

## **Increasing business resilience to flood risk: Developing an effective e-learning tool to bridge the knowledge gap between policy, practice and business owners**

**European Geosciences Union Conference, April 2015, Vienna**

Wragg A, McEwen L and Harries T

The focus of this paper is on the use of an innovative co-production process that engages small and medium sized enterprises (SMEs) and other stakeholders in the development of an e-learning tool that has appeal for business owners as well as being a resource for agents working directly with businesses. It outlines the priorities identified by businesses in relation to the support, advice, and usefulness of sharing experiences which will be reflected in the 'tool'. The researchers suggest that business adaptation to flood risk is a neglected area and that an information 'hub' for businesses will enable sign-posting to advisory sources, 'science communication', and support for those suffering the trauma of damage to their premises and livelihoods.

The flooding of communities is becoming a repeated, widespread issue within the UK, and elsewhere. Significant impacts of extreme floods in 2007 were: loss of life, 48,000 houses and 7,000 businesses flooded, community disruption, and, monetary loss to local economies. The winter floods of 2013/2014 also had devastating impacts. This paper reports on research from a three year multi-disciplinary project funded by the UK Engineering and Physical Sciences Research Council (EPSRC). In early 2014, SMEs accounted for 99.3% of all private sector businesses in the UK and 47.8% of private sector employment (FSB, 2014), thus they are a crucial part of the UK economy. Whilst some research focuses on 'community resilience', less is focused on the resilience of SMEs. Although SMEs may be vulnerable to fluctuations in turnover and housed in vulnerable premises, they often have the ability to make quick decisions and be innovative in the face of adversity owing to smaller, less complex systems.

One key research aim has been to determine attitudes of business owners towards flood resilience and business continuity and barriers and motivators relating to adaptation. The resources SMEs draw on, their understanding of flood risk, and, the part that their knowledges and learning play in decision-making have been explored. The co-production process engages regional/national stakeholders who form a Stakeholder Competency Group (from policy and practice), and, a Business Research Partnership Group comprising local business participants. The two groups have opportunities to liaise and network in discussing the prototype for the learning tool.

Whatmore et al (2008) and McEwen et al (2014) show that stakeholder views, experience and expertise can strengthen research outputs. The approach reflects current ethics and practices of stakeholder participation in that alongside an academic approach to the research, other equally valid forms of knowledge are recognised: 'a lot can be learned from exploring parallels, controversies and frictions between different forms of competency and knowledge (McEwen et al, 2014), for example, scientific, local, tacit and embedded.

This paper presents concerns identified by businesses and wider stakeholders in relation to how the tool is framed and its key design premises. The tool is planned as a living resource that can support a community of learning practice among SMEs to increase flood resilience in the face of increased risk.

### References

Federation of Small Businesses (2014) <http://www.fsb.org.uk/stats>

Whatmore, Lane and Ward et al (2007-2010) *Understanding Environmental Knowledge Controversies* ESRC/NERC funded interdisciplinary research project (2007-2010).

McEwen et al (2014) <https://floodmemories.wordpress.com/2011/04/06/advice-from-competent-stakeholders/>.