

We have the technology, but can we use it? Building flood risk capacity amongst property owners in England.

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The UK's Meteorological Office has provisionally confirmed 2012 to be the second wettest recorded in the country (The Met Office, 2013). Volatile weather patterns resulted in much social and economic disruption and damage from floods. The UK's Flood and Water Management Act (2010) has placed responsibility for flood risk management primarily at local level. In reality, various agencies are responsible for managing flood risk resulting in a fragmented system that communities struggle to make sense of.

Strengthening emergency response during a flood event is one strategy to build capacity. However, resilience has emerged as an operative policy, and points to a need for anticipatory approaches. These should extend beyond large-scale flood defenses or measures that reduce the vulnerability of infrastructures and buildings in order to incorporate social vulnerability through the establishment of warning systems and capacity building (White 2010). To this, small-scale, innovative technologies – from automatic door guards and 'smart' air bricks - hold the potential to manage the uncertainty around flood risk before an event occurs. However, innovative technologies are often resisted by institutions, technical systems, cultural preferences, and legislation, which require a multifaceted approach that addresses the social, cultural, economic and technical domains (De Graaf 2009).

We present a case study that explores the barriers that inhibit the uptake of property level technologies in England by various actors: from property owners and manufacturers, to municipal authorities and built environment professionals. Through the case study, we demonstrate how these various stakeholders were involved in identifying the procedural principles to overcome these barriers and to integrate property level technologies more fully into an overall flood risk management system. Following this, best practice guidance was designed and we show the means by which such guidance can improve social capacity even where there is much uncertainty. The paper ends by describing the transferable lessons learned through the development of this tool and concludes on the potential of property level protection to manage flood risk across Europe.

References

de Graaf, R. E. (2009). Urban water innovations to reduce the vulnerability of cities. Feasibility and mainstreaming of technologies in society, Ph. D thesis, Delft University of Technology. Available at: www.deltasync.nl/reports/De_Graaf_thesis.pdf [Accessed 29 December 2012].

The Met Office. (2013) Statistics for December and 2012 - is the UK getting wetter? [Online resource]. Available at: http://www.metoffice.gov.uk/news/releases/archive/2013/2012-weather-statistics [Accessed 6 January 2012]. White, I. (2010). Water and the city: Risk resilience and planning for a sustainable future. London: Routledge.