Communicating flood risks in a changing climate

9 principles for promoting public engagement

CLIMATE outreach
formerly COIN

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About the report

As part of a project led by the Understanding Risk group at Cardiff University (supported by the Economic and Social Research Council, Climate Change Consortium for Wales[1] and the Sustainable Places Research Institute[2]), Climate Outreach convened a one day workshop in Oxford in June 2015, bringing together researchers and practitioners from academia, civil society and the policy arena, with expertise from across the natural and social sciences.

The purpose of the workshop was to share and synthesise knowledge, as well as identify areas of agreement and 'best practice' principles for communicating flood risks in a changing climate. A draft of these best practice principles was produced during the second half of the workshop, and then developed through further analysis of audio recordings of workshop discussions. This report reflects the outcomes of the workshop - i.e. a synthesis of expert views, not a comprehensive review of the literature. It is primarily designed as a practical resource, so referencing in the text itself has been kept to a minimum, with a list of further reading suggested at the end of the report. The workshop was held at Pembroke college, Oxford University, on June 10th 2015.

About Climate Outreach

Climate Outreach (formerly COIN) is a charity focused on building cross-societal acceptance of the need to tackle climate change. We have over 10 years of experience helping our partners to talk and think about climate change in ways that reflect their individual values, interests and ways of seeing the world. We work with a wide range of partners including central, regional and local governments, charities, trades unions, business and faith organisations.

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Climate Outreach formerly COIN

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1 http://c3wales.org
2 http://www.cardiff.ac.uk/research/sustainable-places

ENDORSED BY

"I endorse the report's content as an accurate reflection of the points of agreement at the workshop, and endorse the nine principles for public engagement derived from these discussions".

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EXECUTIVE SUMMARY

During the winter of 2013/2014, fierce winter weather caused havoc across the UK. Large parts of the Somerset Levels were submerged, Wales was battered by coastal storms, Hull residents were evacuated from their homes and Cornwall was cut off by rail, as the line at Dawlish collapsed into the sea. Although storms are an integral part of the British winter, these floods left their mark on the national consciousness, leading the news agenda for weeks on end and causing disruption to thousands of people's lives.

There is a long history of academic interest in how individuals and communities in the UK have responded to floods and other extreme weather events. And there have been some practical responses to the challenges communities in flood-affected areas face (from the emergency plans of regional councils, to the resources of organisations like the Environment Agency). But in a changing climate, floods will happen more often, and will be more intense. As a result, a growing number of research studies and practical initiatives have focused on how members of the public engage with flooding in the context of climate change.

In response to this burgeoning field of expertise and knowledge, and as part of a project led by the Understanding Risk group at Cardiff University (supported by the Economic and Social Research Council, Climate Change Consortium for Wales[1] and the Sustainable Places Research Institute[2]), Climate Outreach convened a one day workshop in Oxford in June 2015. The workshop brought together researchers and practitioners from academia, civil society and the policy arena, with expertise from across the natural and social sciences. The purpose of the workshop was to share and synthesise knowledge. How can individuals and communities be more effectively engaged around flood risks in a changing climate?

This synthesis report is the outcome of the Oxford workshop, showcasing the latest and most relevant academic research, and drawing on valuable learning from a range of practical projects and initiatives. It reflects the key points of consensus from the workshop, representing a powerful statement from a diverse cross-section of experts. It is a resource for practitioners - from those working with communities directly affected by flooding, to campaigners and policy-makers at the national level - to use when engaging the public around flooding and wider climate impacts.

1 http://c3wales.org
2 http://www.cardiff.ac.uk/research/sustainable-places

The nine principles of best-practice public engagement derived from the Oxford workshop are:

1	**Climate scientists can quantify the role of human influence in individual flooding events; specifically whether they are made more or less likely in a changing climate.**
2	**There is growing evidence that flooding and climate change are linked in the public mind.**
3	**Conversations about climate change should ideally happen before (not during) flood events when communities are under pressure.**
4	**Communication and engagement around flood events must be carried out sensitively, or they will backfire.**
5	**Statistical information and accurate scientific data are crucial, but trusted 'peer' messengers and personal stories are vital for achieving public engagement.**
6	**Flooding and climate impacts cannot be separated from the wider social context that determines communities' ability to cope with stress and trauma.**
7	**Communities that have been affected multiple times offer powerful opportunities for learning (but also have a right to forget).**
8	**It is important to strike the right balance between the 'local' and 'global' aspect of flooding (as a climate impact).**
9	**Communications should empower people to respond and adapt to future flood risks - focusing on preparedness and support rather than 'getting back to normal'.**

Some of the principles focus on engaging and supporting communities directly affected by flooding. Others refer to ways of communicating with a wider public (including those communities that have not yet been flooded but are at risk). Taken together, they offer a resource which distills the most relevant academic research into a format that practitioners can use to more effectively communicate flood risks in a changing climate.

1 Climate scientists can quantify the role of human influence in individual flooding events; specifically whether they are made more or less likely in a changing climate

The go-to line for scientists explaining the link between extreme weather events and climate change has often been that 'no single event can be attributed to climate change'. But there have been striking advances in an area of science known as 'probabilistic event attribution' - the study of how individual weather events are influenced by underlying changes in the climate.

It is now possible to estimate the role of human-caused climate change in an extreme weather event - and whether climate change made it more or less likely to occur. The 'attribution' of a weather event can occur within a relatively short timeframe (weeks to months, rather than years, in many cases). So while the relationship between an extreme weather event and climate change may not be simple, it is increasingly possible to describe.

Being able to attribute flooding to climate change is important for several reasons. Firstly, it helps to **reduce uncertainty about the link between weather events and climate change**, which is a significant barrier to public engagement. Quantifying the contribution of climate change to a particular weather event

reduced UNCERTAINTY

gives a powerful motivation for reducing climate risks in the future. Secondly, conversations can shift from a debate about 'if' similar events will happen to 'how often' they will occur and 'how serious' they are likely to be. This is likely to make climate change impacts feel more real and salient - tangible events in the not-too-distant future, rather than abstract risks that cannot conclusively be linked to climate change.

Finally, talking about climate change in the context of extreme weather (if done sensitively and appropriately - see section 4) can **help to overcome the social silence that surrounds climate change** in the public discourse, and make the risks of climate change seem less abstract and distant from people's lives.

> 'conversations can shift from a debate about 'if' similar events will happen to 'how often' they will occur'

House-insurance policies offer a practical way in which advances in this field can help people engage with heightened flood risks. As climate impacts start to be factored into insurance costs, they become represented in a very tangible way in the public mind, grounding the science of event attribution in everyday concerns.

Personal acceptance of the connection between a weather event and climate change will not automatically lead people to support global action to reduce emissions, or to adapt their own behaviour in the future. As has been well-documented by a growing academic literature, there are many potential psychological responses to extreme weather events and wider climate risks (e.g., feeling overwhelmed, or confused about how to respond). These responses need to be anticipated and considered in any public engagement around extreme weather and climate change: identifying the link between climate change and a flood is **the beginning rather than the end of the process of public engagement**. When the questions attribution studies ask are developed in partnership with policy makers and communicators, they will have the most positive impact on strategies for public engagement - a strong case for working more collaboratively.

THE BOTTOM LINE

Attribution science can provide powerful evidence of the link between flooding and climate change. But establishing this link is the beginning, not the end, of public engagement around extreme weather and climate impacts.

Find out more - key references:

Climate Modelling project based at the University of Oxford, http://www.climateprediction.net

Hulme, M., O'Neill, S.J., Dessai, S., (2011) Is weather event attribution necessary for adaptation funding?, *Science*, 334:764–765.

Huntingford, C. et al. (2014) Potential influences on the United Kingdom's floods of winter 2013/14, *Nature Climate Change*, 4, 769-777.

2 There is growing evidence that flooding and climate change are linked in the public mind

Early research in the UK during the 2000s found no clear link between the experience of being flooded and increased concern about climate change. An analysis of the newspaper coverage of the 2013/14 winter floods - during the wettest January on record - found that of thousands of newspaper articles published about the floods, only 7% of them mentioned climate change. A protest in Oxford, where a community had been flooded for the 5th time in 3 years, asked a simple question: can we talk about climate change now?

window of OPPORTUNITY

During the second month of the 2013/14 floods (when the Thames burst its banks) the situation changed, and climate change was briefly a part of the national conversation. But did people who experienced the 2013/14 floods - or the general population - link the floods with climate change?

In the months following the flooding, researchers at Cardiff University conducted a nationally representative survey of around 1,000 people, asking about people's views on climate change, on the floods, and whether they saw a link between the two. Most respondents (85%) felt that flooding had become more common, and a similar proportion were also of the opinion that it would continue to get worse in the future. Over three quarters of survey respondents agreed with the statement "it is clear to me that climate change is really happening", with 64% of respondents agreeing that the floods were caused in part by climate change.

The nationwide survey was compared to a second group who lived in one of five areas of the country that had been directly affected by the flooding. **People who had directly experienced flooding were more likely to perceive climate change as a threat** to themselves and their families, and were more personally engaged with the issue. In the national sample, around 15% of people spontaneously named climate change as one of the three most serious issues facing the country over the coming two decades – in the flood-affected sample, this rose to nearly 30%. When asked whether their local area was likely to be

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'64% of respondents agree that the floods were caused in part by climate change'

affected by climate change, 61% of respondents who had been flooded said yes, compared to only 15% of the national sample.

The findings offer some crucial signposts for how to engage the public more effectively. Events like these provide a chance to build public support for policies that will reduce climate risks in the future – provided communities are approached in a sensitive and respectful way (see Sections 3 and 4). Climate change is a notoriously intangible risk for people to grasp, so **when floods bring the problem closer to home, there is a window of opportunity for having a national conversation** about climate change that is not usually available.

However, whilst extreme weather events may help climate change feel more real and 'salient', they may not automatically increase levels of concern and engagement. As ever with the highly polarised issue of climate change, the "evidence" of extreme weather can be interpreted in multiple, competing ways, and will be impacted by people's existing political and social views. For those not directly affected, there are many other factors that will shape public perceptions (for example, the rhetoric of politicians or tone of newspaper coverage). And for those directly affected by flooding, the idea that climate change could increase the risk of future flooding may be strongly resisted. It is crucial, therefore, to engage sensitively with flood-affected communities (Section 4) and build a wider narrative about extreme weather and climate change among the general population (Section 3).

THE BOTTOM LINE

There is increasing evidence of a link between flooding and climate change in the mind of the UK public. Flooding provides a window of opportunity for engaging on wider climate change issues among the general population.

Find out more - key references:

Bruine de Bruin, W., Wong-Parodi, G., & Morgan, M. G. (2014), Public perceptions of local flood risk and the role of climate change. *Environment Systems and Decisions*, 34(4), 591-599.

Capstick, S.B., Demski, C.C., Sposato, R.G., Pidgeon, N.F., Spence, A., Corner, A. (2015) Public perceptions of climate change in Britain following the 2013/14 winter flooding, *Understanding Risk Group* WP15-01.

Marshall, G. (2014), After the floods: Communicating climate change around extreme weather, *Climate Outreach*.

3 Conversations about climate change should ideally begin before (not during) flood events when communities are under pressure

In an interview with Channel 4 during the winter floods of 2013/14, the Conservative MP Adam Afriyie (standing knee deep in flood water - and reflecting a commonly held sentiment) advised the interviewer that it was "not the day to talk about climate change". Many participants in the Oxford workshop supported this idea, identifying both practical and ethical reasons for being cautious about first raising the issue of climate change in the midst of a flood event (see Section 4).

That all being said **there remains a need to overcome the 'climate silence' that prevails during day-to-day life**, when flood events are not taking place. If conversations about climate change are already happening when a flood event occurs, discussions about attributing flooding to climate change (see Section 1) do not come out of the blue. For communities who are likely to be affected by flooding, these conversations might focus on preparing people for the risks ahead. For the wider population, the focus might be more general. But breaking the day-to-day social silence around climate change can help create a level of familiarity with climate change that gives people the confidence to discuss flood risks, and wider climate impacts. **This does not mean communicators should discourage communities from discussing climate change during a flood event**. If the discussion is initiated and led by the community itself (rather than introduced by an 'outsider'), it may help the community to make sense of their current situation, encourage engagement with the wider issues around climate change, and help build relationships within the community that will come in useful in the future.

pro-active APPROACH

> 'it is important to learn as much about that community as possible'

An individual's capacity to withstand a trauma such as flooding is increased when they are part of a strong network or community. While 'community' can sometimes be hard to define, there are certain features of communities - their connectedness; or a shared sense of place - that contribute towards their ability to cope with events like a major flood.


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But before launching into any active dialogue surrounding flooding and climate change, **it is important to learn as much about that community as possible** (using whatever existing resources are available). Their past experiences, political stance, adaptive capacity, networks, and all the other things that contribute to the makeup of a community affect the ways in which they operate and how they make sense of situations, both as individuals and collectively.

Communications need to be tailored to the audience, providing examples and options realistic to them and engaging them in dialogue. There needs to be a clear way for the public to respond to any communication, and space for communities to be listened and replied to. Developing a dialogue will strengthen the communicator's understanding of the community and help build trust as communications match the needs of the audience. This process also allows the communicator to identify groups that would usually be distanced from the issue, and find ways to include them in active discussion as well as those who are ready to engage.

For directly affected communities, encouraging preparedness requires a number of factors, including talking about action plans. Clear (and potentially even rehearsed) action plans can help people feel safe and better prepared to face an uncertain event by knowing that there is a certain reaction that they can give which will have a positive effect on their welfare and that of those around them. **Making these action plans visible before an event** (for example, local government plans for business and service continuity) may help people engage with the issue, as long as risks are not exaggerated, and the plans are not perceived as 'alarmism'. This pro-active approach should make good use of the different communication channels available and use them sensitively as their appropriateness may differ before, during, and post-disaster.

THE BOTTOM LINE

Don't wait for disaster to strike to talk about climate change: overcoming the silence around climate change in day-to-day life is crucial in laying the foundations for engaging around extreme weather. The best communications are pro-active and are tailored to the audience through developing a dialogue with them.

Find out more - key references:

Corner, A. (2013). Climate silence (and how to break it), *Climate Outreach*.

Pidgeon, N.F. and Fischhoff, B. (2011) The role of social and decision sciences in communicating uncertain climate risks. *Nature Climate Change*, 1, 35-41.

4 Communication and engagement around flood events must be carried out sensitively, or they will backfire

Awareness of the risks of extreme weather and climate impacts is likely to be increased after a flood event, but may soon diminish (see Section 2). For communities directly affected by flooding, the 'window of opportunity' following a flood event is therefore a unique moment to allow people to connect their current situation with climate change impacts more broadly. But it is most likely to happen if the foundations have already been laid during prior engagement (see Section 3).

Unless done sensitively, using extreme weather events to engage around wider climate impacts can raise ethical questions or cause resentment among those who have been affected, as well as generating an unfavourable view of climate change communication among the general public.

Any communications, whether before, during or after a flooding event (particularly to communities that have been previously affected by flooding) **need to be sensitive to that community's needs at that time**, and be supportive rather than hectoring; even a trusted communicator can be off-putting if they seem to be evangelising.

People affected by extreme weather events may have strong personal and social reasons for not wishing to focus their attention on the

the right DELIVERY

increasing frequency and severity of these sorts of events. 'Messaging' people about climate change so close to (or even during) a flooding event can easily backfire, and add to the general sense that environmental campaigns are 'preachy' or self-satisfied. No-one wants to be made to feel that they could have done more to prepare for an unexpected flood. And when recovering from the shock of displacement or disruption, no-one wants to hear 'I told you so'.

Being sensitive in communications means taking the following into account:

Consider people's emotional responses. Everybody's experience of flooding is different, and they may need time to come to terms with that experience. Engagement is not just about the event itself, but the potential trauma afterwards. This may put stress on people's relationships or their own psychological well-being. Flood risks do not only threaten

'engagement is not just about the event itself, but the potential trauma afterwards'

people's material assets, but also may threaten their sense of identity. Part of the trauma for affected communities can be facing the reality that their own perceptions about their safety, resilience and security were not accurate.

Get the timing right. People may not want to engage in anything other than focussing on how they are going to fix their home up during a flooding event. Therefore, **there should be clear pathways for potentially affected communities to approach communicators when they are ready**. For example, if general communications, such as information leaflets, are sent out from time to time, they should also contain information as to where people can get more information and speak to someone if they wanted to. These communications should also encourage and equip others in the community to continue and introduce the conversation to others within their community.

Get the delivery right. As discussed in Section 3, it is important to understand as much as possible about the audience before starting a dialogue, and to be prepared to change working practices as the understanding between communicator and community develops. The communication method is also important. For example, during a flood, the role of local radio often becomes crucial as it is easily accessible (allowing individuals to carry on with physical tasks), locally specific and a generally trusted authority.

THE BOTTOM LINE

Engaging communities during or immediately after a flood is rife with ethical pitfalls. Getting it right means recognising what the affected community's needs are at any particular time, and responding to them sensitively.

Find out more - key references:

Clayton, S., Manning, C. M., & Hodge C. (2014). Beyond storms & droughts: The psychological impacts of climate change, *American Psychological Association and ecoAmerica*, Washington, DC, Available at: http://ecoamerica.org/wp-content/uploads/2014/06/eA_Beyond_Storms_and_Droughts_Psych_Impacts_of_Climate_Change.pdf

Daly, D., Jodieri, R., McCarthy, S., Pygott, K., Wright, M. (2015) *Communication and engagement techniques in local flood risk management*. Report C751. CIRIA: London

Moser, S., (2014), Communicating adaptation to climate change: the art and science of public engagement when climate change comes home, *WIREs Climate Change*, 5, 337–358.

Whittle, R., Walker, M., Medd, W., Mort, M. (2012), Flood of emotions: emotional work and long-term disaster recovery, *Emotion, Space and Society*, 5, no. 1, 60-69.

5 Statistical information and accurate scientific data are crucial, but trusted 'peer' messengers and personal stories are vital for achieving public engagement

Climate change is a complex issue, often communicated using specialist technical language. Widely-used terms like 'mitigation' and 'adaptation' are not intuitive or common in everyday discussion. For many people, this language can make climate change feel inaccessible, just for the educated elite, and irrelevant to people's daily lives. Graphs of projected temperature changes or sea-level rise may be an effective way of communicating complex data in the context of scientific debate. But for most people, they are remote and unemotive ways of describing an issue that is - at root - about people.

This does not mean that there is not an important role for scientists and other experts to play in providing the data and information that can help local decisions about flood risks and climate impacts more broadly. But a key conclusion from the Oxford Workshop was that **people's peers are often the most powerful communicators** when it comes to making the links between flood risks and climate change.

While they will differ from place to place, there are always trusted peer-communicators who

trusted peer COMMUNICATORS

are important for engaging a community. They are people who represent the local area (or local interests) in some way, reflect common values or mutual interests, and who are therefore often considered more trustworthy than 'outsiders' (government and statutory authorities in particular) as they are acting with personal conviction. They are also likely to be the main source of information during a crisis, as communities pull together and have reduced access to other forms of communication, but this is dependent on the networks already present.

Using trusted communicators is an important step in engaging a community, but what also matters is the message they are delivering. **For most people, personal stories are more powerful than scientific information.** Personal stories about flooding events have authority and integrity and are therefore considered trustworthy. They provide a way for the

> 'personal stories about flooding events have authority and integrity and are therefore considered trustworthy'

audience to engage emotionally with an issue and help to better understand impacts by hearing how they changed people's daily lives. Seeing an overturned fridge in somebody's living room gives a better understanding of the power of flood water than knowing the statistics about the water's speed and depth. When discussions move to talking about how climate change contributes to an increased risk of flooding, people are then approaching it from a more personal - and therefore more engaged - perspective.

USING PERSONAL STORIES

The ESRC Sustainable Flood Memories project worked with local communities who have a history of past extreme flooding events, in the context of climate change and heightened flood risk.

Find out more: http://www.ccri.ac.uk/floodrisk

A collaboration between Exeter University, Climate Outreach & Devon County Council has led to the founding of a local community group in Crediton, Devon, developing a flood resilience plan. Drawing on personal histories and artefacts, the group is using shared local expertise to build resilience to future flood events.

Find out more: http://blogs.exeter.ac.uk/creditonfloods

Flood Manifestos: As part of an ESRC-funded project led by Lancaster University, children aged 6-15 who had been directly affected by flooding proposed a series of measures that they felt should be taken to improve flood resilience in homes, communities, schools and wider society. These were brought together in two 'Children's Flood Manifestos', offering a powerful form of peer-based communication for other young people.

Find out more: http://wp.lancs.ac.uk/cyp-floodrecovery/outputs

THE BOTTOM LINE

Most members of the public don't empathise with graphs and stats - move people with people.

Find out more - key references:

Adger, N., Quinn, T., Lorenzoni, I., Murphy, C., Sweeney, J. (2013) Changing social contracts in climate-change adaptation, *Nature Climate Change*, 3, 330-333.

Flood Risk Communications Public Dialogue project, http://floodriskdialogue.org

Terpstra, T. (2011), Emotions, Trust, and Perceived Risk: Affective and Cognitive Routes to Flood Preparedness Behavior, *Risk Analysis*, 31(10), 1658-1675.

6 Flooding and climate impacts cannot be separated from the wider social context that determines communities' ability to cope with stress and trauma

Some communities are less able to cope with flooding than others, and there may be multiple constraints on how they can respond to flood risks. There are many reasons for this: old infrastructure or poor access to certain services can make some seemingly 'obvious' preparatory and adaptive responses difficult. Other circumstances may further complicate things. For example, a community may have little influence over how an area of land is managed if it is privately owned; tenants may be powerless to make their homes more resilient if their landlord is uninterested in flood risks or climate impacts more broadly. And elevated levels of poverty or poor health can also make communities more susceptible to flooding and other climate impacts.

Most people correctly perceive local authorities and other agencies to be responsible for certain actions when it comes to flood defence and climate change mitigation. However, many also identify this as a reason to avoid taking additional personal actions. Whilst this may or may not be the case (river dredging might be more difficult for the local community to arrange, but making the possible alterations to ventilation bricks is relatively easy to do), these organisations are influential and their actions matter. Government spending (or more pertinently, government spending cuts) can deliver a false message to communities about how serious the risks of climate change are. Institutional responses to flood risk and climate change affect how the public interpret and value the measures required to reduce such risks, and can affect the relationships between communities and statutory organisations.

local DYNAMICS

These decisions are also reflected in local infrastructure. **Resilient infrastructure has a large role to play in helping a community recover after a flooding event** where they may have had limited or no access to certain services, and also in showing how areas not yet affected by flooding are preparing for the future. Ensuring 'business continuity' for some of these services is part of the local authority's emergency preparedness plans. But poor planning (or little evidence of sufficient planning) from any organisation engaged in

> 'poor planning (or little evidence of sufficient planning) from any organisation engaged in communicating flood risk can result in public distrust'

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communicating flood risk can result in public distrust. Linked to this is the difference between Flood Defence Management and Flood Risk Management - taking care of 'material' infrastructure is important, but will not make a community resilient; **building and maintaining a social infrastructure is also crucial**.

The recent 'Flood Re' project, which seeks to make home insurance for those in flood-affected areas more affordable, has proven unintentionally controversial, with some commentators arguing that more should be done to prevent flooding events and that the costs of providing such a scheme outweigh the benefits. Closely linked to this is the fact that homeownership plays a big role in defining people's adaptive capacity: **home-owners have more choice and greater opportunities to take individual flood defensive action**.

For an area made up of mainly rented properties, or of properties built after 2009 which are excluded from the Flood Re scheme, this lack of residents' adaptive capacity can have quite a substantial effect. Another aspect of the composition of these communities that may affect their preparedness is recent growth or rapid turnover of residents. This can mean that residents do not know about the risks, local knowledge may lost, and community networks may be limited or lack longevity.

THE BOTTOM LINE

Consider the wider social context for planning and communicating about flooding and climate change in the community you are working with. Floods do not happen in a vacuum, and without a sound understanding of local dynamics, vulnerable members of the affected community may disproportionately suffer as a result.

Find out more - key references:

Birkholz, S., Muro, M., Jeffrey, P., and Smith, H.M. (2014), Rethinking the relationship between flood risk perception and flood management, *Science of the Total Environment*, 478, 12-20.

Climate Just web tool - mapping and text-based information about climate change and social disadvantage, http://www.climatejust.org.uk

Stroud District Council's Flood Defence work collaborating with local residents, landowners and local organisations, http://www.stroud.gov.uk/docs/press.asp?doit=detail&nid=3112

Twigger-Ross, C. et al. (2014). Flood Resilience Community Pathfinder Evaluation: Rapid Evidence Assessment. London: Defra

Woodley, D.M. (2013) Re-configuring Local Governance for Community Resilience: social learning for flood adaptation under a changing climate - A Literature Review, *University of Exeter Blog, found here*: http://blogs.exeter.ac.uk/crediton-floods/files/2015/04/Re-configuring-Local-Governance-for-Community-Resilience-social-learning-for-flood-adaptation-under-a-changing-climate-A-Literature-Review.pdf

7 Communities that have been affected multiple times offer powerful opportunities for learning (but also have a right to forget)

Personal stories from trusted messengers are a powerful form of public engagement (see Section 5), and often the best source for engaging other communities that have been affected by flooding. These communicators tend to be quickly trusted due to their experience of disaster, and their knowledge and experience can help inform others of the potential risks and various preventative measures possible. Their testimony can also be a source of support and encouragement to other communities facing the risk of flooding, as their experience and lives after the event are demonstrations of success. Resilience can often be a hard thing to describe or prescribe actions for, but **testimonies about adaptations and community understandings of risk can help demonstrate what resilience is.**

These communities can also provide important learning for researchers (who in turn wish to help other communities become better prepared for future risks). Participants at the Oxford workshop frequently relayed stories from people proudly describing how their community had come together to help each


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> 'defining a community by one particular experience and neglecting their 'right to forget' can be unhelpful and actually restrict the learning available'


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other out, stories of great generosity, and of meeting new friends. Whilst often traumatic and troubling, collective responses to flood risks also offer valuable opportunities to build community resilience, and to engage with the issue of climate change in terms that everyone can understand.

different EXPERIENCES

However, in the same way that engaging a flooded community at the wrong time or in the wrong way raises ethical questions (see Section 4), **there are also risks in over-relying on a particular community for their knowledge and experience**. Interactions with these communities can take on more of an extractive quality and, understandably, can result in resentment and upset as communities are asked to describe a traumatic event and its effects again and again. Defining a community by one particular experience and neglecting their 'right to forget' can be unhelpful and actually restrict the learning available.

THE BOTTOM LINE

People's experience can be authoritative and act as a good indicator as to how other communities might respond.

Find out more - key references:

Barr, S. & Woodley, E. (2014). Learning to Listen: A community approach to understanding localised flood events, http://geography.exeter.ac.uk/news/featurednews/title_378522_en.html

Butler, C., Walker-Springett, K. and Adger, N. (2015). Community, resilience and wellbeing in the context of floods, http://geography.exeter.ac.uk/winterfloods/outputs/presentations

Whatmore, S. J., Lane, S. N., Odoni, N. A., Ward, N., & Bradley, S. (2011). Coproducing flood risk knowledge: redistributing expertise in critical participatory modelling, *Environment and Planning*, A 43, 1617-1633.

8 It is important to strike the right balance between the 'local' and 'global' aspect of flooding (as a climate impact)

The 'psychological distance' of climate change is a recurring challenge for communicators. Thankfully, most people in the UK are yet to experience harmful climate impacts, and as such, climate risks can seem abstract, remote and irrelevant to people's lived experience. Flood events, on the other hand, are tangible and situated events, which have very concrete impacts on local communities.

In line with the growing literature examining the concept, the Oxford workshop **recognised that flood events are a way of reducing the psychological distance of climate change**. If approached sensitively (section 4) and with care, they offer an opportunity for a conversation about climate change that may address an individual's perception that climate change is 'something that happens to other people'. Whether flood events act as a motivational 'signal' for people to engage further with climate change is determined by whether they attribute the flooding to climate change - so narratives about the flood/climate link are crucial.

a personal CONNECTION

However, **it is important to strike a balance between emphasising local and global impacts**. There is a risk that focusing exclusively on localised climate impacts (without linking these to the wider national and international context) could encourage the sense that climate change is 'only about me'. Research suggests that there are risks in 'over-localising' climate change. For people who value their own status and power over more communal goals - that is, people with 'self-enhancing' values - focusing on a narrow and individualised set of reasons for engaging with climate change may actually reduce their sense that it is a global priority (rather than a localised concern).

> 'flood events are a way of reducing the psychological distance of climate change'


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There are several options for managing this tension. Firstly, it should not be assumed that people only value places and communities which are geographically local. Making a personal connection with an individual or community - in the wake of a flood, or even better in advance of it occurring - can mean drawing parallels between a local area or groups and other communities (either nationally or internationally).

Using tools (such as videos) which build on the experiences of other communities is also a powerful way of promoting a sense of solidarity that reaches across spatial boundaries. And as the Climate Coalition's 'For the Love Of' campaign demonstrates, making climate change relevant to people's lives doesn't have to mean reinforcing their sense of self interest (just making it more tangible).

THE BOTTOM LINE

Flood events are local and tangible events that impact directly on people's lives, and are likely to reduce the 'psychological distance' of climate change if a link between flooding and climate change is present in the public mind. To avoid locally-framed messages about climate change backfiring, draw parallels to other similar communities and remember to highlight the things people love that are affected by climate change that may not be geographically local.

Find out more - key references:

Climate Coalition - For the Love Of, http://fortheloveof.org.uk

Devine-Wright, P., Price, J., Leviston, Z. (2015). My country or my planet? Exploring the influence of multiple place attachments and ideological beliefs upon climate change attitudes and opinions *Global Environmental Change* 30, 68–79.

Schoenefeld, J. J., & McCauley, M. R. (2015). Local is not always better: the impact of climate information on values, behavior and policy support. *Journal of Environmental Studies and Sciences*, 1–9.

9 Communications should empower people to respond and adapt to future flood risks - focusing on preparedness and support rather than 'getting back to normal'

After a flood, communicators may feel compelled to encourage a community to try and get 'back to normal'; to restore a feeling of security and the familiarity of life before the flood. Certainly, there may be a strong drive towards this from communities themselves. However, getting **'back to normal' may not be possible in a changing climate**, and future flooding could potentially be worse than previous episodes. There may also be items and possessions in people's homes that are damaged beyond repair. The Oxford workshop suggested that this can be one of the most traumatic aspects of experiencing a flood and part of this grief is coming to terms with the fact that there may have been things they could have done to prevent the damage. Communications should **encourage people to rebuild their homes, but to make them more resilient**, rather than exactly as they were before the flood. For some people, these changes will be small (such as learning how to modify their ventilation bricks), but for others, this may mean significant moderations to their house (such as heightening electrical sockets or having tiled floors) and for some even moving house.

Communication and engagement should focus on preparedness - drawing on past experiences to be more prepared for future risks in a changing climate. What things can people do to help protect their home against flooding in

'if a community engages collectively in building a more flood-resilient town or village, a new idea of what 'normal' looks like can develop'


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the future? How can they make their houses and communities safer than they were before - not 'back to normal,' but 'more prepared for the future'? Research suggests that people from different political backgrounds respond well to a 'preparation' frame when communicating climate messages - even those who don't express much concern about climate risks. Notions such as 'responsibility,' 'stewardship,' 'fairness,' 'better to be prepared,' and ideas of 'protection and safety' resonate well across the political spectrum, helping frame the risks of increased flooding due to climate change.

focus on PREPAREDNESS

If a community engages collectively in building a more flood-resilient town or village, a new idea of what 'normal' is like can develop.

THE BOTTOM LINE

In a changing climate, getting 'back to normal' may not be possible. Instead, support communities to be better prepared for future flood risks.

Find out more - key references:

Climate Access (2015). **The Preparation Frame: A Guide to Building Understanding of Climate Impacts and Engagement in Solutions**, http://www.climateaccess.org/preparation-frame

Mishra, S., Mazumdar, S., and Suar, D. (2010), Place attachment and flood preparedness, *Journal of Environmental Psychology, 30(2), 187-197.*

FURTHER READING[1]

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Bruine de Bruin, W., Wong-Parodi, G. and Morgan, M. G. (2014). Public perceptions of local flood risk and the role of climate change, *Environment Systems and Decisions*, 34(4), 591-599.

Bubeck, P., Botzen, W.J.W. and Aerts, J.C.J.H. (2012). A Review of Risk Perceptions and Other Factors that Influence Flood Mitigation Behavior, *Risk Analysis*, 32(9), 1481-1495.

Capstick, S.B., Demski, C.C., Sposato, R.G., Pidgeon, N.F., Spence, A., Corner, A. (2015) Public perceptions of climate change in Britain following the 2013/14 winter flooding, *Understanding Risk Group* WP15-01.

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Harvatt, J., Petts, J., Chilvers, J. (2010). Understanding householder responses to natural hazards: flooding and sea level rise comparisons, *Journal of Risk Research*, 14, (1), 63– 83.

Höppner, C., Bründl, M. and Buchecker, M. (2010). *Risk Communication and Natural Hazards*, CapHaz-Net WP5 Report, Swiss Federal Research Institute WSL. http://caphaz-net.org/outcomes-results/CapHaz-Net_WP5_Risk-Communication.pdf

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Lieske, S. N., Martin, K., Grant, B., Baldwin, C. (2015). Visualization Methods for Linking Scientific and Local Knowledge of Climate Change Impacts, *Planning Support Systems and Smart Cities* (pp. 373-389). Springer International Publishing.

Marshall, G. (2014). After the floods: Communicating climate change around extreme weather. *Climate Outreach*.

1 Prior to participating in the workshop, attendees completed a 'Knowledge Exchange' form requesting recommendations of key resources (academic publications and practical projects) that would be useful to share with others. This 'Further Reading' list reflects those recommendations.

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Relevant projects & reports

Project ASPECT Digital stories that put climate change into the context of people's everyday lives. http://www.projectaspect.org

Climate Outreach: Guide on **communicating adaptation.** http://climateoutreach.org/resources/communicating-climate-change-adaptation-a-practical-guide-to-values-based-communication

Climate Just web tool - mapping and text-based information about climate change and social disadvantage. http://www.climatejust.org.uk

'Coastal Communities 2150' project from the Environment Agency is a well run scheme with strong public support in the area near to where I live, Seaford in East Sussex. http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/aboutus/wfo/128455.aspx

Flood Plan Guide: Prepare for a flood and get help during and after. https://www.gov.uk/prepare-for-a-flood/make-a-flood-plan

Flood, vulnerability and urban resilience: a real-time study of local recovery following the floods of June 2007 in Hull (2007-2009). http://www.lancaster.ac.uk/lec/sites/cswm/Hull%20Floods%20Project/HFP_home.php

The Geographical Journal (special issue) on the **UK winter storms of 2013-14**. http://onlinelibrary.wiley.com/doi/10.1111/geoj.2014.180.issue-4/issuetoc

Herne Hill and Dulwich flood risk management proposal http://www.southwark.gov.uk/downloads/download/3681/herne_hill_and_dulwich_flood_risk_management_proposal

Ipsos MORI Public Flood Survey 2013/14 Wales. Natural Resources Wales

Know Your Flood Risk Homeowners guide to Flood Resilience http://www.knowyourfloodrisk.co.uk/sites/default/files/FloodGuide_ForHomeowners.pdf

Know Your Flood Risk Guide to Flood Recovery http://www.knowyourfloodrisk.co.uk/sites/default/files/FloodRecoveryGuide_Interactive.pdf

Local Government Association Briefing to Councillors: 'Ensuring your community is resilient to the impacts of extreme weather.' http://www.local.gov.uk/documents/10180/6869714/L15-77+CL+Resilient+c_WEB.PDF/a0abfcae-a4db-42ce-abae-55c82d1d7bea

Local Government Association: Guide to communicating in extreme weather events. http://www.local.gov.uk/documents/10180/5854661/L14-633+Extreme+Weather+Communications+Guidance_11.pdf/da2e2109-bd1e-42e6-8496-410c7fe566a4

MAGIC (Multi-scale Adaptations to Global Change, Impacts on vulnerability in coastal areas) On how to develop appropriate responses to risk and vulnerability in coastal zones. http://magic.irstea.fr/en

Northamptonshire Council Flood Toolkit http://www.floodtoolkit.com/education

Public Health England & Environment Agency: guide for the public on **making a personal flood plan.** - https://www.gov.uk/government/publications/flooding-planning-managing-and-recovering-from-a-flood

Ricardo / AEA (2013) PREPARE - **Climate risk acceptability** Findings from a series of deliberative workshops and online survey. Part of the PREPARE Programme of research on preparedness, adaptation and risk. Report for DEFRA. Ipsos MORI. http://www.sciencedirect.com/science/article/pii/S0959378014001617

RISC-KIT (2013-2017) is an EU FP7 Collaborative project, developing methods, tools and management approaches to **reduce risk and increase resilience** to low-frequency, high-impact **hydro-meteorological events** in the coastal zone. http://www.risckit.eu/np4/home.html

Sustainable Flood Memories https://floodmemories.wordpress.com

SHAPE: an online tool for strategic planning of services and physical assets for health care and social care professionals. http://shape.dh.gov.uk/index.asp

'The Coming Storm': How East Sussex will be affected by flooding and storms resulting from climate change. http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/aboutus/wfo/128455.aspx

The Land of Summer People: Connecting artists and PhD students from the WISE project to jointly work on communicating flood issues with the public in Somerset. http://thelandofthesummerpeople.org/the-project/

Voice of the floods exhibition http://wadworthcouncil.org.uk/pages/flood.pdf