



# Discourse and practice of participatory flood risk management in Belfast, UK



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## ARTICLE INFO

### Article history:

Received 3 March 2016

Received in revised form 26 January 2017

Accepted 26 January 2017

Available online 20 April 2017

### Keywords:

Flood risk management

Public participation

Responsibilisation

Public engagement

Risk communication

## ABSTRACT

The introduction of the Floods Directive signals a move from flood protection towards flood risk management in the European Union. Public participation is highlighted in the Floods Directive as being instrumental to effective implementation of this new approach. This study utilised document analysis, non-participant observation, a questionnaire survey, and interviews to evaluate the discourse and practice of participation in the implementation of the Floods Directive in Belfast, United Kingdom. Flood risk management processes in Belfast are found to be high on participatory rhetoric but low on meaningful engagement. The participatory process is lacking in transparency, does not encourage the active participation of interested parties and has not been clearly communicated to key publics. Opportunities to increase meaningful public participation in the process remain underutilised, and the establishment of local flood forums has provided little opportunity for meaningful engagement. Some actions of governance agencies could be best characterised as facilitating the responsabilisation of risk and are designed to manage risk to agencies rather than address flooding issues.

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## 1. Introduction

Increasing community vulnerability to flooding and rising costs of hard-engineering solutions has shifted flood management strategies away from flood protection towards flood risk management (Brown and Damery, 2002; Conrad and Daoust, 2008). The risk management approach, as advanced by the Floods Directive<sup>1</sup> (2007/60/EC), aims to address high levels of complexity and uncertainty associated with flood management issues (Johnson and Priest, 2008; Evers et al., 2012). The European Union (EU) wide shift from risk protection to risk management signals a growing realisation that flooding issues cannot be wholly addressed through engineering solutions (Krieger, 2012, 2013). In contrast with the flood protection approach, which emphasised the role of experts, the Floods Directive stresses the importance of public participation in flood risk management.

This study assesses the participatory approach to flood risk management in Belfast, United Kingdom (UK). The paper provides the first critical analysis of a local flood forum in the UK. Public

participation in risk management is reviewed in the next section. The institutional framework for flood risk management in Belfast is then outlined. This is followed by an account of the study site and methodology. Findings relating to the discourse and practice of participation in flood risk management in Belfast, and study participants' perceptions of management processes, are then presented. The paper concludes with a discussion of these findings in the context of participatory flood risk management.

## 2. Public participation and flood risk management

Participatory flood risk management has many benefits. Proponents of participation in risk management advocate it as a mechanism for increasing public interest in decision-making and for placing public knowledge, opinions and aspirations at the centre of management processes (Few et al., 2007; Reed, 2008). Active public participation has resulted in: effective implementation of flood risk plans; increased preparedness and resilience; increased trust in government agencies; strengthened legitimacy and accountability; and enhanced decision-making (Power, 1997; Stern and Fineberg, 1996; Hood et al., 2001; O'Sullivan et al., 2012; Yamada et al., 2011; Rouillard et al., 2014). Actively engaging the public in flood risk management can aid decision-making by encouraging a sense of shared ownership of management processes, resultant plans and future flood issues (Marttunen and

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<sup>1</sup> A Directive is a legal act of the EU that provides Member States with a specific set of objectives without dictating how these should be achieved.

Hämäläinen, 2008). A study of flood risk decision-making in Austria, for example, found that participation was mutually beneficial to public participants and planners; the public were able to integrate local knowledge and preferences into decision-making processes, and planners were able to gain acceptance for decisions (Gamper, 2008). In essence, the quality of hazard mitigation plans, and the likelihood of them being implemented, tends to increase with higher levels of public participation (Stevens et al., 2010).

Although public participation in management processes is critical to successful hazard mitigation efforts (Stevens et al., 2010; Edelenbos and Klijn, 2006; Pearce, 2003) it is often difficult to foster sustained and meaningful engagement (Hauck et al., 2014). Meaningful public participation in risk management is dependent on three interrelated conditions: effective communication; public receptivity to being involved in participatory processes, which is largely dependent on public perception and awareness of risks being addressed; and processes that foster two-way dialogue between the public and risk management agencies.

### 2.1. Effective communication

Effective communication should inform the public about risk management processes, the roles of various actors in the process, risks being addressed and how they may participate (O'Sullivan et al., 2012). Risk communication should engender a willingness amongst the public to participate in risk management processes (Stern and Fineberg, 1996; Hauck et al., 2014). Participatory opportunities must be publicised in a manner to gain the attention of all those who are likely to be affected by these processes. Public spheres in which political issues are deliberated upon can often be profoundly undemocratic (Hansson et al., 2013), and in specialist areas, the democracy of individual citizens can often be replaced by a de facto democracy of organised interests (Andersen and Burns, 1996). Inequalities can be multiplied if communication about participatory processes reinforce undemocratic or unequal norms (Hansson et al., 2013). Therefore, one of the key challenges for participatory processes is mitigating potential biases through the adequate representation of those affected by a decision, creating more clarity and legitimacy (Abelson et al., 2003).

Communication strategies must outline the roles of actors in risk management processes. Ambiguity around agency roles may ultimately give rise to public frustration and a belief that agencies are unwilling to take responsibility for flooding issues. In a study of risk communication in Finland, Ireland, Italy and Scotland, O'Sullivan et al. (2012) found that a lack of clarity in Ireland around agency roles created a perception among interviewees that a responsibility shifting approach had been adopted by agencies and that agencies were unwilling to accept authority or responsibility for ongoing issues.

Risk communication must also ensure that potential participants are informed about risk management processes and that they become involved in a sustained and meaningful manner (Höppner et al., 2012). Many communication efforts seek to increase people's knowledge and awareness about various hazards and, ultimately, get them to alter their behaviour so as to mitigate against risks (Höppner et al., 2012). Face-to-face communication appears to be more influential than mass media approaches in terms of changing public attitudes and behaviour (Moser, 2010). For example, Parker et al. (2009) found that older people in the United Kingdom had a more positive response to face-to-face interactions with flood wardens than they did with other forms of communication (e.g. dial-and listen flood warning services). Other authors argue that risk communication is less about using 'the right' communication mechanism, and more about ensuring that the message being communicated rhymes with recipients' worldviews. The message being conveyed must address relevant aspects of how risks are

perceived by target groups (Rowan, 1994; Kolkman et al., 2005; Uskul and Oyserman, 2010), or must appeal to their emotions about, or experiences of, a risk (Manojlovic and Pasche, 2008). Fostering preparedness is, therefore, dependent on the public being receptive to the message being conveyed and the importance they attribute to it (Motoyoshi, 2006; Flannery et al., 2015).

### 2.2. Public perception of risks

How risk information is assessed and deemed important is dependent on an individual's judgement or perception of that risk (Miceli et al., 2008). Perceptions are based on an individual's circumstances, their knowledge of a risk, their personal beliefs, social norms and a consideration of the possible impacts that any action might have on themselves and others (Shackleton et al., 2010). Risks need to be communicated in a manner in which the target community will understand, so as to illicit a response or action. In a study of risk perception, it was found that people were more likely to understand risk when presented with a set of potential consequences of floods, rather than when given statistical probabilities of floods occurring (Miceli et al., 2008). Assessing what intended target audiences know, believe and value is a key requirement for designing effective risk communication messages (Bier, 2001).

### 2.3. Two-way dialogue

Sustained and meaningful public participation in risk management has been found when planners employ participatory mechanisms that allow for two-way dialogue between the public and experts (DEFRA, 2004; Stevens et al., 2010). Two way dialogue within the risk management process can serve to enhance mutual learning and respect between the public and experts (Bradbury, 1989). Simultaneously, it can aid in rational decision-making in situations where uncertainty is part of the risk (Renn, 1999). In the USA, Brody et al. (2003) found that utilisation of community forums had a positive correlation with the number of community groups involved in plan-making, indicating that groups were more likely to respond to public forums as a means of participation than other established methods. The assistance of local champions can also have a positive impact in terms of fostering two-way dialogue (Deeming, 2008). A study of community participation and risk perception found that engagement with the public through local champions improved information gathering, assisted the development of communication strategies and enhanced implementation of flood response plans (Richardson et al., 2003).

### 2.4. Critiques of participatory risk management

While participation in flood risk management is conceptually appealing, it is often difficult to implement. Public participation may also lead to a 'tyranny of localism' and fail to include those most marginalised in society, favouring instead key stakeholders, experts and influential local actors (Lane and Corbett, 2005; Fischer, 2006). Rather than ushering in a new era of public participation, the emerging risk management strategies are often described as providing an appearance of inclusion and diversity to what is invariably an exclusive policy process, dominated by elite groups (Raco, 2000). Growing alienation and considerable disparity, in terms of influence, between flood experts and policymakers, on one hand, and the public, on the other, have been highlighted as major issues. Public input is often overlooked during the development of plans (O'Sullivan et al., 2012) and 'experts' still dominate the development of flood policies (Brown and Damery, 2002). This disparity can lead to agencies adopting tokenistic participatory approaches, resulting in meaningless engagement that satisfies neither participatory nor instrumental goals (Few et al., 2007). Furthermore,

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