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# Flood risk management, (un)managed retreat and the “relocation fix”: examining shifting responsibilities and compounding risks through two Irish case studies

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## ABSTRACT

Managed retreat raises important questions of both risk and responsibility. These include what risks are addressed and/or exacerbated through retreat and whether retreat might function as a byword for state withdrawal and the individualisation of responsibility. In response, the aim of this paper is to understand the implications of shifts in the perceived balance of responsibilities between the state and private actors for managing the risks and vulnerabilities associated with managed retreat. The paper draws upon an analysis of two household relocation schemes which took place in County Galway, Ireland in 1995 and 2009. This analysis highlights a range of factors which contribute to vulnerability and risk and which are traced to underlying conflicts regarding responsibility. These factors both put people at risk initially, leading to demands for relocation, and create new risks through a failure to effectively manage the relocation process. It is argued that the approach to relocation in Ireland reflects a neoliberal approach that responds to political and financial pressures upon the state and temporarily resolves some immediate risks for property owners but fails to address the underlying drivers of risk. The aggregate effects of such shifting responsibilities are to amplify existing and produce new vulnerabilities for communities impacted by flooding.

## ARTICLE HISTORY

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## KEYWORDS

Managed retreat; flood risk management; roll-back neoliberalism; Ireland

## 1. Introduction

Risk societies are characterised by the paradox of more and more environmental degradation, perceived and possible, and an expansion of environmental law and regulation. Yet at the same time no individual or institution seems to be held accountable for anything. How can this be?. (Beck 1998, 18)

Beck’s thesis of the “risk society” emphasises the centrality of questions related to risk and responsibility in contemporary society, a situation which is particularly the case in the context of climate adaptation where the potential risks are manifold yet the responsibility for their management is often perceived as diffuse. A prime example of this is the climate change adaptation strategy of managed retreat. This is the strategic relocation of communities, settlements and/or infrastructural networks away from areas made increasingly hazardous by climate change (Hino, Field, and Mach 2017). While managed retreat may mitigate the immediate risks posed by environmental hazards, it can ultimately exacerbate other socio-economic risks associated with a loss of livelihoods or the

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disintegration of communities (Dannenbergh et al. 2019; Siders 2019). Hence, managed retreat raises important issues regarding the role of the state and its responsibilities including, for example, whether these responsibilities extend to ensuring access to adequate housing and protecting people's livelihoods and well-being in the context of relocation initiatives.

Research on the impacts of neoliberalism has also highlighted profound shifts in the assumed balance of responsibilities for managing environmental hazards between states and private actors (Holfield 2004). In this context, "retreat" may function as a means for states to individualise responsibility for managing environmental hazards, for example through effectively unsupported relocation. Accordingly, this paper investigates connections between risk, vulnerability and shifting responsibilities in the context of managed retreat. The overall aim is to address a gap in our understanding of the implications of shifts in the balance of responsibilities between states and private actors for the risks and vulnerabilities associated with managed retreat.

To achieve this, the paper examines two household relocation schemes which occurred in County Galway, Ireland, following major flood events in 1995 and 2009. The empirical material consulted comprise documentary sources including records of parliamentary debates and parliamentary questions (67), newspaper articles (75) and planning and policy documents (25). The planning documents, in particular, provide important evidence regarding: (i) to what extent flood risk was accounted for within the planning process both before and after each relocation project; (ii) the related issue of where people relocate to; (iii) and ultimately to what extent risk has been reduced through relocation. These sources were identified using keyword searches of relevant databases including local newspaper archives and records of parliamentary debates and through map-based searches of the planning authority database. The initial search terms used were "relocation", "retreat" and "flooding". More specific terms referring to particular people and places were added as the authors' understanding of the case studies developed. Sources were analysed in NVivo using qualitative thematic analysis (Braun and Clarke 2006) and a mixture of deductive and inductive coding (Fereday and Muir-Cochrane 2006). This involved two rounds of close reading leading to the identification and elaboration of key themes. These themes included responsibility for the management of flooding and responses thereto, access and entitlements to relocation, the advantages and risks of relocation and other factors which contribute to vulnerability, notably planning and insurance. These themes provide the basic structure for the analysis below. A further key strength of the methodology is the use of two temporally sequential and spatially overlapping case studies. This allows the tracing of continuities and divergences in terms of the importance of different themes as the approach to relocation in Ireland has evolved. It also facilitates in-depth analysis of the production of risk and vulnerability at the local scale over time. In this sense, it follows Pelling's (1999, 258) approach of investigating "flood hazard as an ongoing state, in which extreme episodic flood events [are] embedded".<sup>1</sup>

The next section provides an overview of political ecology perspectives on risk and vulnerability in the context of flooding and managed retreat. It then highlights research on flood risk management that identifies problematic shifts in the assumed balance of responsibilities between the state and private actors, noting that the relevance of similar shifts for managed retreat schemes has not yet been investigated. The paper subsequently outlines the two case study relocation projects. Following this, Sections 4–8 provide a combined discussion of both cases. An interpretation and discussion of influences upon risk and vulnerability is threaded through the case study analysis. The paper closes by extrapolating specific conclusions for managed retreat in Ireland as well as identifying broader lessons for climate change adaptation and managed retreat.

## 2. Risk, vulnerability and flooding

There is an established body of literature in the fields of political ecology and environmental hazards that examines the role of social, economic and political processes in both causing such hazards and determining their impacts (Watts 1983; Wisner et al. 2004). Such studies have contributed to contextualising and historicising environmental hazards and challenged the behavioural and biophysical

focus of previous literature on this topic. Key concepts here include both “risk” and “vulnerability”, with “risk” defined as the potential outcome of an environmental hazard and understood as the product of both biophysical exposure and vulnerability (Wisner et al. 2004). Associated with this, “vulnerability” refers to peoples’ differing “abilit[ies] to anticipate, respond to, and recover from a hazard event” (Collins 2008, 24). As described by O’Riordan and Timmerman (2001, 436), vulnerability thus “relates inevitably to power ... [and] can be interpreted as a loss of power in the creation of one’s own future”.

Additionally, there is an expanding body of literature specifically addressing the political ecology of flooding. Particularly notable for its influence is Pelling’s (1999) study of flood risk in urban Guyana which demonstrates how deprivation, unequal political power and the legacy of colonial rule contribute to contemporary vulnerabilities. Hurricane Katrina later made starkly evident that inequitable risk and vulnerability to flooding was also a feature of the Global North (Walker and Burningham 2011). For example, Smith (2005) argues that Katrina was a “decidedly unnatural disaster” which showed that “it is not only in the so-called Third World ... that one’s chances of surviving a disaster are more than anything dependent on one’s race, ethnicity and social class”. In a similar vein, but referencing an Irish context, Jeffers (2013) argues that the global financial crisis contributed to increasing exposure and vulnerability, by diverting attention away from flood risk management and planning and eroding social networks and protections that provide essential supports in the event of flooding.

A nascent but growing number of researchers have also begun examining the origins and implications of managed retreat from a political ecology perspective. These studies have explored fundamental questions such as: what measures are put in place to ensure that communities remain intact (Lynn 2017); who is involved in decision-making (Maldonado 2014); and what interests determine whether retreat takes place? Responding to this final question, Ajibade (2017) and Paprocki (2019) highlight that retreat can represent a form of forced displacement to create space for urban or industrial expansion. Conversely, Koslov (2019) describes an alternative scenario where a local community in New York successfully campaigned for state support for relocation, which the author connects to their relative affluence and whiteness. This contrasts dramatically with the difficulties accessing support for relocation experienced by marginalised Alaskan communities (Shearer 2012). Hence, this body of literature demonstrates that retreat can take different forms and has ambiguous connections to vulnerability and risk. Nevertheless, each of these studies suggests that the implications for communities undergoing or seeking relocation are deeply connected to issues of politics and power. It is argued below that these issues can usefully be understood in terms of conflicts regarding the balance of responsibilities for the management of environmental hazards between the state and private actors.

## **2.1 Shifting responsibilities in flood risk management and managed retreat**

It is widely acknowledged that there are important ongoing negotiations and conflicts regarding the balance of responsibilities between states and private actors for the management of flooding (Johnson and Priest 2008; Butler and Pidgeon 2011). In practical terms, this relates to the adoption of new paradigms of flood risk management which advocate a shift away from wholesale prevention of flooding through engineered defences towards alternative strategies such as improved land use planning, flood insurance and warning systems, household-level flood defences and, in some cases, managed retreat. These strategies are informed by principles such as individual and community resilience and by the idea of “living with floods” (Scott 2013). They are set out in an Irish context in the Report of the Flood Policy Review Group (OPW 2004) and the EU’s “Floods Directive”.

Importantly, research on these new approaches to flood risk management (although not yet on managed retreat) suggest that they involve shifting responsibility for flood protection and recovery towards individuals and other private actors, for example through encouraging property owners to buy insurance or carry out upgrades to enhance the resilience of their homes (Butler and Pidgeon 2011). However, as noted by Johnson and Priest (2008, 522), “passing greater risk responsibility

onto individuals certainly raises 'fairness' questions for the most vulnerable members of society by placing a greater burden upon those who are often ill-equipped to understand, interpret and act on the information given". It is also widely noted that new responsibilities are often unaccompanied by the necessary guidelines, resources and power required to carry them out (Butler and Pidgeon 2011; Becker 2020). Thus, these shifts may ultimately exacerbate uneven distributions of risk and vulnerability to flooding.

These shifts in responsibility for flood risk management have been conceptualised in different ways including through the idea of "responsibilisation", referring to "a strategy, whether implicit or explicit, wherein the state seeks to transfer responsibility for a policy issue to individuals and private organisations" (Moon, Flannery, and Revez 2017, 410). These shifts further reflect broader processes of both "roll-back" and "roll-out neoliberalism". This refers, in the former case, to a withdrawal of the state from the provision of services to which citizens were previously seen as entitled (in this case protection from flooding) and, in the latter, to efforts to encourage private actors to provide these services in the state's absence (Holfield 2004).<sup>2</sup> Strategically shifting responsibilities in this manner can also be understood as what Castree (2008, 147) terms a "neoliberal environmental fix". As defined by Castree (2008), these are strategies adopted by the neoliberal state to (temporarily) resolve some of the contradictory pressures with which it is faced. These include, for example, the need to minimise state spending while also providing protection from environmental hazards in order to preserve the state's legitimacy (Castree 2008; Wainwright and Mann 2018). More fundamentally, they include the basic contradiction between the imperative of continued economic growth and the pressures of rapid environmental change (Harvey 2015).

Research has not yet addressed whether similar processes of state withdrawal are apparent in the context of managed retreat and, if so, what their implications might be. As noted above, there are instances where retreat is not supported or enabled by the state (e.g. Shearer 2012), meaning that those at risk must try to ensure their own security. In such instances, there is a denial of responsibility on the part of the state and its transfer to communities themselves, with potentially problematic results. Even in cases where retreat is supported in some form, there are conflicts regarding responsibility for managing the longer-term socio-economic risks of displacement. These can include impacts on health, well-being and loss of access to employment amongst others (Siders 2019; Danenberg et al. 2019). There is also the possibility that people could relocate to other areas at risk of flooding if such decisions are determined by individuals and/or housing markets rather than actively managed (Loughran and Elliott 2019). It is widely recognised that mitigating these impacts requires an integrated planning process and a range of comprehensive supports to, for example, ensure access to housing and employment (Siders, Hino and Mach 2019; Lynn 2017; Martin 2019). However, these longer-term socio-economic issues are typically not adequately addressed. Rather, it is implied that they are the responsibility of the individual and/or community to resolve, which raises the possibility of exacerbating risk in the longer term.

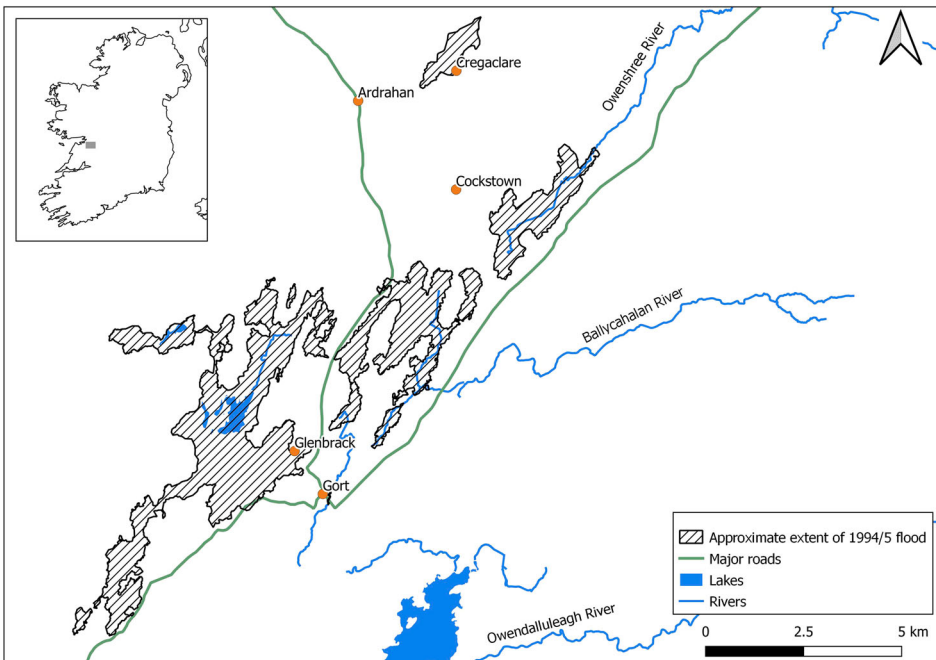
Questions regarding responsibility and the role of the state in managed retreat are also indirectly raised by Felli and Castree's (2012) discussion of planned climate migration. These authors argue (2012, 1) that current UK climate policy seeks to transfer responsibility from the state to individuals to ensure their own security through migration by constructing them as "'adaptable human subjects' ... able to respond tactically to anthropogenic alternations of the biophysical world". It is suggested that such forms of migration could thus come to represent a neoliberal "fix" in the absence of collective and state-supported adaptation. In an Irish context, Devitt and O'Neill (2017) identify a recent shift in policy and media discourses of flooding towards emphasising individual responsibility as well as suggestions that some areas may have to be "abandoned" in the context of financial and environmental pressures. They note that this has not been accompanied by any proactive steps to support or manage retreat from the areas in question, demonstrating a lack of strategic oversight and an underlying shirking of responsibility. The drivers and consequences of this process have, however, not yet been subject to in-depth research.

In summary, managed retreat has an ambiguous relationship to risk and vulnerability and can mitigate and/or exacerbate different aspects thereof. There are also important ongoing shifts in the role of the state and its perceived responsibilities for flood risk management which could potentially impact on the risks associated with managed retreat, but whose relevance in this context has yet to be fully investigated. Thus, a key issue explored in this paper is the degree to which the approach to managed retreat in Ireland reflects an underlying process of state withdrawal and the individualisation of responsibility. It further explores to what extent this relates to a broader political-economic shift towards roll-back neoliberalism (Mercille and Murphy 2015; Lennon 2019; Lennon and Waldron 2019).

### 3. Case study overview

From February to May 1995, there was severe and prolonged flooding in what is generally called the “Gort Lowlands” catchment, an area of 500km<sup>2</sup> which encompasses parts of Counties Galway and Clare in the West of Ireland (Naughton et al. 2017) (Figure 1). This area continues to be subject to periodic groundwater and river flooding linked to its complex geology, which has made flooding difficult to predict or prevent. In winter 1994/1995, the Gort Lowlands suffered the highest level of winter rainfall on record for that area, which was estimated to have a return period of between 1 in 500 and 1 in 1000 years (Southern Water Global 1998). This led to the inundation of approximately 6000 hectares of agricultural land and the direct flooding of 22 houses. A further 32 houses were inaccessible for up to 10 weeks. Houses were flooded in areas including Cockstown, Glenbrack and Cregaclare (see Figure 1). It was estimated that this event had a total cost of £10 million, including a decrease in property values (Gendreau 1998).

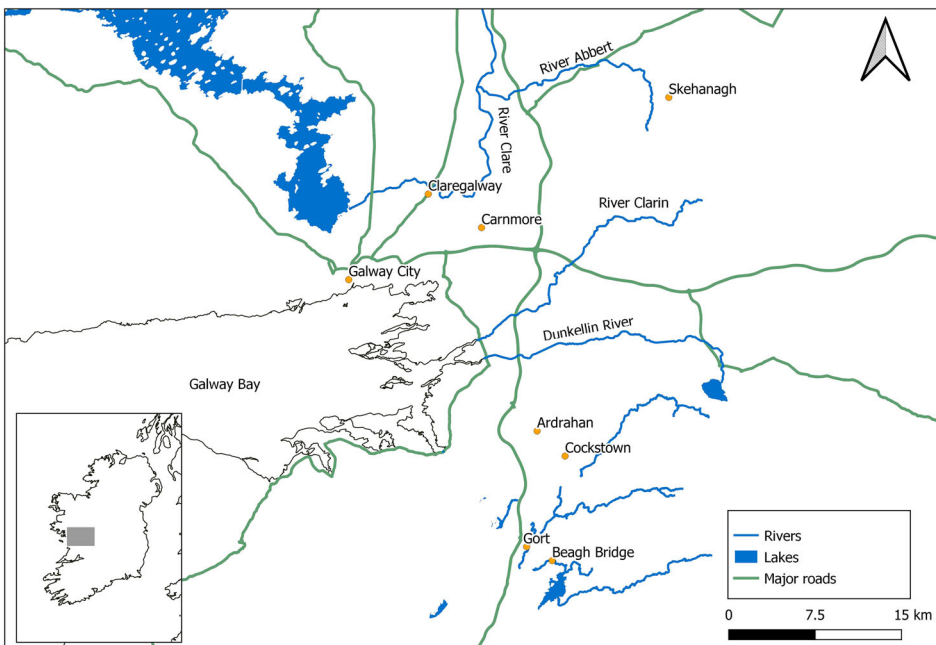
Following this event, a major study of hydrogeology and flooding in South Galway investigated the feasibility of an engineering solution. However, when this was ultimately published in 1998 it concluded that an engineering solution was not feasible due to the financial cost and environmental



**Figure 1.** Gort Lowlands Catchment (flood extent data from Office of Public Works/floodinfo.ie).

constraints associated with the conservation of the area's wetland habitats (Southern Water Global 1998). The flooding in 1995 was also followed by two important pieces of legislation. First were amendments to the Arterial Drainage Act 1945 to allow for the carrying out of small-scale urban drainage schemes by the Office of Public Works (OPW), the state agency with primary responsibility for managing flooding. As discussed below, this marked a major shift in the state's approach and raised questions of responsibility for managing rural flooding. Second, the government also enacted the "Commissioners of Public Works (Functions and Powers) Act 1996" which allowed the OPW to buy out flood-damaged houses to enable their owners to relocate. This remains the primary legislation governing household relocation, and thus managed retreat, in Ireland. Importantly, it established the basic structure followed by subsequent schemes whereby financial assistance is provided to enable property owners to buy or rebuild a new house with minimal additional support or oversight. In the context of South Galway, this legislation empowered the government to introduce what was termed the "Humanitarian Aid Home Relocation Scheme". According to figures provided in 2002, 17 households were relocated under this scheme at a total cost of approximately €1 million, although at that time further applications were still being processed (Cullen 2002).

The second scheme investigated in this paper involved the assisted relocation of property owners in both the Gort Lowlands and the Clare River catchment in Galway (Figure 2). This followed extreme rainfall in November 2009, the highest recorded total for that month across most of the country, which caused severe river and groundwater flooding (Walsh 2010). According to figures compiled by local authorities, approximately 220 houses and businesses were flooded in Co. Galway alone (Moloney 2010), with significant property damage also experienced in nearby counties. Total insured damages were estimated at €250 m (Surminski 2017). This was followed by studies investigating the possibility of reducing flood risk by technical means. Flood defences were subsequently installed to protect the town of Claregalway. However, similar defences were judged non-cost beneficial for other rural areas in the Clare River catchment including on the River Abbert (OPW 2010b). Another report reassessed the possibility of an engineering solution to flooding in the Gort Lowlands but arrived at the same conclusion as previously, namely that



**Figure 2.** Gort Lowlands and Clare River Catchments.

the cost and environmental impact would be too great (OPW 2011). There was consequent pressure on the government to introduce a relocation scheme and this finally occurred in 2011, following the general election in that year. This was progressed under the same legislative and policy framework as the 1995 scheme but was subject to concerns about eligibility as the number of applications significantly exceeded the level of funding available (*Connaught Tribune*, December 7, 2012). Ultimately, 20 property owners received financial assistance to relocate from areas including Cockstown, Carnmore, Skehanagh and Beagh Bridge (see [Figure 2](#)) at a total cost of approximately €4 million (Perry 2012).

#### 4. Changing trajectories of flood risk management

Understanding interactions between risk and responsibility in the context of Irish relocation schemes requires contextualising the policy of relocation within changing approaches to flood risk management in Ireland. Throughout the mid-twentieth century, this primarily involved large-scale schemes of land drainage and flood prevention aimed at improving agricultural productivity undertaken by the OPW under the Arterial Drainage Act 1945 (O'Neill 2018). Although essentially a by-product of protecting agricultural land from flooding, these schemes also protected houses and infrastructure in both rural and urban areas. However, in the 1970s and 1980s, there was growing concern about the environmental impacts of these schemes and whether the investment was merited (as determined by cost–benefit analysis) in the context of the diminishing value of agricultural land (Bruton and Convery 1982). In policy terms, this led to a shift away from land drainage and wholesale flood prevention and, after 1995, towards more targeted projects to protect urban areas. Amendments to the Arterial Drainage Act in 1995 introduced following the flooding in South Galway in winter 1994/5 empowered the OPW to undertake small-scale urban flood relief works. A project of this type was later implemented in Gort town (Southern Water Global 1998), but this left surrounding rural areas in the Gort Lowlands catchment unprotected. More generally, this new focus on urban areas left unaddressed the question of flood management in more rural areas where this was not likely to be deemed cost-beneficial.

In terms of risk and responsibility, the development of Irish flood management policy thus follows a common trajectory involving a shift away from a situation where the state accepted responsibility for preventing flooding towards its withdrawal from this role in the context of environmental and financial pressures (Butler and Pidgeon 2011). It thus partially follows the model of roll-back neoliberalism, although the idea of a wholesale roll-back does not fully capture the Irish experience given that flood protection was never fully comprehensive and was always premised on agricultural productivity. This arguably relates to the particularities of the Irish context wherein there has never been a highly-developed welfare state and thus roll-back neoliberalism can be understood as an “amplification”, rather than a reversal, of pre-existing trends (Kitchin et al. 2012, 1322). This amplification of state withdrawal and the consequent emergence of a responsibility vacuum provides the backdrop to the relocation schemes in 1995 and 2009. In the following quote from the Chairperson of the OPW, the interrelationship between changing approaches to flood risk management in the context of cost–benefit decision-making and the emergence of relocation as a policy choice in the mid-1990s is explicitly recognised:

The cost–benefit has simply gone the wrong way in any [arterial drainage] scheme which we have examined recently ... Part of our approach to this problem in South Galway, for example, is to relocate people. That is a cheaper option. (Murphy 2000)

This quote thus highlights that relocation emerged as a stop-gap measure or “fix” in situations such as South Galway where no other solution is deemed economically beneficial. Importantly, this framing of relocation as a low-cost alternative to other forms of flood risk management precludes a more comprehensive and resource-intensive approach involving, for example, the provision of additional social supports. As discussed below, this understanding of relocation as low-cost, last



resort option is entwined with unreliable and fragmented governance structures that exacerbate various forms of vulnerability.

## 5. Discretionary intervention

Providing further evidence of uncertainty regarding responsibilities, the relocation scheme that was introduced in 1995 was framed as a discretionary initiative that the government had chosen to introduce, rather than as a core service to which people had a right and which the government was responsible for providing. This was reflected in parliamentary debates surrounding the introduction of the relevant legislation in 1996 through the description of the OPW's role as related to the provision of "humanitarian assistance" rather than "compensation", which it was thought would have imposed new responsibilities on the state. As described by the Minister responsible for introducing the 1996 Act, "compensation implies the existence of a legal entitlement, while humanitarian assistance has no such connotations" (Coveney 1995). This is particularly important because the 1996 Act has remained the primary legislation governing relocation in the context of flooding. Consolidating this position, a government review of flood risk management policy published in 2016 concluded that relocation should continue to take the form of "once-off, targeted schemes" (Interdepartmental Flood Policy Co-ordination Group 2016, 70).

This prompts fundamental questions concerning the relationship between responsibility and power in the context of post-disaster support. Specifically, it potentially generates new vulnerabilities because access to support is related to one's capacity to pressure the government to introduce another "once-off" scheme. To some extent, this differs from trajectories of flood risk management in the UK and elsewhere in the sense that there has not been a full withdrawal of the state from the provision of assistance post-flooding and its transfer to insurance companies (although, as discussed below, insurance does play an increasingly important role). Rather, in an Irish context assistance may be provided but on an uncertain and precarious basis. Thus, while in the classic narrative of "responsibilisation" there is a formal reallocation of responsibility from the state to individuals (Sinevaara-Niskanen and Tennberg 2012), in this case responsibility has been strategically diffused leading to a situation of what Beck (1998, 15) terms "organised irresponsibility".

Furthermore, the framing of relocation as a dimension of "humanitarian assistance" circumscribes support to those who have already suffered flood-related damages. It thereby negates the possibility of an *anticipatory* managed retreat which is widely regarded as best practice (Siders, Hino, and Mach 2019). As such, responsibility only extends to providing post-disaster assistance rather than engaging in a strategic planning process. This reactive humanitarian assistance model and consequent competition to access relocation schemes also leads to contrasts with the more conventional narrative whereby managed retreat is imposed upon unwilling communities (Blunkell 2017). However, this is only because assisted relocation after a flood event is viewed by those affected as a least-worst option when compared to the alternatives, such as trying to rebuild in situ in the context of uncertainty regarding future flooding.

### 5.1 Clientelism

Studies of the political ecology of flooding have helped highlight the role played by political power and connections in determining one's vulnerability (Pelling 1999). Recent research suggests that this may also be the case in the context of managed retreat. For example, Koslov's (2019) analysis of managed retreat in New York after Hurricane Sandy demonstrates that affluent white communities were better able to gain political support and resources to enable relocation from at-risk areas. Similarly, there is evidence that in both instances of relocation in Galway, the ease of access to financially assisted relocation depended upon political connections and networks. This appears to be associated with the framing of relocation as a discretionary policy and the latitude for (in)action which this creates for political actors, as well as to the clientelistic nature of the Irish political system

(Kitchin et al. 2012). Consequently, political clientelism emerges as a salient issue in understanding access to Irish relocation schemes.

Of note in this regard is how the 1995 scheme was introduced rapidly, with the government announcing its intention to do so in July 1995. Emergency legislation was promptly introduced in December of that year to enable this to be realised. Instrumental in the speed with which this legislation was enacted was the political influence and effectiveness of local lobby groups. These included the South Galway Flood Victims Action Group (SGFVAG), which was a group composed of property owners affected by flooding and was led by a prominent barrister and flood insurance expert. Also prominent in lobbying activities was the South Galway branch of the Irish Farmers Association (IFA), which is an influential lobby group within Irish politics. These groups presented collective demands including support with home relocation and assistance for farmers (*Irish Independent*, March 28, 1995). Given their local influence, they were supported by local and national political representatives in such lobbying, which enabled them to secure numerous meetings with the relevant government Minister.

In contrast, those affected by the flooding in 2009 had a lesser degree of influence and a less effective political strategy (for example no coherent group of those affected was formed). Unlike in 1995, they did not have support from government figures or lobby groups such as the IFA. There were correspondingly much greater delays as, between November 2009 and February 2011, the government refused to introduce a relocation scheme. Indeed, according to the then Minister of Finance:

There is no specific relocation grant scheme in place in my Department for households affected by flooding and there are no plans to introduce such a grant. It is a matter for any household ... to have in place the necessary insurance arrangements to deal with natural disasters such as flooding. (Finneran 2010)

This quote both highlights uncertainty about the availability of supports for relocation and thus continuity in terms of “organised irresponsibility”, while also illustrating a degree of change in the sense that by 2010, there was a greater willingness to state explicitly that individuals were responsible for ensuring their recovery through the insurance market. In response, efforts were made by those affected by flooding to secure assistance, including a case brought to the Petitions Committee of the European Parliament. This raised the issue of local government responsibility arising from perceived failures to adequately consider flood risk during the planning process and of a general duty of the state to provide compensation for losses due to flooding. However, the Committee found that EU legislation did not impose any relevant responsibilities regarding planning or compensation (European Parliament 2011).

That a relocation scheme was ultimately introduced can be attributed to sustained media attention and the politics associated with the general election of February 2011. Of particular note here is that the outgoing Minister for Social Protection, who was also a representative for Galway, announced the scheme immediately before the election in response to media attention. Credit for the scheme’s introduction was subsequently contested, with both the former Minister and the new government claiming responsibility (e.g. White 2011; Ó Cuív 2011). However, even after the scheme was announced, there were concerns about the restrictiveness of the eligibility criteria and progress with implementation was extremely slow. Indeed, the analysis of planning applications demonstrated that, in at least one case, the process had not been completed by October 2018. It is therefore unsurprising that a comparative survey of those affected by flooding in 2009 in both Galway and Cumbria, UK, found that only 44% of people in Galway believed that state assistance had been provided promptly, a much lower rate than the 74% of people in Cumbria who held this view (Adger et al. 2013). The authors link this to the fact that there is greater clarity regarding responsibilities for responses to flooding in the UK than in Ireland (Adger et al. 2013). This could arguably also be linked to the fact that discourses of individual responsibility are seemingly more explicit and embedded in a UK context, meaning that there may be lesser expectations of state support (Butler and Pidgeon 2011).

Overall, the contrast between responses to these two flooding events highlights the salience of connections between political power and vulnerability, which can be connected to the framing of relocation as a discretionary policy without consistent criteria or an institutional framework to determine whether it should take place. In this context, relocation functions as a relatively low-cost strategy to diffuse political pressure. To use Castree's (2008) terminology, it represents a "neoliberal environmental fix" introduced by the state when faced with a potential crisis of legitimacy related to a perceived inability to ensure citizens' safety. Yet this "fix" fails to comprehensively address flood risk because it potentially excludes those with insufficient access to influential decision-makers, thus exposing a political dimension to vulnerability.

## 6. State withdrawal and entitlement

While there is obvious continuity between both cases in terms of a lack of clarity regarding responsibilities, there are also significant differences related to issues of entitlement and vulnerability that reflect a progressive process of state roll-back, particularly in the context of the great recession and the austerity policies which followed. As described by Adger et al. (2013, 330), the 2009 flood in Ireland occurred against the backdrop of "a profound renegotiation of state responsibility around social protection and economic management" linked to the financial crisis.

This context of financial crisis and austerity was reflected in the relocation scheme implemented in 2011, most obviously by the fact that a total of €4 million was allocated to it even though it was recognised that this was insufficient given the number of flooded households (Ó Cuív 2011). Ultimately, a total of 32 applications were received but only 20 were accepted. There were also more stringent conditions associated with eligibility, as suggested by a local representative from Galway who stated that, "Those who have managed to achieve either relocation or funding have had to go to great lengths to prove their entitlement to compensation" (Connaughton 2014). Indeed, while in 1995 a property owner was eligible for relocation if there were no plans to put in place engineered defences in the following 12 months, this condition was revised in 2009 such that applications were ineligible if it was deemed feasible to build defences at any point in the future. As a result, in at least one case, an application for relocation was rejected because an engineered scheme was determined to be technically feasible, even though there was no funding or plans to implement it (OPW 2010a). In this context, it is unsurprising that Revez, Cortes-Vazquez, and Flood (2017, 2505) find that state assistance after flood events, including relocation, is widely perceived in South Galway as "unreliable and fragmented".

Similar issues have arisen in the context of a more recent relocation scheme announced following major flooding in 2015/16, which received approximately 100 applications, but was allocated sufficient funding for only 20 to be accepted. In this context, the eligibility of those whose homes were not directly flooded but to which access was cut off has been particularly contentious (*RTÉ News* 2017). Despite this, a recent review of flood policy stated that future relocation schemes will be "very restrictive" (Interdepartmental Flood Policy Co-ordination Group 2016, 70). Nonetheless, increasing numbers of people are likely to require relocation in the context of rapid climate change and more intense flooding in Ireland. Indeed, approximately 5% or 500–600 of the at-risk properties assessed as part of the government's Catchment Flood Risk Assessment and Management (CFRAM) programme, itself only a small portion of the total number (O'Sullivan 2020), will not benefit from engineered defences due to technical, environmental or cost constraints (Harney 2018), which means they might reasonably expect support with relocation. In this context, it is possible that denying responsibility for those excluded from engineered defences and restricting entry to relocation schemes will become politically as well as socially unsustainable.

## 7. The insurance vacuum

As documented in the literature on flooding and responsibility, the growing significance of private insurance as a means of ensuring recovery from flood events is a key and problematic dynamic (Butler and Pidgeon 2011; Walker and Burningham 2011). According to Johnson and Priest (2008, 515), in the UK the insurance market has become the primary “safety net” for householders and has thus removed issues related to financial losses and recovery from state responsibility. This has replaced more comprehensive compensation and flood insurance programmes which have been gradually rolled back in the UK (Johnson and Priest 2008) and other European countries (Tennberg et al. 2018) and creates new vulnerabilities for those who are unable to access insurance (Walker and Burningham 2011).

In contrast to this trajectory of state roll-back, Ireland has never benefitted from comprehensive state-backed insurance or compensation for flood losses, thus providing a further instance where Irish neoliberalism entails the “amplification” rather than “reversal” of existing tendencies. Nonetheless, insurance has been increasingly emphasised as the key means to ensure security against flood-related losses (Devitt and O’Neill 2017), which marks a profound shift in perceptions of responsibility. Associated with this, gaps in insurance coverage have come to the fore of media and political debates (Surminski 2017). As noted by Christophers (2019), flood insurance in Ireland is extremely deregulated with no state intervention whatsoever. Thus, pricing is entirely market-driven, leading to the exclusion of low-income groups or insurance being unavailable at any cost. This exemplifies how “responsibilisation” often involves the transfer of responsibility without commensurate resources to ensure that new responsibilities can be carried out (Becker 2020).

Accordingly, a key issue raised in media and political debates in the context of the 2009 flood event (to a much greater extent than in 1995), was a lack of access to flood insurance, both before and as a result of the 2009 flood. Furthermore, this acted as a key driver of demands for relocation as householders either had no means of rebuilding in situ or faced future uninsured losses if they remained in place. Importantly, there were demands for state intervention in the insurance market, but these were rejected on the basis that the cost of intervention would be too great (Surminski, 2017). Instead, relocation emerged as an alternative strategy for resolving the problem of a lack of insurance. In terms of the trajectory of the flood insurance debate since 2009, government efforts have focussed on addressing specific technical problems related to data-sharing (which could in fact lead to increased premiums for those in high-risk areas) (Surminski 2017). Thus, the underlying issues remain unresolved and are likely to continue creating demand for relocation. More generally, the interactions between insurance and relocation described here further highlight the function of relocation as a last resort or “fix” which may or may not be activated when other forms of support are withdrawn.

## 8. Planning failures

Associated with a transition away from exclusive reliance on engineered defences, planning is recognised as a core dimension of flood risk management. Thus, planning authorities have become actors with key responsibilities for managing flood risk (Johnson and Priest 2008). The role of planning is also emphasised in the literature on managed retreat. This literature identifies a need to consider how land is used post-relocation, where people relocate to and to what extent this process needs to be managed in the context of, on the one hand, a risk that people will relocate to areas equally at risk of flooding and, on the other, an understandable desire to remain close to one’s home (Siders, Hino, and Mach 2019).

This leads to a further key factor that has contributed to increasing risk and vulnerability to flooding in the context of Irish relocation schemes, namely failures of the planning system in areas at risk of flooding. This is clearly illustrated by the controversy surrounding the construction of four houses in Glenbrack, outside Gort in County Galway on land which was widely known to

be flood-prone. These houses were flooded in 1995 and their owners were included in the relocation scheme. Afterwards, it emerged that a prominent national politician had been involved in their development while serving as a councillor in the local authority. It was also widely reported that planning permission had been granted via a controversial “Section 4” motion, whereby councillors could overrule the recommendations of the planning officer (*Connaught Tribune*, February 17, 1995), thus illustrating connections between the historical production of flood risk and the deeply clientelistic nature of the Irish planning system (Fox-Rogers 2019).

The role of planning in exacerbating flood risk was also illustrated in the 2009 flood by the case of the Flatley family whose house near Ardrahan in Co. Galway was flooded in that year. They subsequently discovered that an adjacent house had been flooded in 1995 and that its owner had been included in the previous relocation scheme. Despite this, and contrary to the recommendations of a government-commissioned report that development in areas flooded in 1995 should be restricted (Southern Water Global 1998), the Flatley family had been granted planning permission for their house in 2003. However, when such planning failures were raised, the local authority denied responsibility as illustrated in the following quote from newspaper coverage of ongoing flooding concerns in the area:

When the families questioned why they were granted planning permission in an area that was prone to flooding, they were told that it was not the responsibility of the county council planning department to warn applicants of any potential risks in their choice of site. (*Irish Independent*, December 6, 2010)<sup>3</sup>

The circumstances of the Flatley family, and broader discussions of planning in 1995 and 2009, also highlight complex relationships between planning, risk and responsibility and the (successful) contestation of attempts to shift responsibility away from state agencies. In particular, a key strategy adopted by those seeking assistance post-flooding was to highlight perceived failures of planning. This resonated powerfully in 2009 following the financial crisis and the associated Irish property market crash (Kitchin et al. 2012), at which point there was widespread criticism of property developers and local authorities for their role in permitting development on floodplains (Devitt and O'Neill 2017). Accordingly, failures of planning surrounding the 2009 flood generated significant media and political attention which likely contributed to the introduction of a relocation scheme in 2011 as discussed above. Overall, this demonstrates how the emergence of planning as a recognised dimension of flood risk management, and the visible failures thereof, have provided the basis for shifting blame away from individuals and back towards state agencies.

However, it is important to note that the risks associated with poor planning also include those produced through insufficient oversight of the relocation process. Documentary sources show that in several cases, both in 1995 and 2009, property owners used the financial assistance to rebuild on sites immediately adjacent to their original homes. These new houses remain, therefore, within or immediately adjacent to areas designated as being at risk of flooding. This reveals core structural inadequacies of household relocation schemes in Ireland wherein individual householders receive financial assistance to buy a new home or rebuild elsewhere with minimal spatial planning oversight. This contrasts dramatically with more comprehensive approaches to managed retreat which have been adopted in other instances (Hino, Field, and Mach 2017), including in mid-twentieth century Ireland (Tubridy, Scott, and Lennon *forthcoming*). Furthermore, the lack of oversight can be understood as representing what Tennberg et al. (2018, 215) term an “externalisation of responsibility” in the sense that responsibility for ensuring that development takes place in areas safe from flooding is implicitly shifted onto the relevant local planning authority without regard for whether they have the capacity, in terms of knowledge or resources, to effectively fulfil this role. More generally, the consequences of this lack of planning oversight present a conspicuous illustration of the fact that relocation in Ireland functions essentially as a short-term fix which alleviates some of the most immediate aspects of risk and vulnerability (biophysical and financial) for some property owners but fails to either challenge the underlying systemic processes generating these risks or provide an effective long-term solution.

## 9. Conclusion

For retreat to be managed effectively in a period of intensifying climate change hazards, there is a need for a strategic, coordinated, effective and equitable response that is democratic and transparent. This challenge raises important questions regarding the present and future responsibilities of the state, namely: to what extent do political and bureaucratic decision-makers view the state as responsible for ensuring peoples' security from the effects of environmental hazards; how can they be pressured to intervene; and what are the implications of roll-back neoliberalism for how retreat is managed? In response to these questions, this paper has investigated the role of shifting and contested responsibilities between the state and private actors and how this affects risk and vulnerability in the context of managed retreat.

Drawing on two Irish case studies of managed retreat in Ireland, the paper has identified various interconnected factors that contribute to vulnerability and risk which can be traced to underlying uncertainties, shifts and conflicts regarding the respective responsibilities of the state and private actors. Set within the broad context of roll-back neoliberalism, there is a complex combination of both "organised irresponsibility" and responsabilisation. Across both of the cases examined there was a continuous state of "organised irresponsibility", whereby formal responsibilities were strategically left unclear in the wake of state withdrawal through the framing of relocation as a discretionary intervention. There was also a progressive roll-back and increasing responsabilisation of individuals through stricter conditions to access relocation and greater emphasis on private insurance. This interplay leads to what Wisner et al. (2004, 16) term a "concatenation" of factors that amplify exposure to risk and intensify vulnerability. These include: a withdrawal from comprehensive flood protection; a discretionary approach to supporting relocation; a market-driven model of flood insurance; and failures of the planning system. In conjunction, these issues put people at risk initially, leading to demands for relocation, as well as creating new risks by failing to effectively manage the relocation process. Overall, the Irish approach represents a largely unmanaged form of retreat in which there is minimal state support for a lucky few in the form of financial assistance, but relocation is otherwise wholly unmanaged and non-strategic.

As a contribution to broader debates in political ecology, this research has demonstrated that in certain circumstances, relocation may be understood as a specific form of "neoliberal environmental fix". Theorising relocation as a "fix" reflects how its primary origins may be political (it can be introduced where politically expedient to do so) and financial (it may be the cheapest of the available options). It further reflects the multidimensional ways in which it may represent an evasion of responsibility for comprehensively addressing fundamental risks and vulnerabilities which affect both those included and excluded from relocation schemes. These include: (1) the risk of being denied access to support with relocation that stems from the framing of relocation as a politically discretionary intervention; (2) the legacy of the financial crisis and subsequent austerity policies that have further restricted access to relocation schemes; (3) a highly market-driven system of flood insurance that leaves significant numbers of people unable to recover from flooding; and (4) the risk of repeat flooding for those who have already relocated given the lack of oversight of this process.

Overall, the paper illustrates that vulnerability can be produced through the incremental accretion of institutional and political practices that, while not necessarily strategic, generate a situation of "organised irresponsibility". Further, in the context of historical disavowals of responsibility by the state and within a current climate of neoliberalism, there is ample space for responsabilisation and the individualisation of risk management. If unchallenged, these dynamics will only lead to the exacerbation of existing and/or creation of new vulnerabilities in the context of predicted increases in the frequency and intensity of climate change impacts.

Looking to the future, practical recommendations for Ireland include the need to reconsider where managed retreat is positioned relative to other flood risk management strategies (such that it does not remain a low-cost, last resort option) and much more comprehensive and integrated

approaches. This would involve a strategic framework for determining whether relocation is required, establishing consistent criteria for eligibility and enhanced planning and coordination of the relocation process. Of relevance beyond Ireland, the paper also shows the need for a strategic approach to managed retreat, for comprehensive supports to address the longer-term socio-economic risks of displacement, and the need to approach relocation and climate adaptation with a sense of collective responsibility so that those who, typically through no fault of their own, are most exposed to climate hazards are not left to fend for themselves.

An important remaining question is how such changes could be achieved? Evidence from the 1995 relocation scheme and other international examples (e.g. Perry and Lindell 1997; Koslov 2019) demonstrates that such changes are possible through organisation and mobilisation on the part of affected communities. In Ireland, there is currently evidence of demand for relocation (Raleigh 2020). Those seeking support have not yet formed any form of coherent campaign group or organisation but there are other groups which have engaged with issues of justice associated with flooding and climate adaptation, such as the National Flood Forum. These networks could provide the basis to advance demands for supported relocation in future. At the same time, a key finding of this paper has also been to highlight how poorly-managed approaches to relocation reflect broader shifts towards the individualisation of risk and state roll-back both in the context of flood risk management and climate adaptation and across society more broadly. Although not uniform, these shifts are apparent in many different countries and contexts. Moving towards more collective approaches to managed retreat will thus depend upon pushing back against these broader trends. In the context of climate adaptation, there is a need for far-reaching democratic debate regarding the distribution of risks and responsibilities for managing current and future hazards, and for radical challenges to the status quo, lest these continue to disproportionately burden the most vulnerable.

## Notes

1. There has been a further relocation scheme encompassing the area of the previous two, as well as others around the country, which followed severe flooding in 2015/16. This was not included in the analysis because it had not been concluded during the period of data collection and thus information about key issues such as who has been included/excluded is not available. Nonetheless, some comments about this project and future trajectories of managed retreat in Ireland are provided.
2. Neoliberalism itself is widely understood as a political and economic project to extend market relations as far as possible into society, although it is also recognised that neoliberalism is not monolithic and is rather layered upon “inherited institutional arrangements and embedded in particular historical and geographical contexts” (Holifield 2004).
3. While Irish policies regarding planning and flood risk management have evolved since this particular instance, the question of responsibility remains unclear. For example, according to Flannery, Lynch, and Cinnéide (2015), there is often a much greater emphasis on mitigating the risks generated by new development, such as the displacement of flooding, rather than risks to the developments themselves.

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