



Natural hazards and critical public participation

A report of the ESRC Critical Public Engagement seminar,
Thursday 10 June 2010, University of East Anglia

Edited by Jason Chilvers, University of East Anglia

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Introduction

The management of natural hazards has traditionally been dominated by physical scientific understandings, even though it has been recognised for some time that people's vulnerability to disasters also depends on social, economic and political factors. Increasing attempts to incorporate these latter dimensions has led to some risk reduction strategies becoming more interdisciplinary in opening up to social science and participatory by attempting to include the voices and experiences of those most at risk. Yet while participatory practices linked to international development and community-level efforts to build resilience have existed for some time they often remain disconnected from scientific analyses of hazard and risk that inform policy. There is a need for greater critical insight into the performance of participation in these contexts.

The emergence of participation in a domain dominated by technical expertise raises important questions about power and the politics of knowledge, its possible co-production, and the extent to which assessments can be opened up to lay or community-based perspectives? In addition, how does the very nature of natural hazards, that are often localised and open to direct sensory perception, shape the forms of participation that get enacted? The global reach of these developments raises further issues about the 'scaling up' of participation, the 'mobility' of participatory techniques from place to place, and the ways in which national culture conditions participation?

The third workshop of the ESRC seminar series *Critical Perspectives on Public Engagement in Science and Environmental Risk* explored these and other questions in the context of geologic and flood hazards. The morning session included agenda setting presentations on the role of public engagement in the management of natural hazards and disaster risk reduction, whilst the afternoon session explored a range of critical perspectives through focusing down on geologic and flood hazards followed by workshop discussions.

Workshop presentations

The workshop was opened by Dr Jason Chilvers (School of Environmental Sciences, UEA) who introduced the seminar series and set the scene for the day in terms of the overall framing and questions of seminar as outlined above. He then introduced two presentations that provided an overview of the field of public participation on natural hazard-related issues, one from the perspective of a practitioner and one from an academic.

In the first of these papers entitled 'Views from the frontline: global reflections on community participation in disaster risk reduction', Marcus Oxley (Chairman, The Global Network of Civil Society Organisations for Disaster Reduction) interpreted the meaning

of critical public engagement as critical practice. The context for his talk was the Hyogo Framework for Action, a 10-year plan adopted by 168 Governments worldwide, to make the world safer from natural hazards and build resilience for vulnerable communities. Marcus introduced one of the largest participatory monitoring process ever undertaken to track the implementation of these policies at the local level, which involved 7,000 people and 400 civil society organisations in 48 countries worldwide. He powerfully illustrated how there is a significant gap between international and national policy rhetoric and the realities of local level practice. It is in the communities who are most at risk where the least progress is being made in disaster risk reduction and building resilience. There is a pressing need to give voice to these people's concerns, needs and priorities at the local level. Marcus highlighted how national priorities are conditioned by power dynamics. National governments want to put a positive spin on the extent to which policy targets have been met. Vested interests are also reluctant to build capacity of CSOs and local communities as they are seen as a 'threat'. For Marcus, critical public engagement means challenging these incumbent interests through proper 'bottom up' participation that builds solutions grounded in local realities, knowledges, needs, and capacities.

Following on from this Dr Mark Pelling (Department of Geography, Kings College London) gave the second paper on 'Creating disaster risk: social learning approaches to risk analysis and assessment'. Mark began by stating that the field of natural hazards and disaster risk reduction (DRR) had reached a critical moment in terms of public participation. There are opportunities for building more transformational changes but significant risks that if we get it wrong people will be alienated from centres of power in the development process and inequalities, risks and losses will grow. He introduced a neat framework of participation as resilience (i.e. to support status quo), transition (i.e. claiming and realising existing rights) or transformation (i.e. enabling critical changes in values and structures). The third and final category was presented as a more radical vision of participation seen as a social process for critical social reflection and learning. In making sense of the diversity of participatory approaches in the DRR context Mark suggested three lines of categorisation: procedural (whether the orchestration of participation comes from the local or extra-local context); methodological (whether the evidence produced is quantitative or qualitative), and ideological (whether the process reinforces or questions the status quo). He applied these frameworks to the case of a participatory process supported by Oxfam focusing on Urban DRR. Although high levels of participation and citizen control were attained in this case a 'power-participation gap' was evident in local peoples' experience and perceptions of the processes. There were also concerns over the sustainability of the project once the funders had left. Mark suggested that building of new institutions and redesigning existing ones is a necessary response.

After lunch discussion moved on to consider public engagement in two distinct natural hazard contexts, namely flood hazards and geophysical hazards. In the first of two papers on the issue of flooding, Professor Neil Ward (Dean of Faculty of Social Sciences, UEA) discussed 'Competency groups: an experiment in participatory flood science' drawn from his work on the RELU-funded *Understanding Environmental Knowledge Controversies* project (<http://knowledge-controversies.ouce.ox.ac.uk>). Environmental competency groups is a methodology informed by the thinking of Isabelle Stengers that brings together diverse kinds of scientific and local knowledge (i.e. about flood risk) in particular localities over a sustained period. Neil claimed it represents a radical form of interdisciplinary and an advanced form of participation as co-production, where social and natural scientists engage constructively with the

working assumptions and methods that underpin each others' practices and engagement occurs upstream where scientists engage constructively with the different environmental knowledge claims and practices of concerned publics, building these perspectives into the research process. Neil illustrated this through the case of the Ryedale Flood Research Group in Pickering, Yorkshire, where local publics and scientists had met over the course of six meetings to jointly consider the local flood risk problem and possible management strategies. In critically reflecting on this process Neil raised issues in relation to: negotiating the limits to moving participation upstream (in terms of project design and formal deliverables); the challenges of negotiating multiple framings of the problem, but also of the engagement process; the role of objects/technologies in co-producing knowledge in engagement processes; and a recognition that there need not be a single, unified notion of what counts as successful participation and 'making a difference'.

Continuing with the issue of flood risk Dr Rebecca Whittle (Lancaster Environment Centre, Lancaster University) then explored situations that emerge after flood events and people's experiences of long-term flood recovery. Her paper, 'Researcher, expert, victim or policy maker? Washing away boundaries with participatory research in Hull', drew on a two-year study funded by the Environment Agency, ESRC and EPSRC which focused on recent flood events where over 8,600 homes were affected. The project developed a participatory research approach to explore people's experiences of long-term flood recovery in relation to institutional support and the built environment. Rebecca told the story of how the project was initially set up to explore the perspectives of flood victims in separate groups which was to be overseen by a steering group composed of experts and stakeholders in the field. This distinction between separate local community and expert groups was broken down as the project evolved and the two came together and intermingled, reconfiguring notions of knowledge and expertise through the process. Finally Rebecca reflected on the role of the facilitators in the process and how they played an enabling role in terms of participants' learning, but also questioned who's needs were being met by the project and whether real change on the ground actually occurred.

In shifting the focus to geophysical hazards Dr Jenni Barclay (School of Environmental Sciences, UEA) gave the perspective of a volcanologist working on issues of participation and engagement in her paper 'I'm a physical scientist get me out of here': critical reflections on widening involvement in volcanic risk assessment'. As a warm up exercise, and to illustrate how difficult it is to move from different knowledge domains, Jenni held a little 'quiz' based on word clouds and competing discourses emerging from media coverage of the Eyjafjallajökull volcano erupting in Iceland. She suggested that physical scientists are obsessed by reducing problems and upholding a narrow definition of risk. There are fundamental difficulties in developing the co-production of knowledge between natural and social scientists and between scientists and local communities. Jenni asked some critical questions: Do we really trust widening participation? Do we really trust social scientists and interdisciplinarity? Are our motivations really the same? She suggested that given all of this, is there room for experimentation and a little bit of honesty. Examples of such experimentation and innovation include attempts to integrate scientific and local knowledge through participatory rural appraisal in constructing evacuation plans for a persistently active volcano in Vanuatu. Jenni ended by raising a number of issues including: how time consuming these processes are; and that none of these 'improvements' have been tested in a real crisis, although there is some evidence that community participation improves resilience during long-lived or persistently active eruptions.

Dr Ilan Kelman (The Center for International Climate and Environmental Research, Oslo) offered a social scientific perspective on public engagement with geophysical hazards in his paper 'Challenges and opportunities for integrating knowledge types to deal with disasters: Island lessons'. Ilan drew on his work on island vulnerability (<http://www.islandvulnerability.org>) and the *Many Strong Voices* project (<http://www.manystrongvoices.org>), the latter of which is seeking to promote the well-being, security, and sustainability of coastal communities in the Arctic and Small Island Developing States (SIDS) by bringing them together to take action on climate change mitigation and adaptation, and to tell their stories, and to reduce their vulnerability. In reflecting on this work Ilan noted that in combining scientific and community (or other) knowledge types it is important to engage in research without borders, appreciate and understand the capacity of local people's terms and where they are coming from. In terms of who gets involved in such processes Ilan questioned whether it is useful to think in terms of communities and that speaking to community leaders is not a reliable means of reaching the people who are most vulnerable. He argued that there is a need for research and positive change through creating a level playing field for all knowledge.

Workshop discussion

Afternoon breakout group discussions were wide ranging and reflected on the distinctiveness of public engagement in the context of natural hazards. A common theme was on questions of scale and the (often conflicting) relations between 'top-down' and 'bottom up processes'. Reflecting on the sorts of global engagements and networks enacted through initiatives such as the Hyogo Framework, participants questioned the meaning of 'the local' and the democratic representativeness and accountability of CSOs enrolled into these processes in relation to the communities they claim to serve. In this sense critical public engagement was associated with the need for more adaptive, self-aware and reflective governance systems in context of natural hazards and vulnerability to disasters.

There was a strong sense from both groups, however, that all forms of public engagement and action on natural hazards will be overridden by the major 'driving forces' at play in terms of political economic interests within and between nation states, the distribution of research and development funding, and so on. These existing power relations and inequalities need to be understood and accounted for in any vision of critical public engagement. Furthermore, some participants suggested that all forms of participation and responses to natural hazards are to some extent 'locked in' and constrained by historical development paths of technologies, infrastructures, and political systems. Finally, a number of participants held on to the meaning of critical public engagement as critical practice, that is flexible, prepared to take risks, and self-aware of what happens after participation in terms of its effects and unintended consequences.

The seminar was brought to a close with some brief final reflections from Marcus Oxley and Neil Ward. Marcus noted the productive nature of the discussions, which was enhanced through comparing practices in the global 'north' and 'south'. He made a passionate plea for critical public engagement as critical practice in distributed localities that properly empowers, gives voice, and is driven by the needs and purposes of local communities and those that are most at risk. In the international arena of disaster risk reduction such hope quickly 'hits a glass ceiling' of political economic realities. The way

forward, in his view, is to move to more adaptive systems of governing natural hazards and disaster risk that are iterative, flexible and subject to continual feedback from the eyes and ears of people living on 'the frontline'. Neil commented on the timeliness of the seminar series in developing a new agenda with clarity and focus at critical moment for public engagement in science and the environment. He picked up on earlier discussions in the seminar and the series as a whole about the need to study the political economy of public participation and the burgeoning public engagement industry. He also thought that critical public engagement research should focus attention on: issues of equity in the co-production of knowledge, the give and take of participation and the 'politics of reciprocity'; diversity and emergence within engagement processes; and the performance of expertise and the transformation of identities and personalities through such processes.

Workshop programme

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- 10.30am Registration, Zicer Seminar Room
- 11.00am **Welcome and Introduction**
Professor Jacquie Burgess (Head of School, School of Environmental Sciences, UEA)
Dr Jason Chilvers (School of Environmental Sciences, UEA)
- 11.15am **Natural hazards and public participation**
- Views from the frontline: global reflections on community participation in disaster risk reduction**
Marcus Oxley (Chairman, The Global Network of Civil Society Organisations for Disaster Reduction)
- Creating disaster risk: social learning approaches to risk analysis and assessment**
Dr Mark Pelling (Department of Geography, Kings College London)
- Discussion
- 12.30pm Buffet Lunch
- 13.15pm **Participation and flood hazards: critical reflections**
- Competency groups: an experiment in participatory flood science**
Professor Neil Ward (Dean of Faculty of Social Sciences, UEA)
- Researcher, expert, victim or policy maker? Washing away boundaries with participatory research in Hull**
Dr Rebecca Whittle (Lancaster Environment Centre, Lancaster University)
- Discussion
- 14.15pm **Participation and geophysical hazards: critical reflections**
- 'I'm a physical scientist get me out of here': critical reflections on widening involvement in volcanic risk assessment**
Dr Jenni Barclay (School of Environmental Sciences, UEA)
- Challenges and opportunities for integrating knowledge types to deal with disasters: Island lessons**
Dr Ilan Kelman (The Center for International Climate and Environmental Research, Oslo)
- Discussion
- Tea/Coffee

15.30pm **Workshop discussion - two breakout groups**

16.15pm **Plenary discussion**

Final reflections

Professor Jackie Burgess (School of Environmental Sciences, UEA)

5.00pm **Close**