

### Finding out why businesses respond in different ways to the risk of flooding



#### Researchers

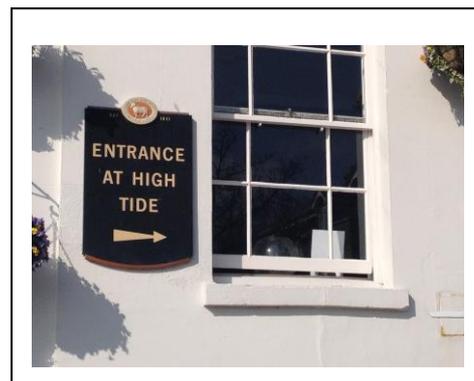
Dr Tim Harries, Small Business Research Centre, Kingston University London

Professor Lindsey McEwen and Dr Amanda Wragg, Centre for Floods, Communities and Resilience, University of the West of England, Bristol

#### Background and aims

This part of the SESAME project set out to understand how small businesses' understandings of flooding and flood risk influence their responses to this risk. We were interested in small businesses' ability to become more resilient – i.e. to accept the “new normal” by recognising the existence of an ongoing flood risk (Twigger-Ross et al, 2014, p32) and make adaptations to existing systems, infrastructure, resource allocations and working practices.

Many different measures are available to businesses that want to reduce their vulnerability to flooding. These include changes to infrastructure (raising door thresholds; dry-lining walls; raising electrical sockets etc.); organisational changes (protecting data security, supply chains, processes, stock and raw materials), and ensuring customer access (see image). Amongst the measures most often implemented by small businesses are changing the use of flood-prone areas, relocating water-sensitive objects and using barriers to keep water out (Kreibich, 2011).



The research literature suggests that for climate risks in general (Dalhamer and D'Souza, 1997; Howe, 2011) and for flood risk (Kreibich, 2005), the likelihood of a business taking measures to adapt is inversely related to number of employees and turnover. Small businesses are said to attribute their relative lack of preparation to shortage of resources and lack of information about their vulnerability and about the available mitigation options (Alesch et al, 2001; McClure, 2000). We wanted to look behind these explanations to see what else might be going on.

We set out to find out how businesses perceive flooding and the idea of becoming more resilient. Hence, we explored with businesses their experiences of flooding and recovery, the role of their relationships with the local community, and their thoughts and experiences about changing business processes, planning for the financial impacts of floods, making business premises more resistant to flood water and changing internal arrangements so that water causes less damage if it does get into buildings. Most of our work focussed on small and micro businesses – i.e. those with fifty employees or less.

#### Approach

To achieve our aims, we interviewed 36 small and micro businesses from a range of different sectors and with experience of being flooded by water from a range of different sources (i.e. tidal, fluvial, groundwater and surface water). Our research participants were recruited from areas in Tewkesbury, Swindon, Sheffield and Tyne & Wear that included different flood risk settings and business contexts. We asked these businesses about their experiences of flooding and their thoughts on adaptation. Using what is called the *narrative interview technique*, we interrupted them as little as possible and encouraged them to talk at length and in depth. In most cases, these interviews lasted around an hour.

Once the interviews had been transcribed, we identified key themes of relevance to adaptation. This involved two rounds of *data reduction* (the extraction of data relating to a large set of emerging themes, and the selection of the most significant themes) and the synthesis of data relating to the key themes. We were interested not only in the immediate content of what businesses said, but also in their *sensemaking* – how they integrated their knowledge and experiences about flooding with their beliefs about life and business. We

looked, too, at the different knowledge-systems (clusters of understandings and ways of understanding – see Whatmore, 2009) that small businesses bring to bear on the subject of resilience, and how they integrate these with the other knowledge systems that they encounter (e.g. lay knowledge systems and systems from business, science or specific institutions). To this end, we not only analysed the literal meanings of what businesses said, but also sometimes used discourse analysis techniques (e.g. see Fairclough, 2003) to look at what they were implying, what they were not saying, their assumptions and what their talk revealed about their understanding of flood risk and adaptation.

For instance, previous research has suggested that owners of small businesses often prefer to focus on core business activities rather than on planning and strategic management (Scase and Goffee, 1980; Blackburn and Smallbone, 2008; Garengo and Bernardi, 2007) and that they prefer to concentrate on the effects of crises rather than dealing with the causes (Herbane, 2010). We wanted to explore this idea of a culture of “life on the edge of security” (Alesch et al, 2001) and see what its impacts were on how businesses talked about, and responded to, flooding and flood risk.

## Draft findings

We found some evidence of owners and managers searching systematically for ways to protect their businesses against flooding and implementing some of these changes. Some other businesses, however, followed a process of trial-and-error; they used the kinds of adaptive measures already familiar to them (e.g. by deploying sandbags), only changing their approach after the experience of a flood had helped them evaluate it.

Interviews with businesses showed evidence, amongst some, of a reluctance to seek the advice of outside experts on flood risk adaptation. Some businesses drew on community knowledge networks in developing their coping strategies and data from an interview with a local authority business continuity team suggested that businesses generally listen more attentively to the opinions and advice of other businesses than they do to that of people with formalised expertise in flood risk management.

Allied to this, ‘adaptation’ as a generalised notion did not seem to be part of the lexicon of the people we interviewed. Interviewees tended to focus on keeping the water out of their premises or minimising the effects when it got in and sometimes overlooked other routes to resilience, such as changing business processes, securing supply routes or finding ways of protecting customer relationships. This can perhaps be explained by the visually and emotionally more vivid nature of direct flood damage when compared with indirect damage; it suggests an emphasis on *tacit* knowledge and observational learning, rather than more *formal* knowledge such as that provided by web-based advice pages.

## Current and future work

Once finalised, the conclusions discussed will be presented and discussed in papers that we are currently writing for a number of academic journals. The findings have also informed the design of an e-learning tool for the promotion of small business resilience; this is being collaboratively produced by the SESAME researchers, small businesses from a flood risk area and organisations responsible for flood risk management. (The tool and the process of its production will be described in detail in later factsheets).

## Benefits to users

By understanding the impacts of business culture on adaptive behaviours, we can better promote such adaptation amongst small businesses and increase resilience to flooding and other stresses. This research aims to equip small businesses, government, local government and local/regional organisations with insights that will enable them to encourage more take-up of the whole range of strategies that can improve business continuity in the face of flood risk.

## More information

Visit <http://sesame.uk.com> or contact Dr Tim Harries ([t.harries@kingston.ac.uk](mailto:t.harries@kingston.ac.uk)), Professor Lindsey McEwen ([Lindsey.McEwen@uwe.ac.uk](mailto:Lindsey.McEwen@uwe.ac.uk)) or Dr Amanda Wragg ([amanda.wragg@uwe.ac.uk](mailto:amanda.wragg@uwe.ac.uk)).

**Funding source** We gratefully acknowledge the funding provided by the UK’s Engineering and Physical Science Research Council under grant EP/K012770/1.