

Building constituencies for flood risk management: Critical insights from a flood defences dispute in Ireland

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Abstract

Stakeholder consultation and participation are often viewed as an essential component of hazards governance and disaster risk reduction. However, an extensive literature in the fields of hazards management, disaster risk reduction, planning, and environmental governance has highlighted numerous challenges that have constrained attempts to increase participation in decision-making. Some scholars have called for transformative alternative approaches based on engaging broader constituencies of interest or on refocusing decision-making from knowledge transfer to relationship building. This paper contrasts consultative and constituency building models of hazards governance through an examination of a disputed flood relief scheme in Cork, Ireland. Despite extensive stakeholder consultation, the proposed Lower Lee Flood Relief Scheme has been the subject of an ongoing dispute between local groups supporting and opposing its implementation. This dispute has prompted a range of interested parties to become involved in debating flood risk management options for Cork City. This has increased both the number of people engaging with issues related to flood risk management and the basis on which they have done so. The ways in which these wider constituencies of interest have emerged highlight important challenges and opportunities for flood

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risk management, as well as for hazards governance more generally.

KEYWORDS

constituency, flood risk, governance, hazards, Ireland, stakeholder

INTRODUCTION

River catchments where urban development, climatic changes, and shifting patterns of socioeconomic vulnerabilities intersect face particularly complex flood risk management challenges. In recent years, researchers from several academic disciplines have engaged in critical analyses of decision-making processes, both for flood risk management and for the wider fields of hazards management, disaster risk reduction, and climate change adaptation. These critical reflections have been motivated by a range of concerns including increasing losses resulting from hazards and disaster events (Mitchell, 2019), barriers to transformative adaptation to climate change (Clarke et al., 2016, 2018), gaps in current flood risk management approaches (O'Neill, 2018), limitations in participatory processes for hazards decision-making (Moon et al., 2017) and increasing evidence of contestation and discontent among local communities exposed to flooding (Revez et al., 2017). In response to some of these challenges, a range of potential modifications to hazards management policy, decision-making, and governance have been proposed. These have included exploring the potential for coproduction of hazard risk knowledge (Fitton & Moncaster, 2018; Landstrom et al., 2011; S. N. Lane et al., 2010; Minucci et al., 2020) the integration of human perceptions of the environment and urban design into flood risk management (O'Neill, 2018), developing better understandings of the complex ways in which communities are constituted and the roles of those communities within disaster risk reduction (Rasanen, Kauppinen, et al., 2020; Rasanen, Lein, et al., 2020), and the potential for increased knowledge sharing to enhance opportunities for community participation (Revez et al., 2017). These recent concerns continue ongoing reflections within hazards research which has often struggled with “the challenge of translating knowledge into better governance” (Cook & Melo Zurita, 2019, p. 56).

In both the literature on hazards management and that on related fields such as environmental governance and planning, scholars have devoted considerable attention to questions such as; who should participate in decision-making, how they should do so, when they should do so, and what types of knowledge should inform decision-making and policy. Arguments in favor of greater public participation include that it can increase public interest in hazards management (Few et al., 2007), that it protects the public interest (Godschalk et al., 2003), that it increases the chances of successful implementation of hazards management plans (Godschalk et al., 2003; Stevens et al., 2010), that it can promote the use of nonstructural measures (Rouillard et al., 2014) and that it can encourage stakeholders to take a more active role and greater responsibility (Begg et al., 2015; Wehn et al., 2015). Scholars have also suggested that widening participation can help to avoid a number of potential pitfalls. Poor public consultation in flood risk management can act to reduce existing community resilience (Jennings, 2009) while hazards management plans that lack sufficient public participation are more likely to fail to meet their objectives (Stevens et al., 2010). In the case of flood risk management such failures can occur when a lack of public participation means that

local experiential knowledge is excluded from the decision-making process (Fitton & Moncaster, 2018). A move toward wider participation in flood risk management was also enshrined in the EU Floods Directive which calls for anyone who has an interest in or is directly impacted by flood risk management to be given an opportunity to participate in the decision-making process (Moon et al., 2017). The Directive mandates that Member States “encourage active involvement of interested parties in the production, review and updating” of flood risk management plans (Directive 2007/60/EC).

Despite this focus on the benefits of widening participation, numerous challenges and difficulties have also been identified. In practice the opportunities for either stakeholders or the wider public to influence the outcomes of flood risk management plans are often limited, as decisions are made by engineers, planners and other technical experts (Fitton & Moncaster, 2018). While stakeholders or local communities may be consulted, their views often have little influence on the outcome (Fitton & Moncaster, 2018; Moon et al., 2017). Participatory processes can lack opportunities for two-way dialog (Moon et al., 2017) while stakeholder consultation or public participation can appear as a decoration at the end of a process after major decisions have already been made (Gamper, 2008). It can also be difficult to generate and sustain participation over extended periods of time (Holifield & Williams, 2019). Hazards managers sometimes also assume that hazards management is an exclusively technical task, most suited to trained professionals and they may come to view the wider public as ill equipped to offer meaningful contributions (Stevens et al., 2010).

Many of these issues are not unique to hazards management and they also arise in other planning and policy domains. An absence of trust can also be an obstacle to successful consultation or participation (Astrom, 2020; Yang, 2005). This lack of trust can operate in two directions, both as a lack of trust in decision-makers among the general public and a lack of trust in the public among decision-makers (Yang, 2005). Trained planners often mistrust data from other sources and intentionally restrict public participation to tightly constrained opportunities to provide limited feedback (Innes & Gruber, 2005). Planners and other decision-makers may trust that the public are honest and sincere in their views, but often do not trust that members of the public have sufficient knowledge to contribute to making fully informed decisions (Astrom, 2020). Within the field of disaster risk reduction, risk management is often viewed by decision-makers as a process involving the creation of expert knowledge, and the transfer of that knowledge to the general public in a unidirectional flow of information (Cook & Melo Zurita, 2019). Expert decision-makers assume a deficit model where the public are believed to be unaware of hazards and their contexts, and this lack of knowledge is viewed as equating to increased risk (Cook & Melo Zurita, 2019). Elite stakeholders often dominate decision-making processes (Moon et al., 2017), while well-intentioned attempts to widen participation through greater community input can also sometimes have unintended negative consequences, enhancing the influence of local elites and excluding marginalized groups (Lane & Corbett, 2005). Unsuccessful consultatory or participatory processes can also damage trust in a way that produces barriers to implementation in flood risk management (Jeffers, 2020).

Two recent critiques of decision-making in the fields of hazards governance and disaster risk reduction have suggested that more radical transformative changes may be required to ensure more effective outcomes. Cook and Melo Zurita (2019) argue that virtually all decision-making in the field of disaster risk reduction operates on a deficit model which assumes that knowledge must be created by experts and then successfully transferred to an unknowledgeable public to effect successful risk reduction. They contend that this deficit model is deeply engrained in decision-makers' worldviews and their understanding of their roles (Cook & Melo Zurita, 2019).

While decision-makers frequently support greater consultation and participation, this deficit model makes it impossible for genuine participation to occur (Cook & Melo Zurita, 2019). They propose that the only solution to this challenge is a radical transformation of decision-making processes, moving away from the deficit model and replacing it with a relationship-building approach (Cook & Melo Zurita, 2019).

Mitchell (2019) suggests that contemporary hazards governance and decision-making is rendered fundamentally weak due to the fact that limited numbers of people engage with hazards governance, and many of those who do engage, do so on a narrow basis for limited periods of time. He questions the centrality of stakeholder consultation and proposes a model of hazards governance focused on wider constituencies of shared interests, arguing that this would both broaden the number of people who participate in hazards governance and the basis on which they do so (Mitchell, 2019). He also contends that the focus on potential losses or gains implicit in the concept of the stakeholders is an excessively narrow conceptualization of hazards that overlooks the diverse ways in which humans engage with hazard processes and events (Mitchell, 2019). Hazards can be encountered, experienced, and engaged within a multiplicity of ways, often involving mixed motives that reflect diverse interests and values, and extending far beyond the calculus of potential losses and their mitigation that is generally the predominant focus of hazards management (Mitchell, 2006, 2016, 2019). In proposing an alternative constituency-based approach, Mitchell (2019) suggests that three agency-based constituencies of engagement or potential engagement with hazards can be identified; a permanent constituency, a fluctuating constituency, and a latent constituency. The permanent constituency is typically composed of scientists, engineers, planners, and other technical experts who engage with hazards management on a regular basis, often as part of their professional responsibilities in both the private and public sectors (Mitchell, 2019). The fluctuating constituency is a larger group but may only become mobilized and engaged with hazards at specific times, generally for a limited period of time, and often in passive ways limited to receipt of information (Mitchell, 2019). Such engagement usually occurs during or after disaster events. Examples of members of the fluctuating constituency can include populations directly impacted by hazard events as well as officials who may have responsibility for emergency management during disaster events, but who are not part of the permanent constituency. The latent constituency is the largest group and is composed of people who are generally not directly impacted by hazards but may have indirect reasons to engage with them (Mitchell, 2019). The latent constituency can be made up of those who are likely to be least vulnerable and most resilient to disasters, and by populations who are likely to be unaware that their interests, concerns, or aspirations may intersect with questions related to hazards governance (Mitchell, 2019). Although rarely considered a resource to be developed in support of hazards management, promoting wider engagement with members of this latent constituency may provide important opportunities to develop new movements and cultures to support “*hazards-sensitive governance*” (Mitchell, 2019, p. 163). Creating a diversity of perspectives can ensure that single issues or viewpoints do not dominate the decision-making process (Mitchell, 2019).

This paper utilizes the contrast between stakeholder consultation and constituency building models of hazards governance to analyze a disputed flood defense scheme in Ireland and explores whether a constituency-based model of flood risk management focused on creating ongoing relationships between diverse constituencies of interest offers a means of potentially avoiding similar conflicts in the future. In December 2016, a proposal for a new flood relief scheme was published for the River Lee Catchment in the southwest of Ireland. Its publication followed a decade-long research and planning

process led by the Office of Public Works (OPW), the lead agency with responsibility for flood risk management in Ireland. The Lower Lee Flood Relief Scheme is the largest and most ambitious flood risk management scheme ever proposed in Ireland, and it aims to protect the country's second largest city from the flooding that has been a regular feature of life in Cork for centuries. However, since its publication, the proposed scheme has been the subject of an ongoing dispute over its planning, design, and implementation. It is supported by several key stakeholder groups in the city including the local business representative organizations, Cork Chamber and the Cork Business Association. However, the proposed scheme has also provoked strong opposition, most notably from the Save Cork City (SCC) campaign group which formed to oppose its implementation. This paper examines who has participated or attempted to participate in flood risk management decision-making in the Lee Catchment and the basis on which they have done so. It argues that the Cork dispute may illustrate the limits of the stakeholder consultation model of flood risk planning, and explores how the ongoing dispute has widened both the number of individuals and groups engaging with flood risk management, and the basis on which they are doing so. These insights from the Cork dispute offer important lessons for public engagement in flood risk management in other river basins where vulnerable cities experience complex flooding challenges, as well as for public engagement in hazards management and governance more generally.

The history of flood hazards in Cork and the current dispute are both multifaceted, and previously published research has addressed several aspects of flood risk management in the Lee catchment. This has included the ways in which normative interpretations of climate risk influence local decision-making (McDermott & Surminski, 2018), the importance of the built environment and its role in risk perception (O'Neill, 2018), the role of place attachment in shaping framings of flood hazards (Jeffers, 2019), barriers to transformation in the decision-making process (Jeffers, 2020), and the role of economic imperatives in shaping dam management practices (Tangney, 2020). The specific focus of this paper is on examining the size and composition of the constituencies of individuals and groups who have engaged with flood risk management decision-making, and the breadth of interests or motivations driving that engagement. The paper examines who has engaged with questions of flood risk management in Cork and on what basis they have done so, to assess what insights this can offer for hazards management and governance.

CASE STUDY

Cork is the Republic of Ireland's second largest city (Figure 1) and it has a long history of flooding of both fluvial and tidal origin (Tyrrell & Hickey, 1991). The original settlement that would later become Cork City was founded on a number of small islands in the estuary of the River Lee. As the city developed, the channels between these islands were either filled in or culverted over, creating a large island on which the modern city center is located. This central island is situated between two tidal channels of the River Lee. As a consequence of this history and geography, much of the city center is exposed to both river and tidal flooding, as well as to flood events that combine both influences (Tyrrell & Hickey, 1991). River floods have generally been more damaging, although tidal floods have also led to substantial losses. Notable recent events include a major river flood in 2009 which caused estimated economic losses of €90 m and a tidal flood event in 2014 which is reported to have led to losses of €40 m (OPW, 2017). In the context of climate change, exposure to extreme flood

events is expected to increase in the coming decades (Guerreiro et al., 2018). Two upstream hydroelectric dams have been used to attenuate some river flood events (Fitzpatrick & Bree, 2001), but the capacity of these dams to reduce the impacts of larger flood events and the most appropriate operating procedures for doing so have become the center of legal disputes in the aftermath of the 2009 flood (Tangney, 2020).

Flood risk management in Ireland is mainly carried out by the OPW, the lead national agency with responsibility for flood hazards. The OPW manages flood risks in river basins across the country through a series of Catchment Flood Risk Assessment and Management (CFRAM) plans. Despite these plans representing a new approach to the practice of flood risk management in Ireland, there has been little national debate on flood policy (Devitt & O'Neill, 2016). The OPW began work on the Lee CFRAM study in 2006 and the plan was completed in 2014. Following completion of the CFRAM plan, the OPW began work to develop a preferred flood risk management scheme for Cork City. The proposals for the Lower Lee Flood Relief scheme were published and publicly exhibited in late 2016. The scheme is designed to protect over 2000 properties from the impacts of both river and coastal flood events (OPW, 2017). The proposed scheme is comprised of a number of measures including permanent and temporary flood defenses, a new flood forecasting and warning system, the designation of washlands upstream of the city to allow for increased dam discharges during flood events, a flow diversion structure to manage flows in the two main river channels that surround the city center, and a network of pumping stations to remove water that may accumulate behind the flood defenses.

Following the publication of the proposed scheme in late 2016, the Save Cork City (SCC) campaign group was formed to oppose the plans. The SCC campaign has described themselves as a group of local professionals including architects, engineers, and historians. Since late 2016 SCC has been mounting a campaign of opposition to the proposed scheme. Their opposition campaign has included a range of activities including protest events, social media campaigns, and the pursuit of legal action to try to halt the implementation of the scheme. SCC social media campaigns have gathered support from some local residents, small businesses, and community organizations. The SCC campaign has opposed a number of aspects of the proposed scheme, expressing particular opposition to permanent flood defenses in the city center and the network of pumping stations. The SCC group has published counter proposals centered on the construction of a downstream tidal barrier to manage coastal floods and the use of the existing dams and new natural flood management techniques to reduce river flooding (SCC, 2017). The OPW contends that these alternatives would be both prohibitively costly and ineffective. At the time of writing the SCC, opposition campaign remains ongoing but the OPW intends to proceed with the planned implementation of the scheme. Construction works are scheduled to commence in 2022.

RESEARCH METHODS

This paper forms part of a wider study that deployed a mix of qualitative methods to examine several aspects of the dispute that emerged in the aftermath of the publication of the proposed Lower Lee Flood Relief Scheme. The focus of this paper is on examining who engaged with the decision-making process, when and how they engaged, and what their reasons for doing so were. Fifteen semistructured interviews were undertaken with a range of local business owners, representatives of the SCC campaign, business representatives, and local residents during April and May 2017.

(see Table 1). Most interviewees were recruited through purposive sampling with a small number added through snowball sampling. While 48 individuals and groups were invited to participate in this study, most declined or failed to respond to attempts to contact them. All interviews were recorded with the consent of the participants and transcribed. To preserve anonymity participants were asked how they would like to be identified in any subsequent research outputs and the descriptors used in this paper are those prescribed by the interviewees. In addition to the interviews, a wide range of documents, videos, websites, and other sources were also analyzed. This included reports, press releases, and other documents produced by both the OPW and the SCC group, social media posts and online videos produced by SCC as part of their opposition campaign, the Lower Lee Flood Relief Scheme project website created by the OPW, blog posts written by opponents of the scheme, submissions made to the OPW by a range of local groups who also posted those submissions online, opinion pieces in local newspapers, and the transcripts of an Oireachtas (national parliament) committee hearing into the dispute which featured contributions from both the OPW and the SCC campaign (see Table 2). Taken together, this diverse range of sources provides an overview of both engagement with the stakeholder and public consultation activities led by the OPW during the ten-year process leading to the publication of the proposed scheme in late 2016, and the wider engagement that has taken place as part of the campaign of opposition led by the SCC group since then. These interview

TABLE 1 List of interviewees

Interviewee	Views
Local resident 1	Opposed to the proposed scheme and supportive of SCC opposition campaign
Local resident 2	In favor of scheme. Critical of SCC but also critical of OPW led decision-making process
Small business owner 1	In favor of scheme. Very critical of SCC
Small business owner 2	Opposed to scheme but critical of SCC
Small business owner 3	Opposed to scheme but views on SCC not clear
Business representative	In favor of scheme. Critical of SCC but also somewhat critical of some aspects of OPW led decision-making process
Writer	Opposed to scheme and strongly supportive of SCC
Former public representative	Opposed to scheme but views on SCC not clear
Ecologist 1	Opposed to scheme but also somewhat critical of SCC and other opponents of the scheme
Ecologist 2	Opposed to scheme and supportive of SCC
Cultural manager	Opposed to scheme and supportive of SCC
Artist 1	Opposed to scheme and supportive of SCC
Artist 2	Opposed to scheme and strongly supportive of SCC
SCC representative	Opposed to scheme and actively involved in SCC opposition campaign
Environmental group representative	Opposed to scheme. Views on SCC not clear

Abbreviations: OPW, Office of Public Works; SCC, Save Cork City.

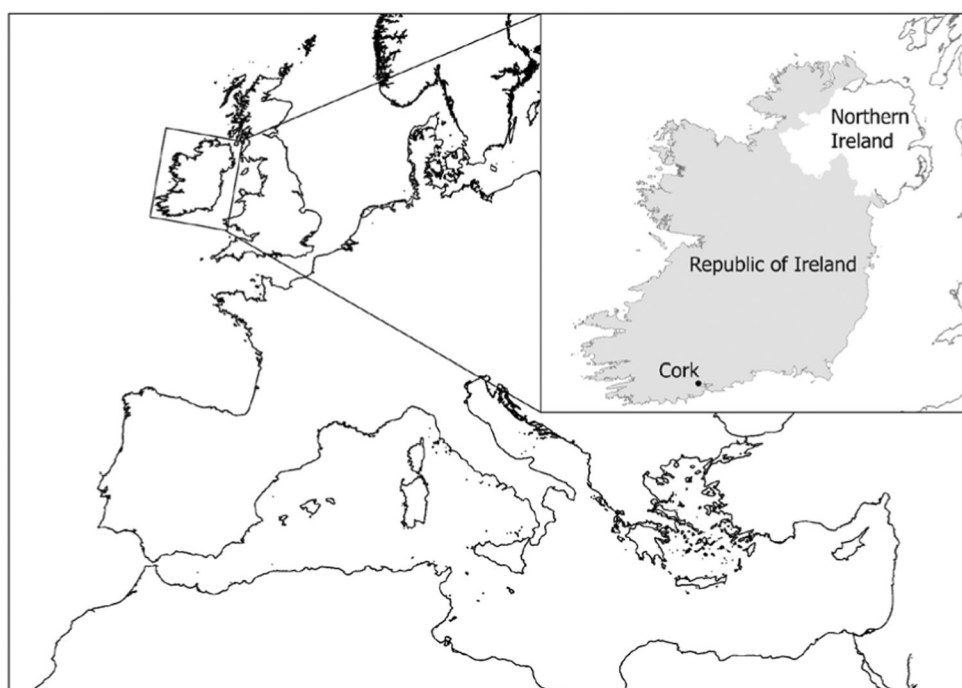


FIGURE 1 Location of Cork

transcripts and all other data sources were analyzed with the assistance of NVivo 11 qualitative analysis software. Sources were thematically coded (Braun & Clarke, 2006) through a coding process that combined the use of codes selected before the analysis and additional codes identified during an initial round of coding (see Table 3). The utility of this hybrid approach combining deductive and inductive coding is increasingly recognized and it is now widely used for qualitative research in a variety of fields including studies of hazards, disasters, and climate change adaptation (Cobbinah et al., 2019; Iwaniec et al., 2020; Mohanty et al., 2018; Oudes & Stremke, 2020).

RESULTS—ENGAGEMENT WITH FLOOD RISK GOVERNANCE IN CORK

The results provide a qualitative overview of three aspects of engagement with flood risk governance in Cork between 2006 and 2018. They illustrate changes in the numbers of individuals and groups engaging with issues related to flood hazards management, the reasons or motivations for engagement, and the types of engagement undertaken. The engagement of stakeholders and other interested parties with flood hazards management in the Lee Catchment can be divided into two phases. The first phase is the 10-year period from 2006 to 2016. During this time the OPW undertook the initial CFRAM study and followed this with the planning of the Lower Lee Flood Relief Scheme. The second phase of engagement began in December 2016 and January 2017 with the public exhibition of the proposed scheme, the foundation of the SCC group, and the dispute that has remained ongoing since then.

TABLE 2 Additional data sources analyzed

Author	Source type	Title/name	Date
OPW	Press release	OPW response to recent press coverage	February 2, 2017
OPW	Report	Lower Lee (Cork City) Drainage Scheme (Flood Relief Scheme) Options Report	March 2017
OPW	Report	Lower Lee (Cork City) Drainage Scheme (Flood Relief Scheme) Phasing Report	March 2017
OPW	Report	Lower Lee (Cork City) Drainage Scheme (Flood Relief Scheme) Exhibition Report	December 2017
OPW	Presentation slides	OPW Presentation to Cork City Council Members	November 13, 2017
OPW	Posters	Exhibition Posters	December 2016
OPW	Brochure	Public Exhibition Brochure	December 2016
OPW	Presentation slides	Project Update—Lower Lee (Cork City) Flood Relief Scheme: Protecting Cork from Future Flooding	December 2017
OPW	Website	Lower Lee Flood Relief Scheme project website	Downloaded on two dates: November 2017 and February 2018.
SCC	Report	Potential Cork—The SCC Solution: A progressive and economical flood management solution for Cork	May 2017
SCC	Discussion document	SCC Discussion Document	March 27, 2017
SCC	Twitter feed	@savecorkcity Twitter	December 2016 to February 2018
SCC	Facebook feed	@savecorkcity Facebook	January 2017 to February 2018
SCC	YouTube videos	Humans of Cork—six short YouTube videos created by SCC featuring opponents of the scheme	February, March, and April 2017
Jer Buckley (Irish National Flood Forum)	Blog post	Beautiful City: Our Homes by the Lee	June 9, 2017
William Wall	Blog Post	Prison Walls for a River: Walling Cork City	March 30, 2017
Dan Boyle	Opinion piece published on broadsheet.ie	Imprisoning Cork	April 13, 2017

TABLE 2 (Continued)

Author	Source type	Title/name	Date
Joe O'Shea	Opinion piece published in Evening Echo newspaper	Is Cork City Ready for a Leap Forward	May 12, 2017
GetCork.ie	Journalistic interview	Interview with John Hegarty—SCC Campaign	Date unknown
Cork Environmental Forum	Submission to OPW (published online)	Cork Environmental Forum Response to Draft Lower Lee Flood Relief Scheme	April 2017
EcCoWell Cork	Submission to OPW (published online)	Submission on the Lower Lee Flood Relief Scheme	February 21, 2017
Irish Georgian Society	Submission to OPW (published online)	Submission on the Lower Lee Flood Relief Scheme	April 10, 2017
Houses of the Oireachtas (National Parliament)	Transcript	Transcript of the meeting of the Oireachtas Committee on Culture, Heritage and the Gaeltacht (representatives from SCC and OPW gave evidence to the committee)	October 18, 2017

Abbreviations: OPW, Office of Public Works; SCC, Save Cork City.

In the years between the commencement of the CFRAM study in early 2006 and the publication of the proposed Lower Lee Flood Relief Scheme in late 2016, a variety of stakeholder consultation and public participation activities were organized by the OPW and external consultants contracted by them (see Table 4). These included group workshops with stakeholders identified by the OPW or their consultants, information, and consultation days open to the general public, exhibitions, presentations to stakeholder groups, one-to-one meetings with stakeholders and landowners, and the issuing of interference notices to landowners or occupiers who would be impacted by the proposed scheme. While these activities involved extensive engagement with some stakeholders, they appear to have generated little interest or engagement among the wider public. The numbers of individuals and groups engaging with the decision-making process remained relatively low when compared to the numbers who would begin to engage after the publication of the proposed scheme. For example, when the draft CFRAM study was opened for public consultation for four months in early 2010, it attracted only 28 written submissions, with most of these relating to upstream villages with little focus on Cork City. Public consultation days appear to have attracted varied levels of interest with 44 people attending a public consultation day in July 2013, 181 attending a public consultation day in July 2014, and 185 people attending open days attended by the OPW design team during the public exhibition of the scheme in December 2016 and January 2017. Most of those 185 people were landowners likely to be directly impacted by the construction works proposed as part of the scheme. These landowners had received interference notices informing them that the proposed scheme would impact on their properties. From the publicly available data, it is not possible to determine whether there are repeated

TABLE 3 Codes used in data analysis

Main codes	Subcodes
Motivations/concerns/interests	Esthetics/visual/urban design Historical preservation Ecology/environmental conservation Disruption during construction Health/well-being Place Skeptical (belief scheme will fail) Impacts on businesses Climate change Flood prevention Sport/recreation Culture
Decision-making process	Positive views Negative views Leadership issues Communication issues Consultation Expertise Frustrations
The conflict	Positives/opportunities Negatives Accusations (unfairness or untruths)
Role of expertise	Engineering Architecture/design Planning Ecology Preservation Others
Causes/types of flooding	Fluvial Tidal/coastal/storm surge Pluvial Dam management Changing patterns over time

TABLE 3 (Continued)

Main codes	Subcodes
Impacts	Deaths
	Injuries
	Direct impacts on businesses
	Indirect impacts on businesses
	Residential properties
	Infrastructure
	Disruption
	Other
Management options	Dam management
	Channel modifications
	Land-use change upstream (natural flood management)
	Living with floods (modifying the built environment to do so)
	Tidal barrier
	Pumps
	Walls and other forms of fixed defenses
	Warning system
	Others

TABLE 4 Timeline of public engagement and consultation

Dates	Events
Early 2006	CFRAM study begins
December 2006	Seven public consultation days held. Attendance unknown
2007–2009	Group workshops with invited stakeholders
May 2009	Four public consultation days. Attendance unknown
April 2010	Public consultation on draft CFRAM study receives 28 submissions
July 2013	One public consultation day attended by 44 people
January 2014	CRFAM study published
July 2014	One public consultation day attended by 181 people
2014–2016	Over 100 face-to-face meetings held with stakeholders likely to be directly impacted by the proposed flood relief scheme
December 2016 to January 2017	Four public information days attended by 185 people
January–April 2017	OPW receives 1162 written submissions on the proposed scheme

Abbreviations: CFRAM, Catchment Flood Risk Assessment and Management; OPW, Office of Public Works.

engagements from the same individuals in the public consultation days and other consultation activities. While the OPW and their consultants invested very substantial amounts of time and resources in undertaking a wide range of consultation activities, it is clear that throughout the CFRAM process and the development of the proposed flood relief scheme, engagement was largely limited to those with professional interests and responsibility for flood risk management, those likely to be directly impacted by flood events, and those likely to be directly impacted by construction works associated with the proposed scheme (see Table 5). Before December 2016, the majority of the wider population within Cork City and the wider Lee catchment were not engaging with flood risk management. This absence of wider engagement was despite the OPW having advertised their consultations in local and national newspapers, on radio, on their own social media platforms and through a project website. Among the wider public in Cork, there appears to have been either a lack of awareness that a flood risk management decision-making process was underway that could have significant implications for the future of their city, or a lack of recognition of the ways in which this process and its outcomes might interact with their varied interests, goals, and aspirations. The extent to which consultation and engagement took place has itself become part of the ongoing dispute. The OPW has insisted that extensive opportunities for consultation and participation were provided throughout the process,

TABLE 5 Actors engaging with flood risk management in Cork between 2006 and 2016

Actor	Role, responsibility, or interest
OPW	National agency responsible for flood risk management
Halcrow Group Ireland	Consultants employed by the OPW during the CFRAM study
Arup	Consultants employed by the OPW during the Lower Lee Flood Relief Scheme
Cork Business Association	Represents over 200 businesses, mostly in the city center
Cork Chamber of Commerce	Represents over 1200 businesses in the Cork region
Electricity Supply Board (ESB)	Owner and operator of the upstream dams at Inniscarra and Carrigadrohid
Cork County Council	Local government for Cork County (excluding the city), composed of both elected councilors and unelected executive officials
Cork City Council	Local government for Cork City, composed of both elected councilors and unelected executive officials
Home owners or occupiers impacted by flooding	Have already experienced impacts of flooding or likely to do so in the future. In some cases, they are no longer able to secure insurance due to previous flood-induced losses
Businesses impacted by flooding	Have already experienced impacts of flooding or likely to do so in the future. In some cases, they are no longer able to secure insurance due to previous flood-induced losses
Landowners or occupiers likely to be impacted by flood relief works	Landowners or occupiers in the city and upstream

Abbreviations: CFRAM, Catchment Flood Risk Assessment and Management; OPW, Office of Public Works.

providing ample opportunity for any interested parties to engage with the decision-making process. However, opponents of the scheme and even some of its supporters have argued that there were insufficient opportunities for public participation and that engagement with the process has been limited as a result (see Table 6).

This somewhat limited engagement beyond those either professionally engaged with flood risk issues, those directly impacted by flood events, or those likely to be impacted by the construction of the flood relief scheme contrasts sharply with the engagement that emerged after January 2017 when the SCC group began their opposition campaign. In numerical terms, the number of individuals and groups

TABLE 6 Selected quotes illustrating views on engagement, consultation, and participation with the decision-making process before December 2017

Positive views	<p><i>We have gone into communication and a lot of consultation with the Office of Public Works. (Interview: Small Business Owner 1)</i></p> <p><i>The OPW has engaged in an extensive and proactive consultation process in relation to a flood relief scheme for Cork since 2006 when the Lee CFRAMS commenced. This includes numerous manned public days in 2006, 2009, 2010, 2013, 2014, 2016 and 2017. All of the above events were widely advertised to the public in advance through advertisements in local and national newspapers, radio advertisements, the project website, and social media accounts operated by the OPW. (OPW, Exhibition Report)</i></p> <p><i>Extensive landowner and stakeholder consultation has been undertaken, including over 100 one-to-one meetings, to ensure that those who are directly impacted by the project remain informed and are provided with the opportunity to provide feedback. Numerous presentations have also been made to key representative groups including Cork Chamber of Commerce, Cork Business Association, Cork Public Participation Network, ICOMOS and many others, as well as to elected representatives of both Cork City Council and Cork County Council. (OPW, Exhibition Report)</i></p>
Mixed views	<p><i>For people who have been following the flooding issue over the last decade, and for people whose businesses in the city centre are in flood risk areas, or who have been impacted by flooding they have been following this. Groups like Cork Chamber and Cork Business Association, they have also been following it closely because their stakeholders have a huge interest in this, but for people who maybe just work in the city centre, in a part of the city centre that isn't going to be impacted by a flood, they might have heard reference to something going on in the background about flooding, they might not have been aware of how advanced the work was, or when public consultation was happening or where it was happening. And a lot of people will tell you that they didn't know that this was going on. They weren't aware that public consultation meetings were happening. They feel that they didn't have a say. (Interview: Local Resident 2)</i></p> <p><i>Now there is another argument that says now if you have as much of an interest in the city as you claim to then maybe you should have been aware that all of this study was going on in the background and you should have made it your business but when it comes to a scheme this big, I think the people who are driving the scheme really do need to push the boat out. (Interview: Local Resident 2)</i></p>
Negative views	<p><i>As a trader and as a part of the trader's association in this area we never heard anything. Nothing. We're the heart of the city. I don't even know if the traders along Oliver Plunkett Street were asked and they were seriously affected by it. But as far as I know, no consultation whatsoever. With a thing as serious as this, just putting a little advertisement into the back of the paper is not enough. (Interview: Small Business Owner 3)</i></p>

Abbreviation: ICOMOS, International Council on Monuments and Sites.

engaging with flood risk management increased significantly and this can be seen in the volume of submissions received by the OPW following the extension of the deadline for submission from February to April 2017. By April 2017, the OPW had received 1162 written submission on the proposed scheme. The timing of receipt of these submissions illustrates the growing interest generated in response to the SCC campaign, with only 4 submissions received in December, but 189 received in January and February and 969 received in March and April. 89% of these submissions are described by the OPW as having being submitted by the general public with only 6% from affected property owners, and 2% each from businesses and community groups. This illustrates that the range of individuals and groups who had become engaged with the issue of flood risk management had now expanded far beyond those directly impacted. The types of engagement that were evident had also broadened, as in addition to the increase in submissions, flood risk management was now featuring in public debates on both traditional media and social media. However, it is also important to emphasize that the depth of this engagement varied. While some actors may have become engaged in various ways including making a submission to the OPW, for others their engagement may have been limited to social media posts, or to allowing themselves to be photographed and listed as a supporter of the SCC group in their social media campaigns.

In addition to the increased numbers of people expressing opinions on flood risk management, the range of reasons for which they did so was also broader. Individuals and groups from a wider range of backgrounds were now engaged with flood risk management issues (see Table 7) and their reasons for engagement included interests in heritage preservation, ecological conservation, amenity values attached to the river and river side spaces, urban design and visual amenities, tourism and business interests (see Table 8). The public discourse and debate that has taken place in Cork since the publication of the proposed scheme has focused not only on issues related to the impacts of flood events and the losses they induce, but also on the future urban design of the city, the importance of the heritage of the built environment and how this can be preserved in the context of environmental and economic change, and the role of the river as a social, environmental, and sporting amenity within the city. Thus, both the number of people engaging with questions related to flood risk management and

TABLE 7 Additional actors engaging with flood risk management after December 2016

Actor	Role, responsibility, or interest
Save Cork City	Campaign group formed in late 2016 to oppose Lower Lee Flood Relief Scheme. A number of interests but particular focus on heritage and architecture
Irish Georgian Society	Heritage conservation
Local environmental groups	Environment, sustainable development
Social, community, and sporting groups	Varied interests and aspirations
Businesses not directly impacted by flooding	Varied interests and aspirations but often concerned about changes to the urban spaces of the city center, or disruption during construction works
Local residents not directly impacted by flooding	Varied interests and aspirations

TABLE 8 Selected quotes illustrating the range of interests linked to engagement with flood risk governance

Reason for engagement	Quotes
Business	<i>Obviously there is a huge commercial damage. It affects in terms of premises damage which can be considerable and right across the sectors, remember most of the flood water is polluted and you have say a hospitality or restaurant that has been damaged by that water, it probably needs a complete fit out because you know the contamination has been quite significant. So it's major commercial damage. (Interview: Business Representative)</i>
Heritage	<p><i>The group promotes the historic centre of Cork and design solutions that can save and restore the beauty and authenticity of the city. Primarily that means finding ways to repair the quays and quayside landscapes with reference to the maritime history of the city. (John Hegarty, SCC – Interview with GetCork.ie)</i></p> <p><i>I think the craftsmanship that went into something like those walls should be respected and honored and not just for our generation but for the generations to come. (Interview: Small Business Owner 3)</i></p>
Climate change	<i>Coming up from the seaward side which is where climate change will come from, I can't see any solution to it other than something like a tidal barrier, a downstream tidal barrier. I'm not an expert you know but to me that seems to be logical. (Interview: Writer)</i>
Culture	<i>There is almost a soullessness in these proposals. What is being suggested is insensitive to the character of Cork City. It ignores the special position of the river in the history and culture of the city. Famed in song and story as it were. (Dan Boyle – Opinion piece in broadsheet.ie)</i>
Amenity, health and well-being, nature and environment	<p><i>The River Lee as an amenity is intrinsically linked to the quality and extent of the natural vistas, vegetation and natural surroundings of the river. (Cork Environmental Forum – submission to OPW).</i></p> <p><i>A few days ago, when I saw that the swifts had returned to the city to roost here for the summer it was just a really nice thing to see and it made me feel connected to the city and it made me feel connected to nature and the world, that is going to keep on spinning and these animals are going to keep coming back if they can. I find that quite a grounding nice experience, but it's something that is not considered in most engineering circles and in the City Council, they probably don't really care. (Interview: Ecologist 1)</i></p>
Sport and recreation	<p><i>We have the Naomhóga Chorcaí^a group and all the rest and the idea of going back to more traditional forms of boat building and enjoying the river in terms of recreational use not just sporting use which would have been the traditional rowing club approach (Interview: Former Public Representative).</i></p> <p><i>Access to the river for boating could be enhanced and promoted by our proposals. Corkonians would retain a vital visual connection with the river which was historically the source of</i></p>

(Continues)

TABLE 8 (Continued)

Reason for engagement	Quotes
	<i>its main trading income. A restored river landscape would make sense of our history and bring new life and opportunities to civic life and the city centre and would reinforce the connection between citizens and the river, already evident in popular events such as the Lee Swim and Ocean to City. (Save Cork City – Potential Cork)</i>

^aA rowing club using traditional Irish boats.

the basis on which they have done so expanded significantly after the publication of the proposed scheme and the launch of the SCC campaign of opposition to it.

While the opposition campaign that has been waged by the SCC group and the subsequent ongoing dispute between opponents and proponents of the Lower Lee Flood Relief Scheme has resulted in a much wider engagement with questions related to flood risk management in Cork, the ways in which this has occurred has also been disruptive and difficult for many of those directly involved. The difficult and stressful nature of the ongoing dispute was highlighted by several interviewees on both sides of the dispute. From the perspective of the OPW and supporters of the scheme, the intervention of the SCC campaign came at the final stages of a long planning and decision-making process. The response of the OPW indicates that at this stage in the process it is unwilling or unable to significantly change the proposed flood relief scheme as it believes the flood relief measures proposed are the most effective means of managing current and future flood risk in the Lee Catchment.

DISCUSSION

A clear change in engagement with questions related to flood risk management in the River Lee catchment is evident before and after the public exhibition of the proposed flood relief scheme. While the OPW had undertaken extensive stakeholder consultations and engaged in some public participation activities, the constituencies of interested parties who participated in these remained limited to those who were directly involved in flood risk management for professional reasons, those who were at risk of flood induced losses, and those who might be impacted by the construction works associated with the flood relief scheme. Engagement with flood risk management was limited in terms of the number of people involved, but also on the basis on which they were participating.

Adopting Mitchell's (2019) categorizations of constituencies of interest it can be said that participation in flood hazards management in Cork was limited to a permanent constituency of professionals, and a fluctuating constituency of those potentially impacted by either the negative impacts of flooding or by the proposed construction of flood relief works. However, following the public exhibition of the proposed flood relief scheme and the foundation of the SCC campaign, a previously latent constituency of interested parties began to emerge. This constituency was both much larger, in that the number of people who were now interested in flood risk management in the catchment had increased significantly, and much broader, in that their reasons for engagement encompassed a range of interests and aspirations. The ways in which this previously latent constituency emerged in Cork point to important challenges and opportunities for hazards management and governance.

Growing “the constituencies that have an interest in hazards response policies and practices is both warranted and promising” (Mitchell, 2019, p. 180). The range of reasons that a wide variety of actors have chosen to become involved in opposing the proposed flood relief scheme in Cork illustrate some of the themes around which such wider constituencies of interest in hazards might be constructed. Individuals and groups that have engaged with flood risk management in Cork due to their interests in heritage conservation, environmental amenities, sports, culture, tourism, and business illustrate the wide range of interests that can potentially be linked with questions of flood hazards management. It also highlights how flood risk management can be integrated with other social, economic, political, and cultural aspirations for the future development of the city. In short, the diversity of engagement that emerged in Cork illustrates the potential for harnessing a much wider level of public participation in flood hazards management. It highlights four broad thematic areas around which potentially overlapping constituencies of interest might be constructed: (1) architecture, heritage, and conservation, (2) urban planning and urban spaces, (3) Health, amenity, and sports, and (4) nature and environment. These constituencies would encompass the interests of many of the groups and individuals who were not engaged with flood risk governance before the publication of the proposed Lower Lee Flood Relief scheme but have since come to realize that their interests and aspirations may overlap with flood risk governance. These thematic constituencies are not unique to Cork or to flood hazards, and similar constituencies could emerge in other locations and for other types of hazards.

However, the Cork dispute also illustrates the challenges that this wider public participation can create, particularly when it emerges in an unexpected way and at an unexpected time. For many of those involved in planning and developing the Lower Lee Flood Relief scheme, the new engagement and opposition prompted by the SCC campaign have been a difficult and disruptive experience. Existing decision-making processes, institutions, expertise, and motivations have been challenged and questioned by opponents of the scheme. This has undoubtedly been a disconcerting experience for those responsible for planning and developing the scheme. It has also been frustrating for local businesses and homeowners who are exposed to flood risks and increasingly vulnerable to loss from flood events due to their inability to secure flood insurance cover after repeated losses in the past. For those facing uninsurable losses from any future flood event, any delay in decision-making is viewed as an existential threat to their livelihoods and well-being. While Mitchell (2019) has highlighted the benefits of widening the constituencies of interested parties, the Cork case illustrates the dangers of failing to do so. When stakeholder consultations fail to engage those who may later develop an interest in the proposed outcomes of the decision-making process, they can then emerge as a powerful opposition force. This illustrates a practical necessity for engaging wider constituencies of interest in flood risk management decision-making processes in an early and ongoing way. Not only does this constituency-building approach offer a means of improving the decision-making process by integrating a richer range of knowledges and experiences, it may also offer a less disruptive and less adversarial means of allowing dissenting voices to be heard at an earlier stage of the decision-making process.

Assuming that engaging a wider constituency is desirable for future flood risk management to be successful, this raises the question of how such a constituency can be generated and sustained through time. The existing literature on stakeholder and public consultations has frequently highlighted that generating and sustaining any form of participation by stakeholders or the wider public can prove difficult (Birkland, 1996; Godschalk et al., 2003; Holifield & Williams, 2019). However, the critical

importance of widening participation to ensure the flood risk management schemes are successful in meeting their goals has also been emphasized (Fitton & Moncaster, 2018). In the Cork case, the OPW clearly initiated a wide-ranging process of stakeholder consultation as well as some public consultation, but these failed to engage the wider constituency that would ultimately emerge as an opposition force. However, these efforts were focused on stakes rather than interests. They were unlikely to engage anyone who was not already directly interested in flood risk or who self-identified as having a stake in the process. Many individuals and groups with other potentially relevant interests may not realize how those interests can be linked to hazards management (Mitchell, 2019). When the ongoing decision-making process in the Lee catchment was framed narrowly in terms of flood risk management and a proposed flood relief scheme, the constituency of interested parties remained narrow. However, the intervention of the SCC group changed the dynamic by reframing the terms on which flood risk management was debated. The debate was reframed from a focus solely on the management of flood risks and the interests of those holding a stake in this, to wider discussions about heritage preservation, ecological conservation, river side amenities, culture, tourism, and how the city should look, feel, and function in the future. As a result, a much more complex, ambiguous, and nuanced set of relationships between the residents of Cork City and the River Lee are now being expressed and openly debated. This reframing has allowed a much wider range of individuals and groups to identify how their varied interests and aspirations are potentially intertwined with the future of flood hazards management in the city and the wider catchment. This illustrates that wider participation in flood risk management can be achieved through reframing policy and decision-making in broader ways and establishing links between these broader framings and the varied interests and aspirations of wider constituencies of potential interested parties.

While engaging wider constituencies in this way offer many opportunities to bring new perspectives into flood risk management decision-making, it also creates a number of practical challenges that require careful consideration. In a European context, the parameters of flood risk management are delineated by the requirements of the EU Floods Directive which establishes that anyone with an interest in flood risk should be encouraged to participate in the production and updating of flood risk management plans (Moon et al., 2017). However, beyond this general statement, the Directive provides little guidance on who should participate or how they should do so. Building wider constituencies of interest is likely to require reimagining the decision-making process to create forums for debate and discussion that will encompass a more varied spectrum of interests and aspirations. This is not a straightforward task and it will require that new resources and expertise be included within the planning and decision-making process. Difficult questions of environmental justice would also emerge. For some existing stakeholders, their engagement with flood risk management is based on the fact that their homes and livelihoods are threatened by flood-induced losses. In the most extreme flood events lives may be at risk. Widening participation to include broad constituencies of interests would create questions of how to balance these pressing risks against the interests and aspirations of other groups, and the limited resources that may be available for flood risk management in individual catchments. However, engaging with these questions in open forums for debate is likely to remain key to successful flood risk management in the future. Facilitating the creation of constituencies of interest may also require legal and institutional changes, as current legal structures may not encourage decision-makers to engage in wider public participation activities (Gamper, 2008). It may also require fundamental transformations in hazards governance of the type proposed by

Cook and Melo Zurita (2019), moving away from decision-making predicated on models of knowledge transfer towards models based on relationship building. Broader constituencies that can support ongoing and effective hazards governance will require relationships that can be sustained over many years, not just shorter-term engagements related to particular proposal for risk-reducing infrastructure. Despite these challenges, a constituency-building model of hazards management and governance offers significant potential to improve current decision-making processes, and a means of potentially avoiding disputes like the one that has occurred in Cork.

Before concluding it is necessary to consider the limitations of the research presented in this paper and to reflect on potential avenues for future research. This paper has used the example of the Cork flood defenses dispute to highlight how public participation in hazards governance can be widened beyond the traditional constituencies of hazards management professionals and those most likely to be negatively impacted by hazard events. It has argued that doing so may prove to be an effective means of improving the decision-making process through the integration of new knowledge and perspectives, and a means of preventing the types of disruptive dispute that has emerged in Cork in recent years. However, while the paper has illustrated the themes around which such wider constituencies might be built, it is able to offer little practical guidance on how such constituencies might be constructed and sustained through time. It also offers little guidance on the environmental justice questions raised by the challenge of balancing the interests and aspirations of those who stand to lose from hazard events, against those who may not lose, or how to balance different types of monetary and nonmonetary loss. Further research oriented towards these questions is required. In recent years, a number of experimental approaches to community participation and coproduction of knowledge in flood risk management have been trialed (Landstrom et al., 2019; S. N. Lane et al., 2010). The lessons of the Cork dispute point to the need for further experiments in other forms of participation, decision-making, and governance, including trialing relationship and constituency building approaches.

CONCLUSIONS

The ongoing dispute over the planning, design, and implementation of the Lower Lee Flood Relief scheme has highlighted important opportunities and challenges for flood risk management, and in doing so it offers valuable lessons for hazards management policy and decision-making more generally. The dispute has illustrated the limits of the stakeholder consultation model of flood risk management and the practical problems that can emerge when consultation exercises fail to engage interested parties who subsequently emerge as a powerful opposition force. This can lead to delayed implementation of flood risk management plans and potentially to increased flood-induced losses as a result of these delays. However, the Cork dispute also highlights the potential opportunities for wider engagement in flood risk management to be harnessed in more constructive ways. It illustrates how wider constituencies can be engaged with flood risk management on the basis of a diverse range of interests and aspirations. These include interests in historical preservation, ecological conservation, riverside amenities, urban design, planning, tourism, culture, and business. The Cork cases also demonstrate how widening the constituencies of interest can expand the basis on which flood risk management decisions are made, broadening the types of potential losses that are considered to include heritage, amenities, ecosystems, and many other items of value to humans, that might be lost either in flood events or

through the construction of new flood prevention infrastructure. Wider constituencies of interest offer the potential to bring new insights, perspectives, and knowledges into flood hazards management decision-making. These insights and perspectives can help to develop more sensitive hazards governance and ultimately to reduce the losses created by hazard events. However, engaging wider constituencies and sustaining that engagement on an ongoing basis is not a straightforward process. Enabling such wider engagement to happen is likely to require more than a willingness from the individuals and organizations responsible for hazards management. It will require transformational changes in policy, institutional structures, and resourcing. It will also necessitate an open recognition of the difficulties in balancing the competing goals, values and aspirations that different interested parties will bring to the decision-making process. However, developing strategies and structures to engage wider constituencies of interest is not just desirable, it is likely to prove essential for successfully managing hazards in the future, particularly in contexts where urban development, climatic changes, and shifting socioeconomic conditions intersect to create complex risks, exposures, and vulnerabilities.

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How to cite this article: Jeffers, James M. 2022. "Building constituencies for flood risk management: Critical insights from a flood defences dispute in Ireland." *Risk, Hazards & Crisis in Public Policy* 13, 356–378.
<https://doi.org/10.1002/rhc3.12249>