



Department
for Environment
Food & Rural Affairs

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Synthesis of flood social science evidence for policy decision and delivery improvement

Final report - Appendices

September 2014

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Appendix 1 - Scoping and visualisation workshop note

A workshop was held on 19th August 2013 as part of the project “FD2671 - Synthesis of flood social science evidence for policy decision and delivery improvement”. The purpose of this note is two-fold:

- to act as a record of the main outcomes of the workshop; and
- to set the direction of travel for the next stage of the study.

The project will synthesise available evidence that could inform a transition away from a centrally funded and coordinated model of FRM (flood risk management), to a multi-level process of governance involving a wide range of public and private organizations and groups, and individuals. The project will also identify areas where current knowledge and understanding is limited and needs to be improved.

The objectives of the workshop were to:

- develop a description of the type of behaviours and actions we want **individuals and communities** to adopt in an “**ideal world**” of FRM; and
- produce a set of **questions** or **policy challenges** that will guide the project.

The remainder of this document is structured around these objectives, before setting out next steps for the project. The document contains two appendices: Appendix 1 provides a summary of the policy context; Appendix 2 provides a description of the workshop activities and a summary of its outputs.

Individuals and communities in an “ideal world” of FRM

Following a warm-up exercise in Session 1, Session 2 of the workshop was designed to set a vision of a transition to local ownership and management of FRM. Important features of the vision for this transition, including the need to develop **resilient communities**, were discussed, and can be most easily presented under three headings:

- *Structures* such as strong **formal and informal networks** – both local networks of individuals, such as Flood Action Committees, and local institutions networked to national sources of support and expertise.
- *Processes* including delivery of **institutional support**, such as robust Local Authority planning guidance and a programme of retrofitting, and local development of community resilience plans.
- *Behaviours*, such as **individual responsibility** and risk being incorporated into **social norms**.

Policy challenges

Session 3 of the workshop was designed to unpick the key challenges and questions that need to be informed by social science evidence to deliver the vision (see Appendix 2). In summary, these included:

- A need to better understand the **benefits of actions** by Defra, the Environment Agency and other institutions to engage with local communities on FRM at each stage of the flood cycle (prevention/mitigation, preparation, response and recovery). Is there any evidence for the cost-

effectiveness of institutional efforts to enhance community level responsibility? Benefits may include social or economic impacts, process-related benefits, or other outcomes.

- A need to better understand what **levels and types of support communities require** from institutions. Does the FRM approach need to be more bottom-up/balanced? What can institutions have to offer that communities do not have/cannot provide? How should support vary according to local context?
- A need to better understand the way in which **current institutional arrangements** and activities either encourage or hinder greater community level involvement in FRM. Do current institutional arrangements create barriers to community-level responsibility/action? What are institutions doing that might prevent communities from being more engaged/resilient?
- A need to better understand **how to effectively communicate risk and motivate action** on FRM. How do you seed bottom-up community engagement? How do you maintain collective memory of flooding in the context of changing risk and shifting communities?
- A need to better understand **“best practice” on FRM and how it can be shared** at different levels.
- Whether there are **lessons to learn** from other policy areas or academic fields outside FRM.

Questions

A process of “distilling” these questions was undertaken by the research team, in consultation with the steering group. This considered existing evidence to answer the questions, and the main (or more immediate) policy priorities. Broad questions that emerged from this process fell broadly into two main categories:

1. Questions about community-level action

- 1.1. What are the benefits of engaging with and supporting community-level action on FRM?
- 1.2. What kinds of institutional support should be given, and by whom, to encourage community-level engagement with FRM (both generally, and at each stage of the FRM cycle)?
- 1.3. What barriers do communities taking action on FRM face (e.g. to getting support/from institutions)?
- 1.4. How might contextual factors (e.g. urban vs rural, socio-economic indicators, etc.) influence how community-led FRM is structured, and the types of support needed, and why?

2. Questions about individual-level action

- 2.1. What are the motivations and barriers to individual-level action? How might “flood memory”¹ or the design and operation of flood defences build awareness and reinforce social norms around flood risks?
- 2.2. What are the best opportunities for engaging with households on FRM? What has worked well before?
- 2.3. What are the opportunities and risks in relation to new policy on flood insurance², and the extent to which it will motivate or inhibit other action? Does paying more because an individual is at high risk make them more conscious of that risk or not?
- 2.4. How do contextual factors (e.g. income, household type, etc.) affect individual-level action, and why?

A **cross-cutting question** is: What insights and lessons can the literature outside flooding provide?

¹ One of the many tools to make flooding more ‘normal’; relevant to locations that have been flooded in the past.

² As set out in the consultation document “Securing the future availability and affordability of home insurance in areas of flood risk” available here: https://consult.defra.gov.uk/flooding/floodinsurance/consult_view

Next steps

The research team, in discussion with the project steering group, will develop research questions that focus on specific aspects of some of these broad questions, as well as a research framework, to provide a structure and focus for the subsequent evidence synthesis. The framework will also incorporate a list of principal search terms, the geographic and disciplinary scope, the detailed list of questions raised by participants during the workshop, and notes on evidence gaps.

The evidence synthesis will include:

- a literature search and selection of a limited number of documents for review;
- interviews with research managers to draw upon emergent findings and policy implications of on-going projects; and
- exploration of a series of case studies which root academic evidence in various local contexts.

The evidence synthesis will be followed by:

- Two themed workshops. The workshop themes and participants will be selected during the evidence synthesis. The workshops will aim to:
 - review the initial findings from this synthesis;
 - discuss its relevance at a local level, and
 - explore any further evidence not available in the literature identified.
- A final written briefing, into which additional evidence from the themed workshops will be integrated.
- A final project workshop to present findings and discuss next steps for addressing social research evidence needs.

Appendix 2 – Policy context

While Defra and the Environment Agency retain national responsibility and strategic overview under the Flood and Water Management Act 2010, some responsibility has now passed to Lead Local Flood Authorities (LLFAs, either unitary or county councils) in particular for local flood risk management strategy³.

Beyond these core legal responsibilities, the Flood and Coastal Erosion Risk Management Strategy⁴, published by the Environment Agency in 2011, sets out a new way of working in partnership with communities and individuals (see Table 1). This aims to help them “understand and actively prepare for the risks, and encourage them to have direct involvement in decision-making and risk management actions”.

Table 1: Key roles set out for communities and individuals in FRM in their area

| Communities | |
|--------------------------|---|
| Prevention / mitigation | Contributing to decision-making about local-level risk management plans and funding priorities |
| | Monitoring and reporting on the condition of FCERM assets |
| Preparation | Planning for impact and response (e.g. community flood action plan) |
| | Raising awareness of risk amongst the local population |
| Response and recovery | Implementation of community flood action plans, and the deployment of local volunteer flood wardens |
| Individuals | |
| Prevention / mitigation | Taking steps to protect their property |
| Preparation ⁵ | Signing up to the Environment Agency’s flood warning system |
| | Ensuring they have adequate insurance |
| | Preparing a flood plan for their household or business |
| | Ensuring that they maintain FCERM assets they own and maintain watercourses where they own the adjoining land |

³ More detail on the responsibilities of each of the key organisations/flood risk management authorities can be found at <https://www.gov.uk/flood-risk-management-information-for-flood-risk-management-authorities-asset-owners-and-local-authorities>

⁴ Environment Agency (2011) Understanding the risks, empowering communities, building resilience: the national flood and coastal erosion risk management strategy for England

⁵ We note that the strategy makes no mention of individual responsibilities for response and recovery in the event of a flood.

Appendix 3 – Workshop structure and outputs

The workshop was structured around three main sessions:

- **Session 1: (Dis-) Orientation** – a scenario exercise designed to build understanding of the perspectives of individuals and communities experiencing a disaster situation.
- **Session 2: (Not tunnel) Visioning** – an exercise to develop a vision of the “ideal future” in terms of de-concentration of FRM and transition to local ownership and management of flood risks.
- **Session 3: So what?** – table and facilitated discussions to unpick the key challenges in delivering the vision set out in the previous exercise, and identify the kinds of questions that need answering in order to overcome those challenges.

The following is a short summary of the key points and issues that were raised during the sessions.

Session 1: (Dis) Orientation – what might individuals and communities experience during disaster situations?

- Fear/shock
- Uncertainty/loss of control
- Help/advice—informal; professional; media
- Disruption/isolation
- Blame/guilt—others; themselves
- Short and long term impacts—social; economic; health

Session 2: (Not tunnel) Visioning – what might local ownership of FRM look like in future?

- Networks
 - Formal/informal
 - Locally
 - With national institutions
- Community resilience management & planning
 - Individuals clear about their responsibility in communities
 - A Flood Action Committee?
 - Leadership
 - Community resilience plan
- Institutional support for local initiatives
 - Local Authority robust planning guidance and programme of retrofitting
 - Improved capabilities of LA
 - National institutional support for communities—equitable?
- Social norms & individual responsibility
 - Flood memory—maintaining awareness of risk and how it is dealt with
 - Linking building of flood defences with ongoing flood awareness e.g. having flood sirens and drills (like smoke alarms)
 - Risk incorporated into social norms

Session 3: So What? – what are the challenges or questions associated with the vision?

- Networks
 - Benefits/justification for taking action
 - Groups fulfilling multiple roles
 - What good practice looks like
 - Personalities/leadership
 - Anecdotal
 - Institution telling communities what is good
 - 'Not invented here' (communities not interested in other communities)
 - Time taken for individuals to get to know community
 - Countryside vs city community
 - Get in early (when looking for support)
 - Facilitation at community meetings
 - Common issues with government gathering/sharing best practice for community action
- Community resilience management and plan
 - Cost effectiveness?
 - Time stories, spreading best practice
- Institutional support
 - Cost—efficiency
 - Complex landscape—looking at this from perspective of individual/community organisers
 - Modelling experience
 - Institutions—what do they have to offer that communities do not have/cannot provide?
 - Institutions might not be the best route for dissemination of communications
 - Are there things that institutions are doing that block communities taking actions they want to?
 - Liabilities—how to organise these?
- Social norms
 - 'Residual risk'... use of complex language
 - Communicating risk—some work done, uncertain about what next questions are
 - Finding new audiences to talk about flooding
 - Can we make people proud that their property is flood proof?

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Appendix 4 - Online search terms

Theme 1

| | | | | | | |
|------------------------|------------------|------------------|--------------|-----------|---------------|---------------------------|
| flood* risk management | institution* | role* | promot* | communit* | action* | rapid response catchment* |
| | OR government* | OR intervention* | OR encourag* | OR local* | OR leader* | OR rapid onset flood* |
| | OR agenc* | | OR nurtur* | | OR governance | OR flash-flood* |
| | OR department* | | OR motivat* | | OR network* | OR low-certainty flood* |
| | OR organisation* | | OR support* | | | OR vulnerable communit* |
| | OR group* | | | | | OR vulnerable group* |
| | OR individual* | | | | | OR communit* characteris* |
| | | | | | | OR transient population* |
| | | | | | | OR var* population* |

Theme 2

| | | | | |
|------------------------|-----------|-------------|--------------|----------------|
| flood* risk management | insurance | access* | effect* | attitud* |
| | | OR availab* | OR affect* | OR perception* |
| | | OR purchas* | OR impact* | OR behaviour* |
| | | | OR influenc* | OR respons* |
| | | | | OR action* |

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Appendix 5 - Theme 1 consultee interview notes

University of Northumbria

Thoughts on the background info sent

- This transition is already happening among lead local flood authorities. Local Authorities are already getting stuck in – the team should talk to Local Authority representatives.
- Perhaps evidence in the literature is out of date?

Research

- Linking up what resilience means across flood catchments across the Dales. There are different issues and drivers, for example in rural and urban locations. There is very little catchment planning on resilience (although there is lots on water quality in the context of the EU Water Framework Directive). There is a need to link perspectives along the whole catchment.
- Issue/challenges:
 - How can public expectations on risk mitigation be managed in light of what realistically can be afforded?
 - What happens if you don't have agricultural policies that allow for flooding on farm land to dissipate the flood before it hits urban areas?
- Read LSE Grantham Institute response to FloodRE consultation
- Also look at CapHaz
- ENHANCE project (EU FP7) looking at business/insurance approach
- A couple of proposals about on good practice examples didn't get funding – doesn't know why

Tension/issues

- Recognise that these are real issues; stimulated by 2007 floods
- Significant changes; need support now
- Hub website for local groups to talk to each other
- Need communications and mentors – local groups re-inventing the wheel? Lottery with how they get on with Civil Contingencies Unit (also having their funding cut).
- Cornwall example – Cabinet Office (guests of Civil Contingencies Unit) mediated with local groups to get good result (e.g. mitigation). Cabinet office gave them legitimacy. They had a local champion, Charles Richardson (won an MBE). Has now built up a team around him. Group has been able to secure funding for resilience from Defra.
- Raises question of how much these groups rely on an individual.
- Tim Harries has done more on household work (2008 paper) – trust in authority is also important; different people have different reactions

- Book chapter – research in coastal RRCs; very tricky; couple of bungalows in tidal plain – residents think ‘Why would it have been built if at risk?’ and ‘Should I not be protected by the people I pay tax to?’
- Environment Agency in Cumbria doing the right thing – facilitation (ongoing); keep talking (including risk communications); getting out there and shaking hands (social networking); in addition to new media (Twitter)
- Lindsay McKewan – flood history work (approach interesting); EA taken it forward (using it in Kendal, Cumbria); started in south, in Gloucester
- Key assumption: No magic bullet – ongoing slog; have always been saying it; 2007 mobilised it

Interesting areas in community resilience

- Sustainability (resilience part) – have sustainability issues behind flooding, if get to the point where cannot insure houses; cash buyers then needed and tenants likely to be put in are some of the most vulnerable to flooding
- Important to appreciate that flooding work concerns rescuers (altruistic – e.g. rotary club) and activists (ones who want to deal with the risk they are living with); which are you working with?
- RRCs very tricky – EA contact asked how to deal with these; risk maps not being used (yet) as they may be arguing over modelling (not sure there is a good reason for not using these); tidal/river/reservoir overflow – get all forms of flooding now
- Key to use these to start conversation/show them the risk they are in
- Just getting conversation going is important – there is no single answer; has to account for local context

Opportunities

- LLFA role; if done effectively
- Role of neighbourhood plans – some talk about this, but many bungalows along the East Coast are still built

Barriers

- Funds; need to keep them supported

Social research

- Need money for longitudinal studies
- Development of indicators (they are 2 years into a study on these but don’t yet have answers)
- Social science is brilliant for this topic, as explains why it’s so difficult
- Social science – things change slowly, then suddenly it becomes a focus

Different approaches in different places?

- Low risk communities – likely to be few people interested.

Flood Hazard Research Centre, Middlesex University

What are the barriers?

- Resourcing – Environment Agency, Local Authorities don't have enough to do some of the communities they would like to; engaging communities in being willing to do something about their properties/community
- Engagement – individual communities/context/characteristics/flood history have different level of interest at start and resources required to maintain interest; characteristics include home ownership (renters not so interested), education level, whether retired (time on hands), wealth, social also (deprived areas too busy trying to manage their day to day lives)
- Changes (interest) – when flooded, people are interested, less so after a few years without flooding; people drop out of flood groups over time so that only a few are left to do the work
- Legal responsibility – flood wardens' roles are uncertain; Environment Agency trying different campaigns of engagement, some work and others don't
- Building up good relationships – trust issues (Environment Agency research showed that there isn't great trust in organisations but that there is more trust in individuals); lack of trust in authorities (or working with them); a lot of mistrust from past experiences (particularly in Local Authorities) as sometimes don't listen, or do listen but ignore them; networks needed between authorities and communities and within communities

Opportunities

- New partnership (matched) funding – way to get participation (communities pay half)
- New legislation – may encourage community participation
- EU floods directive and Water Framework Directive encourage community participation
- When talking to communities – not aware of new policies; issue is how to raise awareness of this (too soon for research)
- Environment Agency actions:
 - If want new development, need consultation
 - Public meetings, more focused workshops, one-to-one
 - Flooding fairs and product demonstrations
 - Annual awareness-raising campaign
 - Websites (some parts of which communities can respond to)
 - Very keen to formulate local Flood Risk Management groups; community flood plan or household flood plans
 - National exercise (e.g. Watermark) – professional actors (and communities at most recent one); test preparedness (professionals); test plans (local people)
- National Flood Forum represents communities and groups, and supports and informs them; also starting to do its own research

Research and evidence

- CapHaz-NET (Europe-wide); report on communities and another on education/risk perception
- FLOODSITE Task 11 – case studies on Germany and Italy; local loss of knowledge and other issues; UK case study they did was based on secondary data already collected
- STARFLOOD - FRM toward resilient FR governance arrangements
- In Saxony local government also shifted responsibility to local communities – led to some communities asking ‘what do we pay our taxes for?’ after flooding; where there is repeated flooding, maybe people will acknowledge the problem and do something; but some in denial/don’t want to admit it in case it affects house prices; not simple/straightforward
- A lot of work has been done in the UK for the Environment Agency – they have been good at taking it on board; someone went through all the reports/guidance and pulled out recommendations; they took on those that could be done quite easily (not all of them though)
- EU research doesn’t always get used, but trickles through – although FLOODSITE project led to Flood Directive
- EC ones – Flood Resilience Management governance; who makes decisions; they are working with lawyers; with a view to developing good practice (legal); considering different contexts; each country doing three case studies; one year into the project, so too early to have examples
- Another project in Doncaster (2007 flood) – ‘We sense it’ citizen science project; get citizens to observe/gather data on water levels; web platform used with mobile devices to upload data; monitoring social media to see what they do and say; also installing widgets to physically measure water levels, etc., which automatically upload data to website; had trouble engaging locals; always usual suspects involved (e.g. local flood wardens)

Gaps in evidence

- Been talking about it for a while – research on businesses, particularly SMEs
- Engagement issue key problem – no easy answers; e.g. rural communities compared to migrant city populations

Good examples

- Cap-Haz – many examples (including flooding as well as other resilience issues)
- Partnership working to respond to flooding/build resilience – Local Authorities, local parishes and local responders
- Richard Ashley at Sheffield University – learning alliances work; Local Authorities work with communities to co-develop approach; some case studies; links to Stuart Lane and Pickering RELU research project

Issues/tensions

- Funding, trust, who should do what, roles and responsibilities
- Some individuals in communities may not know what the Environment Agency is; ‘the water people’; people don’t know or cannot differentiate between organisations involved; even professionals don’t always know others’ roles and responsibilities; hence benefit of partnership working

Roles of institutions

- Providing resources, facilitation and support; initially until capacity within community is sufficient to run itself
- Voluntary groups/activity – Environment Agency study

Role of social science

- Crucial – over years most issues have been highlighted by it; now recognised (more social scientists in the Environment Agency)
- Learning how communities perceive/construct things/behave
- Previously assumed it was an information deficit issue – all thought that they just needed to provide information and everyone would act
- Socio-economic and cultural context work; not simple
- Will be crucial – if working with people, need to know about them
- Focus of research councils is to include social researchers in multi-disciplinary studies
- Been doing some work on artists and their role in raising awareness and engagement – how they look at values/cultural context/history; EA had artists in residence programme in the North East (but only one-off unfortunately)

Department for Communities and Local Government

Background

- New ministers are keen on shifting power to individuals (rather than local government which is sometimes the assumption) and new policies are in place that facilitate this:
 - Community rights (neighbourhood plans), e.g. decisions on new housing/how much – more control
 - Power to run community services, such as parks and libraries, and create lists of assets with community value (decisions on sale)
 - Neighbourhood budgets (managing these)
- Moving from high-level theory to specific actions recently
- Decentralisation – doesn't just happen, needs central government push
- Now focused on policies at coalface – e.g. business rates held by Local Authorities, and new homes bonus (they match council tax paid on these)

What are the incentives for communities?

- People not interested in neighbourhood planning
- Need to give example/story of where other communities have done so

Communication/getting participation?

- 90% of time of policy teams is getting out on the streets -> 'show, not tell' mantra; using examples of where communities have actually done something, as motivation
- Approach summary: 'enthuse, inform, mobilise, support'
- Listening/networking are very important
- Power of story
- Pinpoint influencers – those who have widest networks. This is difficult, and is often self-selecting. Used LinkedIn site for neighbourhood planning. Also can use social media/tweeting – see who replies, often they are the active ones.
- Parish councils important in this agenda – powerful unit in new approach. They often have existing networks, the process of setting them up is now easier, and increasingly they are getting funding.

Public risks

- No work on public hazards/risks. Not sure if they are covering flooding. May be a grouping of coastal areas working on this (?)
- Model they used could be applied to help communities understand risks (of flooding)
- Questions from minister may be relevant: How do you move from conflict to consensus? -> deciding what they want from options
- [Is flood avoidance 'story' suitably positive?] It might be the sharper end of story-telling, but it's the story that counts. E.g. the consequences of not taking actions against hazards; show where communities who haven't taken this on ended up.
- Should be aware that it is not just his team working to engage – they have paid for specialist support. £2 million getting volunteers of National Town Planning Association to help community groups.
- Analysts in resilience areas of DCLG interface on resilience/localism.

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Appendix 6 - Theme 2 consultee interview notes

British Insurance Brokers Association

Key points

- BIBA are actively involved in the consultation on FloodRe
 - Still some issues with FloodRe in their opinion
- Feels that there is a general perception among the public that the Statement of Principles is still in place, even though it ended in June 2013
 - People feel that they are entitled to insurance – the fact that the ABI continues to look at cases on the basis of the Statement of Principles adds to this feeling
 - People’s mindset need to change
- There is some question in BIBA about what exactly ‘Genuinely uninsurable properties’ [FloodRe] means?
 - Does it mean that people will have to engage with PLP in order to continue to have affordable insurance
- At present insurers attitude to properties with PLP:
 - There is a disconnect between certain areas and insurers – not recognising risk management procedures even where they’re installing PLP
- It is estimated that it costs £1200-£4800 to protect homes from flooding
 - This is not a barrier for most people
 - Reduction in excesses [not premiums?] for people who do install PLP – it does make a difference
- **BUT** there are still only a few specialist insurers who will take this into account – the practice is not yet widespread throughout the industry
- Comparison (i.e. online comparison sites) and competition driven by these means that household insurance has become quite commoditised
- Problems with access to insurance often occur when properties change hands – when someone tries to access the market for first time
- Small businesses are not currently being included in FloodRe
 - BIBA’s view that they should be included
 - At the small / micro-business level there are very few differences between their property and domestic property – certainly the risk is very similar
- What is needed [in BIBA’s opinion] is more acknowledgement of PLP and other measures from insurers, AND more education about protecting properties
 - There is a question of who will / should provide this additional education
 - Local government? Environment Agency? Insurance industry?
 - Doesn’t know of any insurers taking the lead in establishing this education / recognition relationship
- Community flood defences might be a simpler solution?

- Once in place homeowners can get a letter to show to their insurers
- Flood Action Groups tend to be in areas that have flooded previously
 - The focus needs to be on areas that haven't flooded, where they have the perception that flooding is someone else's problem

BIBA's response to FloodRe

- Want to ensure that the majority of people in the UK can get flood insurance
- Want small businesses included
- Want clarification (don't understand) of 'genuinely uninsurable properties'
- Council tax banding – band H excluded at the moment, they would like to see it included
 - Exclusion doesn't recognise 'asset rich, cash poor' individuals
- Don't agree with 2009 cut-off – think it should be 2013 instead
- Remaining question of European approval
 - Fallback position may be obligation – BIBA don't favour this
 - If FloodRe cannot / does not happen, hybrid solutions should be looked at rather than obligation

Any current / future research

- BIBA sometimes asks it's members about their experiences, but they are not really involved in research regarding flooding

London School of Economics

Key points

There is a lot of research around looking at flooding, but no clear results regarding flood insurance and individuals attitudes and behaviours

- There are still a lot of questions unanswered

There is a potential for using insurance as an incentive **but**

- Reasons it is not working – in particular a lack of understanding about individual actions and insurance

There is some 'common knowledge' that has been established

- People need to be flooded several times before considering other measures (than insurance)
- Flooding is very complex compared to other risks e.g. burglary

Thinks that there were some insurance companies who sponsored flood work in communities

Any current / future research

Was involved in:

Analysis of flood risk schemes in developing countries

- to see if they have been built with relation to insurance and risk

Currently working on something to see if this is happening in the UK, especially with relation to Flood Re

ENHANCE project

- Insurance element
- doing a case study of flooding in England – looking at which other stakeholders need to be involved e.g. mortgage lenders, property developers

Other evidence to consider

Look outside flooding – there is a wider disaster risk reduction literature, especially within developing countries

Some evidence out of USA, Germany, Netherlands

- Doesn't really know of anything from the UK

There are examples of high value properties that have high premiums, where the insurance company can have a dialogue with the policy holder

- This is standard practice in business insurance
- Could be an area to look at

But numbers don't add up at an individual / residential level (i.e. the amount of money involved makes it not worthwhile for insurance companies or individuals to enter into such a dialogue)?

Anyone else to speak to?

Regarding resilient repairs – authors of ABI report on resilient repairs

There are a couple of working groups at the ABI with regards to setting up a portal for individuals

Any other literature?

Paper on developing countries

- A framework to assess whether insurance addresses risk

Any advice for case studies?

Other routes?

- e.g. communities rather than focus on individuals

Space for replicating the German study in the UK?

Welsh Government

Key points

There is a problem which is inherent in insurance

- The informal cross subsidy – people are not aware that they are at high risk of flooding because they are not paying risk reflective prices
 - SO people are unwilling to now start paying more under FloodRe
- However, if you live in a flood risk area, you should expect to pay a higher price for insurance

Competition in the insurance market is helping people

- Allowing them to shop around for insurance and therefore get a better price
- Insurance companies won't pay for resilience (i.e. resilient repairs) – may cause people to switch insurers?
- Insurance companies are also not taking into account property level protection, so there is little incentive for individuals to install

Barriers to community-led FRM

2 key barriers:

1. It is very difficult to work with urban communities because:
 - a. They are hard to define
 - b. flood risk measures would need to be very robust – there are lots of rapid runoff catchments, and people are not very aware of their risk (also not very aware of climate change issues) SO it is difficult to convince people to take their own measures to address flood risk

Any current / future research

Andrew Darnton (AD Research) did some work for the Welsh Government looking at flood support and advocacy

- 'Flood Advocacy and Support Service for Communities in Wales'
- One finding from this was that it is very difficult to summarise how people respond to flooding

Doesn't know of any future research planned that might be relevant

Any other literature?

ABI resilient repairs

NFF property level protection and insurance

Any advice / suggestions for case studies?

Communities at Risk register might be a useful resource

- Better uptake in some areas – especially those with a more well defined community
- ALSO places with a lead individual and recognised communication

Tal-y-bont as a possible study

- have a local flood group

St Asaph (Roe Parc) as a possible study

Some opportunity for small local case studies of dealing with insurance

Defra Synthesis of flood social science evidence

Appendix 7 - Theme 1 workshop Briefing Paper: Community-led flood and coastal risk management

Background

Brook Lyndhurst, in partnership with Collingwood Environmental Planning and Lancaster University, has been commissioned by DEFRA to carry out an exploratory research project on local ownership of flood and coastal risk management (FCRM). The research involves the synthesis of existing social science evidence and practitioner experience, and the identification of gaps in existing knowledge.

This workshop is one of two in which key stakeholders from relevant sectors are invited to discuss with the project team the evidence synthesis so far, and to help to identify and clarify gaps in the evidence. Together these two workshops constitute Phase 3 of the project. An outline of the project methodology and where Phase 3 fits into this is provided in Appendix A.

Research questions

The research questions that this project seeks to address were formulated following input from key policy makers who attended a 'scoping and visualisation' workshop. These inputs were used to identify policy challenges, and the research questions were developed by the project team in collaboration with the steering group and expert partners.

The broad question that is intended to lead discussion at this themed workshop is:

How can government departments and agencies encourage and nurture community and inter-organizational relationships to promote local FRM interventions and actions?

The specific question that has led the choice of literature and the evidence synthesis so far is:

What do we already know about what the institutional role is, and the role of other organisations, groups and individuals, in promoting effective community level action to manage flood risk, particularly in areas where the greatest challenges are; such as low-certainty, rapid-onset flooding and vulnerable or transient communities?

Introduction

This Briefing Paper aims to set out the findings from the evidence synthesis thus far. It also attempts to highlight gaps encountered in the evidence. Finally, it attempts to raise issues and questions which, based on the project team's wider knowledge and experience, may be related to the findings presented in this paper or provide answers to the questions raised and may therefore be of interest to FCRM practitioners and policymakers. Gaps, questions and issues are presented in boxes at the end of each sub-section.

In terms of the main text, there are a number of important points to raise.

Firstly, the findings presented are drawn from a carefully chosen, but necessarily limited set of literature, and three interviews with experts from academia and policy. The literature was selected via a combination of an online literature search, expert advice from project partners and discussion with the project's steering group. This set of literature is therefore not exhaustive, and the implications of this should be borne in mind when considering the findings presented below. As this is a synthesis of evidence and a presentation of findings, references are not provided in the text unless quotes are lifted directly from the literature – signposting to relevant literature for each section of the evidence synthesis findings is provided in the bibliography.

There has been a significant amount of research conducted since the 2007 floods analysing the roles of various actors and the impacts of flooding. This hindsight has provided useful learning that is, and can be still further, used to inform engagement and increased participation of communities FCRM. **Please note** that parts of the material discussed in this document may be familiar to some but may not be recognised by all attending the workshop. Common understanding and dissemination may be important issues to be addressed – one purpose of the workshop is to identify issues such as these and help to share learning.

This also means that gaps in knowledge identified may simply be gaps in the knowledge accumulated by the project team in the course of reviewing the limited set of literature, rather than gaps in the overall knowledge of the FCRM community. Another purpose of this workshop is to clarify whether this is the case.

Finally, the next steps for the project will involve conducting two case studies to further inform the evidence synthesis. Workshop participants are invited to reflect on what, for them, would constitute useful case studies, and whether they know of any existing studies that might be appropriate. There will be an opportunity to discuss these points during the workshop.

Evidence synthesis findings

Context

The shift to increased participation and leadership of communities in FCRM has increased the variety of stakeholders and raised the question of what roles the different stakeholders are 'best' placed to take.

When discussing the transition to community-led FCRM, it is important to bear in mind that public bodies (such as the Environment Agency, Met Office and Cabinet Office) still have a key role both at the national and local levels. At the national level, this includes assessing risk, publishing risk maps, allocating funding and raising awareness. At the local level this includes providing warnings, supporting resilience-building and providing emergency response. For example, the Environment Agency uses a range of activities to engage communities through the flood cycle: from planning and developing structural and non-structural flood defences to awareness raising to incident management and on into the recovery phase (public meetings, focus groups, flood

fairs/product demonstrations, annual national flood awareness campaign, etc.) and disseminates information through various media (social media, flood alerts via public broadcasting and telephone messages, etc.).

Engaging communities and developing resilience

The key institutional role in the transition to community-led FCRM is supporting the development of capacity and capabilities at the local level through engagement and support.

Community characteristics⁶

When considering FCRM at a location and approaches to engage a community it is important that institutions are aware not only of the flood risk (e.g. geographical factors that may lead to rapid-onset flooding) but also community characteristics, including:

- Perceptions
 - Experience of flooding can influence local perceptions, motivating action to mitigate risks
 - Previous interactions with institutions – if these have not been positive, the community may perceive the institution as ineffective
 - Some communities perceive themselves as able to cope with flooding and may resent what they consider to be interference from institutions
- Vulnerability
 - During a flood – for example, groups such as the elderly or disabled
 - After a flood – to the psychological stresses and financial burdens (e.g. downturn in local economy, the financial burdens of repairs or having to rent in a market of sudden high demand)

Vulnerability has been measured and conceptualised in a number of different ways, and understanding how it affects responses to flooding is complex.

- Is there evidence on how to approach communities in relation to these different characteristics?
- What needs to be done to better understand community characteristics and tailor engagement?
- Is there evidence on businesses' perceptions and response to flooding?
 - How do perceptions vary by location (i.e. areas at high risk), business type or size?
- Is there evidence on the vulnerability of communities?
 - How is vulnerability currently factored into the FCRM decision-making by stakeholders at national and local levels?

The 'ongoing experiment'

The process of engaging communities and supporting the development of resilience is iterative – institutional approaches need to consider community characteristics and these characteristics can change over time. There are no clear answers – the process is described in the literature as an 'ongoing experiment' – but there are guidelines and considerations drawn from the evidence that can improve the effectiveness of community engagement:

⁶ Please note that the term "community" is not straightforward. It can mean different things in different contexts.

- There is greater trust in individuals than institutions. A trusted individual is likely to be more effective in engaging a community than a 'formal' institutional approach.
- Institutions should also take local knowledge into account to engage communities and allow them to question/add to the evidence put forward by institutions during the decision-making process for flood defence options. There is some evidence that this can lead to innovation through local people 'challenging the science'.
 - Social science methods, such as facilitated focus groups, have been found to provide effective frameworks for integrating local knowledge into the design of local flood defence options.
- Partnership working between stakeholders during the conception, design, construction and management of flood defences can lead to cost savings and improved outcomes through, for example, aligning of varied local objectives.

Evidence from other areas of natural hazards research and policy supports and adds further insight to some of the findings from the flooding literature. Key principles highlighted for natural disaster management are stakeholder participation in decision-making, democratic access to knowledge, transparency and accountability in relation to policy decisions, as well as openness, effectiveness, coherence and fairness. Kuhlicke et al (2012) identify "six principles for social capacity building:

1. *Identifying vulnerabilities and prioritising the needs of the most vulnerable*
2. *Making information available*
3. *Being participatory and inclusive*
4. *Building networks*
5. *Starting early*
6. *Sharing responsibilities fairly*"

The experiences of localism in other areas of policy provide insights for community-led FCRM:

- Encouraging community participation in new local decision-making opportunities is not an easy task and requires effort (i.e. investing resources) from institutions/central government.
- Making use of the power of the story – contextualise the benefits (or losses) of inaction through use of real-life examples.
- Pinpointing influential individuals to lead local actions – for example, by sending invitation messages out via social media (although this approach suffers from self-selection).
- Parish councils have increasing influence under the localism agenda and could provide leadership.

- Who should define what capacities are needed in a community to effectively lead FCRM?
 - What evidence should this be based on?
- Who should define what processes are needed to improve these capacities?
- Who should define what the outcomes look like?
- Does the process of 'challenging the science' often lead to innovative solutions?
- Are parish councils a local political unit that should be more involved in FCRM?

During a flood event

Warnings

A range of variables affect responses to flood warning, including characteristics of the warning message, individual factors and social factors. Following research of public understanding of flood warnings, these have been designed to be very clear and use a deterministic warning ('flood warning', 'severe flood warning', etc.).

The literature highlights a need to improve flood forecasting and warnings for locations that experience rapid-onset flooding (such as rapid response catchments and urban areas protected by flood defences), where a breach, although of low probability, could have particularly damaging consequences. There is an argument for the implementation of probabilistic warnings (e.g. '60% chance of flooding'), as these could enable the warnings to be provided with greater lead times. Vulnerable social groups would benefit from more time to prepare/evacuate. However, the literature also identifies the risk that false alarms (or development of indifference to regular warnings) might erode the impact of this form of warning.

- Have there been examples of communities providing input into the design of flood warning systems? Or different warning methods used for different groups of a community?
- Is there evidence on effective warning systems in locations where flooding is rare, and many are not aware of their risk, but consequences of flooding are high?

The emergency response

Local people may be the first responders to take action during a flood, and community flood response action plans may help to raise awareness and reduce vulnerability. Professional emergency response can be perceived as ignoring or belittling community plans/actions to prepare for a flooding event. Evidence from other areas of public hazard emergency response indicates that coordinating emergency response with local action can have benefits. For example:

- A Fire Department in the Netherlands has developed a five-phase model for co-operating with citizens which assumes that victims and bystanders will start providing help before emergency personnel arrive, and integrates this assistance into a control process (including subsequent meetings with the citizens involved and their registration).
- In Ottawa, Canada, it was suggested to senior citizens that they keep track of their neighbours so that they can inform the emergency services who is away and who may still be trapped.

- Is there evidence that supports these examples of coordinating local and professional response to a flood event?

After a flood

Recovery

Post-flooding evaluations have indicated that the main difficulties individuals experience are not during the flood itself but occur after the event, due to the psychological stresses of events such as having to sort out insurance claims, organising builders to make repairs to the homes or having to move house (potentially also having to commute further). Once the immediate danger has passed, institutions may take a step back from direct action as insurers and builders get involved to make repairs.

- Who is best placed to address psychological impacts? Might these be community networks?
- Could institutions provide further support, certification or regulation of practice of insurers and builders to reduce psychological impacts after a flood?

Moment of change

There may be a point in time after a flood, when perceptions of the community have changed, at which institutions are better able to engage with the community to build resilience so that the community is better prepared for the next flood, or propose ways of holding on to the 'flood memory' to maintain awareness.

- What lessons could be learned from the 'moment of change' literature about the opportunities or successes in engaging with individuals at a moment of change?
 - Are there particular moments, such as moving house, at which individuals are more likely to respond to engagement efforts?

Reflection on the evidence and its use

Although there is a significant body of evidence and guidance for FCRM, and useful insight from other areas of policy and natural hazard risk management research, there is very little evidence on the cost-effectiveness of recommended approaches. Evidence on 'best' practice is often qualitative or anecdotal ('what worked best' or 'what would work better'). Although there may not be a clear 'best' role(s) for institutions, better understanding the audience will help institutions engage with communities in a more effective way.

Experts also suggest use of UK research findings has been good but that there is little dissemination of evidence from EU research.

- What characterises 'effectiveness'?
 - What implications does this have for flooding social science research?
- Is there evidence of EU flooding research findings being applied in the UK?

Summary

In summary, the key findings from the evidence synthesis so far, and the questions or issues that they raise are:

| | |
|---|---|
| <p>Engaging communities and developing resilience – Community characteristics</p> | <ul style="list-style-type: none"> - Is there evidence on how to approach communities in relation to these different characteristics? - What needs to be done to better understand community characteristics and tailor engagement? - Is there evidence on businesses’ perceptions and response to flooding? How do perceptions vary by location (i.e. areas at high risk), business type or size? - Is there evidence on the vulnerability of communities? How is vulnerability currently factored into the FCRM decision-making by stakeholders at national and local levels? |
| <p>Engaging communities and developing resilience – The ‘ongoing experiment’</p> | <ul style="list-style-type: none"> - Who should define what capacities are needed in a community to effectively lead FCRM? What evidence should this be based on? - Who should define what processes are needed to improve these capacities? - Who should define what the outcomes look like? - Does the process of ‘challenging the science’ often lead to innovative solutions? - Are parish councils a local political unit that should be more involved in FCRM? |
| <p>During a flood event – Warnings</p> | <ul style="list-style-type: none"> - Have there been examples of communities providing input into the design of flood warning systems? Or different warning methods used for different groups of a community? - Is there evidence on effective warning systems in locations where flooding is rare, and many are not aware of their risk, but consequences of flooding are high? |
| <p>During a flood event – The emergency response</p> | <ul style="list-style-type: none"> - Is there evidence that supports these examples of coordinating local and professional response to a flood event? |
| <p>After a flood – Recovery</p> | <ul style="list-style-type: none"> - Who is best placed to address psychological impacts? Might these be community networks? - Could institutions provide further support, certification or regulation of practice of insurers and builders to reduce psychological impacts after a flood? |
| <p>After a flood – Moment of change</p> | <ul style="list-style-type: none"> - What lessons could be learned from the ‘moment of change’ literature about the opportunities or successes in engaging with individuals at a moment of change? Are there particular moments, such as moving house, at which individuals are more likely to respond to engagement efforts? |
| <p>Reflection on the evidence and its use</p> | <ul style="list-style-type: none"> - What characterises ‘effectiveness’? What implications does this have for flooding social science research? - Is there evidence of EU flooding research findings being applied the UK? |

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Further Reading

For further reading, the table below outlines which of the documents listed in the bibliography relate roughly to which of the themes highlighted in this Briefing Paper.

| Theme | See... |
|---|--------------------------|
| Engaging communities and developing resilience – Community characteristics | 1; 6; 8; 10; 11 |
| Engaging communities and developing resilience – The ‘ongoing experiment’ | 1; 2; 4; 5; 6; 8; 10; 11 |
| During a flood event – Warnings | 6; 7; 8; |
| During a flood event – The emergency response | 3; 8; 11 |
| After a flood – Recovery | 10 |
| After a flood – Moment of change | 9 |

Appendix A – Project Methodology

Phase 1 of the project entails a ‘scoping and visualisation workshop,’ attended by key policy makers, to define the role of the evidence synthesis and its scope. Attendees’ input will be used to collectively identify policy challenges, and the research questions will be developed from the responses gathered at the workshop.

Phase 2 involves the preliminary evidence synthesis, following the development of the research questions and framework in collaboration with the steering group, and the identification of the key sources to be reviewed. A number of interviews and case studies will also be conducted as part of the synthesis.

Phase 3 consists of two themed workshops, based on the themes identified in phases 1 and 2. These will be attended by key stakeholders from relevant sectors, from both policy development and delivery.

Phase 4 will allow the findings from phase 3 to be incorporated into the overall synthesis, and involve the finalisation of the evidence synthesis.

Phases 5 and 6 will consist of a final workshop, to identify and clarify gaps in existing knowledge, and a dissemination workshop to discuss the findings of the synthesis with policy teams.

Defra Synthesis of flood social science evidence

Appendix 8 - Theme 2 workshop Briefing Paper: Flood insurance and individuals' actions

Background

Brook Lyndhurst, in partnership with Collingwood Environmental Planning and Lancaster University, has been commissioned by DEFRA to carry out an exploratory research project on local ownership and management of flood risk. The research involves the synthesis of existing social science evidence and practitioner experience, and the identification of gaps in existing knowledge.

This workshop is one of two in which key stakeholders from relevant sectors are invited to discuss with the project team the evidence synthesis so far, and to help to identify and clarify gaps in the evidence. Together these two workshops constitute Phase 3 of the project. An outline of the project methodology and where Phase 3 fits into this is provided in Appendix A.

Research questions

The research questions that this project seeks to address were formulated following input from key policy makers who attended a 'scoping and visualisation' workshop. These inputs were used to identify policy challenges, and the research questions were developed by the project team in collaboration with the steering group and expert partners.

The broad question that is intended to lead discussion at this themed workshop is:

What actions do individuals take to reduce their flood risk before and after a flood, what are their motivations and drivers, and how does access to insurance affect these?

The specific question that has led the choice of literature and the evidence synthesis so far is:

What do we already know about relationships between insurance and its effects on attitudes and behaviours in relation to flood risk management?

Introduction

This Briefing Paper aims to set out the findings from the evidence synthesis thus far. It also attempts to highlight gaps encountered in the evidence. Finally, it attempts to raise issues and questions which, based on the project team's wider knowledge and experience, may be related to the findings presented in this paper or provide

answers to the questions raised and may therefore be of interest to flood risk management practitioners and policymakers. Gaps, questions and issues are presented in boxes at the end of each sub-section. In terms of the main text, there are a number of important points that must be raised.

Firstly, the findings presented are drawn from a carefully chosen, but necessarily limited set of literature. The literature was selected via a combination of an online literature search, expert advice from project partners and discussion with the project's steering group. This set of literature is therefore not exhaustive, and the implications of this should be borne in mind when considering the findings presented below. For a list of the literature reviewed thus far from which findings have been drawn, see the bibliography.

This also means that gaps in knowledge identified may simply be gaps in the knowledge accumulated by the project team in the course of reviewing the limited set of literature, rather than gaps in the overall knowledge of the flood risk community. Part of the purpose of this workshop is to clarify whether this is the case.

The other important point regards the context in which this project is currently taking place. The flood insurance system in the UK is in the process of undergoing a significant change, with the previous 'statement of principles' coming to an end and a new system being discussed by the insurance industry and the Government. This means that a lot of research is, for want of a better phrase, "out of date," and that findings elicited or gaps identified may have already been, or be in the process of being addressed by the current shift in approach. However, even against the backdrop of a changing context for insurance, this research was considered crucial for drawing together existing knowledge about what works, in order to inform the long-term objective of allowing individuals and communities to take more localised ownership of flood risk management.

Additionally, because this is a synthesis of evidence and a presentation of findings, references are not provided unless quotes are lifted directly from the literature. Accompanying the bibliography however is a table that sets out which of the literature has informed which of the themes highlighted below, to aid further reading.

Finally, the next steps for the project will involve conducting a case study to further inform the evidence synthesis. Workshop participants are invited to reflect on what, for them, would constitute a useful case study, and whether they know of any existing studies that might be appropriate. There will be an opportunity to discuss these points during the workshop.

Evidence Synthesis Findings

Insurance as a default position

The context within which individuals approach their flood risk is one in which flood insurance is effectively a 'default position.' Under the Statement of Principles insurance companies provided flood insurance as part of standard domestic insurance to all but the most at-risk properties, and for these properties insurers were encouraged to work with consumers to maintain cover, rather than simply refusing to cover. This means that for

the majority of individuals it has been possible to gain flood cover, and that for a significant majority this cover is not even explicit: it is, rather, 'bundled up' in their standard domestic cover.

- Does the lack of 'visibility' of flood insurance have an impact on individuals' attitudes and behaviours?
 - If flood insurance is often 'bundled up' in home insurance, does this make it easy for individuals to ignore, and thus ignore their flood risk?
- Are there any relevant differences, in relation to risk and individuals' attitudes and behaviours, between building and contents insurance?
- Does being self-employed / a micro business make a difference to attitudes and behaviours around insurance?

Moral hazard

The literature suggests that one result of this widespread availability of flood insurance cover is that it encourages moral hazard in individuals. Moral hazard is defined as "a situation in which individuals or organisations do not bear the costs of a particular risk and hence lack incentives to change behaviour to reduce that risk." With regards to flood insurance, moral hazard seems to operate in two distinct ways:

Financial

Flood insurance relieves individuals of the financial burden of flooding by paying for repairs in the event of a flood. There is a persistent perception that insurers will continue to pay for like-for-like repairs to property in the event of a flood, and thus the incentive for individuals to improve the resilience or resistance of their property to flooding is removed.

Psychological

Being able to insure their property against flooding encourages moral hazard in individuals by removing the psychological strain of dealing with flood risk, that is, the anxiety that being confronted with flood risk can create. In doing so, insurance can remove the incentive for individuals to take steps to mitigate their own flood risk through actions such as installing property level protection.

It is suggested in the literature, therefore, that the presence and availability of flood insurance is preventing people from addressing underlying flood risk to the full extent.

- Are there other examples in the insurance world of moral hazard?
 - How is the issue addressed in other types of insurance?
- What research exists which looks at attitudes and behaviours of individuals in relation to other types of insurance, such as car / travel (including, for example, the recent explosion of whiplash claims)

The current situation is unsustainable

It could be argued the removal of financial and psychological burdens is, in fact, the point of insurance cover. As noted above, however, in the case of flooding and flood risk the dominance of insurance as a means for mitigating individuals' flood risk encourages moral hazard, that is, it disincentivises individuals from taking other measures to mitigate their flood risk. Many individuals see insurance as a substitute for other forms of flood protection, indeed as a 'panacea' to flood risk entirely. The current context, in which it is acknowledged that climate change is very likely to increase both the frequency and intensity of flooding events means that this situation is unsustainable; insurance companies cannot afford to continue to bear the burden for flood risk. This recognition is the background against which the new arrangement, to supersede the Statement of Principles, is being discussed.

- What research exists which addresses the barriers to the redistribution of risk?
- What is known about community level insurance action, and the relative costs and hassle of establishing this?

Insurers have the potential to encourage mitigation actions

There is a recognition in the literature that the insurance system or insurers have the potential to encourage individuals to take further actions – beyond simply gaining flood insurance cover – to mitigate their flood risk. In light of the two facets of moral hazard outlined above, one approach to encouraging mitigation actions highlighted in the evidence is financial incentives, namely the offering of lower premiums or excesses, or applying discounts for those individuals that take other steps to mitigate their flood risk. Market incentives are often considered to be most effective, and it is clear how offering financial incentives could encourage individuals away from moral hazard and inaction by returning some of the burden for the cost of flood risk.

There is also a suggestion in the evidence that insurers could be playing a greater role in educating individuals about flood risk and the mitigation measures (beyond insurance) available, and thus be encouraging individuals away from the psychological element of moral hazard. It is less clear how this would work in practice, especially given that the prevalence of competition within the insurance market at present means that individuals may be less likely to engage in a longer term relationship with a specific insurer. It is claimed, however, that in order to ensure the continued resilience of the flood insurance system, this function – encouraging mitigation actions – needs to be more fully realised.

- Are there lessons that can be learned from other markets about successful financial incentives?
 - What is known about how individuals respond to different incentives – financial and otherwise?
 - What about expected or anticipated incentives e.g. future impacts on property values?
- Who is best placed to deliver incentives?
 - Who are the 'trusted messengers' in the insurance / flood risk management world?

Financial incentives may not be effective

Despite the assertion that insurers and the insurance industry could, and indeed should, be doing more to encourage individuals to take other flood risk mitigation actions, there is evidence to suggest that financial incentives may not be the most effective way to achieve this.

On the one hand, there is both qualitative and quantitative evidence which points to the fact that individuals do not respond as strongly, or find as motivating, messages or incentives which are financially focused. Instead it seems that individuals respond better to messages or incentives which are psychologically or emotionally focused. So, for example, when promoting resilient repairs (those which increase the ability of a property to recover following a flood, or decrease the time it takes to repair a property) to property, individuals perceived the idea of getting back into your home in less time as more motivating than saving money.

The other issue that casts some doubt on the effectiveness of financial incentives in encouraging people to undertake flood risk mitigation actions, is that there seems to have been very limited opportunity for insurers to test the effectiveness of these kinds of incentives. This may be due to a number of reasons. Firstly, there is an increased tendency among consumers to shop around for flood insurance, as is true for many types of insurance. This may mean that insurers are not able to engage with consumers for long enough to present the idea of financial incentives to individual mitigation actions. Linked to this, individuals are increasingly likely to switch insurance providers at the end of their policy rather than renewing, and so insurers are less able to foster a relationship in which they can encourage mitigation actions by offering longer term financial incentives.

- Is there any evidence of insurers offering 'no claims' or 'loyalty' bonuses, and the effects of these on individual's behaviour?

The effect of experiencing flooding is unclear

One proposition put forward in the literature is that a flooding event could act as a touch-point for engagement with individuals on their flood risk mitigation actions, the assumption being that individuals will be more receptive to change at times like these. This assumption, however, is not necessarily supported by the evidence; or, more accurately, there seems to be evidence to support two different conclusions.

On the one hand, there is evidence which suggests that individuals who have experienced a flood are more likely to take additional mitigation actions, such as the purchase of property level protection. Alongside this, various sources of evidence claim that people's faith in insurance as a panacea can be shaken by a flooding event, that people are more open to the idea of resistant/resilient repairs or alterations in the aftermath of a flooding event, and that multiple experiences of flooding may cause people to alter their behaviour, and make them more likely to consider property level protection.

On the other hand, whilst there is indeed a higher incidence of property level protection measures among those who have been flooded, the numbers are still low. A majority of individuals *do not* purchase flood protection following a flood. Elsewhere it is suggested that individuals are as likely to simply increase their feelings of

- What lessons could be learned from 'moment of change' literature about the opportunities or successes in engaging with individuals at a moment of change?
 - Does the immediate aftermath of a flood constitute a moment of change?
 - Does occupation of temporary accommodation make any difference to this?

anxiety and demonstrate further inaction following a flood, as they are to consider property level protection. It appears then that, as one author puts it, “flooding is neither a necessary, nor sufficient, incentive for domestic flood protection.”

Summary

In summary, the key findings from the evidence synthesis so far, and the questions or issues that they raise are:

| | |
|--|--|
| <p>Insurance is a default position for most individuals, and is the primary form of flood risk mitigation</p> | <p>Does the lack of ‘visibility’ of flood insurance have an impact on individuals’ attitudes and behaviours?</p> <p>If flood insurance is often ‘bundled up’ in home insurance, does this make it easy for individuals to ignore, and thus ignore their flood risk?</p> <p>Are there any relevant differences between building and contents insurance?</p> <p>Does being self-employed / a micro business make a difference?</p> |
| <p>The widespread availability and accessibility of insurance causes moral hazard</p> | <p>Are there other examples in the insurance world of moral hazard?</p> <p>How is the issue addressed in other types of insurance?</p> <p>What research exists which looks at attitudes and behaviours of individuals in relation to other types of insurance, such as car / travel (including, for example, the recent explosion of whiplash claims)?</p> |
| <p>The current insurance situation is unsustainable</p> | <p>What research exists which addresses the barriers to the redistribution of risk?</p> <p>What is known about community level insurance action, and the relative costs and hassle of establishing this?</p> |
| <p>Insurers have the potential to encourage individuals to undertake further mitigation actions</p> | <p>Are there lessons that can be learned from other markets about successful financial incentives?</p> <p>What is known about how individuals respond to different incentives – financial and otherwise?</p> <p>What about expected or anticipated incentives e.g. future impacts on property values?</p> <p>Who is best placed to deliver incentives?</p> <p>Who are the ‘trusted messengers’ in the insurance / flood risk management world?</p> |
| <p>Financial incentives may not be the most effective</p> | <p>Is there any evidence of insurers offering ‘no claims’ or ‘loyalty’ bonuses, and the effects of these on individual’s behaviour?</p> |
| <p>The effect off experiencing flooding on individuals behaviours and attitudes is unclear</p> | <p>What lessons could be learned from ‘moment of change’ literature about the opportunities or successes in engaging with individuals at a moment of change?</p> <p>Does the immediate aftermath of a flood constitute a moment of change?</p> <p>Does occupation of temporary accommodation make any difference to this?</p> |

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Further Reading

For further reading, the table below outlines which of the documents listed in the bibliography relate roughly to which of the themes highlighted in this Briefing Paper.

| Theme | See... |
|---|-------------|
| Insurance as a default position | 1; 2; 4; 8; |
| Moral hazard | 1; 2; 4; 8; |
| The current situation is unsustainable | 1; 8; |
| Insurers have the potential to encourage mitigation actions | 1; 2; 6; |
| Financial incentives may not be effective | 4; 5; 6; |
| The effect of experiencing flooding is unclear | 3; 4; 5; 8; |

Appendix A – Project Methodology

Phase 1 of the project entails a ‘scoping and visualisation workshop,’ attended by key policy makers, to define the role of the evidence synthesis and its scope. Attendees’ input will be used to collectively identify policy challenges, and the research questions will be developed from the responses gathered at the workshop.

Phase 2 involves the preliminary evidence synthesis, following the development of the research questions and framework in collaboration with the steering group, and the identification of the key sources to be reviewed. A number of interviews and case studies will also be conducted as part of the synthesis.

Phase 3 consists of two themed workshops, based on the themes identified in phases 1 and 2. These will be attended by key stakeholders from relevant sectors, from both policy development and delivery.

Phase 4 will allow the findings from phase 3 to be incorporated into the overall synthesis, and involve the finalisation of the evidence synthesis.

Phases 5 and 6 will consist of a final workshop, to identify and clarify gaps in existing knowledge, and a dissemination workshop to discuss the findings of the synthesis with policy teams.

Defra Synthesis of flood social science evidence

Appendix 9 - Theme 1 workshop note: Community-led flood and coastal risk management

Background

Brook Lyndhurst, in partnership with Collingwood Environmental Planning and Dr Nigel Watson, is leading a synthesis of flooding social science evidence for Defra. We are working with a steering group of Defra and Environment Agency colleagues to define research questions, one of which is *'How can government departments and agencies encourage and nurture community and inter-organizational relationships to promote local flood and coastal risk management (FCRM) interventions and actions?'*. The project team has performed a review of existing evidence. To help to identify gaps in the evidence a workshop was held with key stakeholders. This note is intended as a summary of the outcomes of that workshop, for participants in the workshop and others unable to attend who are interested in the outcomes.

A Briefing Paper *'Community-led flood and coastal risk management'* was produced by the project team for participants to consider prior to attending the workshop. This paper summarised the evidence synthesis thus far, and provided key points from the literature to stimulate and frame discussion. Briefly summarised, these were:

- When considering approaches to engage a community it is important that institutions are aware of community characteristics (including perceptions and vulnerability).
- The process of engaging communities and supporting the development of resilience is iterative – approaches need to consider community characteristics which can change over time.
- During a flood probabilistic warnings may help in situations of rapid-onset flooding.
- The emergency response could better coordinated with community action.
- Post-flooding evaluations have indicated that the main difficulties individuals experience occur after the event due to the psychological stress, whereas institutions may take a step back from direct action as insurers and builders get involved to make repairs.
- After a flood there may be an opportunity to engage individuals at a 'moment of change' such as having repairs carried out to their home.

The objectives for the workshop were:

- To reflect critically on the findings of the research review set out in the Briefing Paper;
- to discuss a range of issues and questions arising from that review, focusing in particular on exploring what else we need to know and how that might be tackled; and
- to consider what might constitute a useful case study for workshop participants.

Outcomes

During discussions three key cross-cutting issues for FCRM emerged:

- The **diversity** of individuals/communities and other actors, and of challenges in different locations;
- the importance of **language** used during engagement dialogue with individuals and communities; and
- that **evidence and knowledge are not consistently formalised or shared**.

A key discussion item was **engagement**, about which several points were raised:

- There is a lot of evidence on how to communicate to/engage different groups, but it is not well shared.
- Engagement takes a long time, requiring repeated and sustained engagement. Communities can lose interest in FCRM if engagement efforts drop off for a period of time.
- Engagement has to include consulting and involving people – not just telling them, but listening to them.
- Local leadership (and local government) is important in developing the approach to engaging local communities.
- There is a need to ensure the availability of appropriately skilled project officers (through training and recruitment).
- Parameters that have been found to indicate whether a community will become engaged in FCRM include the number of individuals with interest in the issue and education levels.
- Flooding is very emotive – there can be different reactions to the same event.
- Language is important and can act as a barrier (e.g. use ‘be prepared’ rather than ‘resilience’).
- When considering approaches to engaging communities in deprived areas, a focus should be made on what can be achieved by the community and giving people power to do things.
- Coastal and surface water FCRM involve different issues (perceptions, vulnerabilities, etc.) and should perhaps be communicated/framed differently when engaging communities.

Other issues raised included:

- The challenges that communities face, including:
 - **Accessing funding and skills** (there are few resources available for maintaining local capacity and capabilities); and
 - the issue of **accepting that community-led actions will not always succeed** (due to institutional resistance, local politics and/or the difficulty of managing funding bids).
- Problems and challenges for institutions, including:
 - **‘Silo’ thinking** and funding of particular types of FCRM solution;
 - **over-complication** of FCRM processes and **administrative barriers**;
 - continued **funding cuts**; and
 - the **need for central government to be more flexible** to messages coming from communities and to take these into account.
- The fact that the **market is beginning to take more notice of flood risk** (e.g. increased numbers of people who cannot sell their home, solicitors are now checking flood risk on a more regular basis, and there is increased awareness of flood risk within the Council of Mortgage Lenders).
- **Barriers to private and third sector financial investment**, including the fact that investment is treated as revenue rather than capital expenditure (capital expenditure is eligible for tax relief).

During the final session **key questions and gaps** were raised:

- There is a need to define scope of action for individuals and communities. What are we asking them to do? Are we giving them information or telling them what to do?
- Individuals do not tend to understand probability. How should institutions communicate uncertainty alongside communicating risks?
- Could messages on FCRM connect better to everyday life? Could we normalise consideration of FCRM, such as is done for other risks including fire (e.g. fire alarms) and crime (e.g. locking doors)?
- Could messages on FCRM be better communicated to householders at other stages or 'moments of change' (e.g. house purchase, purchase of household insurance or post-flood repair work)?
- Do communications departments in institutions have the right information to engage effectively?
- There is a need for longitudinal studies and mechanisms for transferring learning from locations where community-led FCRM has been successful. Emergency planning teams are good at writing up performance assessments after floods, but there can be a perception issue with advice coming from 'government'. Who should disseminate 'good practice', and how should this be done?
- Research, such as the current workshop, might gain benefit through inclusion of individuals who have experienced flooding and/or involvement in FCRM (the 'victims'/'customers').

Next steps

Outcomes pertinent to the research question will be used to build on the findings of the evidence review, feeding into the synthesis process, and will be discussed in the final report. Material collected on other issues will form part of the final project outputs to Defra.

Defra Synthesis of flood social science evidence

Appendix 10 - Theme 2 workshop note: Flood insurance and individuals' actions

Background

Brook Lyndhurst, in partnership with Collingwood Environmental Planning and Dr Nigel Watson, is leading a synthesis of flooding social science evidence for Defra. We are working with a steering group of Defra and Environment Agency colleagues to define research questions, one of which is *'What actions do individuals take to reduce their flood risk before and after a flood, what are their motivations and drivers, and how does access to insurance affect these?'*. The project team has performed a review and synthesis of existing evidence. To help to identify and clarify gaps in the evidence a workshop was held with key stakeholders. This note is intended as a summary of the outcomes of that workshop, both for participants in the workshop itself and those who are interested in the outcomes, but may have been unable to attend.

A Briefing Paper *'Flood Insurance and Individuals' Actions'* was produced by the project team for participants to consider prior to attending the workshop. This paper summarised the evidence synthesis thus far, and provided key points from the literature to stimulate and frame discussion. Briefly summarised, those key points were:

- Insurance is a default position for many individuals;
- this is seen as encouraging 'moral hazard';
- the current insurance situation is unsustainable;
- insurers have the potential to encourage further mitigation actions by individuals;
- financial incentives may not be effective; and
- the effect of experiencing flooding on individual behaviours and attitudes is unclear.

The objectives for the workshop were:

- To reflect critically on the findings of a research review set out in the Briefing Paper;
- to discuss a range of issues and questions arising from that review, focusing in particular on exploring what else we need to know and how that might be tackled; and
- to consider what might constitute a useful case study for workshop participants.

Outcomes

The common themes which arose throughout the working sessions – either in relation to the Briefing Paper, or other relevant issues – were summarised in the final session:

- **Denial of flood risk** by households at risk is an issue, even in cases after experiencing one or two floods
 - However, experiencing more than two floods is thought to 'break the spell' of denial
- **Clarity and distribution of risk responsibility** is a key concern
 - Rise of 'blame' culture, people looking for someone at fault when flooding occurs, rather than seeing it as an 'act of god'

- Is the desired redistribution of risk to individuals being made clear to them?
- **Widespread difficulty in understanding flood risk**, both among individuals at risk of flooding and other actors either directly or indirectly involved with flooding
 - This lack of understanding extends to issues such as interpreting and understanding flood risk maps, the availability of flooding data, and the levels of certainty around flooding events and property level protection
 - Even where data is available and certainty is high among professionals, there is widespread impression among the public that there is a lot of uncertainty
 - Linked to this is a general ignorance amongst the public and other actors about the type and range of information available on flooding and flood risk
- **The need to address the emotional dimension** of flooding / flood risk with individuals first
 - Not addressing this may be a barrier to engaging people with further mitigation measures
 - This may be of particular relevance for the insurance industry – rational conversations about risk may follow from working through the emotional ones

Denial of flood risk seems to be widespread by all actors in flooding and flood risk management (including government, local authorities and the general public). There also seems to be a lack of ‘flood memory’ amongst markets and institutions, for example the housing market can ‘forget’ flood events, and the price of properties that have been flooded can ‘bounce back’. The existence of active disincentives, such as the risk of blight or the difficulty of selling a property/the impact on its price, may be encouraging denial.

During the final session key questions and gaps were also raised:

- Is the insurance industry the best way to encourage mitigation? Is it their responsibility to do so? Does having insurance really constitute moral hazard, or is it an acceptable form of risk management?
- Why do individuals (generally) not take responsibility for their flood risk and continue to act seemingly in denial after experiencing flooding?
- How do financial incentives work? How effective are they for different actors?
- What other (natural hazard) risks are there which are comparative to flood risk, which might be relevant for understanding flooding? What other markets (e.g. pensions) might provide useful learning?
- Are there other, non-UK insurance markets that might provide useful information / examples?
- Why does there seem to be a lack of innovation in flood insurance?
- What do we know about the interaction between the individual and the community?
- Why does flooding continue to operate as a silo operation?
- Are we missing points in the market / opportunities to engage individuals on flood risk and mitigation?
- Are there other benefits of non-disclosure when it comes to flood risk? Might ‘organised’ denial benefit these actors? Is there any evidence to support this?

Next steps

Outcomes pertinent to the research question will be used to build on the findings of the evidence review, feeding into the synthesis process, and will be discussed in the final report. Material collected on other issues will form part of the final project outputs to Defra.

Defra Synthesis of flood social science evidence

Appendix 11 - Cumbria 2009 floods case study

Rationale and method

Options for a theme 1 case study were gathered from the project Steering Group and project partners, and sought at the theme 1 workshop. The list of options was reviewed in consultation with the Steering Group, and the 2009 floods in Cumbria selected; the decision to focus on Cumbria was based on a desire to conduct a case study on a location within the UK that had not already been investigated in-depth.

To gather information, two interviews were conducted and three documents reviewed. Potential contacts and documents were gathered in a snowball approach, initiated by ideas put forward by the Steering Group. Cumbria was selected as it had not been the subject of the type of post-flood assessment that had been conducted on the 2007 floods in Hull.

Documents reviewed:

- Cumbria Resilience (2011) *Cumbria floods November 2009: Learning from experience – Recovery phase debrief report*
- ACTion with Communities in Cumbria (2012) *“How would my community survive the first 48 hours of a serious emergency?” Be prepared! 10 steps to complete you community emergency plan*
- Environment Agency (2013) *Profiling Partnership Funding case study on Cockermouth, Cumbria*

Interviewees were Environment Agency Advisors in Resilience, and Partnership & Strategic Overview for Flood and Coastal Risk Management in the Cumbria region.

Context

Carlisle, Appleby, Cockermouth and Keswick in Cumbria experienced severe flooding in 2005. In November 2009 Cumbria again experienced severe flooding, more widespread than that of 2005.

Before the floods of 2005, the Environment Agency (EA) focused on public awareness campaigns at a general level (e.g. posters and newspaper adverts); communities would approach the EA if there were concerns with risk of flooding in a location. The 2005 floods exposed uncertainties and stimulated action; the EA set up drop-ins for residents to discuss what had happened. Community events span off the drop-ins, and the events led to community plans being developed in certain locations.

In addition, the EA Flood Resilience Team Leader at the time decided to change approach; the EA would now go out and actively engage communities instead of continuing the pre-2005, ad-hoc approach. The new approach was successful in bringing together community leaders and, importantly, creating a single point of contact with the communities. For example, the EA’s engagement work with communities in Cockermouth and Keswick post-2005 led to development of community networks and emergency plans.

The 2009 floods tested the emergency plans developed post-2005, and many communities fared relatively well. For example, Keswick had an emergency action plan in place – the community and authorities were able to put the right resources in the right areas to respond to the 2009 floods, the response was better managed and the community was in general happier with the outcome; this also benefitted other communities, as professional responders were able to move on to other areas with more urgent need of assistance sooner than they would otherwise.

Lessons learned during the 2009 floods

One of the learnings was that the emergency response struggled to efficiently manage such widespread flooding; 18,000 homes were flooded across a large geographical area. However, a large proportion of the emergency response resources were sent to Cockermouth, due to the severity of the flooding there, which led to a duplication of effort. Some communities still refer to this inequality in response and, concerned that they might need to 'look after themselves' again, have taken steps to develop their own emergency plans. To address the concerns of duplication of effort, Cumbria CVS⁷ are considering developing a database of volunteers and their skills, to be able to better manage this resource in the event of another flood.

An important factor in effective emergency response to the flooding was the setting up of local operational centres, called 'Operational Coordinating Groups'⁸; these were staffed by Local Authority and EA staff, and provided information and coordination services to emergency partners, as well as community groups who had connected into the emergency response communications network through development of an emergency response plan.

A debrief report⁹ on the recovery stage of the 2009 Cumbria floods, published by Cumbria Resilience, describes feedback provided by various actors¹⁰ on the subject of Community flood recovery groups and proposes actions, supporting the statements above made by an interviewee; this is presented in the appendix. Learning from experiences in 2009 has also been shared, for example Cumbria CVS feeding back to Cumbria County Council to help develop their recovery plans.

⁷ Cumbria CVS offers help, advice, training and support to third sector groups throughout Cumbria. For further details see: cumbriacvs.org.uk

⁸ These are equivalent to a 'Bronze' command and control level. For further details see: www.cumbria.gov.uk/eLibrary/Content/Internet/535/600/4145711938.pdf

⁹ Cumbria Resilience (2011) Cumbria floods November 2009: Learning from experience – Recovery phase debrief report [Available at: www.cumbria.gov.uk/eLibrary/Content/Internet/533/561/4066711109.pdf]

¹⁰ The participants were: Recovery Strategic Coordination Group and associated sub groups; Community Flood Recovery Groups (not all due to time limitations and date conflicts); the communities - residents, businesses etc (through Recovery Groups mostly due to time limitations); and staff from statutory agencies working at the community level. The information gathering was undertaken in a range of ways: RCG and sub groups - facilitated discussion at meetings; Community Recovery Groups - facilitated discussion at meetings, by invitation; communities - facilitated discussion at meetings, on request; staff - internal group discussions, on request; and other – reports from internal debriefs held by other groups and organisations, submitted voluntarily.

The events of 2009 have encouraged some communities to look at neighbouring communities who fared better during the floods, due to having put in place emergency plans, and consider taking similar action; there have been instances of communities using templates developed by their neighbours. There are now around 30 Flood Action Groups in Cumbria.

Current EA practice in Cumbria

Prioritisation of communities at risk

The EA in Cumbria have developed a 'Communities at risk' map; this identifies almost all communities at risk, and stores information about the locations. This map is based on the latest modelling as well as information on historic flood risk and officer input (based on their experience and knowledge). The flood warning incident system is also linked into the map.

They use the risk mapping for the medium-term plan, which links to the bidding for funding in locations that could benefit from flood defence infrastructure. The mapping helps prioritise. It is not published, but is used internally at officer level. It is an evolving thing, for example it can change with each new recorded flood. The information in the map is also used for approaching communities, as it allows review of the history and previous activities with that community.

The EA approaches communities at greatest risk from flooding first. The litmus tests for whether or not funding should be sought for a flood defence scheme are:

- Is it technically feasible?
- Is it economically viable?
- Is it environmentally sustainable?

If cost-benefit calculations show that there is a gap in funding, the EA speak to community and can work together to raise the funds needed.

Approaching communities at risk

The EA is now much more focused on discussions at the community level – their situations, their defence options, PLP, flood warnings, and what expertise and resources are needed. Community groups are treated on the same level as professional partners.

EA staff talk to communities about the options, funding approach and gap if funding (if any); there may also be options to reduce costs to reduce this. Land ownership and purchase is often a big issue with schemes (and can be a big part of the costs); however, if the communities themselves make the approach to the landowner, they are able to leverage social consciousness (particularly if the landowner is part of the communities), and this often can help to reduce this cost.

For example, in Cockermouth the EA had regular weekly meetings with the FAG and worked with them to petition for taking on the scheme and raising funds¹¹:

“After the 2009 floods the existing Flood Action Group (FAG) organised themselves into key sub groups, dealing with communication, technical/ engineering, social wellbeing and fund raising. The FAG was initially seen as a pressure group but was soon recognised for the essential role it could play as part of the wider Environment Agency led project team.”

“A partnership built on mutual trust and respect with the FAG played a key role in the decision-making process and the communication with local community as the scheme progressed. The FAG represented the community and was able to raise any community concerns with the Environment Agency project team and could then reassure the community that their concerns were being addressed sufficiently and appropriately.

The project team, including the FAG, led on several key meetings/public consultations to explain the scheme proposals and reinforce how partnership funding was key to the success of the scheme. Without partnership funding contributions the scheme would not have been able to progress.

The FAG, supported by the Environment Agency Project team, helped gain the community and local business support for the scheme and facilitated discussions around financial contributions.”

Although the EA can provide a lot of figures and scientific explanation, it is the people who live there who make the most convincing argument for the need to act, as they will suffer the consequences of any potential flooding. In Cockermouth the fundraising went ahead and, after a referendum, was able to raise some of the funds required through an increase to the Council Tax. The FAG was also able to raise significant funds through campaigning. A charitable foundation was set up to administer donations; this was important in ensuring trust and providing assurance to donors, due to the transparency (audit trail) and a governance structure. The EA also has a governance structure for its role in gathering the funds; to provide this, the funds were ring-fenced in the EA's accounting, and partners in the scheme kept updated on the status of the funds.

If a scheme is not viable, recommendations on PLP will be made. If there are no viable infrastructure options, they engage the community on resilience and incident management, and warning and informing. This also requires action from the community in terms of agreeing what they will do (through the community emergency plan, as discussed below).

Responding to community-led approaches

It is helpful when communities approach the EA to propose schemes, as they will have already built up momentum and resource; but the schemes still need to make sense. If it passes the 'litmus tests' discussed above, the EA can help them.

¹¹ EA (2013) Profiling Partnership Funding case study on Cockermouth, Cumbria

The community may want to go ahead and fund the scheme themselves; if this is the case, the EA helps with planning applications and consents. But there can be issues around professional indemnity; if there are several houses being protected, who is charged with maintaining the infrastructure and/or what happens if the infrastructure fails? Who will conduct the due diligence?

There have been examples of communities who have done things that have led to problems, such as a ruptured gas main. It is the contractor's responsibility to check for things like utilities infrastructure at the location of the construction of the flood defence infrastructure.

Emergency plans

Guidance, in the form of a 10-step process¹², has been developed to assist communities in Cumbria establish their emergency plans. It *"...describes a method that you can follow to help you prepare for an emergency in a way that fits the particular needs of your community. It will help you identify the key tools that you will need; local people, local knowledge and local resources."* The steps are:

1. Getting Together
2. Organising the Work
3. Knowing the Unknowns
4. Identifying Skills and Resources
5. Legal Issues
6. Organising Key Facilities
7. Keeping in Touch
8. Activating Your Emergency Plan
9. Taking Control
10. Testing Your Plans

The emergency plans are also of benefit to the EA, as they provide information on what each community's plans are and how they will link to the communities during an incident. In particular, rural communities who may get cut off during flood incidents, have been working on the emergency plans and often work with other neighbouring communities to plan how they can support each other in the event of an emergency.

Communications is considered to be a key factor in the success of emergency plans; the community communications network needs to be in place, and this needs to be in touch with the correct professional flood response contacts.

Collaboration and engagement through existing governance structures

¹² ACTION with Communities in Cumbria (2012) *"How would my community survive the first 48 hours of a serious emergency?" Be prepared! 10 steps to complete you community emergency plan*

Post-flood recovery requires a large amount of effort and resources, particularly in the first year, and can last 3-4 years. The 10-step plan is part of the new ('better') way of working with communities. The new approach stemmed from a realisation that, in the context of increasingly limited resources available to local authorities, county councils and the EA, there was a need to work in a more efficient way in order to effectively support communities on flood risk management.

The approach focuses on engaging communities through existing governance structures and systems of local representation, such as town and parish councils, and community forums. Representation at town and parish councils feed into Cumbria County Council (CCC). CCC community officers support this approach by using their existing contacts to engage with communities on flood risk management, and try to get flood risk on the agenda at town and parish council meetings. This approach gives communities the ability to express their preferences in regards to flood risk management through the councils and it allows consideration of other priorities (such as schools, roads, etc) in light of flood risk. It also provides the EA and CCC with opportunities for operational efficiencies.

Working with parish councils has been found to be easier, as they have smaller, very local networks; councillors often live in their constituencies and are therefore motivated to act on flood risk management. Larger, urban districts and towns are more difficult, due to issues such as politics (e.g. the desire to avoid openly discussing flooding at certain times of the year such as tourist season). The issue of community groups' durability was also raised, as people involved usually want to step back their responsibilities after a period of time and there may be no back-up. In contrast, parish or town councils are durable; they provide an ongoing formal structure within which, for example, emergency plans can be maintained.

In addition, flood emergency plans in some locations in Cumbria have developed into plans covering a wider set of risks (based on a community's development of a risk register). There has also been recent work on adding risk management/emergency plans to community plans (i.e. plans around jobs/development).

Learning lessons and sharing good practice

There is an ongoing project examining communities at risk of flash flooding; interestingly, the communities at risk often are not engaged (e.g. only one person turns up to a drop-in). The EA continue in their efforts to engage these communities and have found that engaging representatives, such as parish or town councils, or elected members, can help.

There is also an ongoing community-led planning exercise in catchments, looking at how upland land management affects downstream flooding. Within this work, some communities are coming together in rural areas to support each other (as mentioned above).

Under the Cumbria Local Resilience Forum, a Community Resilience Network group was developed. This group has many members, representing stakeholders such as local authorities, emergency response professionals, etc. The group have terms of reference and agreed objectives and meet every 6 weeks to provide a wider public risk

support network. The diversity provides opportunities to share good practice and find operational efficiencies. The group also led to development of the 10-step community emergency plan guidance document¹³, which was adopted by all agencies.

However, there appears to be lack of collation and dissemination of learning and best practice at a national level; for example, Cumbria has gained a lot of insight into effective response and recovery through its community and voluntary sector, who are the first people on the ground and have important learning to share from experiences. Other areas of the country have stated difficulty with encouraging and managing volunteer resources, but the learning from Cumbria is that there are usually a lot of people ready to help, but the barrier to accessing this resource may simply be a lack of available data on volunteers' details and skills.

In terms of guidance for the recovery stage, Cumbria Resilience (2011) highlights that there is no formal guidance at the national level for recording lessons learned:

“Cumbria has been largely successful in bouncing back from the floods ... Nevertheless, there are still lessons to be learned and this recovery phase debrief report ensures that we have summarised and recorded where improvements can be made in the future. It is disappointing to note that some of these learning points featured in the recovery reports from the Carlisle 2005 floods and other flooding incidents around the country – suggesting that we don't always use experience to change the way we actually work.

There is currently no specific guidance on how to carry out recovery debriefs, but experience and learning within Cumbria and from those carried out following recent incidents elsewhere suggests that it is timely to enact a debrief before the RCG [Recovery Coordination Group] disbands and recovery activity moves into the “business as normal” structure of working and into the regeneration phase.”

There are however continuous improvement groups, such as the Partnership Funding Continuous Improvement Group, within the EA to share good practice. The Partnership Funding Continuous Improvement Group has monthly national conference call, using Webex, to demonstrate case studies, lessons learned and develop material for workshops. Information generated for the group is published on the internal website. There is also use of web-based conversation forums to discuss these topics (the EA uses a tool called 'Yammer'); for example, questions can be posted to if there is a problem to overcome. Information and reports can also be published.

However, it is also accepted that 'one size fits all' does not work well and there may be a need to work out the best way of developing community plans for different locations. Further to this, in terms of engaging communities, knowledge of the 'best' ways to approach this is part of the learning experiences of the officers conducting the engagement.

¹³ The guidance came out of the 2009 recovery debrief (Cumbria Resilience, 2011) and another study by Cumbria CVS on issues such as resilience in Cumbria.

There is a potential recommendation to be made on provision of guidance; there may be some coverage of pieces of the jigsaw, but a central source of reference (such as a flowchart or roadmap), signposting or knitting together the various pieces of guidance would be valuable.

Appendix

Extract on Community Action Groups from *Cumbria floods November 2009: Learning from experience – Recovery phase debrief report* (Cumbria Resilience, 2011):

“Community Emergency Plans work with some very proactive Flood Action Groups already established. There was good on the ground presence, certainly in Cockermouth, providing different types of information, e.g. trading standards, environmental health etc however this could have been better coordinated. Flood Support Centres were very well received.

There is a real awareness that the response has been different in different communities and concerns that will not be addressed next time. Some were not confident that the local authority response has been coordinated as well as it might be.

There is a lack of awareness of the Plans that are in place, particularly what different local authorities do.

Action and next time

- *Raise awareness of emergency plans and response arrangements with communities and responders.*
- *Ensure through all means possible that all communities affected are identified and decide degree of support to be provided in or near to each. Use acute phase impact assessment if available. The recovery support to communities will always start with imperfect or incomplete information. The data collection procedures have to continue into recovery and be expanded to include all information from all sources as it is available.*
- *Allow affected property owners back to their properties as soon as possible to assess damage and recover valuables.*
- *Get high viz multi disciplinary teams (Recovery Action Teams?!) on the ground to disseminate information, provide a presence and hand out practical clean up equipment (squeegees): Trading standards (county council), building control (district council), welfare (lead and coordinated by county council Adult Social Care and Communities Unit, Third Sector (British Red Cross, Age UK, Faith Community Churches Together, National Flood Forum) together with reps from the Community (Flood Action Groups if in place), Police, Fire and possibly health. (Need to list them all.)*
 - *All convergent volunteers to be incorporated into the team to avoid duplication of effort and multiple “door-knocking”. Others to be challenged.*
 - *(Pull together information/leaflets prepared in November)*
 - *Working from a base with: washing and feeding facilities, power to provide means of heating etc, IT and communications to be provided as soon as possible. One agency to take the lead –*

- district council, reporting through the Community Recovery Group with county council leading on welfare and reporting through the Welfare Sub Group.*
- *Team, led by district council, to produce a waste handling protocol as a matter of urgency.*
 - *Team to monitor and challenge “disaster chasers”.*
 - *[This is a silver (tactical) recovery group and training would be needed.]*
 - *Establish a Flood Support Centre/s (could be the base for above). Led and coordinated by district council with administrative and logistical support (desks, ICT), from district and county councils. Registration (councils and Third sector), Trading standards (county council), building control (district council), homelessness (district council), meeting/greeting/listening/cups of tea (Third Sector), signposting to services (county council Communities Unit) etc.*
 - *Coordinate offers of help from local businesses.*
 - *Co-locate county council officer with the District Council/s affected in the initial week/s to share local knowledge and contacts.*
 - *Assign an area for the insurance companies to establish information vans etc.(district council)*
 - *Commence situation reports immediately (compile template) to provide regular feedback to the strategic level.*
 - *Plan for Flood Support Centres for at least 12 months for major floods.”*

Defra Synthesis of flood social science evidence

Appendix 12 - Bodenham Flood Protection Group case study

Method and Rationale

This work is comprised of a number of interviews with key individuals involved with the Bodenham Flood Protection Group (BFPG) in Herefordshire, and the review of a number of documents provided by those individuals in support of or reference to their interview responses.

Bodenham was first suggested as a possible case study by the project Steering Group. The reason behind this was that, as the group's history demonstrates, they have been particularly active since their formation. Bodenham has also not been the subject of any official research to date, and so was the preferred choice of the Steering Group.

This also means that the methodology for the case study was necessarily constrained – there were no published academic papers or reports to review, and the interviews took the form of open, exploratory questioning around the issue of insurance. The issues drawn out from the interviews are presented below.

History

In July 2007 Bodenham experienced a flash flooding which affected the local church and 40 residential properties. The cause was identified as the fact that heavy rainfall was prevented from escaping to the river by blocked and inadequate drains and culverts. A public meeting was held in January 2008, in which it was established that the local authorities did not have the resources to offer Bodenham the assistance it needed. As a result of this, in February 2008 the Parish Council took the initiative to form a self-help group – the Bodenham Flood Protection Group – to carry out the work necessary to avoid a repeat of the 2007 floods. Since its formation, the group has undertaken the following activities:

- Monthly meetings;
- Regular working party sessions to engage in activities such as clearing drains and watercourses, or filling sandbags;
- Fundraising activities;
- Provided advice to other flood protection groups;
- Attended flood risk management events;
- Organised their own flood risk 'open day'; and
- Acted as facilitators on an EA funded project to install PLP measures.

Further information on the group, its history, events, meetings, etc can be found at:
<http://www.bodenhamparish.org.uk/bfpg-home.asp>

Common Themes

List of recommended insurers

One of the key elements of what Bodenham FPG do with regards to insurance is to offer advice and assistance to members, or indeed individuals in the wider community, who are experiencing difficulty finding flood insurance. This is done primarily by offering them a list of recommended insurers who are known to be more willing to insure individuals with a higher level of flood risk. This list gives people who have previously had difficulty finding insurance a ‘tried and tested’ route to market. It was originally compiled by community flood consultant Mary Dhonau, based on her own experience of insurers and also on recommendations passed to her by other people, and given to Bodenham in the wake of the 2007 floods. Mary continues to administer the list, and requests that when BFGP share it with other people, that they keep her informed of any individuals who experience difficulty with any of the insurers on the list, or are refused insurance by any of them; in this way the list is maintained and kept as up to date, and useful, as possible. Probably the most important indicator of the success of this list in helping individuals who had previously experienced difficulty getting insurance, is that none of the interviewees is aware of anyone who has failed to get insurance after contacting the insurers recommended by the list.

Recognition of BFGP’s work by insurers

There is, at present, no clear evidence of anyone in the BFGP or the wider village (that the interviewees are aware of) receiving explicit recognition of any of the flood risk mitigation work – either carried out by the BFGP or otherwise – by their insurers, in the form of a discount/reduction in their premium or excess. There is experience of this lack of recognition by insurers from members of the Group; having their insurance premium dramatically increased recently despite the work that the BFGP do, and the EA funded Property Level Protection (PLP) scheme having taken place. Indeed, even where the risk mitigation work has been explicitly detailed and described to insurers, this has not been sufficient to prevent increases, nor to encourage discounts. There is an acceptance that the fact that – by using the list detailed above – individuals from the BFGP and outside are able to gain flood insurance, where following 2007 people were being refused based simply on their location, may constitute a recognition by insurers of the work that has taken place. Alternatively, this may simply be a result of using a tried and tested method (the list) of approaching insurers who are known to be more willing to insure those with greater flood risk, rather than using traditional means such as price comparison websites. Indeed, the interviewees stated that to the best of their knowledge, any reductions that members of the FPG have seen in their insurance have been a result of switching insurance providers using the list, rather than having the risk mitigation work of the Group recognised. Finally, there is some concern that not seeing financial benefits – or not seeing others receiving such benefits – of risk mitigation actions may “put people off” taking further actions or taking these actions themselves, particularly if this involves paying out of their own pocket, such as those who didn’t have PLP installed through the EA funded project. Interviewees also expressed frustration at the lack of recognition, considering the amount of work that the BFGP has undertaken to mitigate their risk, and questioned what more they could do to ensure that their risk was effectively addressed in the eyes of insurers.

Group membership has remained stable

Interestingly, despite the apparent lack of recognition of the Group’s work by insurers, particularly through reduced premiums/excesses, group membership and attendance at working sessions etc has remained relatively

stable over time. When probed as to why this might be the case, interviewees suggested a number of reasons. Firstly, it was suggested that despite being initially formed as a response to the floods of 2007, the BFPG has evolved over time to become more than simply a group dedicated to addressing flood risk by undertaking work to clear watercourses etc, and has in fact become an important means of socialising for many of its members. Indeed, the variety and frequency of activities that the group undertakes, in particular social events, would seem to support this idea. Another possible reason suggested is that the risk mitigation work that the group does – the clearing and maintaining of drains and watercourses, filling and strategically locating of sandbags around the village – address the emotional or psychological element of flood risk, the fear and worry that many victims of flooding feel, which can in fact be more crippling than the financial strain of insurance. This is particularly relevant for the more vulnerable members of the BFPG, those who might require assistance erecting PLP devices in the event of a flood for example, or those who are frequently away from home. It was suggested then, that the financial incentives of insurance reductions may not be a key motivating factor for group membership or engaging in group activities – echoing some of the findings from the literature on the importance of the emotional or psychological element of flood risk.

Lack of understanding around flood insurance and risk

Part of the reason why a tool such as the list mentioned above can be so useful is that, as workshop attendees suggested and some literature has demonstrated, is that some individuals have difficulty understanding, or a lack of understanding flood risk, and in turn how to access insurance when they are at greater risk. It was suggested by an interviewee that individuals who lack the knowledge of how to access insurance may feel that they are being refused across the board, but that they may in fact simply be using the wrong method to obtain insurance, such as traditional price comparison sites. A difficulty understanding risk and the way it is communicated may well compound this problem; individuals may misunderstand and underestimate their level of risk, as well as feeling like they are being consistently refused insurance.

‘Ostrich behaviour’

An issue which was raised at the workshop, and highlighted in the literature, is the idea that there exists to some extent a denial of flood risk. In the case of BFPG, the interviewees suggested that this behaviour has indeed manifested itself in the form of individuals who have denied that their properties were flooded in 2007, despite being adjacent – in some cases on both sides – to properties which had flooded. There was concern amongst some residents that admitting to having been flooded could have severe adverse effects on the cost of their insurance, value of their home, or their ability to sell the property in the future. Some individuals apparently even went as far as to suggest that the formation and existence of the BFPG drew unnecessary attention to the flood risk that Bodenham faced.