



After the floods: lessons for climate adaptation and resilience from three local areas

Introduction

“The country experienced the wettest winter on record and the highest tidal surge in 60 years, resulting in more than 130 severe flood warnings.”

The weather that hit the UK in the winter of 2013-14 was, as the Met Office said, “exceptional”. The country experienced the wettest winter on record¹ and the highest tidal surge in 60 years,² resulting in more than 130 severe flood warnings, serious coastal damage and widespread disruption. Over 10,000 homes and other properties were flooded and insurance costs were estimated at more than £1 billion.³

As the severe weather continued, many began to ask whether climate change was to blame. Although it is not possible to attribute a single event to climate change, the Met Office has made it clear that such events will become more frequent in the future, saying:

“there is an increasing body of evidence that extreme daily rainfall events are becoming more intense.... there is no evidence to counter the basic premise that a warmer world will lead to more intense daily and hourly heavy rain events.”⁴

Accordingly, political attention shifted from immediate flood relief questions, to the causes of extreme weather, and the need for greater preparedness in future.



Cross-party consensus February 2014



“We will deal with the floods and we will build a more resilient country for the future.”

Prime Minister David Cameron



“If we don’t work hard to help other countries to deal with desertification and climate change and all the things that produce this volatile weather, then it gets worse for all of us.”

Deputy Prime Minister Nick Clegg



“If there’s one thing we know about the effects of extreme weather, it is that the costs, financial, human and other costs, of not acting are much greater than the costs of acting.”
Ed Miliband, Leader of the Labour Party

“National government should set clear expectations for local areas, then let each area respond in the most appropriate way.”

Views from three local areas

Against this backdrop, we approached three MPs from Green Alliance’s Climate Leadership Programme, to investigate how local areas could best respond to climate impacts. Workshops were held in three constituencies in February and March 2014, bringing together local experts, national agencies and community representatives:

- Lilian Greenwood MP’s **Nottingham South** constituency, an urban area with past experience of flooding;
- Mike Thornton MP’s constituency of **Eastleigh in Hampshire**, which escaped the worst of the 2013-14 flooding but still experienced disruption;
- Sarah Newton MP’s Cornish constituency, covering **Truro and Falmouth**, which was badly affected by the winter storms, with severe disruption to transport links.

At each event, participants heard from experts about current and predicted effects of climate change on their local area. They discussed the existing structures and responsibilities for climate adaptation and how things could be better managed in the future. There was discussion of how local responses could be improved and how national government could better facilitate local action.

Participants from the three regional events were brought together at a seminar hosted by the MPs in the House of Commons in July 2014, which was also attended by national representatives of the Department for Environment, Food and Rural Affairs (Defra), Department for Communities and Local Government (DCLG), the Environment Agency and the insurance industry.



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Six priorities for climate resilience

Despite the differences between the three areas, there were strong common themes, with a clear agenda for national and local government emerging, which can be outlined under six priorities:

1) More responsibility and freedom for local areas

The strongest finding from all three areas was the need for greater local control over climate adaptation. Although local authorities have responsibility for flood risk management, there is currently no requirement for local areas to have a comprehensive strategy, and no earmarked resource or delegated responsibility. National government should set clear expectations for local areas, then let each area respond in the most appropriate way. For example, this could include devolution of funding and encouragement to build climate adaptation measures into local plans.

The benefits of a more localised approach would include:

Sensitivity to local circumstances Climate impacts are very localised, and may not be reflected well in national data or climate models. There should be better recognition of the variance in risk, from flash floods to tidal surges. For example, Nottingham is more likely to suffer from flash floods, and has experienced summer flooding in recent years; and rural areas have different needs to urban areas. It is at the local level that climate impacts can be matched to socioeconomic data, creating a fine-grained analysis to inform climate adaptation. Eastleigh Borough Council has been involved in a collaborative project to predict vulnerability to climate change. It combined socioeconomic data, mapping areas of deprivation against potential climate impacts such as floods or heatwaves. This allows support to be targeted.

Local collaboration A more local response would allow better co-ordination of expertise, and collaboration between local organisations. For example, Cornwall has made good use of the knowledge of Cornwall Wildlife Trust, as part of a local collaboration to respond to climate impacts.

Recognition for local leadership and innovation If the government was to set clear expectations, local areas which responded well would get recognition, and incentives could be better aligned to action. This would inspire other areas to act. If national government set the overall direction, but left local areas to decide their own course, it would encourage different approaches and innovation could spread.

2) Climate readiness: linking mitigation and adaptation

Constituents in all three areas also agreed on the need to link climate adaptation to climate change mitigation, the latter tackling the causes of climate change, through reducing emissions of carbon dioxide and other greenhouse gases.

Land use planning, for example, needs to encourage settlements which are resilient to the impacts of climate change, reduce energy demand and help to combat fuel poverty. Public transport infrastructure, such as the rail network, is important for carbon reduction and needs to be resilient to climate impacts. ‘Blue-green infrastructure’, protecting green space and tree planting, is good for carbon sequestration as well as preventing flooding. Water management can help with both mitigation and adaptation.

This points to the need for a comprehensive local climate strategy, co-ordinated by local authorities and agencies. Extreme weather events can provide a good opportunity for a wider debate about climate impacts, and the need for both mitigation and adaptation, as shown by the robust parliamentary debate triggered by the floods.

“If local areas have a carbon reduction strategy which involves local people, it provides a tangible response and helps people to understand the links.”

If local areas have a carbon reduction strategy which involves local people, it provides a tangible response and helps people to understand the links. For example, in Eastleigh there is an environment centre with an advice line, providing information on energy efficiency. And Nottingham has done pioneering work on local energy generation through the MOZES (Meadows Ozone Energy Services) project. Often, the local MP plays an important role in pulling different agencies together and engaging local people.

3) Local co-ordination

If local areas are to lead on climate strategy, a range of different local agencies and organisations should link up. This happens through existing networks, such as the twelve climate change partnerships supported by ClimateUK.⁵ However, the difficulty in bringing together and involving numerous stakeholders to organise such a strategy was widely noted. This is more complicated in areas with a two-tier local authority system.

In all areas there was a suggestion that the new Health and Wellbeing Boards, which combine health and social care agencies and functions, could provide a model. A ‘Climate Adaptation Board’ could involve all the relevant local players to form a collaborative leadership structure. This could build on the collaborations now in place for flood risk management, including shared management strategies, and partnership funding arrangements for flood and coastal erosion risk management projects. These enable joint working between local authorities and the Environment Agency, with community involvement. A good example of this is Cornwall’s Community Flood Forum, which shares expertise, provides training and works with farmers to improve land management.

There are effective networks for immediate, short term responses to floods, heatwaves or other climate impacts, co-ordinated through Local Resilience Forums. However, linkages are not so strong at the level of prevention, such as making sure that new housing developments are climate-proof. Nottingham has an ‘early intervention and prevention service’ for social care, in which families at risk are identified at an early stage and helped before a crisis point is reached. The same approach could apply to climate adaptation, minimising the costs associated with extreme weather events.

4) The role of agencies

As the 2013-14 winter floods showed, the Environment Agency has a key role in responding to extreme weather events, as well as helping local areas adapt to climate change. Its ClimateReady initiative, a partnership between the agency and a range of organisations including the Local Government Association, Defra and Natural England, works with local areas to encourage climate adaptation. However, the Environment Agency has limited powers. For instance, it cannot prevent inappropriate building in floodplains.

Declining budgets for public agencies may see a reduction in spend on medium or long term prevention mechanisms. Other public agencies, like the fire service and other emergency services, are likely to come under increasing pressure from climate impacts, and the implications of this for resource allocation are not well understood. For example, climate change, combined with an ageing population, is likely to result in more health problems due to heatwaves, as the Committee on Climate Change made clear in its recent report.⁶

Companies involved in energy transmission and distribution, as well as transport infrastructure, need to plan for climate impacts. Without strategic assessment at the national and local level, the Committee on Climate Change warns of a “systemic build-up of risk”.⁷

5) Valuing climate adaptation

At present, the value of climate resilience is not properly recognised. While we have a good understanding of the costs of extreme weather events, it is more difficult to put a price on preventive measures, such as planning policies which minimise flood damage in the built environment, land management which reduces water run-off or forest fires. Defra’s work on

“The importance of floodplains and other undeveloped land in helping flood prevention should be explicitly recognised and valued.”



ecosystem services, and the work of the Natural Capital Committee, is helping to record the value of such services. However, incentives need to be better aligned with this value. For example, climate adaptation measures adopted by farms could be rewarded through farm payments.

In particular, the importance of floodplains and other undeveloped land in helping flood prevention should be explicitly recognised and valued. It is possible to find diverse uses for floodplains, such as recreational use, without compromising flood resistance, and this would have the added benefit of helping the public to understand climate adaptation.

Neither is climate resilience currently factored into buildings or infrastructure. Costs and impacts can be avoided by designing buildings to cope with floods or heatwaves. The recent report from the Committee on Climate Change points out that buildings and infrastructure are not well prepared for extreme heat, and that this will have health impacts. ‘Resilient repairs’, such as higher electrical sockets and floodproof fixtures, can reduce future costs. Although they are sometimes offered by insurers, the take-up rate is low. In future, this could be included in building regulations. The insurance industry has detailed knowledge of damage to buildings from extreme weather events, and could work with local areas and national government on preventative measures.

“Companies need to understand the risks of climate impacts to their business and investment decisions.”



6) Links to economic development

Our workshops identified the need to look at climate resilience from an economic perspective and link it to local economic development initiatives, particularly the work of Local Enterprise Partnerships (LEPs). Companies need to understand the risks of climate impacts to their business and investment decisions, particularly for infrastructure, should be made with this in mind. In Nottingham, companies have had the chance to participate in the BRiCC (Business Resilience in a Changing Climate) scheme, where small businesses can find out how to prepare for climate impacts and undertake a ‘business resilience health check’. The Committee on Climate Change has highlighted that small businesses in particular lack the expertise or knowledge to assess climate risks.⁸ LEPs should work with local agencies to:

- ensure that climate resilience is factored into infrastructure investment decisions;
- support businesses to respond to climate change, particularly in vulnerable sectors such as agriculture;
- consider the indirect economic effects of climate change, such as disruption to supply chains;
- use wider metrics than GDP to measure local economic performance, including measures of well-being which are already collected; these should include measures of climate resilience.

Endnotes

- ¹ Met Office, February 2014, www.metoffice.gov.uk/news/releases/archive/2014/early-winter-stats
- ² *The Independent*, December 2013, www.independent.co.uk/news/uk/uk-weather-warnings-scotland-and-north-battered-by-100mph-winds-as-biggest-tidal-surge-in-60-years-threatens-east-coast-8984542.html
- ³ Association of British Insurers, figures released 20 March 2014
- ⁴ Met Office and Centre for Ecology & Hydrology, February 2014, *The recent storms and floods in the UK*
- ⁵ For more information on this, see climateuk.net
- ⁶ Committee on Climate Change Adaptation Sub Committee, July 2014, *Managing climate risks to well-being and the economy: ASC progress report 2014*
- ⁷ *Ibid*, p22
- ⁸ *Ibid*

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The Climate Leadership Programme

Launched in 2009, Green Alliance's Climate Leadership Programme aims to give Members of Parliament the knowledge and skills they need to lead a proactive and ambitious climate change agenda.

We run introductory sessions for parliamentary candidates and new MPs, and work with small groups of parliamentarians on specific policy areas that link national policy with constituency issues, including the Green Deal, localism, city deals and community energy, as well as this project on climate impacts.

For further information on this project, including details of the three events, go to www.green-alliance.org.uk/climateadaptationworkshops_2014

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Green Alliance

Green Alliance is a charity and independent think tank, focused on ambitious leadership for the environment. With a track record of 35 years, Green Alliance has worked with the most influential leaders from the NGO and business communities. Green Alliance's work generates new thinking and dialogue, and has increased political action and support for environmental solutions in the UK.

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