

6. *What would it take to create change on public engagement?*

- Messages to instigate change need to be tailored to specific groups with different values and priorities
- Individual is motivated through society : change individual values and behaviour via local communities so that it becomes normal in a local community. This results in change that will allow higher level policy introduction
- Increase enforcement
- Political leadership – leading by example
- Consistent policy decisions (e.g. not expanding Heathrow)
- Local government role: tangible local solutions; policies to remove barriers to change creating political space for policies
- Providing the means for changing behaviour
- Measuring as a way to increase engagement: spectrum of engagement – some aspects are higher than others
- meaning of words
- role of Government
- normalising activities in communities

7. *What do we mean by public engagement on climate change and energy demand reduction?*

- different publics (policy-makers; individuals; organisations; professions), masses
- engagement meaning
 - actions - indirect level
 - public pressure to result in transformative government at all levels
- increase in renewables and energy efficiency
- what's important about being alive: sense of place; relationships; community
- do we need a more participatory approach to policy-making and research

- public as members of institutions with influence or different points of influence in social organisations?
- Taking positive steps towards change

CAFÉ 2 – table findings

1. What do we still need to learn about engaging the public in climate change and energy demand reduction?

We citizens; politicians; academics; scientists; communicators

Politicians

- vision
- to be trustworthy/consistent
- how to control media messages around climate change
- when and how to legislate
- its not enough to be right
- to be less self-interested
- bravery (promote measure people might not like)
- the system doesn't promote the right decisions
- allow engagement and collaboration
- vision

Communicators:

- know peoples' preconceptions
- agency and control
- behaviours, not values
- feedback, success
- aspirational
- don't lose sight of bigger picture and values
- future positive
- be less boring
- how to convey complexity
- do we need to engage everyone

Citizens

- co-operate
- to think
- to do
- its for everyone, not just greenies

Academics:

- how do we retain good behaviours from credit crunch
- communicate in understandable terms: scientists vs social scientists
- which disciplines can and need to talk to each other (not just interdisciplinary for its own sake)
- learn to be relevant
- how far do we need to dumb down
- more climate change from exterior to interior dimensions of what problem is
- what is the long term vision: bigger picture; where does climate change fit into wider sustainability agenda; climate change is a symptom of the disease
- over reliance on technology
- positive vision of the future
- long term thinking (intergenerational) in current decision making infrastructure

2. *What are the dilemmas in public engagement around climate change and energy demand reduction?* [Not documented but findings emerge in 'reflections' below]
3. *What is emerging that is new for you in engaging the public? What new connections are you making?* [Not documented but findings emerge in 'reflections' below]
4. *What are we not seeing? Where do we need more clarity on public engagement?*
 - What are the key beliefs that cause these forms of public engagement? Consumer advocacy and political advocacy; cultural norms.
 - Who's doing the engaging? Government not trusted but public expects govt to solve problem
 - Need engagement over long term
5. *What hasn't yet been said, but is needed for deeper understanding of public engagement?*
 - We haven't been talking enough about the relationships and peer groups that influence how people change
 - Concentrate on sustainable communities
 - This makes it relevant to wider audience, impacts are local
 - If we're talking about 90% cuts in 40 years, we're talking about total lifestyle change: some agree; others think technology will solve it. We're agree we need to take action but we aren't hearing what action. Conflicting messages?
 - The hardest thing about climate change is us: we know its hard to diet, give up smoking, so what?
 - What do we do about changes that can't be made easy, fun or popular e.g. flying less
 - How do we get people to think long-term when everything else is short-term?
 - Citizenship at local, national and international levels hasn't been discussed
 - Fairtrade sales shows people have internet in global issues
 - What about engaging people who care about social justices/peace/poverty etc but not yet engagement with environment or climate change: these people will be put off by value-free messages and egocentric money-saving approach but could be influential and ready to change
 - Is there something to be done other than giving messages as part of a uni-directional process e.g. a dialogue-societal debate
 - We're talking about talking to a small group of people, when will it become a mass movement?
 - People need to re-learn that they can affect policy
 - If people consume to fit in they are influenced by their peer group – so having dialogue with such groups would work better
 - Staged messages
 - Its good for you and your community
 - And its good for the environment
 - Need ego-centric and eco-centric reasoning for different audiences
 - Need appropriate public engagement processes – not pulled off the shelf e.g. citizens jury/summit.
 - Mass communications: go to where they are; get nurses/hospitals to do things around climate change.
 - We can't communicate with or to every individual – so where do we put pressure?

6. *What would it take to create change on public engagement?*

- We've heard mostly about us-to-them communication. How about facilitating emergent-creative narratives and practices.
- positive image of the public
- Better use of mass engagement tools e.g. Facebook
- Engage other classes, races, faith groups, not just white educated
- Better communication on the benefits of low carbon living
- Engagement by stealth...talk about something else...brings people in
- Need a strong, positive, engaging story of how change will happen – myth of transformation
- How do we record or recognise when people are engaged and capture that moment?
- Identify the benefits that most attract public to our offerings
- Communications – a safe and trusted voice
- Inspiring leadership important
- Communicating, sharing, developing best practice
- Communication of real action/making difference – positive stories; visible message on how individual actions/tools impact
- Find a way for people to feel they can affect policy
- How do we tune into people's innate sense of justice
- Sciencewise – enables members of public to get up to speed with issue, deliberate with peers, then write recommendations that feed into policy
- Locking in climate friendly behaviours
- Funding for community level development
- Go to where they are, do not start your own blog
- Agency may like more in the group than the individuals – so engage people as groups and communities
- Appropriate communication of climate change reality
- Emotional connection to climate change or to possibility of a different kind of future
- Unleashing positive and active citizenship
- Highest common denominator...'heroes' aspirations 'its happening, join in'; heroic/ordinary dimensions
- Need interventions that last over time, sustainable
- Reward good behaviour, punish bad
- Top-down ambition, political will
- Empowering local organisations/agencies to deliver bottom up, locally appropriate initiatives tools/techniques/methods that are fun, innovative and interactive – making people want to be involved not telling them to be
- Simple, clear messages repeated often by a variety of trusted sources
- Choice editing bad behaviour
- Legislation to support people

7. *What do we mean by public engagement on climate change and energy demand reduction?* Not documented but findings emerge in 'reflections' below]

CAFÉ 2 – REFLECTIONS

- Is public engagement a means to an end? What is the end?
- Aiming messages:
 - Should we be building conversations instead?
 - Long-term relationship
 - Common ground

- How do we view the public?
- What are the barriers to positive feedback about citizenship? Feel powerful as citizens.
- What do we mean by public engagement? Need definition.
- We do know what public engagement is. Many guidelines/levels on public engagement.
- Need to inspire
- Need conversations to give powerful images of the future. May start before climate change discussions
- Consensus around other public engagement issues. Is there consensus around climate change
- Inspiring people is necessary but is it enough?
- Public engagement means cutting emissions
- Some policy-makers are listening
- Little discussion around climate change and energy; mostly public engagement and how to use this specifically for climate change
- Public engagement allows more room for policy makers to manoeuvre
- Reality about abstract future
 - others are re-framing the problem
 - external to internal landscape
- meaning-making depends on perspective
- climate change symptom of disease
- the point of linking climate change and energy demand reduction
 - people do energy demand reduction for many reasons and unlikely to change
- individual action in broader context of sustainability
- different engagement methods required for different goals

APPENDIX 5: GROUP WORK, DAY 2

Group1: Communicating uncertainty and risk

Rapporteur: Nick Pidgeon

Social Dilemma Research:

- Environmental uncertainty – about the condition of the resource
- Social uncertainty – expecting others to behave as I would behave

Key – information to stakeholders

- How will probabilistic forecasts be used by stakeholders. Will a PDF be useable for stakeholders
- Use of scenarios: negative actions which lie outside the scenario (so use of visionary is important)
- What is risky – is it probability or is it a consequence (people that the latter is what risk is)
- Point estimates are difficult
- How do we communicate very dangerous things which have a low probability
- Point estimate – if we say it is a 95% chance of 2°C warming what does the other 5% mean (greater than 2°C, less then 2°C etc)
- Adding more technical info (pdf) on a simple message
- How do we communicate a low probability of a catastrophic warming 4 – 5°C
- What is an acceptable level of proof?
- Is UKCIP08 a potential research site / object in terms of risk communication
- People are adverse to uncertainty in some situations (e.g. why fix your mortgage when it is always more expensive)
- Dealing with uncertainty
 - Anticipation
 - Resilience (strategies of adaptation)
 - UKCIP – are they dealing with:
 - Know – probability
 - Uncertainty
 - Ignorance – this is ambitious
 - It will also depend on who the decision makers are – making the information useable
- Is it desirable to communicate uncertainty
- Can we afford to have uncertainty over the reality of Climate Change?
Probably not, even though there is some

- Uncertainty is always there but it should not be seen as preventing action
- Also there is a danger in covering up - because you will lose trust

Group 2: Message and Technology

Rapporteur: Brigitte Nerlich

Present: Sarah Darby, Brigitte Nerlich, Kathryn Janda, Katherine Shepherd

The group discussed the following:

- how words can act as things and vice versa, e.g. how, for example, certain 'carbon compounds' (as words clustering around carbon as a hub) can act as Latourian 'actors' in a network of technology and engagement, e.g. Act On CO₂ websites etc.
- how things or technologies can act as scripts for behaviour or not – e.g. Kathryn told us how the same house can tell different stories when different people live there, despite a particular design script.
- energy systems, infrastructure, gadgets, buildings, smart meters, ubiquitous technology, the embodiment of technology in everyday life on the one hand and the decoupling of technology and behaviour on the other.
- socio-technological assemblages...
- possible scripts for a low carbon society, instruction/prescriptive vs embodied scripts
- buildings that teach; difference between design intent and lived reality; the script that is written by the people living in the house not corresponding to the script the designers had built into it.
- issues of control that people have over buildings or technology and the possibility of using the technology explosion to tell people different things in different situations.

Group 3: Beyond Green Consumerism

Rapporteur: Fiona Branigan

The general discussion looked at the links between consumerism and perceptions of happiness and wellbeing. Although feelings of wellbeing have levelled since the 1950s despite exponential economic growth, there seems to be an ever increasing link between perceptions of happiness (however short lived) and what we buy for ourselves and others. The group felt that much of this is driven by the messages that are bombarded at us by sophisticated marketing techniques on a daily basis. If we are to really create a sustainable future and to change the 'myths' by which we live we need to address the fundamental questions about happiness and how we achieve it. There were those in the group who felt that green consumerism and a more sophisticated approach to social marketing which worked within but challenged the traditional marketing paradigms was the way forward. Others, however, felt that we needed to remove the mechanisms which lock us into the consumerism/happiness myth altogether (such as marketing to children, the pressure to buy presents to show 'love' at Christmas etc) and through their absence a new sustainability could emerge. Whilst others felt that it is essential to replace

the consumption/happiness myth with another sustainable myth/story to shape our behaviours and attitudes.

Metaphors of Climate Change

"Conjuring the heroic" – harnessing myths and metaphors (Jo Hamilton)

- Are heroes exclusive or inspiring?
- Do less! It solves everything
- No stress
- What else perpetuates a story that isn't working
- However the US identifies itself through retail – it is national pride and duty

"Local / community orgs using in communication, experience and effectiveness are these based on what people want to hear or public expressions? Trailing of new metaphors / metamorphosis in partnerships" (Katherine Shepherd)

- Community/local telling people what thing should be/want to hear? Or responding to local level CC internet driver
- Wider context, climate change as a symptom of the disease
- Consumerism liked to happen
- Social Pressures
- Rename the framework

Narratives

"Beyond Green Consumerism: New stories for life" (Tom C)

- Andrew Jenkins liked the above: How to take the debate from "Climate Change (a symptom) to the need for a more sustainable society (i.e. solving the root cause of the problem)
- Consuming is a form of participation on conforming – its hard not to buy Christmas Presents
- If you don't do a social norm – but you cant just take away retail therapy without giving them something
- Action:
 1. Group Up
 2. Vision your own positive story
 3. Decide what NOT to do: co-ordinate and back people up

Group 4: Equality, worldviews, the marginalised.

Rapporteur: Brooke Flannigan

(b) How do we change our relationship with the public?

- Dialoguing with, rather than talking at the public about climate change
 - 2-way
 - Meaningful
 - Draw on community wisdom and expertise
- Multiple scales of the issue: global futuristic view and local immediate needs
- Deliver programs that address immediate needs within a larger framework of climate change and energy reduction
- Listen
- Knowledge doesn't just belong to universities
- New language and approach to work meaningfully with communities
- Do we need to reach them all OR just those with high emission lifestyles
- What priorities are? – not clear in policy terms or not always?
- Social justice climate change message – better to not use per capita message

- (c) The role of world views in communicating about climate change (worldviews include values, understanding, attitudes and mindsets etc)
 - Longer term deeper transformative changed values and world views
 - Shorter term ongoing translation of climate change and energy reduction of existing values and world views
- (d) Climate change will affect all people but not equally
 - Corporate off-setting – connecting experiences of both communities (eg Scottish refinery/Brazilian plantation)
 - Finding links between communities
 - Empowering communities – listening to communications and making a proper participatory approach.
 - Can learn from approaches of developing countries (finding a new language to describe this – new ways of engaging)
 - Vulnerable groups – difficult to reach – focussed on more immediate survival issues and concerns – adaption issues to cope with
- (e) How to engage the less/non-engaged segments / Or should we bother / To what extent / Lessons from other fields
 - Vulnerable communities needs more basic??? Challenge to engage conversations in CC
 - Communication strategies? Framing! (e.g. fuel poverty= affordable warmth)
 - Power issues
 - Accessibility to rich
 - Lack of invitations to dialogue

Group 5: Learning and Sharing Projects and Actions

Rapporteur: Jo Hamilton

The questions and statements we started with:

- A regional climate change and sustainable energy agency seeking partnerships to share and develop our 'grass roots' experiences, to trial new tools/ methods etc, and to develop new approaches through combining enterprises.
- Looking for best practises in peer to peer engagement for application in Canada
- Joint research projects – action research. Projects in the community and public sector organisations, evaluated academically to see what works, and why
- GAP are one of the best test beds for behaviour change interventions/ communications testing in the UK. We invite all researchers seeking to test interventions through joint bids.
- Research that captures the experience and practise of existing community engagement, and what we can learn
- Serious void in knowledge-sharing at all levels. Local to local, cross sectoral, trans-regional. Yes IP issues, but how to initiate for mutual benefit and increase effectiveness. Would there be a will if resources were there?
- How to join up public engagement programmes / initiatives?

What networks and means of sharing information about climate change and energy reduction are already in place?

Transition Towns / Transition Network	http://www.transitiontowns.org/
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	Low Carbon Communities Network, including Going Carbon Neutral Groups , COIN (Climate Outreach Information Network)	www.lowcarboncommunities.net
	Climate Challenge Fund projects	Here's the archived site page with the projects: http://collections.europarchive.org/tna/20080313140814/http://climatechallenge.gov.uk/whats_being_done/projects.aspx
	Global Action Plan (GAP) – SMEs, schools, corporations, households, (Eco-Teams), hard to reach	http://www.globalactionplan.org.uk/
	Women's Environmental Network	http://www.wen.org.uk/
	Carbon Trust, GRI that only some events report to	http://www.carbontrust.co.uk
	Energy Saving Day (E-Day)	http://e-day.org.uk/
	Black Environment Network	http://www.ben-network.org.uk/ www.fcdl.org.uk/ubuntu
	Every Action Counts	http://www.everyactioncounts.org.uk/
	CRAGS – Carbon Rationing Action Groups	http://www.carbonrationing.org.uk/
	RESOLVE Carbon Capitals	http://www.surrey.ac.uk/resolve/
	Climate Action Network	http://www.climateactionnetwork.org/
	Echo Action	http://www.echoaction.net/
	CRED	http://www.cred-uk.org/
	Eden Bees - online communities	http://www.edenbee.com/
	Climate Camp (links to lots of grassroots groups doing popular education)	http://www.climatecamp.org.uk/
	Greening Campaign	http://www.greening-campaign.co.uk/About.html
	Scottish Education and Action for Development (SEAD)	http://webs.workwithus.org/sead/
Some tools to explore / use		
	DiCe model – Dimensions of Community Empowerment	http://www.changesuk.net/June%202008.pdf
	DEFRA's segmentation and Behaviour Change Framework	http://www.defra.gov.uk/evidence/social/behaviour/index.htm This is really a guidance tool rather than allowing anyone to share info etc so perhaps again does not need included
	Community Based Social Marketing (North American, good tool to take principles from)	www.cbsm.com
	Community Development Network	www.cdse.org.uk also www.FCDL.org.uk
What communication is needed?		
	• Better communication and signposting between community groups and academia. • Specific sharing of effective methods, what has worked and what hasn't.	

	• More engagement with public groups. • Specific communication and networking around evaluation
What funding is needed?	
	• Incubator funds for entrepreneurs, funding for innovative public engagement for energy reduction • Direct funding for initiatives, supported by funding for research, rather than everything through academia • funds in the region of £100,000 - £1 million for high calibre projects with a proven track record of large scale and/or highly effective public engagement. • The most successful public engagement projects are not hidden or unknown, they just need backing and funding to achieve scale
What future research is needed?	
	• Monitoring, measuring, research, and reporting / capturing the learning of existing networks, projects and programmes. • Scoping to see what more needs to be done. • More research into alternatives to behaviour change (eg changing <i>values</i> instead of <i>behaviours</i>). • Best ways of changing behaviour based on learning processes and human psychology • Finding out what people aren't willing to do / change, and why • Action research – rolling out the methodology across groups • Direct funding for incubator projects – to the projects, not academia. • What pro-environmental behaviours are near to the tipping point for change – and how do we quantify this? • More emphasis on LED lighting.
What sources of funding/ potential support are there?	
	• There is £50m coming through Sustainable Communities Act in 2009. Need to develop and plan now, and form effective community partnerships. • Green Homes Service • Low Carbon Buildings Programme • CERT programmes • Local Authority Programme Officers • Regional Sustainability Funds
Some questions	
	• Do all regions have a climate plan? Is this correlated with average carbon footprints? • How could some existing grassroots groups feed into National Indicator 186? (percapita CO2 emissions - http://www.defra.gov.uk/environment/localgovindicators/ni186.htm) • How can learning from the groups be fed into policy? Who should / could do this? • How can we evaluate the effect of different projects nationally? • What scoping / evaluation is taking place already? (eg evaluation of the Climate Challenge Fund projects from DEFRA?) • What's happening to the success stories from this conference?
Some suggestions	
	• Effective signposting to existing projects, and project evaluations

	(where could this be hosted?) • Tools for evaluation and monitoring that can either be used by groups with not much time / resources. (GAP has lots, and is developing more, see tools section above too). • A scoping study on Public engagement networks working in this area • A workshop on robust measurement, evidence based evaluation, etc. for these networks (Savita interested in taking further). • KEY SUGGESTION: To ask existing networks what's needed? What measurement / evaluation tools would be useful? What collaborations with academia would be useful? (Scott at GAP happy to help lead on this with the right funding).
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Compiled by Jo Hamilton, Oxfordshire ClimateXchange / Environmental Change Institute

Appendix 6: Feedback

Participants were asked:

- A. What they liked
 - B. What they learned
 - C. What they will do
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A. Liked

- So many people
- Specific topics to discuss with others
- Range of topics
- Range of speakers
- Flexibility of organizers
- High caliber of people
- Energy expertise
- Outside one's comfort zone
- Diversity of people here
- Format – allowed conversations
- Meeting new people
- Different perspectives, opinions
- Venue
- International guests
- Walked the talk
- Structure of the 2 days
- Informal conversations
- Catering
- Put names to faces I've known / read about
- Flexibility for discussions / conversations
- Variety of speakers
- Food
- Flexibility
- Presentations
- Mental space
- Listen to range of perspectives
- Practitioner / academic interactions
- World café
- Small group discussion format
- Opportunity to set afternoon session on Day 2

B. Learned

- Did not find out enough
- A lot to think about
- Different perspectives
- Operationalise energy reduction debate than climate change

- Many different opinions in energy communication SKB
- Framing questions are important
- Need to slow down and get up to date on research / studies
- New projects
- Range of research in the field
- Complexity with grass roots public engagement
- Many more factors influencing language
- Learned what linguists do
- A lot about what I don't know, especially engagement around climate change
- Grass roots initiatives
- Diversity of views
- Dilemmas in going forward
- Giant smorgasbord with food from all over the planet
- What folks in the UK are doing
- Absorbed a lot

C. What will you do?

- Lots of idea to follow up
- Apply to IISD
- Implement 3 actions
- Write abstract for book
- Actionable ideas
- Look at my carbon footprint
- Work more collaboratively
- Project Evaluation
- Micro-generation project
- Re-examine what I do in light of what I have learned here
- Ideas for collaboration to follow up
- Follow up contract, accessible information
- Pre-articles, apply
- Follow up on project leads – invite / involve / new contracts
- Implement personal work
- Tell students
- Write paper
- New directory for projects
- Report to colleagues
- Thank you emails
- PHD – stay in touch
- Action research projects
- Develop personal ideas / views
- More action research needed
- Incorporate / develop personal experience and feedback / reflect
- Powerful narrative
- Help some people re funding projects / Defra