**ES/L009234/1**

**Re-configuring Local Governance for Community Resilience: social learning for flood adaptation under a changing climate**

**Methodological Description**

**Project aims and objectives**

This project responded to three distinct but converging agendas that are shaping the ways in which communities build resilience in the face of environmental hazards. First, there is increasing concern surrounding the ways in which vulnerable communities prepare, respond to and recover from flooding in the UK (DEFRA, 2013; Pitt, 2008). Second, anthropogenic climate change is leading to changes in the risks associated with many environmental hazards, rendering existing knowledges only partially useful in shaping responses to hazards such as flooding (Met Office, 2013). Third, placed alongside these environmental concerns is the wider context of the state’s changing relationship with citizens and communities as austerity measures accelerate the rolling back of the local state and its role in providing support services during times of crisis.

This project therefore aimed to assess the implications for the changing relationships between the local state and citizens in an age of anthropogenic climate change and increasing austerity. In so doing, it used social learning between climate researchers, the local state, environmental agencies and residents to co-produce knowledges and strategies for dealing with future flood risk under a changing climate and new modes of local governance. This aim was achieved through the following objectives:

1. To adopt a deliberative and collaborative approach for engaging a range of community participants in a dialogue for co-creating knowledge for understanding risks associated with fluvial and surface water flooding;
2. To use this social learning process as a way of promoting informal learning about public engagement for representatives of the local state, environmental agencies and climate researchers across the physical and social sciences;
3. To enable a collaborative and jointly agreed assessment of current levels of flood resilience between the research participants and to develop place-based strategies to flood risk management within the context of future impacts from anthropogenic climate change;
4. To consider the role this methodology can play in promoting community resilience at a time of local government service re-structuring.

**Methodology**

The complexity of climate change and its impacts (in the case of this proposal, increased flood risk) to convey to publics has been the subject of numerous policy analyses by both the UK Government (see DEFRA, 2012) and ‘think tanks’ and interest groups (e.g. WWF, 2009). In line with existing modes of governance for responding to flood events outlined earlier, frameworks for communicating climate change and its impacts rely not on a collaboration between publics and scientists in the production of knowledge, but rather a linear ‘expertisation’ model (Owens, 2000) that emphasises the importance of getting communication messages right. By contrast to the perpetuation of ‘expert-lay’ relationships described by Shove (2010), this research project sought to use ideas of knowledge co-production from society-nature studies (Landström, *et al*., 2011; Lane *et al*., 2010) to examine the ways in which greater resonances for climate change risks can be constructed through a process of co-learning and knowledge co-production between natural and social scientists, local agencies and publics through competency groups. Within this project this was used as a way of breaking what Mahony and Hulme (2012, p. 197) have referred to as the “epistemic hegemony” surrounding climate knowledges, which precludes different “ways of knowing” about the climate that are often configured through networks of power and space. In particular, we draw on research from science-technology scholarship, in which deliberate attempts by policy makers to break down the expert-lay boundary have been examined in the context of development controversies (Reno, 2011) as a way of over-coming the perceived lack of public understanding about environmental dilemmas. Drawing on the analyses provided by key commentators such as Beck (1992), we sought to understand the processes by which scientists, agencies and publics believe that climate change impacts become knowable and the ways in which such knowledges are used in processes of truth-telling and ‘impression management’.

As a conduit for this approach, the research used ideas of experiential learning (Blewitt, 2006; Maiteney, 2002) that seek to “…reach out beyond…formal boundaries to a larger world, to evoke in the viewer the complex, dynamic cultural forces from which it has emerged and for which it may be taken by a viewer to stand” (Greenblatt, 1991, p. 41). In this way, the very experience of knowledge co-production is viewed as a powerful way of enabling experts and publics to re-consider the issue of climate change and to ‘flatten’ knowledge hierarchies as a way of establishing new and negotiated knowledges for climate change impacts and responses (Sterling, 2001).

***Programme of Work***

The project was a formal collaboration between the University of Exeter, Devon County Council (DCC) and the Climate Outreach Information Network (COIN). In addition, the project’s wider partners were those with a stake in preparing for and managing flood events in the community of Crediton in Devon, namely householders and business owners in Crediton, the Environment Agency and Devon and Somerset Fire and Rescue Service. The project adopted a place-based approach, evidence for which suggests focusing on a single location (and therefore specific physical, social and cultural contexts) that provides greater opportunities for the appreciation and application of local knowledges concerning environmental hazards (Schweizer *et al*. 2013). Crediton was selected by the project partners as the single community case study because it is a community at high risk of fluvial and surface flooding events and as yet does not have a community resilience plan in place to deal with flood events. As a small town community with a range of assets and amenities, Crediton has the potential to co-produce a plan for resilience that utilises community capacities and permits an appropriate scale for identifying the potential of a co-production approach to develop shared knowledge about current and future flood risks.

The overall aim of the project was to co-produce a place-based plan for community resilience during flood events and to make this plan flexible in the context of changing risks associated with anthropogenic climate change. To facilitate the development of the plan, the project utilised a co-production and deliberative approach to acquiring knowledge about current flood risks, future predictions of risk and the ways in which the community currently responds to flood hazards. This was achieved through the use of a competency group approach (Landström, *et al*., 2011) in which a small group of individuals representing different interests and with different competencies met to establish a common set of knowledges and working practices. In this particular case, the competency group was comprised of representatives from the relevant local authority’s emergency planning department, community representatives from local accountable bodies, local residents and two university academics. The group was facilitated by the project PI, whose role it was to maintain impartiality and guide the group’s discussions throughout its meetings.

Each group meeting attracted a range of participants, as noted at the start of each transcript.

***Competency Group Meetings: an outline agenda***

In the spirit of knowledge co-production, it is was possible to prescribe the precise agendas for each competency group meeting, but in outline, it was envisaged that the formulation of a place-based plan for community resilience during flood events would require three meetings over an eight month period. The following briefly describes the workshop agendas, which are provided in detail in the plans deposited for each workshop meeting.

The **first meeting** explored the group’s knowledge of contemporary flood risk and areas of conflict in the knowledge presented by the range of participants.

The **second meeting** examined the potential hazards associated with greater risks associated with changing precipitation patterns and explored a set of scenarios associated with probabilities of change associated with anthropogenic climate change.

The **third meeting** used the knowledge and insights from the first three workshops to explore the potential for developing a collaborative community resilience plan for flooding events to deal with both current risks and those likely to arise in the future.

This proposed methodology therefore attempted to achieve the project’s objectives by combining specific knowledge on flood risk in a particular community with often conflicting knowledges about how such risks may change in the future through the lens of changing governance frameworks for the management of natural hazards.

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