

The evolution of UK flood insurance: Incremental change over six decades

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Our theorising here shifts away from the catalytic role of the flood itself – or other crises - towards a deeper understanding of the relationship between change and stability, taking the example of UK flood insurance and the agreements – and the implicit policy approaches – between the relevant actors involved: the private insurers and the government. This research relies upon in-depth analysis of the policy agreements governing flood insurance since the 1960s, and semi-structured interviews with six current or ex-flood insurance professionals. We have found that the important agents of change have been, firstly, the threat to existing household insurers from new entrants unencumbered by agreements to insure all-comers. Secondly, the march of technological change has made exposure more explicit and pricing risk both easier and less expensive. But the slow pace of change and the relatively stable role of the different actors and coalitions is now clearer. The many significant windows of opportunity created by major flooding or financial crises have not significantly affected the pace or direction of policy change. The overriding importance of the London location for - and the profitability of - the insurance industry, both to government and to the insurers themselves, is our explanation for the extraordinary policy stability that we have described. This particular history suggests that the UK may not be a good model for imitation elsewhere.

Keywords: Floods; policy evolution theory; insurance; UK

Introduction

Institutions, policies and approaches towards flood risk management (FRM) in the UK have undergone a substantive transition over the past 50 years or more, affecting the dominant philosophy, the type of risk reduction measures, and the implementation strategies (Tunstall, Johnson & Penning-Rowsell, 2004). This transition has been characterised into three key phases and phrases: ‘land drainage’, ‘flood defence’ and, more recently, ‘flood risk management’ - each of which reflect a fundamental shift in

the dominant beliefs, values and attitudes of society towards the flood problem (Johnson, Tunstall & Penning-RowSELL, 2005; Tunstall et al., 2004). Research has also examined the impact of flood crises as creating ‘windows of opportunity’ for promoting and fostering policy change (Penning-RowSELL, Johnson & Tunstall, 2006).

In this paper, the theorising shifts away from the catalytic role of the flood itself – or other crises - towards a deeper understanding of the relationship between change and stability, taking the example of flood insurance, its agreements, policy approaches and the actors involved: the insurers and the government (Defra; HM Treasury). We examine flood insurance both because it is an important FRM measure in the UK and because an overview of this field over the past 50 years would suggest many years of relatively unusual policy stability. It is also notable in that the private sector is centre-stage – profit driven insurance companies – and therefore it differs markedly from most other measures in FRM which are in the public domain. As we shall see, this profoundly affects outcomes because a major factor continues to be assuring the profitability of the private companies involved, not least to ensure that the government is spared the obligation and burden of a scheme of national flood compensation.

Our research should be seen in its international context. There is a wealth of literature about the different current and past flood insurance models and their effectiveness (including CEA, 2005; CCS, 2008; Fiselier & Oosterberg, 2004; Gaschen, Hausmann, Menzinger & Schaad, 1998; Lamond & Penning-RowSELL, 2011), highlighting the relative uniqueness of the UK flood insurance model, with its private market basis and little direct government intervention. These reviews also show that insurance (and compensation) arrangements in other European countries, for example, have undergone many recent and fundamental reforms (e.g. Belgium in 2003/5;

Denmark 2000; France 1982; The Netherlands 2000) and that the US NFIP has only been in its current guise for some 35 years (Lehrer, 2008; Michel-Kerjan, 2010).

In the paper we therefore seek to understand the UK arrangements, and its special character, not least to show how it may not be a model for imitation elsewhere, owing to its unique history. We do this by first outlining our methodology and important limitations, and the classic theories concerning policy evolution. We then catalogue the many stages of flood insurance policy and practice since the 1960s, and seek to discuss this empirical material in the general context of the theories that frame our analysis. We briefly conclude with some comments about the value for this policy area of the policy change theories we have described, and some suggestions as to how the situation might evolve in the future given the many forecasts of greater flood risk as a result of climate change.

Methods and Limitations

This research relies upon in-depth analysis of the policy agreements governing flood insurance since the 1960s (ABI, 2001; 2002; 2005; 2008; BIA/FOC 1961; Defra, 2013a) in the context of other FRM policy decisions which may have influenced the provision of flood insurance (e.g. Defra, 2005). We also draw upon Parliamentary and professional debates about flood insurance, to illuminate the several drivers for policy stability or change. An integrated policy analysis approach has been adopted which combines both a retrospective and prospective analysis of policy decisions (Dunn, 2004), permitting comment on how previous policy evolution and decisions may impact on future flood insurance provision.

But methodologically this field is far from easy: in many instances it is simply not possible to understand fully the pattern of drivers and events. This is partly because ‘commercial sensitivities’ abound in the insurance industry – whether real or invented.

Policy evolution here has been as a result of repeated periods of intense negotiation between the key players, most of which has been ‘behind closed doors’ with little written evidence remaining. Briefings to Ministers are also unavailable and government motives appear even less easy to fathom here from their public pronouncements than in other areas. Also, the incremental policy changes that we are investigating are much more hidden than catalytic changes, which are often well publicised. The forces that inhibit change – or promote no-change - are often deep seated within society and difficult to pinpoint and analyse: when there is no change, or very little change, this can be difficult to explain.

To seek to remedy this situation, empirical data have been gathered through in-depth semi-structured interviews with six current or ex-flood insurance professionals many of whom represented the insurance industry from 2000 to today (Table 1)¹. Each interview was transcribed and analysed using a systematic process of open and selective coding adopting a grounded theory approach to data analysis (Strauss & Corbin, 1998). We have thereby explored, as far as possible, the content, processes and power relations within these negotiations to better understand the key drivers involved and complement the documented formal policy agreements and associated published material. Often, however, even these interviewees only had hypotheses about the cause of slow policy evolution, or periods of apparent change, rather than unambiguous information.

Table 1 should be inserted about here

Given these methodological difficulties, we are careful here not to ‘over-interpret’ the evidence that we have collected, and anticipate that this paper provides only a first step in unpicking the hidden but important world of flood insurance. As time

passes some of the negotiation processes may become less contentious and clearer, and that is an area for future research.

Conceptualising policy change and stability

We seek here to understand the slow and incremental evolution of FRM policy through an understanding of change itself.

In this regard the policy science literature is awash with theories on how and why policy changes in certain contexts but is highly resistant to change in others (Birkland, 2005): we briefly review these ideas here. A common strand is that policy subsystems are inherently resistant to change. The classic theories are that any significant change requires either an external shock or catalyst (Johnson et al., 2005; Sabatier & Jenkins-Smith, 1993), or a combination of external pressures resulting in ‘large leaps’ such that the status quo becomes ‘punctuated’ (Baumgartner & Jones, 1993), or a ‘window of opportunity’ opens to connect successfully two or more components of the policy stream (Kingdon, 1995). Stability, conversely, implies that these change agents are weak or non-existent; hence their failure to facilitate change during the brief timeframe within which any ‘window of opportunity’ remains open.

Stachowiak (2011) has identified three more theories that also raise questions regarding policy stability (Table 2). In challenging rational choice theory, Tversky and Kahneman’s (1981) ‘Prospect theory’ is useful in arguing that change depends on how options are framed and presented. ‘Political Elite’ theory is valuable in that, drawing on the sociology of power relations, it focuses on influence concentrated in the hands of a few individuals (Domhoff, 1990; Wright Mills, 2000). And, finally, from social psychology, ‘Grassroots theory’ shows how community organisations can create power and, through mutual action, achieve change (Alinsky, 1989; Biklen, 1983).

Table 2 should be inserted about here

Each of these theories is based on differing ontological, epistemological and theoretical understandings of change, leading to a number of profound questions of the policy process: Does policy change as a result of socio-economic context or human agency? Is it the networks of relations between actors, and their choices and bargaining, or their beliefs, ideas and interests themselves that dominate? Is policy change constrained or enabled by institutional constraints and opportunities and contextual socio-economic conditions, or do ideas have ‘a life of their own’ (John 1998)? In this research we drew on this classical political science literature to provide a framework from which such questions can be asked of the flood insurance policy subsystem.

If policy stability *appears* abnormal in FRM, this is counterintuitive to most theorists of policy change, who argue that under ‘normal conditions’ policies are indeed relatively stable. Where it is in the interest of powerful elites (Wright Mills, 2000), advocacy groups (Sabatier, 1999; Sabatier & Jenkins-Smith 1993), actor networks (Marsh & Rhodes, 1992) or policy communities, a set of shared core beliefs and values result in a common understanding of the policy domain, the main policy problems, and the desirability and feasibility of different policy options (Huitema & Meijerink, 2009). These groups resist change, creating a policy equilibrium (Baumgartner & Jones, 1993), serving thereby to further enhance their individual and collective interest and power in the strategic manipulation of the policy process.

For some observers, however, policy stability is a result of inherent barriers to change – dominated by ideological values and beliefs, institutional constraints, the ingrained nature of public policy decision processes and the inadequacies of policy implementation (Bachrach & Baratz, 1970). For others there is active defence of the

status quo by the power elites (Wright Mills, 2000). From this perspective, policy subsystems are continually being created and destroyed by negative feedback. Only during times of positive feedback can issues be redefined and a new stability created (Baumgartner & Jones, 1993).

Huitema and Meijerink (2009) draw on Kay (2005) and Haas (1992) on path-dependence and epistemic communities to suggest that each step down a policy path essentially increases the benefits of the current activity compared with other options. This institutionalises ideas and policies from particular advocacy coalitions or epistemic communities, which are then largely irreversible. Here the dominant outcome is incremental and marginal policy shifts that match the changing interests of the powerful actors. The only changes to belief systems here is to Sabatier and Jenkins-Smith's (1993) secondary policy beliefs; core beliefs remain unchanged (Huitema & Meijerink, 2009, p. 25-26).

For Kingdon (1995), stability is maintained until there is a 'policy window' that can be exploited by policy communities and entrepreneurs. These 'windows' can be predictable (e.g. elections) or unpredictable (e.g. floods). Triggers can be both dramatic - such as natural disasters, wars and revolutions - or they can be the result of less dramatic perturbations such as changes in socio-economic conditions, public opinion and governance arrangements. But crises events rarely result in any fundamental shifts in policy (Penning-Rowsell et al., 2006); rather, as Huitema and Meijerink (2009) corroborate, they tend to act as a focusing event for accelerating policies along an existing path.

Less dramatic perturbations appear to be equally (if not more) important in facilitating 'windows of opportunity' for change. Here, the gradual rationalising, reasoning and bargaining of policy entrepreneurs and coalitions over time can ensure

that when socio-economic, institutional or governance conditions facilitate it, new policy ideas can be seen as the solutions to perceived problems. Indeed it can be the actions of the relevant political players themselves that provide the political will to foreground their particular policy ideas. Similarly, changes to relevant governance structures can provide policy entrepreneurs and coalitions with the ‘venue’ to exploit their policy ideals. This may be down to simple bargaining and negotiations in order to end a policy stalemate (Sabatier *et al.* 2005 in Huitema & Meijerink, 2009).

What is clear is that most theorising suggests that, over a period of several decades, any particular policy subsystem is unlikely to be identical to its systems in the past. These changes may be solely incremental or they may include cataclysmic or seismic shifts that have rapidly and dramatically altered policy domains. Changes are likely to include a changing pattern of actors, differing state/private roles, changing distributional consequences of policies, and whether these are universal or selective. For flood insurance arrangements, it is these differing processes of change that we examine here, to seek to understand the relative policy stability that we observe.

The evolution of UK flood insurance arrangements

Flood insurance pre-1961 and the ‘Gentleman’s Agreement’

Flood insurance is one of the cornerstones of UK FRM, and has been available for domestic properties in the United Kingdom for over 90 years (Table 3), becoming part of composite policies in 1922. The take-up was reported to be relatively low initially, a likely combination of the lack of product awareness, other priorities on domestic budgets, and the lack of large scale floods before 1947 to demonstrate need (Arnell, Clark and Gurnell, 1984).

Table 3 should be inserted about here

By the early 1960s this situation was changing and a number of larger floods including those in 1947 and 1953 highlighted the lack of flood insurance penetration (Interviewee 3). At the time Government and local authorities were providing financial assistance to uninsured flood victims (Interviewee 1) and the high number of the uninsured - up to 90% in Exeter floods of 1960 (Arnell et al., 1984) - raised concerns that providing compensation would become the norm and would be unaffordable (House of Commons, 1961). Insurance industry concerns that the government was about to impose additional regulations on insurers and the creation of a National Disaster Fund (Arnell et al., 1984) led in 1961 to what has come to be known as 'The Gentleman's Agreement' between the insurance industry and government (Arnell et al., 1984; House of Commons, 1961; Interviewees 1,3). The details were set out in a *Memorandum on flood cover to be provided by the private insurance market*, issued by the British Insurance Association and the Fire Officers Committee (FOC) (the predecessors of the Association of British Insurers (ABI)). Here insurers provided the following reassurance to HM Government:

“Insurers...are prepared, on request, to provide Flood cover at reasonable rates for the contents of all private dwellings (including farm dwellings) which are permanently occupied. Such cover will normally be granted only in conjunction with cover against Fire, and the Insurers may find it necessary to require that Storm and Tempest cover is also effected. In the case of dwellings vulnerable to flood the additional rate for Flood cover would not normally exceed 10/-d%² and the insurance would be subject to a small excess” (BIA/FOC, 1961, p. 4).

This agreement formed the foundation for flood insurance for the next 40 years: universally available cover and by default the creation of a cross-subsidy to the at-risk

from the risk-free (in that every householder was charged for flood cover, irrespective of risk). It was not, however, immediately successful in increasing penetration and reducing the exposure of government and local authorities to providing ex-gratia compensation payments. Although the rationale behind the agreement was to provide the “*assurance that Flood Cover will be available to everyone, including the ‘small man’*” (BIA/FOC, 1961, p. 5) one of the Agreement’s key phrases was that insurance was available “on request”. In reality, consumers were not asking for flood insurance cover to be added to their policies, and flooding in 1965 and 1968 showed that penetration had not increased significantly since the agreement (Arnell et al., 1984). This was recognised to be owing to a lack of awareness of the availability of cover (Interviewee 1, 6) and, in 1969, a publicity campaign was mounted by both the BIA and the UK Government with, for example, leaflets enclosed with all fire insurance renewals. Local authorities also sought to raise insurance awareness with their tenants and, from the 1970s onwards, the Building Societies Association began making flood insurance cover mandatory for all of their mortgage business.

Although the Gentleman’s Agreement’s aim was to increase insurance penetration and “get some extra value out of insurance” (Interviewee 1), flood insurance was not universal. Those at high risk were meant to pay a modest increase in premium and the Agreement allowed those at the very highest risk to be excluded. Despite these notable provisions, the situation in reality in the following 40 years was that flood insurance was considered to be universally available and there was very little pricing difference between high and low risk properties. Penetration greatly increased during this period, particularly for buildings cover owing to the mortgage requirement, and flood insurance began being offered for commercial properties.

Post-2000 and the 'Statement(s) of Principles'

On the 20th February 2001 the ABI issued a Memorandum to the UK government which heralded a period of apparent policy change. This was the first of a suite of formal policy agreements setting out commitments on both sides: “The general policy of (ABI) members will be to maintain cover for a minimum of two years for domestic properties and small businesses...which already had cover” (ABI, 2001, p. 1). The express purpose of the agreement – actually remarkably similar to the ‘Gentleman’s Agreement’ - was “to prevent Government intervention in underwriting policy and widespread criticism of the industry” (Interviewee 5).

This was perhaps the beginning of a shift in power relations as evidenced by insurers beginning to increase the pressure on UK Government to take a stronger lead in FRM and improve their levels of investment. The insurers now occupied a stronger position following the favourable reception of their performance after the 1998 and 2000 floods, in contrast to widespread criticism of the Environment Agency’s flood warnings in 1998 (Bye & Horner, 1998) and of spatial planning in 2000 (Johnson *et al.*, 2005). Maintaining cover responded to media concern at the time that many flooded households would find policy renewal difficult following the widespread 2000 event (Environment Agency, 2001). However, our interviewees suggested there was also increasing pressure from the Government, with an implicit threat that “if the industry did not respond helpfully then the Government was going to make life a bit difficult for them” (Interviewee 2). Little comment was made publicly but during negotiations it was apparently made clear that unless some agreement was reached the situation might become “politically difficult for insurers” (Interviewee 2). The Memorandum was seen by the ABI as a “band aid... to stop the debate rushing off into unhelpful territory” (Interviewee 2) and to give time for them to enable them to reposition themselves.

The process of gradual change continued. The basic agreement was renewed and strengthened in September 2002 with the ABI's *Statement of Principles on the Provision of Flood Insurance* (hereinafter 'SoP2002'), to which all ABI members agreed. It set out the general principles for companies offering flood insurance from January 2003 (ABI, 2002) and reflected the changes in flood management since 2001. These included Government flood defence spending commitments and the implementation of PPG25 concerned with spatial planning and development control in flood risk areas (DETR, 2001) (Interviewee 2). The 2002 Statement ensured that flood insurance continued to be provided on a widespread basis, but reinforced the ABI position that flood risk should be reduced through improved flood defences, albeit with little consideration as to whether this was the appropriate FRM approach or even in line with government FRM policy in the form of *Making Space for Water* (Defra, 2005). A Statement of Principles clause guaranteed to cover properties only if they had flood risk lower than 1 in 75 years – in fact a very high standard - or where defences were planned to do so. Where this protection was not provided, or where previously covered properties changed ownership, ABI's insurers would assess the risks on a case-by-case basis and then "use their best efforts to continue to provide cover" (ABI, 2002, p. 5).

The Statement of Principles (2002) can be seen as insurers showing a continued commitment to those residing in flood risk areas whilst protecting their profitability through refusing the highest risks and pricing accordingly: price was never a part of the Statement. Our interviewees reported that many insurers felt that drifting away from the 1961 Agreement would enable companies to be more selective and better able to manage their risk. However, although there is anecdotal evidence from this period that some people were unable to obtain insurance, in practice insurance was completely unavailable to very few properties (Interviewee 4) a situation supported by Lamond,

Proverbs and Hammond (2009). Instead, premiums from those flooded in 2000 may have risen in some cases, raising for the first time the issue of the affordability of the product. Any premium increase, however, was not out of line with the Statement of Principles and ABI members generally followed the agreement (Interviewees 3, 5).

The change in 2001 to the 40-year relationship with the introduction of SoP2002 could, therefore, be analysed as a reaction to the widespread Autumn 2000 flooding in England and Wales (Environment Agency, 2001), the losses thereby sustained by the insurance industry, and concern that insurers would 'red-line' (i.e. refuse cover to) those properties which had been flooded. But, instead, evidence from our interviews suggested that the 2000 event was only one of the factors leading to this change: it provided a 'window of opportunity' (Kingdon, 1995), or an excuse for change, but was not the only driver. Concern had been raised amongst insurers for some time about the scale of flood risk and research had begun prior to the 2000 floods into the scale of their exposure (ABI, 2000; Halcrow Group Ltd, HR Wallingford & John Chatterton Associates, 2001). Additionally, insurers were now experiencing repeated flood claims from some properties; one interviewee stated that as early as 1990 they were committed to honouring the agreement to insure those people already on their books but were reluctant to insure other properties in these locations. There was the view that the Gentleman's Agreement was sometimes encouraging "bad underwriting practices which were becoming more obvious" (Interviewee 6) and leading to excessively low premiums. With UK flood losses increasing - £500-700 million in 1998 and £1+ billion in 2000 (Huber, 2004) - insurers became increasingly aware of potential loss-making exposure if their risk was not better managed.

The Government's response to the ABI Memorandum and to the SoP2002 is difficult to untangle. Improved working relationships between members of Government

and the ABI were considered themselves to be a positive outcome of the need to renegotiate and formalise matters, and the Government was seen to have responded constructively to calls for improvements in FRM. However, it is not possible to distinguish clearly between government action consequential upon the Autumn 2000 floods and any reaction to insurance industry pressure.

The original SoP2002 was established for a three year period and was therefore renegotiated in November 2005 (hereinafter 'SoP2005') for January 2006 to December 2008. The commitment by insurers remained the same with them maintaining the minimum standard of protection of 1 in 75 years; however the action required of government was strengthened and subject to an annual review against five performance targets: reducing the annual probability of flooding for substantial number of properties; at least maintaining flood investment spend every year; implementing spatial planning reforms; effectively communicating flood risk; and improving the approach to urban drainage. This 'tightening' of the requirements on government was judged to be related to frustration within the industry about how long it was taking to increase standards of flood defence and its impact upon mitigating risk (Interviewees 2, 3).

Towards the ending of the Statement of Principles

Towards the end of the first decade of the 21st-century a fundamental change appeared to be in train. In July 2008 the Statement of Principles agreement was again reviewed, with the insurers again renewing their commitment to provide insurance cover more or less as before. However, this agreement heralded a new phase in the relationship between Government and the insurance industry, with the ABI's insistence that this would be the final time that the agreement would be renewed in its then current form. From July 2013 a new arrangement would be needed. Otherwise SoP2008 represented few changes from the previous iteration, retaining the 1 in 75 years cut-off and

reiterating that “Premiums charged and policy terms will reflect the level of risk presented” (ABI, 2008,p. 1). The only significant change was that it now excluded newly built property from the commitment: the insurers would not support what they saw as unwise flood plain development (Interviewee 3) and their arguments carried the day.

The renewal of the Statement of Principles in 2008 followed a period with high losses from the 2007 floods estimated at around £3 billion (Chatterton, Viavattene, Morris, Penning-Rowse & Tapsell, 2010) with some insurers needing to draw on their reinsurance cover (Interviewee 5), a very rare if not unique occurrence for flooding in the UK. Although the scale of the flooding “woke insurers up to the issues of surface water flooding” (Interviewee 5), it was not considered by our interviewees to be the catalyst for changes to the policy agreement: the 2008 update was part of the ‘normal’ triennial review cycle. Indeed our interviewees suggested that the ABI wanted to negotiate a new agreement sooner, ending the status quo earlier than in 2013, but that the 2007 floods may have prolonged the period of adjustment. The Statement was always seen as a “short fix” (Interviewee 3) but calling for change just after a major event would probably have been interpreted as ‘walking away’ and the consequential reputational damage was deemed unacceptable. The different character of the 2007 event – ‘surface water’ rather than floodplain dominated – also required a pause for thought as to what was needed to replace the ‘Statement of Principles’, given its foundations on the EA’s floodplain map.

In 2013 a new ‘understanding’ was reached that seeks to replace the current ‘Statement of Principles’, after protracted negotiations from 2011 to 2013 between the government and the ABI: “Getting to this stage has required compromise by both sides” (Thoresen, 2013, p. 1)³. The proposal if confirmed will, from 2015, establish an

arrangement to set an upper limit to flood insurance premiums (rendering them supposedly “affordable”), linking these to local Council Tax bands so that householders will know the maximum they will have to pay and those in the larger properties will pay more. To fund the continuation of the cross-subsidy from those at low risk to those at high risk that this entails, a new and compulsory industry-backed levy will enable insurance companies to fund a not-for-profit ‘pool’ (termed Flood-Re), at the rate of £180m per annum, to cover claims from those 500,000 households with premiums above certain “eligibility thresholds”. As these compulsory payments are in effect a tax, and the arrangement brings at least some state liability, legislation will require all UK household insurers to pay into this pool, at an estimated average annual rate of £10.50 per household (from within the existing insurers’ revenue). The arrangement is seen as a transitional one: “while a gradual move to risk-reflective pricing in the longer-term would create additional incentives to reduce the likelihood and the cost of flooding” (Defra, 2013a; p. 14) “...successful implementation (of the agreement) would entail insurance terms adjusting towards risk-reflective pricing at a pace that allows choices to be made by policyholders facing long-term increases in insurance costs ... and avoids any risk of instability in insurance, mortgage and local housing markets” (Defra, 2013b, p. 1). So the era of relatively informal agreements is likely to be over, and the full force of the law will be used to support the new scheme. The proposals in 2013 appear fundamental, and have been described as such (“a step-change better than the Statement of Principles” (Defra, 2013a, p. 6)), but we see them as only marginal changes to the system that has existed since the 1960s: a formalisation of the previous cross-subsidy system with a continuation of universally available flood cover provided by private insurance companies.

Discussion

In interpreting the steady evolution of agreements and policy for flood insurance in relation to the classic theories of policy change briefly discussed above, we seek here to answer some questions in three areas related to the change theorising above: understanding the policy domain; understanding the policy subsystem: actors, coalitions and entrepreneurs; ‘windows’ for policy change and/or policy stability in flood insurance. These are tackled below in turn.

The changing context for the policy domain

Our questions here are, in relation to last 50 years, how important has been the wider context and hence external pressures in affecting the flood insurance domain and its policy; why has change not be more fundamental given so many other societal changes over this time?

In response, we can see relatively few changes of flood insurance institutional structures and governance arrangements; these are driven by market forces as much as by policy and, in general, markets change slowly over time. But there have been a number of significant changes within the insurance market over the period of the Statement(s) of Principles, which have impacted on insurance provision. Each represents a progressive tightening of the competitive environment.

First, the deregulation of building societies (Deregulation (Building Societies) Order 1995) meant that they were now able to write business and contents insurance. Additionally, this period saw the end of ‘block insurance provision’ for mortgage lenders and a greater freedom for both consumers to ‘shop around’ for flood insurance and for insurers in pricing premiums for individual properties. The other main contextual change has been EU directives, not concerning flooding but concerning

competition policy and the solvency of insurance companies (Competition Act 1998; Solvency II). The former discouraged industry wide agreements and the latter imposed extra costs

But many interviewees, however, suggested that these factors external to the provision of flood insurance – whilst important - have had less influence than might be assumed. What has been important, apparently, has been the rise of ‘new’ insurers into the household market following 2000. This meant that there were a number of new participants and different streams of business within the insurance market (Interviewees 1, 6). They had little or no existing high flood risk business and no commitment to continue to insure this business under the terms of the Statement of Principles. This gave them a competitive advantage as they could choose to select the more profitably lower risk business (Interviewee 5). One driver for change thereafter was therefore to seek to level the playing field amongst insurance companies.

But with none of these changes was there a fundamental shift, more a gradual change in the marketplace, and the continuing ability of insurers to charge those not at risk (initiated under the Gentleman's Agreement) must have meant that the provision of household insurance - of which flood insurance is now an integral part - was profitable, leading to a disincentive to seek change (Interviewees 3, 5).

But one aspect of contextual change is gradually and inexorably leading to change in the subsystem. Since 2000, insurance companies have been seen to be leading the way in the assessment of flood risk (Interviewees 1, 4) and steady technological advancements in flood modelling have enabled much more accurate assessment of all types of flood risk. Developments in computer-based flood modelling over the last two decades emerged from our interviews as a key driver of incremental change within UK flood insurance provision, with significant improvements to both the extent and

resolution of risk assessments. Data improvement also has been important: the Flood Estimation Handbook (Reed, Faulkner, Robson, Houghton-Carr & Bayliss, 2000) together with the investment in rain and river gauging telemetry, a progressively longer data record, and the declining real costs of high speed data processing have meant significant advancements in flood risk assessment (Environment Agency, n.d.). At the same time, insurance underwriting has also been radically changed by computer modelling, with more complex risk algorithms and the integration of more data from flood models and claims records.

These developments allowed a progressively greater awareness of insurance companies' total exposure to flood risk, and this led to a greater awareness by insurers of what they saw as deficiencies of FRM and greater concerns about the potential impact of climate change. This was mirrored by – and often explains - the incremental evolution in the Statement of Principles, strengthening *inter alia* the requirement therein for increased flood defence investment and tighter spatial planning with its floodplain development controls.

One insurance professional we interviewed argued that premiums are also not increasing quickly enough to reflect the risk (a finding supported by Ball, Werritty, & Geddes, 2013), for what the interviewee considered to be mainly reputational reasons. In a competitive market many insurers want to limit premium increases per renewal and therefore re-rating is taking a long time for high risk properties. Other insurers are avoiding substantially raising household premiums due to concern about how the damage to their reputation may affect other areas of their business such as motor cover (Interviewee 5). Insurers have been looking for solutions whereby they would not need to increase premiums beyond a certain level - i.e. a mechanism to deal with the highest risk and avoid affordability issues - or a solution that would give them an excuse to

raise premiums along with the rest of the market. Concern about this under-pricing has risen greatly as awareness of flood risk and the extent of under-pricing and therefore insurers' exposure has become clear (ABI, 2010). It is this gradual advancement in risk assessment understanding that has, according to our insurance professionals, been the main driver of policy change.

Many aspects of contextual change have therefore led to the slow evolution that we describe: changing market conditions; technological advancements; and reputational concerns. Many of the characteristics of the situation six decades ago continue to this day and appear liable to continue into the future. The external pressures were not such as to create the classic "large leaps" (Baumgartner & Jones, 1993); they were strong, pervasive but not sudden.

The policy subsystem: actors, coalitions and entrepreneurs

Several questions are pertinent here, many of which are as yet unanswerable because many of the processes are hidden. But who are the powerful actors or elites in flood insurance? To which coalitions are they aligned? How have these elites promoted or blocked policy change, when and where? What is their dominant ideology, as illustrated by their core and secondary beliefs and values?

Fundamentally there are two main 'sides' to the flood insurance issue – the insurers and the government (including Defra; Treasury). Viewed in this way the actors have remained fairly stable over the last 50 years. In terms of elites (Wright Mills, 2000) the ABI is the public face of the private insurance industry, which is backed by heavyweight capital interests, but it is only as strong as its members will give it support; and this is not guaranteed - although divisions are rarely made public owing to reputational risks. The insurance industry as a whole is extremely powerful within British society - although again largely hidden from view - because it earns very large

amounts of foreign exchange at a time of chronic imbalances in payments elsewhere, in a UK economy rapidly losing its manufacturing base and its source of export income. The implication is that the government always seeks to maintain the industry's profitability and have it located in London rather than see it migrate elsewhere. The strength afforded to the insurance industry by this position means that there is something akin to a parity of power between the government and the industry, rather than the latter being subservient to the former: an equality in power relations.

But the ABI cannot always rely on its members agreeing with each other – and some insurers are not members - and therefore developing a position the ABI can put forward with strength is not always easy. This situation is also complicated later in the policy evolution described above by having some members signed up to the Statement of Principles and others, who have appeared in the market since 2001, not committed in this way. This weakens the ABI's policy influence – for change or stability - because its support can be fragmented. Developing an unambiguous position also requires negotiation and lobbying at 'second hand' as the ABI itself is not directly involved in the market.

Clearly the insurers want to avoid regulation and therefore this is one of their key aims when dealing with flood insurance. For instance, several of our interviewees mentioned the threat of regulation before the 1961 agreement and again in 2000, both pushing the industry (probably reluctantly) into some sort of informal agreement. They appear to have promoted a stable policy situation to avoid the possibility of tighter regulation at a time when they did not fully understand the risk they were insuring. As this understanding has increased, however, these same actors have sought incremental policy changes to try to push the UK government into spending more to reduce this risk, matching and using public reaction to the damaging floods as they occurred. Now that

they better understand the risk insurers face the ABI has sought policy change for its members – or at least an end to the Statement of Principles - through the formalization of the cross-subsidy in a way that maintains the revenue stream from insuring those at virtually no risk. Any non-member or late joiners ‘outside the coalition’ are forced to comply, through the proposed legislation. It looks anti-competitive, and it probably is.

In terms of the debates and negotiations, for the 1961 Agreement the process appears very public and the key venue was the House of Commons with questions in parliament about insurance penetration etc.: on the government’s ‘turf’. But much of the negotiation occurred behind closed doors. Following 2000 our Interviewees suggested that they had to build a relationship with government (i.e. Defra, the EA, the Treasury), which had not been there prior to this, and that securing the friendly relationship was more important than what was actually negotiated. For the new ‘understanding’ in 2013 there have been committees and consultations, at least at the level of tokenism: the real business of firm agreement remains hidden.

In terms of entrepreneurs there have been many key people involved in the negotiations between government and the ABI at different times, but in the most part it is hard to see what influence individuals may have had on the process. The chair of the General Insurance Council pushed for change in 2000 and sought, through the Statement of Principles, to buy some time to look for a longer-term solution (it lasted 12 years). But it is not clear that we should class this policy effort as entrepreneurial, rather it appears more conservative with efforts aimed at minimal change.

On the periphery are other interested parties, such as policyholders represented by the “grassroots” National Flood Forum (NFF) (Alinsky, 1989), but each seems to have had little influence, including the mortgagers (the Council of Mortgage Lenders); surprisingly since they own or hold as collateral many of the assets at risk. The role of

this group did not feature in our interviews at all and others have also suggested that they are surprised the mortgagors are not more vocal. The role of community organisations and, in effect, the customers of the insurance industry is also surprisingly muted. The NFF developed the Morpeth flood group's insurance model, suggesting segmenting the market and creating a pool for bad risks (Morpeth Flood Action Group, 2013). But our interviewees commented more on the ABI's very similar OXERA model (Oxera, 2011) which, of course, got more exposure and attention in government through the ABI mouthpiece and its clever deployment of media stories about vulnerable pensioners losing their flood cover: how options are framed and presented and by whom (Tversky & Kahneman 1981)) appears important both here and in the way that the 2013 proposals have been explained as consumers facing little or no change (Defra, 2013).

A further group who might have had the role of policy entrepreneur are the independent researchers, perhaps in universities. However, with some notable exceptions (e.g. Ball et al., 2013; Crichton, 2007; Lamond et al., 2009; O'Neill & O'Neill, 2013; Priest, Clark, & Treby, 2005) there have been few researchers actively engaged in this field, unlike, for example, in policy fields such as education or health. There has also been relatively little critique of the current arrangements, and certainly no academic policy entrepreneur has developed fundamentally new policy arrangements that have been acceptable to either government or the insurance industry.

In reality, therefore, the fundamental goals of the flood insurance policy and the actors supporting it have remained the same on both sides but they have gradually moved towards a more precise and formalised policy and relationship, and continue to do so as they agree on the new Flood-Re. The overall aim of the policy (i.e. to have risk-based pricing and broadly a market-based system, whilst maintaining availability and affordability in high risk areas) has probably stayed relatively constant. The

dominant ideology and the core values of the two main players have not changed in the last 50 years: the role of the regulated private market has continued to be the dominant theme, supported by both the government and the insurers, in the only effective coalition that has existed (Sabatier & Jenkins-Smith, 1993). No significant other actors or policy entrepreneurs have emerged to challenge or change the situation. No significant policy review has been undertaken, except in negotiations behind closed doors, and the players active in the policy subsystem have therefore continued in much the same way as they always have done.

Policy 'windows'

The questions pertinent here are whether there is any evidence of key 'policy windows' in this process that might have led to fundamental change? Have these come about by external forcing events in the policy domain such as changes in public opinion or socioeconomic conditions or have they come about as a result of crisis events, or less dramatically as a result of the bargaining and power of actors in the exploitation of any specific 'policy window'?

Here the situation appears to be clearer: the process of change might well have been accelerated by several catastrophic events. The Autumn 2000 floods did have a major impact and were followed by the Memorandum and then the Summer 2007 event was followed by the announcement of the ending of the Statement of Principles. But there were arguments from our Interviewees that there were discussions about the continued validity of the Gentleman's Agreement prior to the 2000 floods and that the ABI and insurers were becoming concerned about the ineffectiveness of flood defences and their growing exposures. Our Interviewees therefore questioned whether these flood events were causes of any changes, rather they were exploited as opportunities to show the value of insurance to those afflicted, by more rapid settlement of claims than

hitherto. Some (marginal) policy shifts also occurred with SOP 2002, but far less important than major changes to spatial planning or flood warning systems (Johnson et al., 2005). Indeed the 2008 update of the Statement of Principles was in train and would have occurred whether the summer 2007 floods had happened or not - and the ABI was already considering that there needed to be a new type of agreement – but arguably the floods raised the issue again with both insurers and government and pushed along the process of policy evolution.

A further issue occurring at the same time as the 2007 floods was the global financial crisis, significantly affecting major insurers in the USA. Our interviewees mentioned that in reality this might not have had the impact that one might suppose, but might have acted as another uncertainty and seen as a possible problem, thereby providing another rationale for subtle policy change. The main driving factor suggested by most interviewees, as discussed above, was increases in the understanding about flood risk and improvement in flood risk modelling, and as we have seen this was a gradual process.

There is no doubt that there have been events in the last 50 years which could have created windows for major policy change in the field of flood insurance, but the reality seems to have been that such windows as occurred were not particularly significant nor exploited by entrepreneurs or coalitions of actors seeking fundamental change. The events may have changed the nature of the debate, but they did not lead to fundamental policy change in the field of flood insurance; they had their influence elsewhere, not least in increasing FRM budgets, tightening spatial planning systems and improving information flow to the public (e.g. Johnson et al., 2005).

But it is also clear that these events did have one other important effect: they reinforced the importance of the very existence of the extant system of flood insurance,

to compensate victims and to allow the government to avoid itself paying compensation to those who had been flooded. The insurers made significant use of this ‘window of opportunity’ (Kingdon, 1995), but this was not to promote change but to promote the merits of the status quo.

Assessment

The research reported here has deliberately aimed at examining a process of change which appears to be slow and incremental, to complement our previous research on catalytic processes of flood risk management policy evolution (Johnson et al., 2005; Johnson & Priest, 2008; Penning-Rowsell et al., 2006). What we have observed is an institutional structure and a series of policy agreements which have shifted only at the margins over time but not changed fundamentally in the last six decades (summarized in Table 4). What we see here is an unchanging element of FRM policies through time, to set against the changing overall philosophy of moving from agricultural drainage through to FRM, and from a dominantly top-down approach driven by engineering to reduce the probability of flooding to elements of devolution and bottom-up activity aimed at addressing both the probability and the consequences of flood events.

Table 4 should be inserted about here

The fundamental underpinning of government FRM policy – whatever it has been – by the private sector insuring against damage and allowing the public sector not to have to pay compensation should not be underestimated. This is why government has been so keen to obtain agreements with the insurance industry, which in turn has generally followed the ABI in presenting a united front in its negotiations. But there are many aspects of the process of incremental change that remain opaque, because a lack

of transparency has been justified by ‘commercial sensitivities’. Nevertheless we now understand more about the overall policy for managing flood risks in the UK than previously - although much remains still to be uncovered in detail.

What we have seen is that contextual factors dominate what policy change that there has been, and ideas of policy change that emphasise this appear most pertinent here. In this respect what has been important has been, firstly, the threat to existing household insurers from new entrants unencumbered by agreements to insure all-comers. Secondly, the march of technological change has made exposure more explicit and pricing risk both easier and less expensive. The relatively stable role of the different actors and coalitions is now clearer, and we have seen that entrepreneurial activity has been minimal because the status quo has satisfied the main contenders: the government and the insurers. The many significant ‘windows of opportunity’ created by significant flooding or financial crisis have not significantly affected the pace or direction of policy change. The overriding importance of the profitability of the insurance industry – both to government and to the insurers themselves – is our explanation for the extraordinary policy stability that we have described.

The policy windows theory of policy change (Kingdon, 1995) is not negated by these interpretations, rather it appears not to be appropriate for this FRM measure: there were ‘windows’ but they did not lead to fundamental change. The coalition of government and insurers continued to advocate the same policies and there was virtually no criticism let alone opposition to this situation: the ‘Coalition theory’ is therefore powerful not in explaining change by explaining the lack of change. At the same time “power elite” ideas are also useful: policy stability is assured by the ABI working with Defra and its Ministers to manage together the process of incremental change. Indeed, policy equilibrium is the norm in this context (Baumgartner & Jones,

1993) largely because there appears to be no competing coalition of actors seeking fundamental change (Sabatier & Jenkins-Smith, 1993), no groundswell of grassroots opposition (Alinsky, 1989) nor any fundamental change in the actors involved or the manner in which the flood insurance message has been framed (Tversky & Kahneman, 1981).

Conclusions and forward look

In this paper we have described, analysed and – we believe – explained the slow and incremental evolution of policy in this FRM field of flood insurance. We contrast this with our previous analysis of catalytic processes of change (Johnson et al., 2005), and now see this slow process as also contrasting with the many profound UK societal changes that have occurred since the 1960s, affecting most areas of government intervention and insurance markets.

In contrast to many examples of flood insurance and compensation in other countries, the early introduction in the UK of a system of flood insurance purely provided by the private market appears to have been a critical component of the stability of the system. When the system was originally introduced the inability to accurately assess and price flood risk meant that any cross-subsidy was hidden and the system was considered acceptable to consumers, government and insurers alike. Technological (and data) advances mean that the context has fundamentally altered and insurers are now better able to assess flood risk, and understand their exposure. Their customers (and their government) can see much more clearly now the cross-subsidies involved, and the Flood-Re proposals seek to continue the pattern so well established in the past. In many other countries this ability now to assess risk (and thereby more accurately to price that risk) is, we feel, likely to prevent the adoption of a private market system, or

the high penetration of flood insurance where it is offered, because of the new clarity about cross-subsidy and the 'unfairness' that it exposes and the lack of the particular history on which our UK example is based.

The past is therefore crucial; what then of the future in the UK? Based on our analysis of the past, can we predict or at least suggest the path of future policy change? In this respect, first, we would predict no fundamental shift in policy direction emanating from the current "understanding" in 2013. Flood insurance will continue to be dominated by the private sector, with government support but little apparent 'interference'. Secondly, the problem of cross-subsidy will not go away. With even greater transparency regarding risk, it will become increasingly clear that many properties at high risk are uninsurable, at least at "affordable" premiums. A transition to full risk-based pricing will be painful for those who occupy these high risk areas, but eventually may create a disincentive for unwise floodplain occupancy. Thirdly, the main actors will continue to be the insurers represented by some trade organisation such as the ABI and the government, each with an interest fundamentally in maintaining the status quo.

Any failure of insurance *per se* will be "bailed out" by the government fearful of the consequences within the wider economy and concerned to retain London as the premier location for insurance internationally. These last forces are far more important than the intricacies of the flood insurance domain in the United Kingdom, while that remains reasonably profitable.

Explanatory Notes

¹ Interviews were not possible with the government side of the discussions and negotiations, as most of those involved here have retired or decided they were unable to participate. The six interviews cover most aspects of the flood insurance industry, but this survey is limited to those with the greatest experience and is not seen as fully comprehensive.

² 10 shillings per £100 insured, which is £0.5 in post-1971 decimalisation currency.

³ One government official indicated to us that in the negotiations concerning the ending of the *Statement of Principles* there had been as many as 20 meetings between government Ministers and the ABI in the 10 months between September 2012 and June 2013.

⁴ The UK Government Flood Insurance Obligation included in the Water Bill 2013 would be invoked if Flood Re could not be implemented or subsequently if it failed to achieve its objectives. Defra (2013a, 6) suggest that this obligation would involve the UK Government regulating the insurance industry to ensure the “widespread availability” of “affordable” home insurance and requiring insurers to cover a quota of high risk households.

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References

- Alinsky, S. D. (1989). *Rules for Radicals: A Pragmatic Primer for Realistic Radicals*. New York, NY: Vintage:
- Arnell, N.W., Clark, M.J. & Gurnell, A.M. (1984). Flood insurance and extreme events: the role of crisis in prompting changes in British institutional response to flood hazard. *Applied Geography*, 4, 167-181. [http://dx.doi.org/10.1016/0143-6228\(84\)90020-1](http://dx.doi.org/10.1016/0143-6228(84)90020-1)
- Association of British Insurers (ABI) (2000). *Inland flooding risk – Issues facing the insurance industry* (General Insurance Research Report No. 10), London: Association of British Insurers.
- Association of British Insurers (ABI) (2001). *Continued availability of flood cover for domestic properties and small businesses*, Memorandum to Government from

- John Parker, Head of General Insurance at the ABI, 20th February 2001, (Ref: G/210/038). London: Association of British Insurers.
- Association of British Insurers (ABI) (2002). *ABI Statement of principles on the provision of flood insurance*, September 2002. London: Association of British Insurers.
- Association of British Insurers (ABI) (2005). *ABI Statement of principles on the provision of flood insurance, Updated Version*. London: Association of British Insurers.
- Association of British Insurers (ABI) (2008). *Revised statement of principles on the provision of flood insurance*. London: Association of British Insurers.
- Association of British Insurers (ABI) (2010). *Under-pricing of the flood element of home insurance for domestic customers at significant risk*. London: Association of British Insurers.
- Bachrach, P. & Baratz, M. S. (1970). *Power and Poverty: Theory and Practice*. New York, NY: Oxford University Press.
- Ball, T., Werritty, A. & Geddes, A. (2013). Insurance and sustainability in flood-risk management: the UK in a transitional state. *Area*, 45, 266–272.
DOI: 10.1111/area.12038.
- Baumgartner, F. R. & Jones, B. (1993). *Agendas and Instability in American Politics*. Chicago, IL: University of Chicago Press.
- Biklen, D. P. (1983). *Community Organizing Theory and Practice*. Englewood Cliffs, NJ: Prentice-Hall.
- Birkland, T. A. (2005). *An Introduction to the Policy Process: Theories, Concepts, and Models of Public Policy Making*. Armonk, NY: M. E. Sharpe.
- British Insurance Association/Fire Offices Committee (BIA/FOC) (1961). *Memorandum on flood cover to be provided by the private insurance market*, Issued July 1961. London: BIA/FOC.
- Bye, P. & Horner, M. (1998). *Easter 1998 Floods: Final Assessment by the Independent Review Team*, vol. 1. Bristol: Environment Agency.
- CCS (Consortio de Compensacion de Seguros) (2008). *Natural catastrophes insurance cover. A diversity of systems*. Madrid: CCS.
- Chatterton J. B., Viavattene, C., Morris, J., Penning-Rowsell, E. C. & Tapsell, S. (2010). *The costs of the summer 2007 floods in England*, (Project: SC070039/R1). Bristol: Environment Agency.

- Comité Européen des Assurances (CEA) (2005). *The insurance of natural events on European markets*, Property Insurance Committee, AB 5050 (06/05). Paris: CEA.
- Crichton, D. (2007). The Future of Flood Management in the UK, (Insurance Research and Practice No 1) December 2007. *Journal of the Chartered Insurance Institute*, London.
- Department for Environment, Food and Rural Affairs (Defra) (2005). *Making space for water: taking forward a new government strategy for flood and coastal erosion risk management in England. First government response to the Autumn 2004 Making space for water consultation exercise*. London: Defra.
- Department for Environment, Food and Rural Affairs (Defra) (2013a). *Securing the future availability and affordability of home insurance in areas of flood risk*. London: Defra.
- Department for Environment, Food and Rural Affairs (Defra) (2013b). *Managing the future financial risk of flooding: Impact statement*. London: Defra.
- Department for Environment, Transport and the Regions (DETR) (2001). *Planning Policy Guidance 25; Development and flood Risk*. London: DETR.
- Domhoff, G. W. (1990) *The Power Elite and the State: How Policy is Made in America*. New York, NY: Aldine De Gruyter.
- Dunn, W. N. (1994). *Public policy analysis: An introduction*, Second Edition. New Jersey: Prentice Hall.
- Environment Agency (2001). *Lessons learned: Autumn 2000 floods*. Bristol: Environment Agency.
- Environment Agency (n.d.) *Understanding Flood Risk. Our National Flood Risk Assessment (NaFRA)*. Bristol: Environment Agency.
- Fiselier, J. & Oosterberg, W. (2004). *A quick scan of spatial measures and instruments for flood risk reduction in selected EU countries*. RIZA work document 2004.068x. Lelystad: RIZA Institute for Inland Water Management and Waste Water Treatment.
- Gaschen, S., Hausmann, P., Menzinger, I. & Schaad, W. (1998). *Floods - an insurable risk? A market survey*. Zurich: Swiss Re.
- Haas, P. M. (1992). Introduction: Epistemic communities and international policy coordination, *International Organisation*, 46, 1-35. DOI: <http://dx.doi.org/10.1017/S0020818300001442>.

- Halcrow Group Ltd, HR Wallingford & John Chatterton Associates (2001). *National appraisal of assets at risk from flooding and coastal erosion, including the potential impact of climate change*. London: Defra.
- House of Commons (1961). *House of Commons debate: Floods*, 1st August 1961, vol. 645, cc138-40W. Retrieved from Hansard http://hansard.millbanksystems.com/written_answers/1961/aug/01/floods#S5CV0645P0_19610801_CWA_40.
- Huber, M. (2004). *Reforming the UK flood insurance regime – the breakdown of a gentleman’s agreement*, ESRC Centre for Analysis of Risk and Regulation, Discussion paper no. 18, January 2004, London: London School of Economics and Political Science.
- Huitema, D. & Meijerink, S. (Eds.) (2009). *Water policy entrepreneurs. A research companion to water transitions around the globe*. Cheltenham: Edward Elgar.
- John, P. (2003) Is There Life After Policy Streams, Advocacy Coalitions, and Punctuations: Using Evolutionary Theory to Explain Policy Change? *The Policy Studies Journal*, 31, 481-498. DOIETC
- Johnson, C. & Priest, S. J. (2008). Flood risk management in England: a changing landscape of risk responsibility? *International Journal of Water Resources Development*, 24, 513-525. DOIETC
- Johnson, C. L., Tunstall, S. M. & Penning-Rowsell, E.C. (2005). Floods as catalysts for policy change: historical lessons from England and Wales. *International Journal of Water Resources Development*, 21, 561-575. DOIETC
- Kay, A. (2005). A critique of the use of path dependency in policies studies. *Public Administration*, 83, 553-571. DOIETC
- Kingdon, J. W. (1995). *Agendas, Alternatives, and Public Policies*. New York, NY: Harper Collins College.
- Lamond, J. & Penning-Rowsell, E. (2011). *A review of international approaches to flood insurance*. University of Wolverhampton and Middlesex University, Flood Hazard Research Centre, Report prepared for the Knowledge for Climate Programme.
- Lamond, J., Proverbs, D. & F. Hammond, (2009). Accessibility of flood risk insurance in the UK - confusion, competition and complacency. *Journal of Risk Research*, 12, 825-840.

- Lehrer, E. (2008) *Reforming the National Flood Insurance Program after 35 Years of Failure: Issue Analysis*. Competitive Enterprise Institute, Washington. Retrieved from: <http://cei.org/sites/default/files/Eli%20Lehrer%20-%20Reforming%20the%20National%20Flood%20Insurance%20Program.pdf>.
- Marsh, D. and Rhodes, R.A.W. (eds.) (1992). *Policy Networks in British Government*. Oxford: Oxford University Press.
- Michel-Kerjan, E.O. (2010). Catastrophe Economics: The National Flood Insurance Program, *Journal of Economic Perspectives*, 24, 165-186. DOIETC
- Morpeth Flood Action Group (2013) *Flood Insurance in the UK: The Morpeth Model v3*. Retrieved from: http://www.morpethfloodaction.org.uk/assets/applets/Morpeth_Model_V.3.pdf.
- O'Neill, J. & O'Neill, M. (2012). *Social justice and the future of flood insurance*, (Ref: 2755). York: Joseph Rowntree Foundation.
- Oxera (2011). *Risk-sharing options to support the private market for flood insurance: Overcoming the market distortions of the Statement of Principles*, London: ABI.
- Penning-Rowsell, E. C., Johnson, C. & Tunstall, S. M. (2006). 'Signals' from pre-crisis discourse: Lessons from UK flooding for global environmental policy change? *Global Environmental Change*, 16, 323–339.
- Priest, S. J., Clark, M. J. & Treby, E. J. (2005). UK Flood insurance: the challenge of the uninsured. *Area*, 37, 295-302.
- Reed, D. W., Faulkner, D., Robson, A., Houghton-Carr, H. & Bayliss A. C. (2000). *Flood Estimation Handbook*, Wallingford: CEH.
- Sabatier, P. A. (Ed.) (1999). *The policy process*. Boulder, CO: Westview Press.
- Sabatier, P. A. & Jenkins-Smith H.C. (Eds.) (1993) *Policy change and learning*. Boulder, CO: Westview Press.
- Stachowiak, S. (2011). *Pathways for change: 6 theories about how policy change happens*. Washington DC: Organisational Research Services.
- Strauss, A. & Corbin, J. (1998). *Basics of Qualitative Research Techniques and Procedures for Developing Grounded Theory* (2nd edition). London: Sage Publications.
- Thoresen, O. (2013). Quoted in ABI and Government agree Memorandum of Understanding on scheme to safeguard UK flood insurance. Retrieved from: <https://www.abi.org.uk/News/News-releases/2013/06/ABI-and-Government->

[agree-Memorandum-of-Understanding-on-scheme-to-safeguard-UK-flood-insurance](#)

- Tunstall, S.M., Johnson, C.L. & Penning-Rowsell, E. C., (2004). *Flood hazard management in England and Wales: from land drainage to flood risk management*. Paper presented at the World Congress on Natural Disaster Mitigation, 18–21 February 2004, New Delhi, India.
- Tversky, A.& Kahneman, D. (1981). The Framing of Decisions and the Psychology of Choice. *Science*, 211(4481), 453-458.
- Wright Mills, C. (2000). *The Power Elite* (New Edition). New York, NY: Oxford University Press.
- Sabatier, P.A., Focht, W., Lubell, M., Trachtenberg, Z., Vedlitz, A. & Matlock, M. (2005). *Swimming upstream: collaborative approaches to watershed management*. Cambridge, MA: MIT Press.

Table 1. Our interviewees.

Interviewee number	Interviewee position/affiliation and experience	Knowledge of key policy changes
1	Current representative of the Association of British Insurers (ABI)	Current negotiations of the changes to insurance post-2013
2	Senior Civil Servant: worked for both Defra and seconded to the ABI during part of the period of the policy changes described here	Involved in SoP2005 and SoP2009 negotiations from both perspectives (i.e. the ABI and government)
3	Insurance company employee with a specialism in flood risk – also has undertaken secondments with the ABI	Over 25 years' experience with insurance and flooding issues with knowledge spanning all of the policy changes described here
4	An ex-senior member of the General Insurance team at the ABI	Was involved in the ABI Memorandum of Understanding (2001), SoP2002 and SoP2005
5	Ex-insurance employee with a specialism in flood risk and climate change – also undertaken some academic study in this area	Over 30 years experience with insurance and flooding issues – with knowledge covering all policy changes described here
6	Insurance consultant and ex-insurance industry employee with a specialism in insurance and flood risk	Approximately 40 years' experience with insurance and flooding issues with knowledge spanning all of the policy changes described here

Table 2. Six theories of how policy change happens (after Stachowiak, 2001, p. 3)

	<i>Theory (Key Authors)</i>	<i>Discipline</i>	<i>How change happens</i>	<i>This theory</i>
Global Theories	1. “Large Leaps” or Punctuated Equilibrium Theory (Baumgartner, Jones)	Political Science	Like seismic evolutionary shifts, significant changes in policy and institutions can occur when the right conditions are in place.	<ul style="list-style-type: none"> • Large-scale policy change is the primary goal • Strong capacity for media advocacy exists
	2. “Coalition” Theory or Advocacy Coalition Framework (Sabatier & Jenkins-Smith, 1993)	Political Science	Policy change happens through coordinated activity among a range of individuals with the same core policy beliefs.	<ul style="list-style-type: none"> • A sympathetic administration is in office • A strong group of allies with a common goal is in place or can be formed
	3. “Policy Windows” or Agenda Setting (Kingdon, 1995)	Political Science	Policy can be changed during a window of opportunity when advocates successfully connect two or more components of the policy process: the way a problem is defined, the policy solution to the problem or the political climate surrounding their issue.	<ul style="list-style-type: none"> • Multiple policy steams can be addressed simultaneously (problem definition, policy solutions and/or political climate) • Internal capacity exists to create, identify, and act on policy windows
Theories related to strategies or tactics	4. “Messaging and Frameworks” or Prospect Theory (Tversky & Kahneman, 1981)	Psychology	Individuals’ policy preferences or willingness to accept them will vary depending on how options are framed or presented.	<ul style="list-style-type: none"> • The issue needs to be redefined as part of a larger campaign or effort • A key focus of the work is on increasing awareness, agreement on problem definition, or an issue’s salience
	5. “Power Politics” or Power Elites Theory (Domhoff, 1990; Wright	Sociology	Policy change is made by working directly with those	<ul style="list-style-type: none"> • One or more key allies is in place • The focus is on

	Mills, 2000)		with power to make decisions or influence decision making.	incremental policy change (e.g., administrative or rule changes)
	6. “Grassroots” or Community Organizing Theory (Alinsky, 1989; Bikien, 1983)	Social Psychology	Policy change is made through collective action by members of the community who work on changing problems affecting their lives.	<ul style="list-style-type: none"> • A distinct group of individuals is directly affected by an issue • The advocacy organisation can and is willing to play a “convener” or “capacity-builder” role rather than the “driver” role

Table 3: Changes in policy agreements between the UK Government and Insurance Industry: 1961 to the present.

<i>Period/Date</i>	<i>Policy agreement</i>	<i>Characteristics of the policy agreement</i>
Pre-1961	Market driven – no specific policy agreement	Flood insurance was a part of composite policies from 1922, but total loss insurance not available until 1929 (Arnell et al., 1984) but was optional and penetration was initially low.
1961 to 2001	Gentleman's agreement between Government and Insurance industry	Insurers made an informal, yet strong commitment with Government to continue to provide cover to all permanently inhabited UK domestic properties. Coverage and importance was enhanced when insurance on buildings was made compulsory for mortgage holders in the early 1970s.
20th February 2001	ABI Memorandum to Government	The first challenge of the 1961 agreement to provide universal cover, but maintains a two year commitment to continuing availability, but required government commitment to increasing funding for and building of flood defences and improving planning in areas at risk.
January 2003	<i>Statement of Principles</i> policy agreement between UK Government and the ABI	This replaced the temporary memorandum agreement issued in 2001 and set out the terms of the new formal agreement between the ABI and Government re-emphasising the commitments on both parts, but indicating that insurers are more likely to consider the refusal of insurance in high-risk areas but only refuse as a last resort.
January 2006	Updated <i>Statement of Principles</i> policy agreement	This reinforced the minimum standard of protection of 1 in 75 years established in 2002, however strengthened the requirements for government to commit to reducing risk through flood defence investments and other flood management mechanisms.
January 2009	Updated <i>Statement of Principles</i> policy agreement	The final Statement excluded all newly built properties and strongly reinforced the message that policy terms and premiums should be based on the risk. Announcement that this was the final time the Statement would be renewed.
Post-July 2013	Ending of the <i>Statement of Principles</i> policy agreement	An 'understanding' between UK Government and insurers about a 'Flood-RE' solution which would mean flood insurance remains available but also affordable – but more clearly links premiums to risk but retains the existing industry-maintained cross-subsidy favouring those at high risk

Table 4. A summary of the key elements in the evolution of flood insurance policy arrangements, 1961 to 2015

<i>Change criteria</i>	<i>Timeframe and arrangement / 2013 proposal</i>			
	<i>1961 to 2001: Gentleman's Agreement (GA)</i>	<i>2001 to c. 2015: ABI Statement of Principles (SoP)</i>	<i>c. 2015 onwards: Flood Re (FR)</i>	<i>c. 2015 onwards Flood Insurance Obligation⁴</i>
Actors involved in the process	Private insurers and UK government.	No real change – although the power relationships between the two has varied and changes to the departments involved due to restructuring.	Little change – still UK Government and private insurers involved. But requires 'State Aid' approval by the EU.	Little change - Government and private insurers involved – but is likely to require the introduction of a regulator for enforcement.
Universal coverage vs. selected availability	Based on the principle of universal cover and insurance available to all.	Little change - Later editions of the SoPs begin to challenge this notion with the potential exclusion of high risk properties and new build – however in practice insurance remained available to the majority.	Little change - developed to maintain universal cover and enable those at high-risk to be able to purchase affordable flood insurance cover.	No change – retains the basic principle of universally available and affordable cover.
Cross-subsidised vs. actuarially pricing	By default created a cross-subsidy but GA actually permits actuarial-based pricing.	Little change – the SoP permitted commercial pricing but cross-subsidy largely remained and caused distortions in the market.	Minor change - Involves the formalisation of the cross-subsidy already occurring but will occur between insurers as well as within their own business. The expectation that actuarially-based pricing will increase.	Not yet known: Probably a continuation of the current system with an informal cross-subsidy within the business of individual insurers
Private market-	Private market-based	No change still a private market	No change - Insurance is still	Significant change likely -

based vs. state-based	system.	based system.	provided by the private market however there is grouping within the industry in relation to the pool.	This alternative option involves a greater intervention in the private market by the government through regulation – although insurance would still be provided by private companies.
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