

Urban Heat: Developing the role of community groups in local climate resilience

Kevin Burchell • Ben Fagan-Watson • Mike King • Tom Watson
(with: Colin Cooper • David Holland • Hilary Jennings • Sue Palmer • David Thorne • Charles Whitehead)

February 2017



The project team

We would like to express our gratitude to: everyone at the local, regional and national level who participated in and contributed to the Urban Heat project; Katharine Knox at JRF for insight and support; the PSI support team; and, the University of Westminster design unit.



Kevin Burchell, Ben Fagan-Watson and Tom Watson

Policy Studies Institute (PSI)

PSI produces high quality research – that is of value in policy, practice and academia – on environmental and sustainability issues. PSI is a research centre in the Faculty of Architecture and the Built Environment at the University of Westminster.

psi.org.uk

Contact: Kevin Burchell

k.burchell@westminster.ac.uk



Colin Cooper and Sue Palmer South West London Environment Network (SWLEN)

SWLEN is a charity with ten years of success helping local people and community organisations in south west London to protect and enhance the environment.

swlen.org.uk

Contact: colin@swlen.org.uk



David Holland

Age UK (East London)

Age UK is the UK's largest charity dedicated to helping everyone make the most of later life. Age UK (East London) works in Newham, Hackney and Tower Hamlets.

ageuk.org.uk/eastlondon

Contact: david.holland@ageukeastlondon.org.uk



Mike King

Resources for Change

Resources for Change specialises in evaluation, engagement and participation, organisation development, capacity building and project support.

r4c.org.uk

Contact: mikek@rfc.org.uk



Hilary Jennings, David Thorne and Charles Whitehead Transition Town Tooting

Set up in 2008, Transition Town Tooting is a community organisation that responds locally to the challenges of climate change.

transitionowntooting.blogspot.co.uk

Contact: cemwhitehead@btinternet.com



Funder: Joseph Rowntree Foundation

Project manager: Katharine Knox

The Joseph Rowntree Foundation is an independent organisation working to inspire social change through research, policy and practice.

jrf.org.uk

Contact: katharine.knox@jrf.org.uk

Burchell, K., Fagan-Watson, B., King, M. and Watson, T., with Cooper, C., Holland, D., Jennings, H., Palmer, S., Thorne, D. and Whitehead, C. (2017) *Developing the role of community groups in local climate resilience: final report of the Urban Heat project*. Policy Studies Institute, London. psi.org.uk/urban_heat

Please see the Urban Heat website for links to: the full report, the full bibliography, the executive summary, the independent evaluation (King, 2017), project papers and other materials. psi.org.uk/urban_heat

Published by: Policy Studies Institute, University of Westminster
© Kevin Burchell, Ben Fagan-Watson, Mike King and Tom Watson, 2017

**UNIVERSITY OF
WESTMINSTER**

The University of Westminster is a charity and company limited by guarantee. Registration number: 977818.
Registered office: 309 Regent Street, London W1B 2HW.
8017/02.17/LC

Contents

Executive summary	1
1. Introduction	
2. Urban Heat project	
3. Key impacts	
4. Key findings and recommendations	
1 Introduction	9
1. Local climate resilient futures	
2. The project team	
3. Project rationale and aim	
4. Objectives and assumptions	
5. Project design	
6. Data and analysis	
7. Report structure	
2 Background issues	17
1. Heatwaves and heatwave planning	
2. The voluntary and community sector (VCS)	
3. Community resilience	
4. The local policy level	
5. Summary	
3 Project design and process: what works?	26
1. The London case studies	
2. Introduction to the Urban Heat PAR	
3. Workshops 1 and 2: working with VCS groups	
4. Workshop 3: sharing ideas with local policy stakeholders	
5. Local policy engagement for practical impact	
6. Differences between the case studies	
7. Policy engagement for learning and dissemination	
8. Interviews with 'vulnerable' people	
9. Summary	

4 Heatwaves and ‘the community’	53
1. ‘Vulnerable’ people	
2. Representatives of the VCS groups	
3. Summary	
5 Impacts	61
6 Policy challenges and recommendations	65
1. A national policy disconnect?	
2. Heatwaves and hot weather	
3. Community resilience	
7 Key findings and recommendations.....	75
1. Key findings	
3. Key recommendations	
8 Selected bibliography	79
9 Appendix: Workshop programmes.....	81

Executive Summary

1. Introduction

It is estimated that the 2003 UK heatwave caused 2,000 excess deaths, and it is predicted that such events will be more frequent in the future due to climate change. Certain groups are particularly vulnerable to heatwaves, including: older people, infants, those with health or mental health issues, disabilities or alcohol/drug dependencies, as well as people on certain medications and isolated people. London is particularly vulnerable to heatwaves, due to its size, location and concentrations of vulnerable people. In response to the 2003 heatwave, Public Health England (PHE) has published an annual Heatwave Plan since 2004, and work is now underway on a broader – and very much emergent – ‘overheating’ agenda by a cross-government working group. Although the Heatwave Plan guides national and local responses to heatwaves, there are very few statutory responsibilities in this domain and attention to the issue varies around the country. Community resilience – the idea of a range of individuals, voluntary and community sector (VCS) groups and institutions working together at a local scale to increase the community’s ability to prepare for, cope with and recover from adverse events or conditions – has been a policy objective within the Cabinet Office for more than five years. At the local level, work on community resilience tends to be led by local authority emergency planners within the context of a Local Resilience Forum, while work on heatwaves is led by public health managers. Although there are some statutory responsibilities in this area, local practice also varies around the country.

2. The Urban Heat project

The Urban Heat project took its inspiration from the simple observation that the heatwave planning and community resilience agendas are somewhat disconnected at the national policy level: the potential of community resilience is relatively unexplored in the Heatwave Plan for England and heatwaves are not mentioned in the Cabinet Office’s community resilience materials. The aim of Urban Heat was, therefore, to explore the potential for greater ‘community’ – and, more specifically, voluntary and community sector (VCS) – involvement in local heatwave planning and community resilience. The project focused on VCS groups because many of them: work with the social groups that are more ‘vulnerable’ to heatwaves, are able to reach many people that local institutions might consider ‘hard to reach’, and possess a distinctive form of ‘grass roots’ local knowledge that is derived from their own and their clients’ experience.

The project had three key objectives in the context of heatwaves and community resilience:

- To implement and evaluate a participatory action research (PAR) process designed to have a direct local impact;
- To learn more about the scope, processes, institutional arrangements and practices that relate to heatwave and community resilience planning and implementation, especially as they relate to the VCS, and to consider the role the VCS can play;
- To draw out and – through policy engagement – disseminate learning that will have broader strategic impact at London-wide and national levels, and thus in other locales.

The project addressed these objectives through a project design that combined: PAR in three London case studies (in Hackney, Hounslow and Wandsworth), policy engagement at local, London-wide and national levels, and independent evaluation (see Figure 1).

3. Key impacts

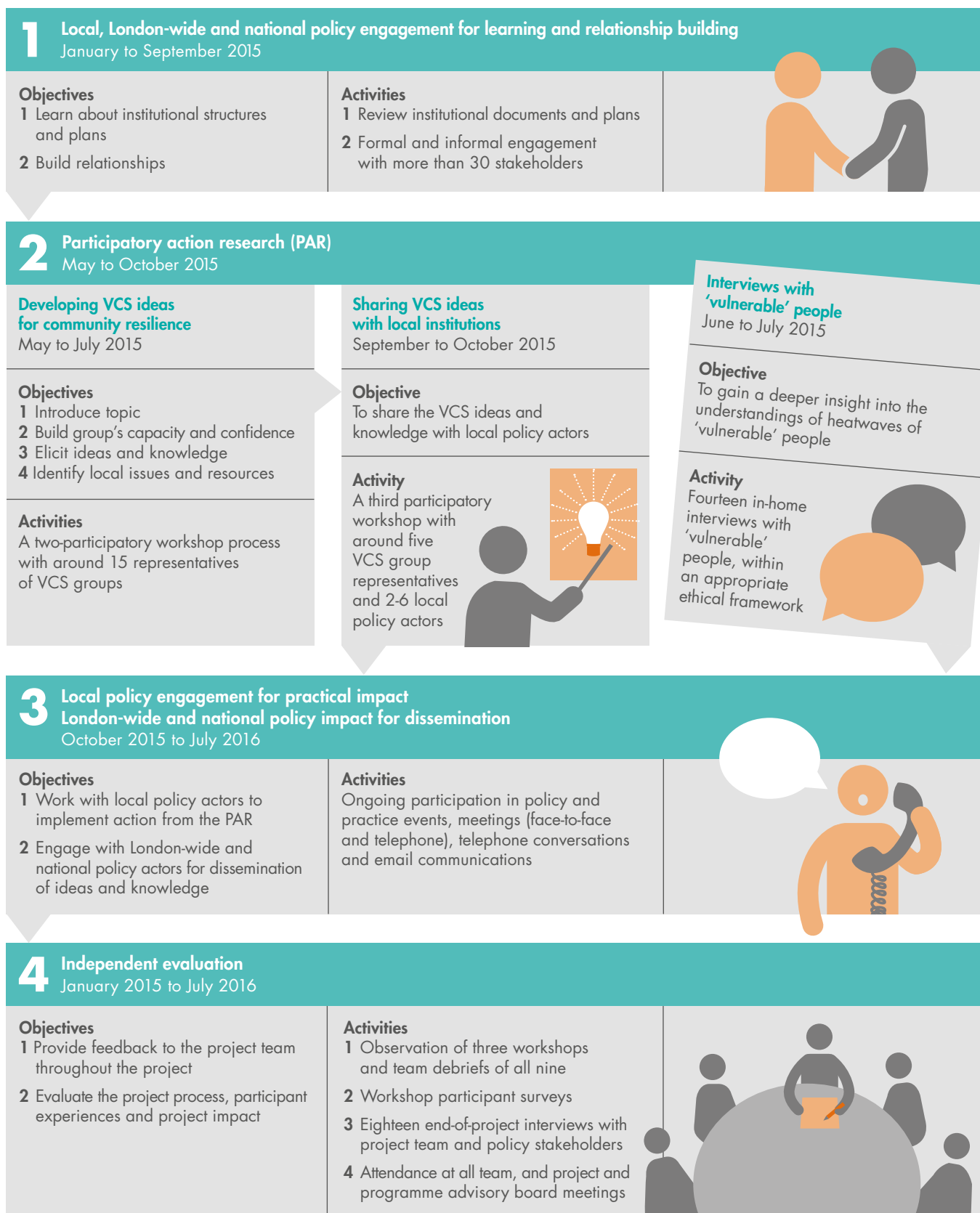
Within the project period, the main impacts of the project were: raising awareness and informing agendas across sectors and levels; brokering new relationships between policy and practice stakeholders; supporting the development of communications materials and systems at local and national levels; and changes in local governance structures. The project was also described as an example of best practice in community engagement by Public Health England (London) and the Civil Contingencies Secretariat. Significantly, the project drew attention to some of the more social aspects of heatwave response in a domain that often focuses on technical issues of health, buildings and mapping.

The key impacts of the project – within the project period – were:

Raising awareness and shaping future agendas

- In the local case studies, the project helped to increase awareness among VCS groups, emergency planners, public health specialists and others in local authorities, Local Resilience Forums, ‘excess deaths’ groups and a Health and Wellbeing Board;
- The project also prompted shifts in local governance, for example changing the remit of an ‘excess winter deaths’ group to ‘excess seasonal deaths’, and the inclusion of heatwaves in responses to a consultation on a major local development;

Figure 1. The Urban Heat design



- Regionally/nationally the project informed teams, working groups and strategies in the Greater London Authority, the London Climate Change Partnership, the London Resilience Forum, Public Health England (London), the Civil Contingencies Secretariat, Public Health England and Defra.

'Brokering' new relationships

- In the local case studies, the project 'brokered' new relationships and has had a positive impact on perceptions of the VCS within local authorities;
- Nationally, the project encouraged and supported the development of new relationships between the community resilience team in the Cabinet Office and the extreme events team in Public Health England;
- In London, the project facilitated new working relationships between the Greater London Authority and Public Health England, and officers in the London Borough of Hounslow in support of a local heat pilot project.

Communications

- In the local case studies, local VSC co-ordinating organisations agreed to act as communications hubs between local authorities and the VCS, the emergency planners in one of the case studies are working with a group of students to develop community-based communications strategies, and local authority Town Centre Managers have agreed to act as a communications hub between the local authority and local businesses and retailers;
- Nationally, the project supported Public Health England's development of new public communications materials for heatwaves through: direct feedback, by offering a 'community' perspective, and by facilitating links between Public Health England, and local policy stakeholders and a group of chartered environmental health officers to test the salience of communications materials.

An example of 'best practice' in community engagement

- The project was described in this way by Public Health England (London) and the Civil Contingencies Secretariat.

Advice services

- Locally, the VCS groups that we worked with, a local authority advice service for 'vulnerable' people, and a local pharmacy group agreed to incorporate heatwave advice into their work.

4. Key findings and recommendations

Community resilience

We recommend the following issues for consideration by the Cabinet Office and its advisory Community Resilience Working Group, for inclusion in future community resilience strategies and materials, and implementation at the local level:

- At the national level, it is important to more fully integrate community resilience and heatwave planning, through liaison between the appropriate teams in Public Health England and the Cabinet Office;
- There is widespread enthusiasm – across domains, sectors and levels – for the general idea of greater community involvement in resilience issues. However, community resilience is currently understood and practiced – both nationally and locally – in ways that limit its potential;
- For instance, the project shows that VCS groups have much to offer in terms of local knowledge and novel ideas, and these are appreciated by local institutions. However, local engagement on community resilience typically focuses on parish councils and voluntary emergency responders, and neglects the broader VCS. It is important that future community resilience materials should encourage local institutions to liaise with local VCS co-ordinating organisations – such as local Councils for Voluntary Services (CVSs) – to discuss two key issues:
 - i. Broad-based VCS representation (not just voluntary emergency responders) on Local Resilience Forums (and other relevant bodies, such as ‘excess seasonal deaths’ groups in the case of heatwaves);
 - ii. Use of the VCS co-ordinating organisations’ mass communications channels to convey information and alerts to the local VCS. Given the relatively low uptake of digital technologies among some ‘vulnerable’ groups, the importance of the direct communications that the VCS undertakes with its ‘client’ groups – for instance face-to-face and on the telephone – should be emphasised and supported wherever possible;
- The Cabinet Office should liaise on community resilience with national bodies that represent the VCS, such as the National Council for Voluntary Organisations (NCVO);
- The project also suggests that there is potential in more fully including local retailers in community resilience efforts as they may be able to support ‘vulnerable’ customers, and provide ‘cool spaces’ and water during heatwaves;

- The project highlights the significant impact of the government's 'austerity' measures on both the public sector and the VCS in terms of reduced capacity, knowledge and skills. At all levels of government, it is important to appreciate that the VCS requires funding to carry out projects, and that the VCS is affected by 'austerity' measures just as much as the public sector. This means that it cannot be relied upon to plug emerging gaps in public services.

Drawing on these findings as well as the broader literature, we are also keen to offer a description of community resilience that we hope will be of value in policy and will maximise its potential in practice:

- Community resilience should focus on the most 'vulnerable' and should be mindful of the ways in which the dimensions and spatial distribution of 'vulnerability' vary across different events and issues;
- Community resilience is best understood as *both* an array of capacities or capabilities and a way of doing things that maximises these;
 - i. Community resilience is the broad-based local capability to plan and prepare for, respond to and recover from adverse events and adverse background conditions. Community resilience is also the capability to learn, plan and adapt (and even transform) in ways that mitigate the impacts of adverse events in the longer term future;
 - ii. As a way of doing things, community resilience has the potential to bring to bear a wide and, therefore, powerful variety of forms of both local knowledge, insight and ideas *and* capabilities and capacities (particularly with respect to 'vulnerable' people);
- While community resilience might often be led by local statutory bodies, its potential is maximised by approaches to planning and practice that are inclusive of the entire VCS (not only 'voluntary emergency responders'), as well as local retailers and individual residents;
- Community resilience is reliant on each of these sectors thriving, and on the good personal relationships and stable cross-sector institutional structures that facilitate effective collaboration;
- While it is implemented at the local level, building effective community resilience relies upon appropriate signals and support from regional and national government;
- Finally community resilience can also be driven from the outside of local statutory bodies, and may be in active resistance to them.

Heatwaves and heatwave planning

We recommend the following issues for consideration by PHE, other lead government bodies and the Cross-Government Group on Overheating, for inclusion in future Heatwave Plans, overheating strategies and implementation at the local level:

- The project suggests that awareness of the risks of heat and heatwaves is relatively low among ‘vulnerable’ people and VCS groups. There is a clear need for national public communications (the NHS FAST stroke awareness campaign might provide a model for this), and for national and local communication with VCS groups;
- Heatwaves have to compete for attention at both national and local levels. Now that heatwaves feature strongly in the UK Climate Change Risk Assessment (evidence review), it is important that this is carried through to the National Adaptation Programme;
- Although national benchmarks can be effective in prompting local action, previous efforts in this area by PHE have proved challenging. One option here might be to design the Heatwave Plan in ways that facilitates and supports greater self-assessment at the local level;
- In addition, at the local level, emergency planners and public health professionals need to think creatively about the ways in which new action on heatwaves can be ‘bundled in’ with existing activities (for example on fuel poverty);
- Long term urban and spatial planning to mitigate the impacts of heatwaves does not feature in either local planning guidance or the building regulations. At the national level, lead organisations – such as PHE, the Cabinet Office and the Greater London Authority – need to further emphasise this, and to work collaboratively, across sectors and disciplines, with other bodies – in particular, the Department for Communities and Local Government and Greater London Authority;
- It is important to more fully emphasise – both nationally and locally – the ways in which the characteristics of heatwaves imply different ways of thinking and responding when compared to flooding (in terms of climate change responses) and ‘excess winter deaths’ (as a public health agenda).

The Urban Heat process

The Urban Heat process was novel because it combined workshop-based PAR, ongoing policy engagement and independent evaluation.

- Urban Heat demonstrates that, although challenging, this process represents a compelling model for producing both local impact and learning for broader application;
- In particular, this approach is highly effective in terms of raising awareness, shaping policy agendas, introducing new ways of thinking and 'brokering' new relationships in local, regional and national policy. Implementing practical change is more challenging within the limited timescales of a project;
- The VCS workshops were highly effective in sharing knowledge about heatwaves and heatwave planning, generating enthusiasm, and eliciting participants' local knowledge and novel ideas. It is recommended that workshop-based community engagement processes should be supported as important elements in the development of local policy and practice, and that 'best practice' in community workshop development and implementation should be more broadly shared within policy institutions;
- In the VCS-local policy workshops in two case studies, the participants built on the ideas of the VCS groups and collaborated in productive discussions of practical actions. The less successful third case study demonstrated the importance of getting the right policy people in the room and the potential for past challenges in VCS-local authority relationships to constrain collaboration;
- The implementation of local change was challenging within the project period, and due to the impacts of 'austerity';
- Our ongoing regional and national policy engagement has already had some positive impacts, and there is considerable scope for policy stakeholders to respond to the findings of the project in ways that can feed into local practice over time.
- Urban Heat was valuable to policy stakeholders because it focused on: research and evaluation (for example, giving voice to the VCS and 'vulnerable' people), practical action (in the three case studies) and policy engagement from the outset (in particular, the researchers acted as 'brokers', facilitating new relationships across policy domains and scales).
- The project suggests that there is widespread enthusiasm for community engagement projects among policy stakeholders, but that it remains challenging to 'sell' the distinctive value of this approach within their institutions. It is recommended that researchers and policy stakeholders work together to explain and demonstrate the distinctive value of community engagement within policy institutions.

1 Introduction

In this brief chapter, we introduce the Joseph Rowntree Foundation programme that funded Urban Heat, the project team, and the rationale, aim and objectives of the project. We also describe the structure for the rest of the report.

1. Local climate resilient futures

Urban Heat was funded by the Joseph Rowntree Foundation (JRF), under the *Local climate resilient futures: Action research and evaluation* stream of its *Climate Change and Communities* programme. The objective of this programme is to 'support vulnerable and climate disadvantaged local areas and communities to increase their resilience in the face of climate change in the UK'. Within this broader context, the more specific objectives for projects in the *Local climate resilience futures* stream were:

- Within an action research context, and focusing on areas that are likely to be disadvantaged by climate impacts, to bring together local authorities, communities and other agencies to develop strategic responses to climate change;
- To apply current learning and develop further evidence on how community resilience to climate change can be developed in different local contexts;
- To support a process of change and capacity building in selected areas;
- To draw out lessons from the work through a report and evaluation of the approach.

The Local Climate Resilient Futures stream also funded a project, led by Dundee University, called Scottish Borders Climate Resilient Communities (www.dundee.ac.uk/cechr/projects/sbcrs).

2. The project team

The design and implementation of the project was led by Kevin Burchell and Ben Fagan-Watson, with the support of Tom Watson (Policy Studies Institute, University of Westminster). The three London case studies were designed and implemented in collaboration with three local teams: David Holland (Age UK, East London); Colin Cooper and Sue Palmer (South West London Environment Network); and Charles Whitehead, David Thorne and Hilary Jennings (Transition Town Tooting). The project was evaluated by Mike King (Resources for Change). The project was also supported throughout by an advisory board, made up of local, London-wide and national policy actors and other experts, and benefited from further stakeholder engagement through JRF's Climate Change and Communities Programme Advisory Network.

3. Project rationale and aim

The rationale for Urban Heat was based upon a simple observation relating to heatwave planning. This is that – although the Heatwave Plan for England (**Public Health England (PHE), 2016**) mentions the voluntary and community sector (VCS) and community resilience – the role of VCS groups remains somewhat unclear and the meaning of community resilience is not articulated. With this in mind, employing participatory action research, the aim of Urban Heat was to explore the potential for greater voluntary and community sector (VCS) involvement in heatwave planning and community resilience.

It is estimated that there were 2,000 excess deaths as a result of the 2003 UK heatwave, and heatwaves are predicted to be more common in the future due to climate change (Adaptation Sub-Committee of the Committee on Climate Change (**ASC-CCC), 2016; PHE, 2016**). The planning and implementation of emergency responses to heatwaves at national, London-wide and local levels is led and informed by the Heatwave Plan for England (**PHE, 2016**). Heatwaves are also now strategically considered as part of a broader 'overheating' agenda by a cross-government group (**Defra, 2016**). Meanwhile, the **Cabinet Office (2011)** has published a number of tools designed to help local authorities to develop community resilience, which can be described for now as community-based planning and response – often in collaboration with local institutions – in the context of a wide range of adverse events, emergencies or civil contingencies. The VCS, which is often also known as the third sector or the not-for-profit sector, is made up of many formal and informal groups that are driven by a wide variety of social and environmental values (as opposed to profit). The VCS has been advocated as a 'channel': to local knowledge that institutions find it hard to come by; to social groups – in particular, 'vulnerable' people – that institutions find 'hard to reach'; and to additional capability and capacity (Climate Ready-Voscur, 2016).

The aim of the Urban Heat project was to examine, investigate and enhance the role of VCS groups in local heatwave planning and community resilience strategies and practice, especially as they relate to vulnerable people. To express this within the context of the broader literature, the aim of the project was to begin to explore the ways in which a 'partnership' model of community or public engagement or participation might be feasible and helpful within the context of local heatwave planning by local statutory agencies in the context of climate change. In her classic paper, Sherry Arnstein (1969) describes the 'partnership' model as one in which 'citizens and powerholders agree to share planning, decision-making [and implementation] responsibilities through such structures as joint policy boards and planning committees.'

4. Objectives and assumptions

The Urban Heat project had three key objectives in the context of heatwave and community resilience planning:

- To implement a participatory action research process – designed to have a direct local impact – by eliciting knowledge and ideas from VCS groups, and sharing these with local institutions (such as local authorities and other statutory bodies);
- To learn more about the scope, processes, institutional arrangements and practices that affect heatwave and community resilience planning and implementation, especially as they relate to the VCS, and to consider the role the VCS can play;
- From this process, to draw out and, through policy engagement, disseminate learning that will have broader strategic impact in London-wide and national policy, and thus in other locales.

5. Project design

We examine the Urban Heat design and process in detail in Chapter 3. In summary, the Urban Heat project design drew on three key interlinked approaches: policy engagement, participatory action research in three London-based case studies and independent evaluation (Figure 1).

Policy engagement

Although this is not always the case in participatory action research projects, policy engagement was central to Urban Heat. While policy engagement was an ongoing feature of the project, four distinct chronological phases can be fairly readily identified. These phases consisted of policy engagement within the context of the case studies, and at other local, London-wide and national scales as indicated in Table 1.

Table 1: Policy engagement

OBJECTIVES	IN THE THREE CASE STUDIES	LOCAL INSTITUTIONS ELSEWHERE	LONDON POLICY INSTITUTIONS	NATIONAL POLICY INSTITUTIONS
Learning and relationship building (January 2015 to October 2015)	✓	✓	✓	✓
Recruitment to the PAR process (September to October 2015)	✓			
Practical implementation in the PAR process (October 2015 to March 2016)	✓			
Dissemination (October 2015 to October 2016)		✓	✓	✓

Participatory action research (PAR)

Participatory action research (PAR) is one of a range of similar approaches (e.g. action research and community-based participatory research), can take many forms and resists definition (**Fals Borda, 1995**; Chevalier and Buckles, 2008; **Reason and Bradbury, 2008**; McNiff, 2013). Nonetheless, most approaches have a number of common characteristics. Through concurrent action and research, PAR endeavours to bring new forms of knowledge – rooted within the everyday experiences of ordinary people – to bear, within the context of social issues, such as: health, migration, race and ethnicity, community development and sustainability. PAR typically utilises an in-depth case study approach in which a series of participatory processes are undertaken in collaboration with members of the relevant social group or community, as well as – where appropriate – relevant policy and practice stakeholders.

PAR emphasises the importance of *research with* as opposed to *research on*. With its emphasis on action, PAR typically has the objectives of prompting learning among the project participants and promoting direct change within the context of the case study. In this sense, PAR is somewhat similar to ‘community

engagement and participation’, in particular those approaches which have empowerment and partnership with local institutions as their desired outcomes (Urban Forum and NAVCA, 2009; Centre for Sustainable Energy, 2013; Community Places, 2014). With its emphasis on research, PAR has the objective of enhancing the researchers’ understanding of social phenomena with a view to broader dissemination that can inform future practice and policy. Given the objectives of learning among both the project participants and the researchers, we can speak of mutual learning – from each other and from the PAR process – as a key objective of PAR. This is important because it implies that both the researchers and the participants must be understood and valued as experts. More specifically, while the facilitators might be described as formal experts, the participants can be described as lay experts or ‘experts of/by experience’; this term is used to describe individuals whose expertise is derived from a particular facet of every day experience (Preston-Shoot, 2007) and is widely used in the UK healthcare sector (e.g. Care Quality Commission, 2015).

Participatory action research typically yields qualitative evidence from a range of sources. As well as more formal evidence (such as interview and workshop transcripts), the evidence from PAR is often informal, gathered in the course of conversations, email exchanges and experiences during the implementation of the project action. Insights from this blend of data are, therefore, typically interpretive, yet have the potential to yield in-depth and powerful new understandings of particular social phenomena, and the ways in which change does or does not take place within particular contexts.

We describe this process in detail, as well as the outcomes of the process, in Chapter 3. In brief, to address Objective 1, we employed a workshop-based participatory action research (PAR) design in three case studies. In each of the three case studies, we worked with between ten and twenty representatives of local VCS groups. We worked with VCS groups because they are important community actors, and because they very often work with people who are more ‘vulnerable’, both in general and with respect to heatwaves. As an adjunct to this workshop process, to ensure that the voices of ‘vulnerable’ people themselves were heard in the project, we also conducted interviews with fourteen individuals who were ‘vulnerable’ to heatwaves.

Independent evaluation

Within PAR projects, independent evaluation can have a range of benefits, three of which were employed in this project:

- To act as a ‘critical friend’ to the project team, an independent and trusted person who takes time to understand a project, asks provocative questions, offers helpful critiques, and is willing to challenge and question, all within the context of a relationship based upon mutual regard (Costa and Kallick, 1993; Rallis and Rossman, 2000; Hartle and Thomas, 2003);

- To iteratively provide *formative* or process-oriented feedback to the project team *during* the development of the project design and the implementation of the project action itself;
- To conduct an end-of-project or *summative* evaluation of the impacts of the project action, identifying ‘lessons learned’ and contributing to the formal research elements of the action research.

The independent evaluation was undertaken by Mike King of Resources for Change, and the elements and methods of the independent evaluation are described in Table 2. The full evaluation report is available (King, 2017), and has been used as data in this report.

6. Data and analysis

These activities – by the project team and the independent evaluator – produced the following diverse dataset, on which the analysis and this report are based:

- Transcripts of early interviews and group interviews with around 40 local, London-wide and national policy stakeholders;
- Notes and emails from ongoing informal interactions with these stakeholders and others;
- Transcripts of six workshops with representatives of VCS groups;
- Transcripts of three workshops with representatives of VCS groups and local policy stakeholders;
- Reports of the evaluator’s facilitator debriefs from all nine workshops;
- Evaluator’s observation reports from three workshops;
- Results of the evaluator’s participant surveys from all nine workshops;
- Transcripts and evaluator’s reports from team meetings and advisory board meetings;
- Notes from 18 end-of-project evaluator interviews with the project team and policy stakeholders (see list in Appendix 1);
- In addition, the report draws on the independent evaluator’s final report (see King, 2017).

Table 2: The objectives and methods of the independent evaluation

OBJECTIVES	EVALUATION METHODS
Develop a Theory of Change (King, 2017) to clearly identify the project outcomes, as well as the activities and outputs that will – if delivered effectively – deliver those outcomes.	<ul style="list-style-type: none"> • Co-design of Theory of Change with the project team and JRF through a workshop discussion and email consultation.
Provide iterative and ongoing formative feedback, advice and learning throughout the project action, with the objective of improving the process.	<ul style="list-style-type: none"> • Observation of three project workshops (one in each case study); • Detailed debriefing with the facilitation team after all nine workshops; • Attendance of all four team meetings; • Attendance at both project advisory board meetings; • Attendance at all three JRF programme advisory network meetings; • Regular discussions and meetings with the core PSI team.
Understand the experiences and views of the workshop participants to determine the validity of the project from their perspective.	<ul style="list-style-type: none"> • Observation of three project workshops (one in each case study); • Participant evaluation questionnaires undertaken at all nine workshops.
Identify the impact of the project action/dissemination.	<ul style="list-style-type: none"> • Semi-structured interviews with the local teams at the start of the project; • 18 semi-structured interviews with the PSI team, the local teams and local, London-wide and national policy stakeholders towards the end of the project.

Drawing on the principles of thematic analysis (Boyatzkis, 1998), themes were derived from close reading and coding of the data (as well as, in the context of PAR, experience during the project action). This process was supported by the use of NVivo qualitative analysis software. These themes were refined and finalised through discussion within the project team, further iterative engagement with the data, and the writing of the report and other materials.

7. Report structure

In Chapter 2, we describe the range of background issues that provide the context for the Urban Heat project. In particular, we focus on: heatwaves and heatwave planning, the voluntary and community sector (VCS) and community resilience planning. Chapter 3 focuses on the detail of the Urban Heat process. In particular, we describe the participatory action research and policy engagement elements of the project design in detail. In addition, as we go, we identify the elements of the project design that worked well, along with the challenges that we experienced. Chapter 4 focuses on our learning relating to the relationships between heatwaves and heatwave planning, community resilience planning, the VCS and 'vulnerable' people. In Chapter 5 we describe the impacts of the project that were achieved during the project period itself. In Chapter 6, we turn our attention to a range of challenges – and corresponding opportunities – that we have identified in the context of national and local heatwave and community resilience policy and planning. In Chapter 7, we summarise our findings and our recommendations for policy and practice.

Throughout the report, the most important references appear as bold in the text; full bibliographic information for these references can be found at the end of the report. Bibliographic information for these references and all the others can also be found in the separate full bibliography, which can be found at: **www.psi.org.uk/urban_heat**. The Executive summary as a stand-alone document and the Independent evaluation report are also on this webpage.

2 Background issues

In this chapter, we describe the range of background issues that provide the context for the Urban Heat project. In particular, we focus on: heatwaves and heatwave planning, the voluntary and community sector (VCS), community resilience and local heatwave planning.

1. Heatwaves and heatwave planning

The recently published evidence review for the UK Climate Change Risk Assessment, 2017 assesses the magnitude of the 'risks to health, wellbeing and productivity from high temperatures' to be 'high', both now and in the future (**ASC-CCC, 2016: 4**)¹. As a salutary reminder of current UK levels of preparedness and planning for the impacts of climate change, 'Risks to public health and wellbeing from high temperatures' is one of 20 issues that is placed in the 'More action needed' category (**ACS-CCC, 2016: 7**). Heatwaves became a significant policy issue in the wake of the 2003 European heatwave (**ASC-CCC, 2016; PHE 2016**). This event resulted in very high numbers of excess deaths: an estimated 2,000 in the UK, 15,000 in France (**PHE 2016**), and 70,000 across Europe (Robine et al., 2008). Less impactful heatwaves also occurred in 2006 and 2009, and 2014, 2015 and 2016 were each the hottest years since records began. It is predicted that – due to climate change – the UK will experience warmer summers and more frequent heatwaves in the future, such that heatwaves like the one experienced in 2003 will be the norm by the 2040s (**ASC-CCC, 2016: 4**). The importance of heat as a health risk, outside of specific heatwave periods, is illustrated by the estimate that heat contributes to 2,000 premature deaths each year in the UK (**ASC-CCC, 2014: 135**).

For the most part, heatwaves are a public health issue, although – at exceptionally high temperatures – infrastructural failures (such as power and water outages, and significant transport disruption) are also experienced with knock-on effects for business and communities (**ACS-CCC, 2016; PHE, 2016**). More broadly, higher temperatures will also affect farming, forestry and the natural environment (**ACS-CCC, 2016: 3**). It is important to note that higher temperatures are also predicted to have some positive impacts, such

¹ The evidence review for the UK Climate Change Risk Assessment, 2017 was published in 2016 by the Adaptation Sub-Committee of the Committee on Climate Change (**ASC-CCC, 2016**). The UK Climate Change Risk Assessment, 2017 government report will be laid before Parliament in January 2017.

as reducing winter heating bills, fuel poverty and excess winter deaths, and supporting agricultural and recreational development in some respects (ACS-CCC, 2016). For vulnerable people, however, life-threatening health problems – typically dehydration and overheating leading to cardiac and respiratory problems – can occur at temperatures as low as 26°C in London (PHE, 2016). It is salutary to note that this is just the point at which many other people might be celebrating the warmer weather. These problems can occur relatively quickly, certainly much more rapidly than the health problems associated with cold weather (PHE, 2016). Vulnerability to heatwaves is complex. There are several inter-related groups who are more sensitive, and less able to respond, to heat: older people, people with pre-existing health or mental health issues, people with cognitive or physical disabilities, people on certain medications, isolated people, obese people, those with alcohol or drug dependency, and babies and young children (Lindley et al., 2011; PHE, 2014; 2016). These factors can be compounded by factors that increase exposure to heat: poorly ventilated buildings, environmental issues – such as noise or pollution – that might deter people from ventilating their home, location and orientation of dwellings, unshaded rooms, poorly insulated hot water systems and other factors that increase solar gain (PHE, 2016; Mavrogianni et al., 2015). Overheating is also a common problem in some specific institutional contexts, such as care homes. This can be due to institutional norms, poor heat management and control, and other issues relating to how buildings are managed and operated (Gupta et al., 2016).

London is particularly vulnerable to the hotter weather and more frequent heatwaves that are predicted due to climate change. There are a number of reasons for this. First, temperatures in London are typically higher than in other parts of the UK. For instance, Arup (2016) suggests that the daytime difference was as much as 10°C during the 2003 heatwave. This is due to London's exceptional size which exacerbates the 'urban heat island effect' – which leads to daytime summer temperatures up to 9°C greater than surrounding areas (Kolokotroni and Giridharan, 2008) – and London's location in the relatively warm south east of the UK (Lindley et al., 2011). In addition, there are relatively high proportions of the vulnerable groups described above in London (Lindley et al., 2011; Arup, 2016). The pressures of a growing population has the potential to exacerbate this.

In response to the 2003 heatwave, the government has published an annual Heatwave Plan for England since 2004. Published by the NHS until 2013, the Plan is now published by the Extreme Events and Health Protection team in Public Health England (PHE, 2014; 2016). In practical terms, the current Heatwave Plan advises on the actions that should be taken by a variety of statutory actors – the Met Office, central government, a range of departments in local authorities, the NHS, the ambulance service, and clinical commissioning groups (CCGs) – both in preparation for the summer months and as the level of heatwave alert increases (PHE, 2016). The Department of Health has commissioned an

evaluation of the current Heatwave Plan for 2017. Both heatwave planning and community resilience planning (which is discussed below) are informed by the UK Climate Change Risk Assessment (Defra, 2012; **ACS-CCC, 2016**) and the policy response to these risks set out in the National Adaptation Programme (Defra, 2013; forthcoming, 2018). Until its closure in April 2016, the Environment Agency's Climate Ready support service, which advised local authorities, health authorities, small businesses, planners, and farmers and foresters also played a role in this agenda (Environment Agency, 2016; The Guardian, 2016).

Heatwaves are also being considered as part of a broader 'overheating' policy agenda, which also focuses on the overheating issues described earlier and an emerging problem of overheating in modern highly-insulated buildings. These issues are being addressed in different ways by: a cross-government group on overheating (**Defra, 2016**)², a group that is convened by the Environment team in the Greater London Authority and a group run by the London Climate Change Partnership.

2. The voluntary and community sector (VCS)

Although the term can be defined in a number of ways, the VCS – also often called the 'third sector' or 'not-for-profit sector' – typically refers to organisations and groups that are not from the 'public sector' (local authorities, emergency services, the NHS and so on) or the 'private sector' (commercial businesses) (Hogg and Baines, 2011; NCVO, 2016). The UK VCS is large and diverse, ranging from national, formally-constituted bodies – such as Age UK – to small and highly informal groups – such as parents and staff at a stay-and-play centre. VCS groups tend to work in relatively small geographical areas (although they may be part of national networks), and they are typically driven by social and environmental values. They can often be identified by the particular social group that they represent or serve (for instance: older people, people with mental health challenges, people with disabilities, residents' associations, particular faith groups or ethnic groups, people who are LGBT and so on) or by their topic of interest (such as: sustainability, energy, Neighbourhood Watch or travel). As this list of domains indicates, VCS groups often work with the most 'vulnerable' in society. VCS groups can be constituted as charities, social enterprises, mutuals, community interest companies and so on, and many are not constituted. For the analysis that follows, it is important to emphasise that the work of VCS groups is typically carried out by both volunteers and paid officers, and – while profits are not taken – income is required for project work, and surpluses for reinvestment and financial stability.

² The group comprises representatives from the Department of Health, Public Health England, Department for Communities and Local Government (buildings regulations and planning), Department for Environment, Food and Rural Affairs, the Department of Business, Energy and Industrial Strategy (climate change adaptation and energy efficiency), Department for Education (including the Building Bulletin renewal), and the Greater London Authority.

3. Community resilience

The notion of *community resilience* is increasingly popular in a range of international public policy domains, from the impacts of climate change, to hazards such as earthquakes, and threats such as terrorism³, and has received considerable positive academic attention (for example: Magis, 2010; Norris et al., 2008; Miller et al., 2010; Whittle et al., 2010). The community resilience policy agenda is also the subject of critique and we address this below. At its heart, the community resilience agenda combines the positive connotations that are often associated with two already existing policy approaches. The first is the term 'resilience', with its focus on – depending on which definition you adopt – people and/or systems' capability to plan, prepare, respond, resist, recover, learn, adapt, thrive, not change or transform in the face of extreme events (and in some cases, adverse background conditions). The second is the notion of 'community' or collective participation and action, with its focus on: place- or interest-based action, social capital, context-specific local action, local knowledge, collaborative planning and action by VCS groups, residents, local statutory bodies and other local actors, and local benefits equitably distributed (Walker, 2011).

While there are many definitions of community resilience, **Twigger-Ross et al.'s (2015a: 2)** captures many of these elements within the context of climate change:

Communities' ability to reduce exposure, prepare for, cope with, recover better from, adapt and transform as needed to the direct and indirect effects of climate change, where these can be both shocks and stresses.

The local characteristics that are understood to underpin community resilience are expressed in a wide range of ways, but they tend to coalesce around five themes, often known as 'capitals' (Magis, 2010; Norris et al., 2008; **Twigger-Ross et al., 2011; 2015a**; Young Foundation, 2010; 2012; Carnegie Trust, 2011; Cinderby et al., 2014):

- Strong public services and VCS groups (though note that some do not even mention the VCS in models of community resilience, eg: Jones and Ali, 2013) (social capital);
- Strong networks and partnerships within and between stakeholders (such as residents, statutory bodies, community groups and local businesses) (bridging capital);
- Strong infrastructure (physical capital);
- Strong local economy and other forms of income (economic capital);
- Healthy, educated and skilled people (human capital).

³ For instance, see: UN International Strategy for Disaster Reduction, 2004; Edwards/Demos, 2009; Transitions Network, 2008; **Cabinet Office (2011; 2016)**; **Scottish Government (2011; 2013)**; Carnegie Trust, 2011; Red Cross, 2013; Young Foundation, 2012; Cinderby et al., 2014; Royal Society, 2014; **Twigger-Ross et al, 2015a**.

Reflecting on the project objectives that were discussed earlier, we can see that the Urban Heat project particularly focuses on the first two of these supporting capitals. Some discussions also express an understanding of community resilience as the iterative process – or a means to an end – of working together to achieve such capabilities and enacting them in the context of adverse conditions or events (Sonn and Fisher, 1998; Norris et al., 2008; **Twigger-Ross et al., 2011**).

In UK policy, the Civil Contingencies Secretariat (CCS) in the Cabinet Office has published a *Strategic National Framework for Community Resilience* accompanied by a guide, a toolkit and a plan template for use at the local level (**Cabinet Office, 2011**), has funded research on community resilience (**Twigger-Ross et al., 2011**) and has recently published supplementary guidance (Cabinet Office, 2016). The **Scottish Government** has published guidance on the principles and practice of *Emergency Planning for Community Groups* (2011) and *Building Community Resilience* (2013). It is clear that these materials are widely used at the local level. Although community resilience is defined in many ways, **Scottish Government (2013)** provides the most up-to-date UK policy definition (though some might regard this as a limited definition). Here, the word community is used to denote community and voluntary groups, households and individuals, and the local private sector, and the term community resilience is defined as,

‘Communities and individuals harnessing resources and expertise to help themselves prepare for, respond to and recover from emergencies, in a way that complements the work of the emergency responders’ (p1).

Scottish Government (2013) argues that community resilience is beneficial because it can ‘unlock skills, knowledge and resources held by the entire community’ (p1), and that its realisation relies on ‘engagement, education, empowerment and encouragement’ (p2) by local institutions and statutory bodies, as well as involvement of the community in emergency planning processes (p2). More broadly, community resilience has also been supported in the UK through the £5 million Defra Flood Resilience Community Pathfinder projects (2013-2015) (Twigger-Ross et al., 2015b), the £12 million Big Lottery Communities Living Sustainably programme (2016), and the National Flood Forum (2016) provides ongoing advice and materials in the context of floods.

The policy agendas on resilience and community resilience, and broader community participation agendas have been criticised in a number of interlinked ways. For instance:

- It has been argued that resilience approaches are overly focused on short-term emergency response and extreme events, and neglect longer term issues relating to spatial and urban planning, and the built environment;

- As an associated point, it is argued that resilience approaches underplay the background conditions or long-term stresses that are the root causes of vulnerability, as well as the role of governments in creating such conditions (Sudmeier-Rieux, 2014);
- Miller et al (2008) have also suggested that resilience approaches too easily obscure inequality and overlook variations in vulnerability;
- Aiken (2014) has suggested that state-sponsored community-based approaches can place unrealistic burdens and expectations on communities, while legitimising the withdrawal of the state from its responsibilities;
- Sudmeier-Rieux (2014) suggests that community resilience discourses neglect the transformative potential of community resilience and community action that is embedded in some grass roots agendas, and overlooks the resilience that already resides in communities;
- It has long been pointed out that advocates of community action can easily obfuscate the power relations and conflict in communities (Day, 2006; Crow and Mah, 2012), and the implications of these for community participation;
- Similarly, it is argued that community participation processes sometimes overlook the challenging questions of what the community is and how it can be meaningfully represented in participatory processes;
- Arnstein (1969) has also pointed out that processes of engagement or participation can be misused by institutions as a means of ignoring or oppressing the community.

4. The local policy level

At the local level, planning for heatwave events and community resilience more broadly are primarily the responsibility of the Local Resilience Forums (LRFs), under the Civil Contingencies Act (2004), in particular local authorities. LRFs are statutory bodies, required to meet at least every six months, and their required members are the 'Category 1 responders', such as: various departments within local authorities (such as emergency planning and public health), the emergency services, the NHS and the Environment Agency (as well as some other local institutions, and sometimes voluntary emergency responders). In this context, heatwaves are considered alongside other extreme weather events (such as flooding), technological accidents, terrorism and civil unrest (Cabinet Office, 2013).

In London, in addition to LRFs, local authority emergency planners also participate in London-wide networks at managerial and director level, and there is a London Resilience Forum chaired by the Greater London Authority (2016). Perhaps due to its particular vulnerabilities to heat, longer term heatwave planning in London is also well-served by two London heat groups, one run by the resilience team within the Greater London Authority (GLA) and another by the London Climate Change Partnership.

While the emergency planning and public health functions typically lead on heatwave planning, the precise roles and arrangements and priority given to this issue appear to vary widely across different local authorities (see Button and Coote, 2016 on public health). In the context of emergency planning and community resilience in local authorities, heatwaves are considered alongside the range of other issues that we listed above in the context of the LRFs. Meanwhile, in the context of public health, heatwaves are understood as a cause of 'excess summer deaths' within the broader context of 'excess seasonal deaths' alongside 'excess winter deaths'. Within local authorities, the work of the emergency and public health teams is often supported by housing, social care and others. At the same time, it is clear that: local institutions have only very limited statutory responsibilities in the context of planning for heatwave events; neither heatwaves nor higher temperatures more broadly are considered within statutory building regulations or planning guidance; and, perhaps with good reason, heatwaves are relatively neglected compared with flooding and 'excess winter deaths'. We return to these issues later.

In terms of local practice, there are two examples that we would particularly like to highlight here. First, it is clear that both the **Cabinet Office (2011)** and the **Scottish Government (2013)** community resilience materials are widely used at the local level, and a notable aspect of the local emergency planning and community resilience landscapes is the extensive community engagement work that is often undertaken by the fire brigade (for instance, see: Ashford Borough Council, 2016; Hampshire County Council, 2016; Northamptonshire County Council, 2016; Scottish Borders Council, 2016; Sussex County Council, 2016). Kent County Council has a particularly well-developed community resilience approach (see Box 1), and a similar set-up is present in Sussex. We will return to this example later in the context of identifying policy challenges and opportunities.

Box 1 Case study: Kent County Council's voluntary-community resilience activities

There are two key elements to Kent County Council's work in this area. The first is the Kent Voluntary Sector Emergency Group (KVSEG) which is a sub-group of the statutory Kent Resilience Forum (KRF). The KVSEG is an established network of around 20 local voluntary groups of various kinds; these are largely organisations that can provide specific forms of emergency support (such as: medical, communications, rescue, welfare and transport), as well as some organisations that work with particular social groups, such as Age UK. The Group works in close relationship with the KRF to complement the efforts of the Kent statutory emergency responders. The KRF and KVSEG take part in regular joint training, meetings and networking lunches, and work together on procedures, policy, news, information and so on.

The second is the Kent Resilient Communities group. This group has been brought together to create a strategy for engaging with those communities who may be vulnerable to flooding or other adverse events such as snow. Working through parish councils – the smallest unit of local government in England – the group is made up of individual members, and has developed a Community Emergency Plan template including a flood plan. The KRF, led by the Environment Agency, has also trained a network of volunteer flood wardens who, during flood events, can operate a door-knocking programme targeted at 'vulnerable' people.

www.kentprepared.org.uk

In the context of 'seasonal excess deaths', we are keen to highlight the London Borough of Islington's SHINE programme (Seasonal Health Interventions Network), which operates in Islington and Hackney. SHINE addresses the impacts of both cold weather and hot weather through a targeted programme of home advice visits (see Box 2). In combining the challenges of hot and cold weather and the use of home visits, SHINE offers an excellent example of 'bundling' policy issues and a sophisticated approach to communicating advice, both of which we discuss in more detail in Chapter 6.

Box 2: The Seasonal Health Interventions Network (SHINE)

The objective of SHINE – a local authority service in Islington (since 2010) and Hackney (2012) – is to reduce excess seasonal deaths and hospital admissions. Whilst the main focus is winter deaths the project also provides advice and Stay Cool packs for vulnerable residents at risk of overheating. SHINE offers a single point of contact for a range of interventions such as home visits, energy efficiency improvements, benefit checks, and befriending services. SHINE prioritises older people, those with long term health conditions and low income families with young children. To July 2016, SHINE has helped 13,500 households access 60,000 interventions.

5. Summary

It is estimated that the three-day 2003 heatwave caused 2,000 excess deaths in the UK, and it is predicted that such events will be more frequent in the future due to climate change. Certain groups are particularly vulnerable to heatwaves and London is particularly at risk. Public Health England has published an annual Heatwave Plan since 2004, and this guides national and local responses to heatwaves. Within the broader context of a resilience-turn in policy, the notion of ‘community resilience’ is also becoming popular. Community resilience is defined in many ways – and is subject to criticism – but the term tends to refer to the idea of a range of individuals, VCS groups and institutions working together at a local scale to increase the community’s ability to prepare for, cope with and recover from adverse events or conditions. At the local level, work on community resilience tends to be led by local authority emergency planners within the context of a Local Resilience Forum, and work on heatwaves tends to be led by local authority emergency planners and public health managers. There are very few statutory responsibilities in these areas, particularly community resilience, and our experiences suggest that attention to them varies enormously around the country.

3 Project design and process – what works?

In this chapter, we describe the participatory action research and policy engagement elements of the project design and identify the elements of the project design that worked well, along with the challenges that we experienced. The three key messages from this chapter are: the workshop process that we used was powerful in terms of eliciting the perspectives, knowledge and ideas of VCS groups, and sharing this with local policy stakeholders; notwithstanding this, the local practical implementation of these ideas was much more challenging; and, our policy engagement work represents a valuable model for introducing new ways of thinking in local, regional and national policy.

1. The London case studies

Case study locations and set-up

London is particularly vulnerable to the hotter weather and more frequent heatwaves that are predicted due to climate change. For this reason, the three Urban Heat PAR case studies were implemented in London. The case study locations were selected – prior to submission of the project proposal – based on three main criteria:

- We selected three case study areas in which broad-based socio-economic disadvantage and ‘vulnerability’ is relatively high;
- We selected one case study area in inner London, one in the outer suburbs and one in-between the two. We did this to understand ways in which these different urban contexts might influence case study outcomes;
- For pragmatic reasons, we selected case study areas in which we could identify local teams that were locally well-networked and/or experienced in community engagement and workshop facilitation.

Based on these criteria, the following case studies were implemented:

- Inner London: Dalston in the London Borough of Hackney. Working with Age UK (East London), this case study was focused on working in an area with strong existing local VCS networks for older and disabled people;
- Between inner London and the outer suburbs: Tooting in the London Borough of Wandsworth. Working with Transition Town Tooting, this case study focused on an area with strong existing community and voluntary group networks oriented – in particular – around sustainability;

- Suburban London: Ivybridge housing estate in the London Borough of Hounslow. Working with South West London Environment Network, this case study took place in a large ‘high rise’ estate that was understood in advance to have relatively low social capital and few VCS groups and networks. Our experience during the project suggests that although this is the case, there are a range of formal and informal VCS groups working in the Ivybridge Estate.

The benefits of working with the local teams

As indicated above, the Urban Heat team included local teams or partners in each of the three case study areas. We did this to achieve a local and authentic identity in the local case studies and to draw on local knowledge in the development of the case studies. The local partners were selected on the basis of their experience and competencies with respect to community engagement and workshop facilitation. While Age UK East London (Age UK) and Transition Town Tooting (TTT) were already well-networked in the areas in which their case studies were located, the Ivybridge housing estate case study with the South West London Environment Network (SWLEN) allowed us to compare the process when the local partner had few pre-existing links to local VCS groups.

‘Having local partners who knew and understood the locale meant that the process design was locally applicable, existing issues and tensions could be acknowledged and relationships built that could potentially take the project outcomes forward.’
Evaluator’s observation

The role of the local teams was considerable and focused particularly on the workshop process as well as the local policy engagement. In each case study, the local teams: were interviewed by the evaluator at the outset; recruited workshop participants from among local VCS groups; collaborated with PSI on the development of the workshop programme (discussed below); made all the local arrangements for venues, catering and AV; co-facilitated the workshops with PSI; participated in two whole team (and advisory board) meetings; participated in telephone debriefings after each workshop; were interviewed again by the evaluator towards the end of the project period; participated in one whole team evaluation meeting; and participated in one JRF *Climate Change and Communities* programme advisory network meeting to discuss and reflect on emerging findings from the project. The local teams were paid from the project budget for all of their time and expenses on the project. The local teams were fundamentally important to the successes of the project. With this in mind, it is important to reflect on why this was, the aspects of the Urban Heat project that facilitated these positive outcomes, and the ways in which challenges in project management were overcome. The key points are summarised in Box 3.

‘It was good for our group to be seen to be involved in a thing like this – policy related connections and with a university.’
Local team member

‘It’s been very positive for us, getting to know a new neighbourhood and the issues they face. We were very interested to learn about the pressures faced by a community living largely in tower blocks and under a lot of financial pressure. We have followed up that relationship, running an environmental family event in May, actively engaging families from community centre.’
Local team member

Box 3: Working with local teams and partners

- 1.** Local teams provide an authentic, local and bottom-up identity for projects that is much more difficult to achieve by approaching communities from the outside. Local teams also provide local knowledge, and routes in to existing local VCS relationships and networks. In practical terms, local teams were able to work on-the-ground more easily and effectively than the University-based researchers leading the project.
- 2.** All VCS groups require funding to support their core functions and project work (NCVO, 2015). All three local teams commented on the extent to which a meaningful project budget for staff time and expenses demonstrated the value that PSI and JRF placed upon the local teams, and allowed them to wholeheartedly contribute.
- 3.** It is of great value to acknowledge the legitimacy of project partners' objectives, and to explore them in order to ensure that the project can deliver them and that any tensions between objectives can be discussed.
- 4.** It is valuable to create a safe team space – for instance, in planning meetings, project events, evaluation sessions and informal settings – in which all team members feel able to offer honest critical reflections on future plans and past practice. The objective is to facilitate productive learning and improvement, as well as stronger team relationships.

Including policy stakeholders in teams

That said, there was one aspect of this phase of our work that bears further examination. This relates to the question of whether or not to include local policy stakeholders within project teams. This is a particularly interesting question since our sister project, Scottish Borders Climate Resilient Communities, did this. In advance of the Urban Heat project, we were very clear in our minds that we wanted the focus of the project to be on the VCS sector itself, and we did not want the project to be overly framed by the perspectives of other local institutions, such as local authorities. One implication of this is that, although we included local VCS partners in the core project team, we did not include local emergency or resilience planners in the project team. In advance of submitting the project proposal, we contacted the three relevant local emergency and resilience planners from the London boroughs in which we wanted to work, and two of the three readily and enthusiastically committed to the project and its objectives. However, the third local emergency and resilience planner was much harder to contact and was more guarded in their response to the project; in the end, even once the project had been secured, they declined to participate.

On the one hand, there is no doubt that this constrained the effectiveness of this case study because it limited the avenues through which the ideas of the VCS group representatives could be progressed later in the project. On the other hand, we learned a lot about attempting this kind of process outside of an ideal case study, in the far more varied, messy and problematic 'real world'. In addition, we learned a lot about the extent to which – despite policy guidelines and institutional structures that are designed to produce particular actions and outcomes – so much of what happens locally is down to the preferences, constraints and priorities of local policy actors.

2. Introduction to the Urban Heat PAR

The Urban Heat PAR relied upon three participatory workshops in each of the three case studies. Participatory workshops are a key method or approach in PAR because – when they are done well – they are able to facilitate the mutual learning (among both participants and researchers) and empowerment that are crucial to successful PAR. In contrast to simply delivering material to an audience, participatory workshops emphasise: interactions between and contributions from both facilitators and participants, interaction between participants in small groups and a range of activities that Chambers (2013) describes as 'serious fun'. There are many helpful strategic and practical considerations of participatory workshops on the internet (for instance: Jisc, 2012; Chambers, 2013; 350.org, 2016; Community Toolbox, 2016, Seeds for Change, 2016, all of which link to further resources). That said, when reading these materials, it is important to note that some of them seem to regard participatory workshops merely as an innovative pedagogic or teaching tool; by contrast, in participatory action research, the emphasis is always on a mutual learning process in which both the participants and the facilitators are learning. While it is not our intention to try to reproduce one of these guides or to provide a highly detailed account and rationalisation of what we did and why, we do highlight a number of principles and practices that appeared important, and examine some of the key differences that emerged between the three case studies.

Each of the three case studies commenced with two 2-hour workshops with between 10 and 20 representatives of local VCS groups as participants designed to develop a set of recommendations for community resilience to heatwaves. In each of the three case studies, these two workshops were followed – around three months later – by a third 2-hour workshop. This workshop was different because the participants were five of the VCS group representatives who had attended the earlier workshops and between two and six representatives from local institutions. The objective of this workshop was for the VCS group representatives to share and discuss their recommendations with the local institutional representatives. More detail is provided in Table 3.

3. Workshops 1 and 2: working with VCS groups

Recruitment of the VCS group representatives

The VCS group representatives were recruited by the local teams (see the list in Figure 2). To demonstrate the value that the project team placed upon the contributions of the representatives of the VCS groups who participated in the workshops, they received a contribution of £50 for each workshop they attended. The local teams reported that this was an important factor in ensuring the commitment of the VCS groups. Nonetheless, the local teams all reported that the process of recruitment was very time-consuming for two key reasons:

It was important that the community groups were compensated for their time. I don't think it would have worked without it because the community groups were under a lot of pressure and would not have valued the time. The recompense enabled them to put effort into the research and value the project.

Local team member

It was much harder to get the right people in the room than we expected, especially their commitment to attend.

Local team member

- In part, this was due to the regular challenges of securing commitment from busy people. The VCS groups we worked with were often staffed by hard-pressed volunteers or limited numbers of paid staff, and securing a 3-hour commitment from them was a significant ask.
- At the same time, recruitment was time-consuming because of the time that was needed to describe the relative novelty of both the topic and the objectives of the workshops.



Table 3. Summary of the three 2-hour workshop process that was implemented in the three case studies

WORKSHOP	OBJECTIVES	ATTENDED BY (DETAILS IN FIGURES 2 & 3)	DATES
Workshop 1	<ul style="list-style-type: none"> • Introduce heatwaves and local institutional responses; • Build the group’s capacity and confidence to work together on a relatively novel topic. 	<ul style="list-style-type: none"> • 10 to 15 representatives of local VCS groups. 	Hounslow: 18-05-15 Wandsworth: 17-06-15 Hackney: 25-06-15
Workshop 2	<ul style="list-style-type: none"> • Reintroduce the topic; • Identify local issues and resources; • Develop ideas for community-oriented approaches to resilience to heatwaves. 	<ul style="list-style-type: none"> • 10 to 15 representatives of local VCS groups. 	Hounslow: 08-06-15 Wandsworth: 01-07-15 Hackney: 09-07-15
Workshop 3	<ul style="list-style-type: none"> • For the VCS group representatives and the team to share and discuss their recommendations with the local institutional representatives. 	<ul style="list-style-type: none"> • 5 representatives of local VCS groups; • 2 to 6 representatives of local institutions. 	Hounslow: 23-09-15 Wandsworth: 02-10-15 Hackney: 09-10-15

Some participants were not able to attend both of the VCS workshops; this required some repetition of information in the second workshop, but does not appear to have been a problem for participants.

‘When there was inconsistency in participant attendance, the facilitators were able to respond to this appropriately and adapt the process for subsequent workshops.’
Evaluator’s observation

Age UK (East London) in Hackney and Transition Town Tooting in Wandsworth recruited these participants from among their existing networks; this meant that the VCS groups that were represented in the Hackney workshops tended to work with older people and disabled people, while many but not all of those in the Tooting workshops had an interest in sustainability and climate change issues. In contrast, SWLEN in Hounslow undertook extensive work to seek out formal and informal VCS groups working in and around the Ivybridge Estate; crucially, as well as being important for the project, SWLEN felt that this work would support their future work in and around Ivybridge. This led to a possibly more diverse range of VCS groups being represented in this case study. In particular, the Ivybridge VCS workshops featured participants from less formal groups, such as a representative of local Somalian women, the manager of the local stay-and-play centre and a representative from an informal faith-based group (as well as groups working with older people, people with disabilities and mental health problems and so on). There is a full list of the participants in the VCS workshops in Figure 2.

Figure 2. Participating organisations in the workshops

PARTICIPATING ORGANISATIONS	HACKNEY WORKSHOPS	HOUNSLOW WORKSHOPS	WANDSWORTH WORKSHOPS
Community Groups	Age UK (East London) Beersheba – Living Well (Type 2 diabetes) Claudia Jones Organisation (families of African-Caribbean heritage) Dalston Community Organisers Disability BackUp (Hackney) Hackney African Forum Hackney Empire Elders Group Hackney Keep Our NHS Public Hackney Pensioners Convention Senior Bees, Hackney Building Exploratory Rainbow Community Care Rio Cross Residents Association Rise Community Action (HIV)	All Souls Church Disability Network Hounslow Greater Heights Church Hestia (support for people in crisis) Marlborough Primary School Somalian Community in Ivybridge Support Speak Out in Hounslow (learning disabilities) Bridge Link Centre (community centre) Residents Association	Carbon Collaborations Age UK (Wandsworth) Food Cycle Wandsworth Furzedown Low Carbon Zone Mushkil Aassan (Asian families in crisis) Neighbourhood Network SW17 South London Swimming Club Thinking Works (energy efficiency) Transition Town Tooting Wandsworth Community Empowerment Network Wandsworth Home Adaptations Repair Forum Be Enriched (community kitchen)
Institutions	Homerton Hospital (resilience) Homerton Hospital (patient experience) London Borough of Hackney (public health) London Borough of Islington (SHINE programme) London Fire Brigade (NE Operations, Prevention and Response)	London Borough of Hounslow (emergency planning) London Borough of Hounslow (public health) London Borough of Hounslow (sheltered housing)	London Borough of Wandsworth (housing) London Borough of Wandsworth (public health) St. George’s Hospital (emergency planning)

Each of the three case studies commenced with two 2-hour workshops; these workshops were two weeks apart in each case study and took place between late May and early July 2015. The objectives of Workshop 1 were to: introduce heatwave vulnerability and local institutional responses, and build the group’s capacity and confidence to work together on a relatively novel topic. The objectives of Workshop 2 were to: identify local issues and resources, and develop ideas for community-oriented approaches to resilience to heatwaves (especially in support of the most ‘vulnerable’). Both workshops employed well-established co-creation activities designed to help groups to take ownership of an issue and to draw on their own local knowledge to produce actionable place-specific ideas. The workshop programmes are shown in Appendix 1.

Although we experienced some challenges, the two VCS group workshops were broadly successful. From the perspective of the participants, Table 4 and the accompanying feedback quotes shows that workshop participants across all three case studies reported that: their knowledge about heatwaves

‘The evaluation shows quite clearly that most of the VCS representatives who participated in all three case studies were engaged effectively in considering local responses to heatwaves and hot weather.’
Evaluator’s observation

‘Participants reported that they knew relatively little about the issues before the workshops and gained a lot of knowledge through being involved. This knowledge encompassed not only the technical aspects of heatwaves, such as the temperature levels that cause certain health effects, but also the nature of the local response.’
Evaluator’s observation

was enhanced, the workshops were successful in terms of understanding local resources and issues, the workshops were well-run and they were able to participate in the discussion. Success is also indicated by an average facilitation team self-evaluation score across the six workshops of 4.2 (out of 5.0, where 1 is very poor and 5 is very good) and an average evaluator score – on the basis of attendance of one Workshop 1 and one Workshop 2 – of 4.3 (out of 5.0) (see further information in King, 2017). The workshops were also successful in terms of eliciting local knowledge and new ideas for community resilience (which we describe later), and generating a desire to act on heatwaves in the future.

‘Small group discussions enabled everyone to contribute. Relaxed and informal style of presentation was very conducive to getting participant input.’
Tooting VCS group

‘I think that we, as the voluntary sector, have to be responsible for our service users, we can do it, yes we are really strapped financially, but I think we’ve got to get the message out, we can work together and do it amongst ourselves.’
Hackney VCS group

‘I learnt a lot about heat, how it affects all kinds of people and the range of organisations involved.’
Hounslow VCS group

‘The presentations and feedback from a diverse groups really highlighted the issues, including many that I had not thought about.’
Tooting VCS group

‘The facilitators were spot on. Started late but finish on time. Group was well controlled and each one felt had a chance to talk.’
Hackney VCS group

‘Mapping exercise was particularly good – high energy and visual – and generated information about local resources and got people into the issues. There were some practical ideas about how to deal with heat.’
Evaluator’s comment on Tooting workshop

Table 4: Participant evaluations of the workshops

QUESTION	SCORE (OUT OF 10)
How would you rate your knowledge about the challenges associated with heatwaves?	
Before Workshop 1	2.6
After Workshop 1	3.9
After Workshop 2	4.1
How much have you learnt today about the issue of heatwaves? (Workshops 1 and 2)	4.0
The purpose of this workshop was to talk to local community groups in order to understand local issues and resources. How effective were we today at achieving this? (Workshops 1 and 2)	4.3
How well do you think today’s workshop was run? (Workshops 1 and 2)	4.6
How well were you able to participate in the discussion today? (Workshops 1 and 2)	4.3

The VCS workshop design

Through the design and implementation of the workshops, we attempted to foster an atmosphere of collaboration, respect, appreciation, openness and inclusion. To achieve this, we were informal, welcoming, friendly and open in all of our interactions with workshop participants. Crucially, as we have mentioned, in participatory action research, mutual learning – by both facilitators and participants – is key. To reiterate, this means that the participants must be understood and valued as ‘experts of/by experience’ (Preston-Shoot, 2007).

Turning to the participants’ learning, given that the topic of the workshops was somewhat technical, we used a range of techniques to deal with this challenge and to demonstrate to the workshop participants that this was a topic that they could become knowledgeable about. We were particularly mindful of this in preparing for Workshop 3 in which some of the VCS groups presented ideas to representatives of local statutory bodies and institutions. We addressed this challenge in a number of ways:

- We took care to avoid using technical jargon wherever possible, and – when it was necessary – we acknowledged the complexity of the topic and explained the jargon.
- We used a ‘Who wants to be a millionaire?’ style quiz to introduce key information about heatwaves and the heat plan in an entertaining way.



‘There’s no shade on the main shopping areas and these main roads have got terrible air quality, three times the nitrogen dioxide level permitted by the EU.’

Tooting VCS group

‘I was brought up in Uganda on the Equator and the sun was striking hot, and we were taught from very young age how to manage heat, how to use the shelters, the trees, and also the importance of cotton clothing.’

Hounslow VCS group

‘An important contribution to the discussion was the wealth of knowledge and practical experience that people brought from living in or visiting hotter parts of the world.’

Evaluator’s observation

‘So, in emergencies, this is the chart of what’s supposed to happen! It’s a bit of a complicated thing and there’s too much information so I thought we could break it down a bit.’

Workshop facilitator

‘Here’s a difficult one. Which government agency is responsible for the Heatwave Plan for England? So is it the Department for Energy & Climate Change? Is it the Met Office? Is it Public Health England? Or is it the Civil Contingencies Unit in the Cabinet Office? This is quite technical isn’t it?’

Workshop facilitator

- To emphasise the value of knowledge that participants already held, towards the beginning of Workshop 1, when we asked participants to introduce themselves, we also asked them to comment on their own experiences of hot weather.
- With similar intent, in Workshop 2, we asked participants to mark local resources, networks, and challenges on large scale maps of the local areas that we had specially prepared (see pages 36-38). As well as yielding in-depth local knowledge, this also placed the participants in the position of 'expert of/by experience'.
- In each of the three case studies, there was a period of two weeks between Workshop 1 and Workshop 2. At the end of each Workshop 1, we asked the participants to share their new knowledge about heatwaves with some of their colleagues and 'clients', and to report back at the start of Workshop 2.

'It was good to have small groups and space was given for participants to voice issues in large and small forums. It was well facilitated.'
Hackney VCS group

At the first workshop there was a challenge from one of the local groups, which can be summarised as 'what is in it for us?'. This illustrates a clear tension in this project and in Action Research in general between the emergent learning from the process of the research and achieving something tangible for communities engaged. Many communities are increasingly wary of a 'consultation culture' that asks for their views to inform research or policy development but does not appear to change anything. The facilitation team dealt with this by ensuring that they were very clear about expectations for both them and the participants at all subsequent workshops.'
Evaluator's observation

In terms of room layout, we used the 'horseshoe' layout and the 'cabaret' layout, both of which – in contrast to the 'lecture' layout – promote broad-based discussion and participation (see Figure 3). Acknowledging the value of the VCS groups' time, they were offered a £50 contribution for each workshop that they attended. Both the local teams and the workshop participants themselves emphasised the importance of this. We endeavoured to be clear about the parameters and somewhat experimental nature of the project, and the extent to which the outcomes of the project were unknown in advance. In addition, after being challenged on the potential impact of the

'I think my first big memory is in the mid-70s, when we had a really long heatwave in this country and remembering thousands of ladybirds coming out and people were sleeping in parks.'
Hounslow VCS group

'On the map, we want you to map out the things where there are problems and also things where there might be solutions or resources. Just write directly on the maps, draw all over them.'
Workshop facilitator

'I wanted you to draw a danger sign by Tooting Broadway station, where the buses just sit there rewinding their engines. I don't know if they can make the bus stands cooler, you need shade when you're waiting for a bus, I tend to stand under a shop awning to try and keep myself cool.'
Tooting VCS group

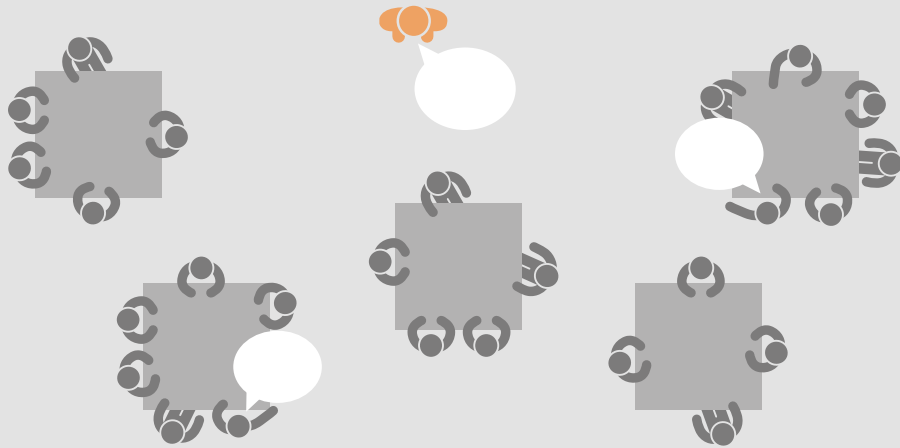
'Workshop 2 was designed to elicit knowledge, using maps, about local resources, which could be used in a heatwave situation. Participants responded to this very well and again not only informed the research but also each other, sharing local knowledge which could lead to the development of community-led responses.'
Evaluator's observation

'In my block of flats I was able to tell them what we did here last time and most of the elderly were interested in what they could do to ease the problem that comes with heatwaves, and they took on board putting out bowls of cold water in the room, as well as facecloth in the freezer and using that to cool down.'
Hackney VCS group

'It was important that people were compensated for their time. I don't think it would have worked without it because the community was under a lot of pressure and would not have valued the time. The recompense enabled them to put effort into the research and value the project.'
Local team member

Figure 3. Room layouts

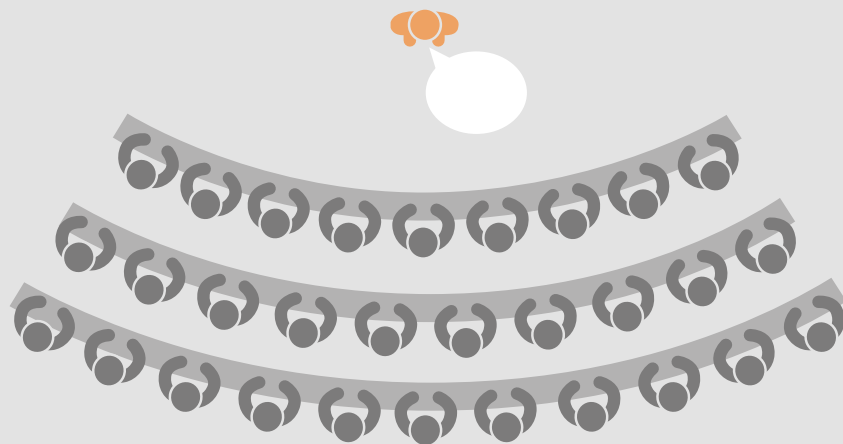
Cabaret



Horseshoe



Lecture theatre



project in the first workshop, we made sure that we were clear about our own uncertainty about the local impact that the project might have. With inclusion in mind, we budgeted for signing and interpretation in our workshops, we offered to cover transport to the workshops if needed and we supplemented the workshop process by conducting 14 in-home interviews with 'vulnerable' people who might not be able to attend a workshop.

Box 4: Our values in action

1. Values of collaboration, respect, appreciation, openness and inclusion are essential.
2. Workshop participants should be valued and endorsed as 'experts of/by experience', and *mutual* learning must be paramount.
3. It is important to present novel, technical information in a variety of engaging ways.
4. Room layouts that facilitate participation, interaction and discussion are essential.
5. It is helpful to value the VCS representatives by compensating them for their time and looking after their needs in workshops.
6. It is important to be open about the parameters and objectives of the project, and to be realistic about the likely outcomes.
7. It is essential to consider 'inclusion' carefully.

We are also keen to highlight some of the challenges or tensions that we experienced. For instance, while the PSI team and the evaluator felt that the programme in the workshop was broadly appropriate, two of the local teams expressed the view that the workshops should have moved faster so that more time could have been devoted to the production of ideas. On inclusion, two issues can be highlighted. First, in one workshop, although we had offered to provide an interpreter, a group of women decided to conduct their own language interpretation. This didn't keep pace with the presentations and – as a result – some of the women were somewhat excluded from the discussion. Second, we were also rightly informed

'The facilitators worked at a pace that felt right for the participants.'

Evaluator's observation

'The first workshop seemed slow, I feel we might have got them off to a quicker start so that they could have produced more ideas later on. At some points I felt that the process could have been pushed a bit faster, but when it's viewed as a whole the process worked well.'

Local team members

'Some of the group have little English and therefore most of the information was not taken in.'

Hounslow VCS group

by a disability rights activist that we should have formatted all of our workshop materials at 14pt or more, as recommended in central Government guidance (Office for Disability Issues, 2014). In addition, in one of the workshops, the facilitators' desire to be generous and polite mitigated against effectively dealing with a participant who tended to dominate the discussion and was insensitive to other participants. While this was not a challenge overall, we were – quite rightly – challenged about what the project was likely to achieve for the local residents. Finally, we learned the hard way that it is not a good idea to hold your very first workshop on a Monday morning. Largely due to problematic – yet not quite catastrophic – late arrivals by the PSI team, the programme for this workshop had to be adjusted and the workshop was delivered by a stressed team.

4. Workshop 3: sharing ideas with local policy stakeholders

Objectives

In the three case studies, the third workshops – which took place in September and October 2015 – were very different to the earlier two (see Table 3). This was in two key ways. First, the objective of Workshop 3 was for a sub-group of five of the representatives of the VCS groups who had attended the first two workshops to present and discuss the ideas that they had developed to a group of five relevant local policy or public sector actors (we discuss the specifics of these ideas in Chapter 4). It was also our hope that the workshop might provide a platform from which relationships between the VCS groups and the local public sector actors could develop. Second, inevitably, this implies that the participants in this workshop were both representatives of local VCS groups and local relevant policy actors. The project team was conscious that this was a potentially challenging workshop because we were bringing together

'The lack of interpretation services was identified as a weakness for the small number of people concerned.'

Evaluator's observation

'Some participants, like Sybil [a pseudonym], should be better managed, ie told to shut up!'

VCS group

'For me, it's like you've been given a bit of funding to do this bit of research that's okay, but then what is going to come from this...how is this research going to impact the future outcomes for families and residents?'

Hounslow VCS group

'Delays getting to venue caused increased stress levels. This was perhaps unavoidable but impacted on the programme. The swan principle came in to play – serene on the surface, paddling like mad below!'

Evaluator's observation

'Using participatory workshops to inform research is not unique but what was perhaps different in this process was the use of the third workshop to bring community representatives and local institutions together to discuss ideas developed by the VCS representatives.'

Evaluator's observation

'This was the most challenging of the workshops as a new dynamic needed to be managed, but it is perhaps testament to the process design that in all three locations VCS representatives were willing and able to present the ideas from the earlier workshops. Again the creation of a safe space by the facilitation team was critical to helping make this happen and a number of the institutional representatives reported that this was a refreshing new way of working which gave them access to the community in a constructive and collaborative way.'

Evaluator's observation

people who might have different modes of professional practice and expertise, and different levels of agency and power. In addition, as might be expected, during the first two workshops, local authorities and other local institutions were sometimes criticised by participants, and we were concerned about the potential for Workshop 3 to be damagingly conflictual. We discuss the ways in which we responded to these challenges below.

Recruitment of participants for Workshop 3

We aimed to recruit around five of the representatives of VCS groups who we had worked with in the earlier workshops and around five representatives of local relevant policy domains (most importantly, emergency planning and public health). Within the context of the potential challenges that we had identified, we purposively selected and invited the five individuals from local VCS groups who we judged would be most likely to fully contribute in these circumstances. With respect to local policy stakeholders, our primary aim was to achieve the participation of representatives from local authority emergency planning and public health teams. Our secondary aim was to ensure the participation of further representatives of local policy stakeholders working in, variously: housing, social care, the emergency services, local hospitals, community engagement and so on. In similar ways to our earlier policy engagement, this was a challenging and time-consuming process. In addition, as cuts to local government funding hit home during 2015, a running theme throughout our recruitment process was that of staff leaving, increasingly limited resources and severe constraints on what council officers could do. In addition, one of our key local authority partners commented that it was difficult to secure the involvement of his colleagues because of the extent to which, within the context of the PAR design, the outcomes of the project were exploratory and emergent.

Despite considerable effort, we were able to achieve our key aim – participation by representatives of both emergency planning and public health – in only one case study (see lists of participants in Figure 2); despite extensive support from the emergency planner, in this case study we were not able to secure the attendance of any other local policy actors. In the second case study – the one in which the emergency planning team had already declined to participate in the project – we were able to secure the participation of public health, a local hospital, the local fire brigade and the managers of a local authority advice service. In the third case study, although the emergency planning team was unexpectedly unable to attend at the last minute, the workshop was attended by representatives of public health, housing and a large local hospital.

‘Not all the outcomes were clear from the outset. I understand that this is an Action Research project and to some extent outcomes emerge through the success or otherwise of the process. However, this sometimes made it difficult to sell the project internally and make decisions on the resources that we should apply to it. Some selling points would have been useful.’
Local emergency planner



Preparation for Workshop 3

We were keen for the representatives of the VCS groups to personally present the ideas that had emerged from the earlier VCS workshops. At the same time, we wanted to ensure that the ideas could be presented to the policy stakeholders in ways that would be meaningful and compelling for them, and we did not want to overload the already very busy VCS groups. With these imperatives, and the potential challenges of bringing together VCS groups and local policy stakeholders, we prepared for Workshop 3 in the following ways:

- Based on our analysis of the ideas that were developed in the first two workshops, we developed a set of slides for use by the VCS presenters;
- We selected three VCS group representatives who we felt would be best placed to actually present the ideas of the VCS groups, and we very carefully briefed each of the VCS group representatives, particularly those who we had asked to formally present in the workshop;
- We also briefed the local policy actors very carefully, particularly emphasising the value that we hoped the VCS groups' contributions would have and our ambitions for a collaborative and constructive workshop;
- We developed a loose step-by-step structure for the discussions that was designed to avoid negativity and closing-down of new ideas, and support mutual learning and opening up space in which new ideas could be jointly developed.

Outcomes from the VCS-public sector workshops

In two of the case studies, the preparations that we described above bore fruit and the VCS-public sector workshops were successful in a number of ways:

- The representatives of the VCS groups were willing and able to present the ideas from the earlier workshops in ways that were meaningful and compelling for the policy actors;
- Workshops participants engaged in a highly collaborative way;

'A well-structured facilitation plan meant the process worked well. The presentations from the community were very clear and the discussion was "rich, informed and generous"... It was a good conversation based on mutual respect and a willingness to learn on all sides.'

Evaluator's observation

'The team witnessed the institutional representatives moving from a feeling of uncertainty to being comfortable that they were in a productive space.'

Evaluator's observation

'It is perhaps testament to the capacity development aspects of the process that in two of the three locations the VCS representatives were willing and able to present the community groups' views.'

Evaluator's observation

'I've got quite a few ideas down already. I'd be more than happy to explore opportunities for the Local Resilience Forum to work more closely with community groups or with a community resilience forum. I think it's a fantastic idea and I would be happy to support the development of this.'

Emergency planner in local authority

'The best feature of the project was getting people in the room who would not normally be there to talk about a subject that they would never normally talk about.'
Local team member

'The links with institutions were very good, creating connections between these institutions and the community groups was a real strength. Having not too many 'experts' in the room really allowed people's ideas to surface'
Local team member

- The triangulation of different forms of local knowledge was productive and sometimes powerful.

The independent evaluation suggests that our careful planning of the workshop process, briefing of the participants and facilitation style worked in support of these positive outcomes. That said,

it is also important to draw attention to the extent to which the success of these workshops relied upon the intelligent, enthusiastic and collaborative contributions from some of the individual representatives of the VCS groups and the institutions that attended the workshops, particularly when those individuals worked in one of the key domains for the project (emergency planning and public health).

However, while there were some fruitful conversations in the third VCS-public sector workshop, this was not as successful as the other two. The challenges in this workshop had three key characteristics. First, it is perhaps not surprising that this was the case study in which – as previously mentioned – the emergency planning team declined to participate in the project. The implication of this was that a very important voice or perspective was conspicuous by its absence, and lots of interesting conversations ran out of steam for this reason. Unfortunately, this issue was compounded by two further problems that we had not experienced in the other two case studies. One of these was that, despite the project team's efforts, the workshop was sometimes characterised by sensitivities relating to the relationship between the local authority and some of the residents of the borough; in particular, this related to criticisms of the local authority by representatives of the VCS groups. At times, this led to an uncomfortable atmosphere in the room which constrained the conversation at some points, and certainly led to facilitation challenges. Also, despite the project team's efforts in advance, two of the three presentations by the representatives of the VCS groups were not as compelling as they had been in the other case studies. This final issue was perhaps exacerbated by an apparent lack of engagement from some of the representatives of the local institutions.

'These workshops showed that when the two groups (VCS and institutions) are in the room, things can happen.'
Evaluator's observation

'Local people really do know about their own area – this was perhaps surprising to the institutional people.'
Local team member

'A lot of local knowledge came out through the mapping process. This was a good way of sharing information.'
Emergency planner in local authority

'I'm not having a go at anyone, but if we're going to criticise the council, that's fine, it doesn't do things perfectly, but it would be helpful if it's constructive criticism.'
Workshop participant from local authority

'Concern was perhaps not acknowledged by the facilitator as well as it could have been, leaving that individual feeling rather awkward, though note that this was later addressed in a one-to-one conversation.'
Evaluator's observation

'The quality of presentation at this workshop was relatively low and this appeared to affect how the messages were received.'
Evaluator's observation

These observations – regarding both the successes and challenges that we experienced – emphasise the extent to which what is possible in the processes and approaches that were investigated in Urban Heat depend upon the characters and capabilities of individuals at the local level. At the same time, with respect to the local policy stakeholders, these observations also suggests that it is more important to have a limited number of the *right* people in the room – people who have direct responsibility for the topic of the workshop – than a larger number of people whose key interests and responsibilities might be less focused on the topic of the workshops.

In addition to these comments, there was one other challenge – relating to consent and confidentiality – that emerged in the context of one of the VCS-policy workshops. In the interests of knowledge-sharing and providing feedback, the research team shared transcripts of each workshop with the participants in that workshop. Although this had been explained within the consent form, two of the participants in one of the workshops observed that this was not appropriate in the context of the participation of local institutions and the discussion of potentially sensitive issues, especially given the ease with which digital material can be widely shared. While we regret the impacts that this might have with respect to knowledge-sharing, we noted that this is an important issue. In addition, we noted that it is important to circulate consent forms in advance so that they can be more fully studied by participants, and to mention these issues at the workshop itself.

‘There is a need to be very clear about the consent process and the sharing of the transcript from the workshops. If I had known that the transcript was going to be shared widely I would have been more guarded about what I was saying.’
Workshop participant
from local authority

Box 5: Key learning with respect to VCS-public sector workshops

- 1.** These can be challenging workshops due to the different professional practices across sectors, and the differing kinds of expertise and agency that reside in each.
- 2.** Although these challenges can be tackled through careful planning, support for the VCS representatives, briefing of the public sector participants and experienced facilitation, problems might still be expected in some cases.
- 3.** Our experience suggests that it is important to secure the participation of the most relevant institutional actors, as opposed to a broader group of participants for whom the topic may not be of core relevance.

5. Local policy engagement for practical impact

In the six months following the workshop process (October 2015 to March 2016), the project team undertook another phase of local policy engagement. Although, for budgetary reasons, this phase of the project was not included in the original Urban Heat proposal, JRF themselves very constructively recommended that this phase be added in to the project design. The objective of this work was to disseminate the outcomes of the workshop process and to facilitate the practical implementation of some of the ideas that had emerged from the workshops and from other activities. Our hope was that we would be doing this in partnership with some of the VCS group representatives and policy stakeholders that we had worked with in the three final project workshops. In practical terms, our engagement work on this phase of the project consisted of a time-consuming process of email and telephone communications, as well as a number of presentations to groups in the case study areas. This work focused on engagement with: local emergency planners and public health specialists, Local Resilience Forums, local 'excess deaths' forums, local voluntary sector umbrella organisations (CVSs or similar), local pharmacists' groups, local Town Centre Managers departments and local advice services for 'vulnerable' people. Although we experienced some successes in this phase of the project (and these are detailed in Chapter 5), we also experienced challenges and were somewhat frustrated that more concrete progress could not be made in this respect.

Our analysis of our conversations, notes and emails over this period suggests a number of reasons for this. First, very pragmatically, six months is probably not a sufficient time period in which to see major change in the practices of local authorities and other local institutions; after all, local groups and forums tend to meet every three to six months, and many proposals for change have to be discussed up and down managerial structures, and across teams and departments. Second, the more fundamental challenge was – in the absence of ongoing funding – an uncertainty about who would be in a position to take longer term responsibility for the practical matter of

'There is little evidence at this stage, that the project will lead to major changes to the way that heatwave response and wider resilience issues were delivered by these local institutions. Interestingly this was not seen by participating organisations as a failing of the project but more to do with the context, financial constraints and restructuring that local institutions are currently facing.'

Evaluator's observation

'We have made limited progress. The ideas are there and a couple of people have met with community groups. In each case we have made a start but there is quite a way to go.'

Emergency planner in local authority

'It's a bit early to say what the local impact will be, the project has started to address this but not sure how this is going to be taken forward.'

Local team member

'If you want a sustained community response you need to do a more intensive process than Urban Heat. You need to tell people at least five times if it is to have an impact.'

Local team member

'The issue with pilots is that it's always difficult to get the funding to scale up. The reports tend to sit on shelves gathering dust – the challenge is how to build in legacy right from the beginning.'

Resilience officer in GLA

turning ideas into action: the project team was in a position to engage with various stakeholders, and propose and guide change, but not to enact it. We had hoped that some of the representatives of the VCS groups that we had worked with in the workshops might be in a position to support this change. However, those that we approached made it clear that this was not possible within the context of the severe restraints on their resources and capacity in the prevailing economic climate of 'austerity'. For their part, officers from local authorities also often cited the ongoing impact of 'austerity' and budget cuts – reconfiguring plans, losing staff and capability, constraints on capacity and budgets and so on – on their ability to take action. Ironically, this was also a key reason why some local authority officers saw value in greater involvement from the VCS. It is also possible that our action research approach encouraged local institutions and VCS groups to place too much reliance on the project team to drive things forward.

6. Differences between the case studies

One of the key reasons for implementing three case studies was to allow us to comment on the ways in which differences between the ways in which they were set up – for example, with respect to the local context, the local team partner and the way in which the recruitment was undertaken – produced or did not produce any associated differences in process or outcome. When considering such differences, it is important to be cautious for three reasons:

- In action research, care should be taken when identifying relationships – or non-relationships – between characteristics, and processes and outcomes, and when generalising from a small number of case studies;
- Discussion of these issues should not diminish the possibly greater importance of appropriate values, planning, preparation, processes and facilitation;

'The hard thing is to create something that is ongoing. If it is not PSI pushing it then it has to be the Local Authority because from experience the voluntary/community sector is reluctant to take the lead. The LA does not really have the capacity to do much more than it is currently doing. Needs input from another body if it is really going to progress.'

Local authority public health officer

'It is not just good enough to undertake research on this type of topic, we also need to resource the recommendations so they are taken forward. Action needs to be taken on the findings – "we need to get on with it".'

Local authority seasonal health officer

'A lot of the 'weaknesses' are contextual things that we could not do much about, such as government cuts having immediate impact on the communities we were working with.'

Local team member

'Not sure that we have achieved much yet; lots of positive talk but not achieved what we thought we might get out of it at this point. This is not the project's fault but reflects the resource constraints that we work under as a government organization.'

Local team member

'As with all councils we are losing resources, we're losing staff, we're losing a lot of corporate knowledge. We're losing premises because we're selling things off so we are less resilient than we were because whereas before we could de-camp to another building if a building was affected by something we now can't so that's it, we are whittling away at our resilience and our ability to do things.'

Emergency planner in local authority

'One of the key lessons for me was to make sure people involved from the institutions have assigned enough time to participate and follow up on actions agreed. This has resource implications which are a challenge to overcome. Would like to be involved in similar projects in the future because the insights gained have been very useful. With our resources reducing it is useful to know what is out there that we can call on or use.'

Emergency planner in local authority

- The objective of this discussion is not necessarily to identify a 'right' and 'wrong' way (though this may be the case in some instances), but rather to highlight the ways in which methods and approaches shape processes and outcomes.

Perhaps the most significant aspect of this issue is that we did not ensure the buy-in of all three local emergency planners before we confirmed the case study areas and one of them did not participate in the project. There are two aspects of learning from this. In the context of project process and outcomes, this was not helpful because it constrained what was possible in the VCS-public sector workshop and in terms of practical action afterwards; this was maximised when both emergency planning and public health were involved. This issue illustrates our broader point that what is possible and what happens is highly dependent on who is engaged and 'in the room'. At the same time, we also learned about the extent to which – in the 'real world' – what is possible and not possible locally is dependent on the characteristics and preferences of key local individuals.

It will be recalled that the case studies differed in the context of their urban locations: inner city, outer suburbs and in-between. We did not discern any differences in process or outcome on this basis, possibly because the case study areas were similar in the sense that they all had relatively high levels of socio-economic disadvantage. That said, one of the case studies took place within the specific context of a high-rise housing estate, and here the quality of the housing stock and over-crowding were a significant topic of discussion in ways that were not present in the other case studies. One of the case study areas was characterised by very informal activity by VCS groups, and possibly by lower levels of social capital. Due to the extensive efforts of the local team, this did not affect the VCS or VCS-policy workshops, all of which were well-attended and rich with ideas. Given that implementing practical change was challenging in all of the case study areas, it is not possible to comment on the extent to which the issue of social capital made a difference here.

'No water, no electricity and no heating, we've had them all. We had the no heating in the middle of winter for two weeks. The tower blocks have communal heating, yeah, and it goes a lot.'

VCS group

'My next door neighbour, they're eight people and someone came from Hounslow Homes and said, "this place is enough for you", eight people, two bedrooms! They're now deeming your living room as a bed space, so you no longer qualify for over-crowding.'

VCS group

In a number of ways, the case studies illustrated the ways in which approaches to recruitment shape processes. For instance, in two of the workshops, the local partners recruited participants from their existing networks, while in the third recruitment was undertaken based on the development of new networks. One outcome of this was that there was a greater variety of VCS groups in the third case study; this did not strike us as significant in our work but might be in some cases. Another aspect of this issue was highlighted in the extent to which our local partners, Transition Town Tooting, recruited groups that work on sustainability issues on the basis of their existing networks. This was an interesting distinction because it was noticeable that climate change was not

a salient way of framing heatwaves in the other two workshops, but it was in the Tooting workshops. This is an important issue because it reminds us of the importance of considering who is in the room when deciding how to frame issues. Finally, in this case study, it was clear that – despite the relatively high levels of social-economic disadvantage that prevail in the area – it was our judgement that, generally-speaking, the representatives of the VCS groups had a higher level of education than was typical among those in the other two case studies; this may have been related to the emphasis on sustainability. This was significant to some extent because it meant that these individuals were able to engage more analytically and strategically with the policy actors that they met in the third workshop.

7. Policy engagement for learning and dissemination

Objectives

Recalling Table 1, the purpose of this section is to discuss Phases 1 and 4 (we discussed Phases 2 and 3 in the previous section on the PAR process). In the early stages of the project (Phase 1: January to October 2015), we engaged with policy stakeholders within the three case study areas, as well as other local, London and national policy actors. We undertook this policy engagement for three key reasons:

1. To learn more (at local, London-wide and national levels) about:
 - The ways in which heatwave planning and planning for community resilience is undertaken;
 - The extent to which heatwaves are a priority;
 - The various institutions that are involved in heatwave planning;
 - The ways in which community resilience is planned and operationalised;
 - The role that is ascribed to VCS groups;
2. To build relationships that would support activities later in the project. In the three case studies, this was specifically to support the involvement of local policy actors within the PAR process, as well as supporting the implementation of ideas that emerged later from it. Within the context of our London-wide and national policy engagement, our relationship-building was in support of dissemination later in the project;
3. As the project progressed, it became increasingly clear to us that we were in a position to facilitate or ‘broker’ valuable new policy relationships.

During the latter stages of the project, the objective of the policy engagement gradually switched to dissemination of the emerging outcomes of the project (Phase 4: October 2015 to October 2016). Obviously, dissemination will continue beyond this period, especially within the context of this report. A list of the local, London-wide and national policy institutions with which we engaged is in Figure 4. In practical terms, this engagement and research was undertaken in a range of more and less formal ways:

- In the early phase of the project we conducted a number of group interviews, individual interviews and telephone interviews that were recorded and transcribed. We engaged with around 40 individuals;
- The contributions of policy stakeholders at two project advisory board meetings were recorded and transcribed (January and October 2015);
- We also engaged via ongoing telephone conversations (that were not transcribed), email exchanges, and presentations and face-to-face discussions at a range of meetings (such as three JRF Climate Change and Communities programme advisory network meetings, four LCCP London Heat Risk Group meetings, two GLA London Heat Risk Group meetings and the Public Health England heatwave plan seminar in March 2016);
- We also shared a confidential draft of the final report with our core policy stakeholders and received very useful comments and suggestions from them.

The early and ongoing scoping discussions with policymakers allowed us to understand how the heatwave and community resilience planning agendas are pursued and implemented at local, London-wide and national scales (this informed Chapter 2). Further, this work – along with the PAR process – allowed us to identify challenges and corresponding opportunities in these policy domains across local, London-wide and national levels (we discuss these in Chapter 6). In addition, this early work helped us to develop relationships that were invaluable when we started to implement our local PAR case studies.

Figure 4: Participating organisations in policy/practice engagement

LOCAL	Hackney London Borough of Hackney (public health) London Borough of Hackney (town centre managers)	Hounslow London Borough of Hounslow (community partnerships) London Borough of Hounslow (emergency planning) London Borough of Hounslow (housing) London Borough of Hounslow (planning) London Borough of Hounslow (public health)	Wandsworth London Borough of Wandsworth (emergency planning) London Borough of Wandsworth (public health) London Borough of Wandsworth (social care) St. George’s Hospital (emergency planning)	Other locales Kent County Council (emergency planning) Hampshire County Council (emergency planning) London Borough of Islington (seasonal health interventions network) Scottish Borders (emergency planning)
LONDON	Greater London Authority (resilience) Greater London Authority (heat risk group) London Ambulance Service (information services) London Ambulance Service (operations) London Ambulance Service (resilience and special operations) London Climate Change Partnership (director) London Climate Change Partnership (heat risk group) London Fire Brigade (resilience) London Fire Brigade (community engagement) Peabody Housing Association (asset management team) Peabody Housing Association (development team) Transport for London (sustainability) Transport for London (infrastructure)			
NATIONAL	Cabinet Office (civil contingencies secretariat) Department for the Environment, Food and Rural Affairs (climate ready team) Joseph Rowntree Foundation (climate change programme advisory network) NHS England (emergency preparedness, resilience and response) Public Health England (extreme events team) Public Health England (London team) UK Climate Impacts Programme			

Finally, at the London-wide and national policy levels, these relationships were crucial when we came to disseminate our early findings. We focus on the impacts of these efforts in Chapter 5. At this point, though, it would be helpful to briefly review the characteristics of the project that policy actors found to be helpful:

- Giving voice to the public;
- High quality community engagement;
- Focus on action and practice;
- ‘Brokering’ new relationships; and
- The policy engagement strategy.

Challenges of policy engagement

At the same time, policy engagement of this kind is highly time-consuming, it requires detective work, persistence and comprehensive record-keeping, and it is replete with endless repetition of the project aims, set-backs, dead ends, wrong turns and a feeling of going – or being passed – around in circles. In work of this kind, it is not easy to know how much investigation work is enough, or whether the balance of effort in different domains was appropriate. In addition, although PSI researchers are familiar with doing this, for many researchers there is the challenge of moving from the ‘pure knowledge generation’ of research to the much more applied policy sphere.

In addition, there is one possible short-coming related to our early local case study policy engagement: we did not pro-actively engage with local politicians in the form of local authority councillors; this was largely due to the preference of the PSI team to focus on policy domains as opposed to political issues. However, as one of our local team members pointed out, we recognise that engagement with both officers and councillors might have been an effective approach. As the project progressed, we encountered examples of both the pros and cons of trying to engage local politicians. For instance, in one of the case studies, we presented to a ‘winter excess deaths’ group. On the basis of our presentation, the chair of the group – a local councillor – immediately decided that the name and remit of the group should be

‘Transitioning from research to evidence and then policy to delivery is so important and this project demonstrates how that can occur. I particularly like the engagement with local people and starting to understand how local people will respond. I am so often working with academics and policy makers – it’s really refreshing to get direct feedback from communities.’

Officer in Greater London Authority

‘One of the project’s strengths was the methods used for engaging with the communities – I consider this to be best practice.’

Officer in Civil Contingencies Secretariat

‘Urban Heat is a useful example of how others are addressing the issue of overheating, particularly in the urban environment so any results will be valuable to see. The project is very practical but with a strategic emphasis, and I like the fact that there are 3 different pilots (local interaction) and there is the potential for developing a strong knowledge base about how communities cope with and adapt to increasing heat.’

Officer in Defra

‘The project acted as an ‘honest broker’ and enabled constructive conversations to take place between communities and institutions.’

Officer in PHE (London)

‘The project is making good progress by involving and influencing us and other departments.’

Officer in Defra

‘Working at officer level meant that they could ignore us until we went away – if we engaged politically this would not have been the case.’

Local team member

extended to 'seasonal excess deaths'. However, in a different case study, on the instigation of a local authority officer, we tried to engage a particular councillor in the PAR process; unfortunately, this was a highly time-consuming and ultimately fruitless undertaking.

8. Interviews with 'vulnerable' people

To ensure that the voices of people who are more 'vulnerable' to heatwaves were heard in the project, in June and July 2015 we undertook fourteen exploratory interviews with 'vulnerable' people (five each in two of the case study areas and four in the third). In particular, as context for the PAR process, the objective of these interviews was to understand the experiences and perspectives of 'vulnerable' people with respect to relationships between themselves, heatwaves, the local VCS and the local public sector. The interviewees were recruited via some of the VCS groups that attended the project workshops, and were 'vulnerable' for a variety of reasons; for instance, while many were older people, some were caring for infants, or had a disability. One of the interviewees was 'vulnerable' because she lived in a ninth floor south facing flat on the Ivybridge Estate. Within an appropriate ethical framework, the interviews were most often carried out in the interviewee's home. We discuss the results from these interviews in Chapter 4. As we had hoped, these interviews were of value because they provided a distinctive experiential perspective on the relationships between 'vulnerable' people, the VCS, local institutions and heatwaves.

9. Summary

Three key findings regarding the process of the PAR process and accompanying policy engagement can be identified. First, carefully planned workshops can elicit compelling knowledge and ideas from representatives of VCS groups (discussed in Chapter 4), and facilitate the sharing of these ideas with local policy stakeholders. Within the context of a well-planned process, much depends upon the characteristics of the workshop participants, and – to the extent to which this is possible – this should be reflected in recruitment. Second, however, despite considerable shared enthusiasm and some success, these ideas are not easy to translate into practical action. This is often due to a lack of capacity when outside resources (such as the Urban Heat project) have to draw back. Finally, although very time-consuming, ongoing local, regional and national policy engagement is highly valuable as a tool for mutually-reinforcing research and learning, and relationship building that helps maximise policy dissemination later on. In the next chapter, our attention turns from findings regarding the process to findings relating to the relationships between heatwaves, VCS groups and 'vulnerable' people themselves.

4 Heatwaves and the 'community': contexts and ideas

In this chapter, drawing on the six VCS group workshops and the fourteen 'vulnerable' people interviews, we have two objectives. The first is to examine various dimensions of the relationships between heatwaves and the 'community'. Central to these findings is a general sense of familiarity with hot weather and heatwaves, but a lack of awareness of the associated health risks for 'vulnerable' people and the existence of formal heatwave advice. The second is to review the key ideas for heatwave planning and community resilience that emerged from the VCS workshops. Key to these are ideas for 'bridges' or relationships between the VCS and the local public sector, ways of enhancing local communications through the VCS sector and the kinds of local resources that would be of value.

1. 'Vulnerable' people

Perceptions of heatwaves

Although these findings are based on just fourteen interviews, they do broadly concur with those of other similar research (Abrahamson et al., 2009). All of the 'vulnerable' people who we interviewed were familiar with and could talk about hot weather and heatwaves. However, they typically understood the risks associated with heat in terms of sunburn, sunstroke and feeling thirsty, as opposed to the more serious risks of morbidity and mortality. In addition, although we had selected most of the interviewees because they were in one or more of the various categories of 'vulnerability', some of our interviewees did not understand themselves to be 'vulnerable'; indeed, some stated that they enjoy the heat. On the other hand, some other interviewees were very conscious of their own vulnerability or that of their young children and reflected on this in quite anxious terms and some recognised that their built environment might exacerbate this.

Awareness of the appropriate actions to take was also variable. For some, within the context of an understanding of risk based on sunburn, the key coping strategy was staying indoors. While this is sensible in some circumstances, this is important

'I like the heat because you can go out in a neck shirt and you don't want a cardigan, you can go round in your shirt and trousers.'

James (a pseudonym)

'I live in a 17th floor flat you're right about the heat up there, and the lady is right about the heat affecting people with mental health problems because it affects me and I hate it. I just sit by the fridge if it's really hot, I don't go out.'

Steve

'If you suffer from heat, apart from having a nice bath, going, spending summer in the North Pole, there's not a lot you can do.'

Sandra

given that the broader risks of dehydration, and cardiac and respiratory problems, most often occur indoors. More broadly, drinking water, opening windows and doors, closing curtains, and using fans and air conditioning were understood as important; few other coping strategies were cited. Given the relatively low levels of awareness of the risks associated with heat among the interviewees, it is perhaps not surprising that the 'vulnerable' people that we interviewed did not recall having received any formal heatwave advice. In addition, some stated that they would welcome more information, usually on a printed flyer or on TV / radio.

'I do leave the door open, the windows open.'
Dilbert

'All the curtains were drawn, make as dark as possible. I just had the air conditioning going, as much as possible.'
Sandra

Social capital

Social isolation has been identified as a key dimension of vulnerability to heat and heatwaves. Our interviews with 'vulnerable' people revealed highly varied extents of social capital from interviewee to interviewee. Although we did not use any of the tools that are available to quantify social capital (van der Gaag and Webber, 2008), it was notable that some of those we interviewed were very well-connected with family, friends, extended families, community groups, local institutions and so on, and appeared to be active and capable within these networks. On the other hand, some interviewees were not at all well-connected or were only connected with the family unit, and were not in a good position to build or make use of such connections. In one case, it was clear that the research interview itself – and a hoped-for visit from the VCS group that had introduced us – were one of the very few social interactions that the interviewee was expecting to have in the near future. Importantly, due to his previous experiences, this interviewee actively avoided contact with local institutions, such as the local authority. Instead, he preferred the VCS group to liaise with the local authority on his behalf. This example served to emphasise the particular challenges – especially for statutory bodies – associated with identifying and supporting vulnerable people, as well as the potential that resides within VCS groups to support these efforts. At the same time, the finding that some 'vulnerable' people are not connected with VCS groups highlights the limitations of VCS action.

'I have 'hi helloes' with everyone. The groups that I told you earlier, with all of the mums I know their names, we talk in the parks, when we go to school we go together and come back ... if anything happens we can tell ... watch my children and they will tell you what has happened.'
Hanifa

'Personally I wouldn't know who to approach, you know, if there is a heatwave there except what I can do for myself I guess, I don't know if there are any organisations that can help in that. I've never come across anybody telling me anything about that.'
Victor

In addition, the interviewees had very varied ideas about the 'sense of community' in their area. Some thought that there was a very strong sense of community, while others felt that community had declined or disappeared years ago. When asked if anyone would look in on a neighbour or friend who was vulnerable to heatwaves, the interviewees cited friends, wardens in sheltered accommodation, or family members.

Responses to heatwaves

Some interviewees thought that the VCS could support vulnerable people by: checking that they are alright, providing information, or campaigning to bring attention to the issue of heatwaves. However, reinforcing some of the key messages from the VCS workshops, there was concern among some individuals about whether VCS groups have the capacity to take action during a heatwave, and whether VCS groups would be willing to prioritise action on heatwaves. Many of the interviewees suggested that local authorities should have broader responsibilities in terms of providing fans or air conditioners, or taking vulnerable people outside to the park, but similar challenges were raised in the context of tightening budgets and a sense of cynicism about local authorities. Echoing the insights of the representatives of the VCS groups, some of the interviewees highlighted a need for more water fountains and shaded public benches. Interviewees also suggested that pharmacists, GPs and hospitals also have a role to play in terms of providing information. Most of the interviewees were sceptical about the willingness of the private sector to support action of this kind. Notably, although the characteristics of buildings were understood as a contributing factor in some cases, addressing these in the longer term was not raised by the interviewees.

'Everybody looks after everybody else in a way.'

James

'I would trust anybody in this road, certainly.'

Aileen

'It's not that any more. The close knit community is not here anymore. Well that's what I see anyway.'

Simon

'I'm looked after, if I'm not seen, she has a key to come in and find out if I'm okay.'

Dilbert

'It's the people that suffer from heat, old age people, some people, the heat makes them weak and they'd like for someone to wheel them out in the fresh air or something.'

James

'The council won't do nothing.'

George

'Nobody wants to do that. Nobody wants to do that, no chemist would do that. That's out of their money, isn't it?'

Christine

'It is difficult living in these properties, I can't speak for other ones but in these properties it is difficult to keep cool when it's hot and even to warm up when it's cold. They're always breaking down. I mean it's not a criticism, it's just fact, but they are heat traps.'

James

2. Representatives of VCS groups

Understandings of heatwaves

Although it should be remembered that we offered £50 for attendance at the project workshops, the VCS group representatives were universally very willing to engage with the issue of heatwaves. Once we had introduced the topic, we did not encounter the view that the issue of heatwaves is not important. At the outset of the workshop process, all of the workshop participants were familiar with hot weather and heatwaves, and were keen to talk about their own experiences, often within the contexts of previously living in very hot parts of the world. Importantly, participants often talked about past experiences of heat in a celebratory way. At the same time, heatwaves were not an issue that most participants had previously considered as a matter of concern within the context of their own VCS work or personal lives. In addition, the risks associated with heatwaves were often instinctively understood in terms of sunburn, sunstroke and getting thirsty, and not necessarily in terms of the other more serious risks of morbidity and mortality associated with very high internal temperatures (such as dehydration, leading to cardiac and respiratory failure). Importantly, however, once they were appraised of some key facts about heatwaves – in particular, the number of excess deaths in the 2003 UK heatwave, the health risks and the dimensions of vulnerability – participants universally saw heatwaves as an issue that is relevant to them and to the social groups that they work with. Indeed, some participants lamented the fact that heatwaves are not given more attention.

'When I lived in the Middle East, we used to make a rehydration drink with water, fresh orange juice, sugar, salt and baking powder.'
Tooting VCS group

'That was the last time, in the 1976 heatwave, that I ever went in the English sea, that it was warm enough to go in, never since!'
Tooting VCS group

'Heatwaves are not a subject that would initially come to mind for us or the groups, it is not on the climate change agenda in the UK, so the project brought these new agendas to the community groups.'
Team member in Tooting

'I think that it really rests on our shoulders to raise levels of awareness within our sphere of influence, for example, following on from the initial meeting that we had, I fed back to the CCG.'
Hackney VCS group

Crucially, the VCS groups that we worked with were not involved in or aware of local heatwave planning processes or plans; action in this area emerged as a key theme in the ideas of the VCS groups. Further, although some large organisations, such as local branches of Age UK, recalled having received heatwave alerts in the past, this was not the case for the vast majority of the VCS groups that attended our workshops; this too became a central issue in the ideas that the VCS groups developed. For most of the participants, the heatwave issue was most salient and galvanising when it was presented as a public health issue. That said, some of the VCS representatives at the Tooting workshops also understood heatwaves as a climate change issue, due to the sustainability-related nature of those groups' work. Although this inevitably varied across the

individuals involved, the representatives of the VCS groups were able to productively: engage with the heatwave issue; engage with policy contexts for heatwaves; identify local issues and resources; bring particular local knowledge to bear; and, develop novel ideas for heatwave planning.

Community and community action

The workshop discussions also demonstrated that the idea of 'community' and the practice of 'community action' should always be understood within the context of their limitations and struggles, as well as their capability and potential. For instance, illustrating the often conflictual nature of communities, during the recruitment in one of the case studies, there was clear tension between an 'official' residents' association and other elements of the 'community' who felt that the association had become too close to a particular political party. Challenges were also consistently cited across the case studies relating to the relationships between local residents and the VCS, and the local authority.

The VCS groups that we worked with were also very aware of their own limitations and those of the VCS as a whole. Very often, this was related to identification of an increasingly challenging funding environment, as government cuts associated with 'austerity' start to bite. Through these discussions, we were reminded that – although the VCS relies on voluntary action in many cases – it needs funding to be effective; while the VCS has some very special capabilities, operating without adequate funding is not one of them. Finally, the charge that community action legitimises state withdrawal from responsibility was raised by the participants.

Ideas for community resilience

Although this inevitably varied, the workshop participants were able to identify relevant local issues and resources, bring particular local and experiential knowledge to bear, and develop novel ideas for heatwave planning. Although the local

'When we needed to clear up after the riots we got all the community groups out, and the local authority were nowhere to be seen.'

Local team member

'Yes, there is a residents association, but a lot of people are fed up with it because it has all become too political and personal, and it's not serving the needs of the residents.'

VCS group

'The council does get a lot of things wrong, particularly regarding planning and there are very few organisations or people in the area who are in a position to call it to account.'

VCS group

'Many of the grass roots groups which are important in this process, are very grant driven and there wouldn't be sufficient resources to effectively reach the community. So I think people really do need to look at the resources and how that could be made available.'

Hackney VCS group

'There's a bit of me that wants to say that why is this all getting loaded onto the community groups? Recently apparently Iain Duncan-Smith said 'food banks are great because they show people are making a difference', well no, I want the government to provide that and I want it to look after people who are at risk of dying when it gets really hot.'

Tooting VCS group

'One key thing for me is that tapping into the grass roots organisations is critical because we know the sections of the community that are on the outskirts of things, people who have not come from this country, they're not going to the GP and all the rest of it. So there needs to be resources in place or there needs to be information that is available to people who are on the fringes of society.'

Hackney VCS group

detail varied across the three case studies, the ideas that emerged in all three case studies had some common themes. Importantly, all of the ideas that are summarised below were raised in some shape or form by VCS representatives during the workshops in all three case studies, though – as is the norm in action research – we have elaborated on them for presentation here. These are the ideas that were taken forward into Workshop 3, and were presented to and discussed with local policy actors. It is important to note that many of these ideas do not apply to heatwaves only, but also to the full range of resilience, emergency and public health issues.

Bridges

Within the context that local planning processes for heatwaves and community resilience do not typically include the VCS (especially VCS groups who are not ‘voluntary emergency responders’), it is important to establish ‘bridges’ – a set of ongoing formal and informal institutional relationships and arrangements – linking the full spectrum of VCS groups and local statutory bodies. This has the potential to bring new local knowledge, ways of thinking, ‘reach’ and capacity to local emergency planning processes. For instance, this might include: involving non-‘voluntary emergency responder’ VCS groups in Local Resilience Forums; setting up a VCS group equivalent to the Local Resilience Forum; and, involving statutory bodies in this. It was also proposed that there should be cross-fertilisation of ideas between the two resilience forums. In many local settings in the UK, a good starting point for this might be the local Council for Voluntary Services or equivalent. These organisations act as VCS-hubs, offering support and networking throughout the VCS.

Digital communications

In all three of the local case studies, communications was an area in which the VCS groups that we worked with universally felt that they could meaningfully contribute to heatwave response (as well as other emergency and public health issues) by getting information to more people. This is a distinctive capability of the VCS because it is able to reach many people

‘Shouldn’t there be a grassroots resilience forum in their own right? I think that you need a more grassroots connected collection of people.’
Tooting VCS group

‘It would be a forum that would include voluntary organisations, we had residents and just any one who is interested and they could feed in and that’s their opportunity to discuss any concerns that they have about the heat and also it would be an opportunity to share tips.’
Hackney VCS group

‘So, the first proposal is about establishing links between community groups working in different community populations in the borough and with statutory agencies and the hospital as well. We recognise that it doesn’t need to be formal structures, can be informal structures as well, but it would be good to have that ongoing relationship.’
Hounslow VCS group

‘So a person from the grassroots forum would be co-opted to the borough committee and somebody from that committee could commit themselves to attending all the community meetings. Potentially your third workshop that links these kind of groups with institutions is a pilot of how that situation might work.’
Tooting VCS group

‘In this borough we do have a very rich voluntary sector and there are quite strong coordination organisations, they don’t exist everywhere.’
Hackney VCS group

– especially vulnerable people – that statutory bodies might find ‘hard to reach’. This is also an issue on which the research team feel it is relatively straightforward for local authorities to meaningfully act in the future. Emergency planners and public health professionals in local authorities might consider developing their own email lists of local VCS groups. At the same time, the VCS-hubs mentioned above are an ideal starting point. VCS-hubs are in a position to cascade information and alerts to their VCS members and others via their web sites, newsletters, blogs and social media, and also to place posters and leaflets in appropriate locations.

Face-to-face communications

It is important to bear in mind, though, that many people in vulnerable groups are not well-served by digital communications, and – more broadly – that practical advice can be difficult to convey this way (Burchell et al., 2015). VCS groups can help here because they often communicate directly with their ‘clients’. This takes the form of face-to-face interactions during planned home visits, in ‘door knocking’ programmes, at advice centres, in workshops and in other social contexts, as well as telephone communications of various kinds. Leaflets were also cited as important within this context. Given that funding is always a challenge, it is important to note that, in many cases, information about heatwaves can be ‘bundled in’ with other information at appropriate times of the year.

Resources and infrastructure

Based upon their knowledge of their client groups and their local areas, the VCS groups suggested a range of practical measures that could help to build resilience to heatwaves. In particular, they suggested that vulnerable people would most value: well-promoted indoor cool spaces (supermarkets and churches were mentioned more than once), water fountains, shaded benches and rest spots, and trees. Town Centre Managers are a useful starting point for these discussions, and most

‘Some of the most vulnerable people are the ones who are not residents, the ones who are itinerant, homeless or part of our large boating community.’
Hackney VCS group

‘A lot of our users aren’t digital natives and they wouldn’t check their emails.’
Tooting VCS group

‘Yes, that’s very much the approach we take, we door knock as well because the only way to reach people who are at home and not interacting with any social networks, is to knock on their door.’
Hackney VCS group

‘Our research suggests that there’s a core of 10-15% of the local population who are very socially isolated and vulnerable. There’s a challenge to the third sector to take statutory authorities out of their comfort zone and knock on doors in mainly social housing estates because that’s where the concentrations of those people are, just have that conversation on a doorstep.’
Local authority manager
of an information service

‘We tend to send out a batch of leaflets to the providers of social care so they can distribute them to people who are socially isolated.’
Resilience officer in hospital

‘The big Tesco’s got community noticeboards, it’s got water and it’s nice and cool in summer.’
Hounslow VCS group

‘Churches are big cool places and some of them are very socially engaged.’
Hackney VCS group

‘There should be more water fountains for children to cool down, even adults.’
Hounslow VCS group

‘That’s another thing that Dalston Square has, they have those fountains.’
Hackney VCS group

local authorities have processes through which local infrastructure and street furniture can be sponsored by local businesses.

'There are some trees along here but that's about it for shade, but it is an open space and it's quite high up, so it does get a breeze.'

Hackney VCS group

The local private sector

In all three case studies, the VCS groups strongly expressed the view that the local private sector – especially local retailers (and especially pharmacies and supermarkets) – also has a role to play in community resilience. This might include involving local retailers in the bridge-building and communications efforts described above, providing cool spots and water, and sponsoring the resources and infrastructure mentioned above. It was also pointed out that many local authorities have Town Centre Managers who can facilitate links with local retailers.

'Institutions should reach out to the corner shops who can then reach out to their customers.'

Tooting VCS group

3. Summary

The representatives of the VCS groups were willing and able to engage with heatwaves, and to produce insightful ideas for community resilience. While the VCS groups and 'vulnerable' people are familiar with hot weather and heatwaves, the risks are typically understood in terms of sunburn, heatstroke and feeling thirsty, as opposed to serious morbidity and mortality. In most cases, understanding of coping strategies is fairly limited. Once the public health risks associated with heatwaves were explained, they were a matter of very real concern for both groups, though 'vulnerable' people did not always see themselves as such. Most VCS groups do not currently receive heatwave information and alerts, and are not aware of the Heatwave Plan or heatwave planning processes. VCS groups are keen to receive heatwave information and to share it with their 'clients', and – with appropriate support – are keen to participate in local planning. We encountered a wide range of levels of social capital among the 'vulnerable' interviewees indicating that a range of routes – including via the VCS – might be needed to support them in responding to heatwaves. Importantly, the potential of the VCS should always be understood within the context of its conflicts and limitations.

5 Impacts

The purpose of this chapter is to briefly describe the impacts of the project that were possible within the project period itself. In addition, these impacts offer lots of specific ideas for local action. As we have mentioned, late 2016 is perhaps too early to comment on the long term legacy of the project, but these impacts are encouraging for the future.

Reflecting the relative novelty of heatwaves as a policy issue, a key impact of the project was raising and reinforcing awareness of heatwaves as an issue. The project was also able to inform and shape heatwave planning and community resilience agendas across sectors and levels, and 'broker' new relationships between policy and practice stakeholders across sectors and levels. The project also supported the development of communications materials and systems at local and national levels; and changes in local governance structures. The project was described as an example of best practice in community engagement by Public Health England (London) and the Civil Contingencies Secretariat. Significantly, the project drew attention to some of the more social aspects of heatwave response in a domain that often focuses on technical issues of health, buildings and mapping. That said, it is clear that more significant change will take longer to embed, and will require greater prioritisation of heat as a policy issue, as well as future leadership – including political leadership – and collaborative cross-government working.

Raising awareness

- Across the three study areas, the project has raised awareness of heatwaves and community resilience issues. This is especially the case within the VCS organisations with whom we worked, as well as the statutory bodies;
- Within Public Health England, the project has helped to focus attention on the potential of community resilience and the importance of locale in the context of heatwaves and other extreme events. At the same time, the project has helped to highlight some of the challenges that PHE faces in the context of heatwaves;

'The Resilience Forum has bought into the approach and has taken on board the greater involvement of community groups. An excellent outcome that we now need to build upon.'

Emergency planner in local authority

'The project has brought the issue of excessive heat to the fore – it is now on the local agenda in a way that it has not been before. Just raising the question was valuable.'

Local team member

'Heat is now on the agenda of my organisation. We have recently written to the local Housing Minister about lifetime housing and we made reference to the need to take account of future heatwaves.'

Local team member

'The impact interviews suggest that the Urban Heat project has had more influence at a national level than a local one. Regional and national policy stakeholders were very positive about the project and could articulate how it had influenced their thinking.'

Evaluator's comment

- The project was able to help raise the profile of heatwaves within the community resilience team in the Civil Contingencies Secretariat.

Shaping future agendas

- Following presentations to the Local Resilience Forums in two case studies, heatwaves and community resilience were established as agenda items for future discussion. This was not possible in the third case study;
- As a result of discussions with local public health officers in two case studies, an already existing local 'excess winter deaths' forum changed its name and extended its remit to 'excess seasonal deaths', and a local 'seasonal deaths' forum that had stopped meeting was marked for resurrection. Efforts to this end in the third case study were not successful;
- In one local case study, information about heatwaves has been fed into a consultation on a major local development;
- We were able to support Public Health England before and at its Heatwave Plan seminar in March 2016, and community and community resilience were key issues at the seminar;
- The project is contributing to a review of the London Resilience Forum's Severe Weather Framework for London;
- Findings from the project will be of value within the context of the Civil Contingencies Secretariat Community Preparedness group;
- Public Health England (London) told us that the project is helping to embed community-based practice in its work;
- Following extensive engagement with the Greater London Authority, the project is likely to contribute to the draft of the Mayor's London Environment Strategy.

'The project has supported the work of PHE and helped bring a community focus to the work that we do. Urban Heat has provided a link to the community level which has been really helpful. The issue of community resilience can be challenging, especially around heat as many people do not consider themselves at risk. The approach to heat is somewhat behind other resilience issues.'

Officer in Public Health England

'We have definitely benefitted. The project has raised my personal awareness of heatwaves and I valued being brought into the room with others who are looking at this issue. I valued the learning and networking opportunities, specifically PHE contacts.'

Officer in Civil Contingencies Secretariat

'This impact seems to have been most prominent in pushing the issue of urban heat up the agenda not only as an important emergency planning issue but also a longer term resilience planning issue.'

Evaluator's comment

'Our area has got £5m to redesign road infrastructure, and we have input the urban heat information into the final consultation report produced by the engineers. This would not have happened prior to the project.'

Local team member

'Ben and Kevin attended the Heatwave Plan seminar and they were very helpful in helping to run breakout sessions.'

Officer in Public Health England

'There is now a review of London Resilience Forum's strategy which has come about partly as a result of the project. We are looking at a more preventative strategy which should be able to utilise the learning from Urban Heat.'

Officer in PHE (London)

'I have had discussions with Kevin about how the findings can be utilised through the Community Preparedness group. This group looks at the local government resilience capability and I am looking to share Urban Heat best practice and lessons in national guidance.'

Officer in Civil Contingencies Secretariat

'Brokering' new relationships

- In the three local case studies, the project 'brokered' new relationships and has had a positive impact on perceptions of the VCS within local authorities;
- The project encouraged and supported the establishment of new relationships between the Civil Contingencies Secretariat and Public Health England;
- The project facilitated links between the Greater London Authority and Public Health England, and officers in London Borough of Hounslow in support of a local heat pilot project.

Community participation in planning

- In one of the case study areas, plans are in motion to include a community representative on the local Health and Wellbeing board.

Communications

- Following engagement with the CVS (or equivalent) in all three case study areas, in two case studies these organisations agreed to act as communications hubs between local authorities and the VCS. This was not possible in the third case study;
- In one of the case studies, the emergency planners are working with a group of students to build on these ideas for wider communications;
- As a result of engagement with a local authority Town Centre Managers department, this department agreed to act as a communications hub between the local authority and local businesses and retailers;

'The project has a lot of benefit for us – the focus of my work is helping organisations across London become more prepared for climate change. This project is helping bring 'community based practice' into our work. Learning about how we can better use local community networks to get our messages out. What we want to do is move away from an approach where we tell people what to do to a model where we give them some options which they pick from.'

Officer in PHE (London)

'I learnt that community groups are keener than I expected to address these issues, they just need to be facilitated and allowed to get on with it. I got the feeling that they did not feel engaged in the issue until we said that they could/should be.'

Local authority emergency planner

'The project reassured me that there are people and groups out there that are interested in their own resilience, they want to engage, take on board the messages and help other people.'

Local authority emergency planner

'We have gained knowledge and understanding from Urban Heat and hope to use the knowledge to inform a pilot.'

Officer in Greater London Authority

'We are looking at engaging a community representative on the Health & Wellbeing Board.'

Emergency planner in local authority

'I'd really like to see the voluntary sector as an integral part of this structure that is responsible, takes responsibility for disseminating information across the piece.'

Chair of local public health committee

'There were lots of ideas around communication. We have been working on this with a group of visiting students. We have not yet agreed what we are going to do but we do intend to roll some of these out in due course.'

Emergency planner in local authority

- We were able to support Public Health England’s development of new public communications materials for heatwaves through: direct feedback, by offering a ‘community’ perspective, and by facilitating links between Public Health England, and local policy stakeholders and a group of chartered environmental health officers to test the salience of communications materials.

‘The project has been able to give quite detailed perspectives from a community level which has enabled us to tailor the information we are producing.’
 Officer in Public Health England

‘The project has been very helpful in piloting and reviewing some of PHE public health material – due to this we are now totally revising them.’
 Officer in Public Health England

An example of ‘best practice’

- This was cited by Public Health England (London) and the Civil Contingencies Secretariat in the context of community engagement.

‘I am keen to explore in the future how we might use this model of community engagement for other things; cold risk, flood risk.’
 Officer in PHE (London)

Advice services

- As a result of a presentation to a local advice and referral service for ‘vulnerable’ people in one of the case studies, this team agreed to incorporate heatwave advice into their work;
- Following a presentation to a local pharmacists’ council in one of the case study areas, they agreed to implement an agreed set of advice-related actions in response to future heatwaves.

‘One of the project’s strengths was the methods used for engaging with the communities – I consider this to be best practice.’
 Officer in Civil Contingencies Secretariat

6 Policy challenges and responses

In this chapter, we review a number of policy challenges that we observed during the implementation of the Urban Heat project, particularly through the engagement with policy actors at local, London-wide and national levels. Among other issues, we discuss the apparent policy disconnect between community resilience and heatwave planning, the ways in which heatwave planning is relatively neglected in policy, the implications of a policy emphasis on floods and the very nascent levels of long-term planning to mitigate the impact of future heatwaves. Turning to community resilience, we discuss some of the limitations associated with some understandings of 'community', once again, a policy gap with respect to long-term planning, and the need for greater co-operation between government departments. On the basis of these challenges, and our learning and activities during the project action, we identify potential responses to these challenges.

1. A national policy disconnect?

The premise for the Urban Heat project is the observation that the Heatwave Plan does not elaborate on the VCS and community resilience to the extent that it might (PHE, 2016). For instance, although community resilience is mentioned in the Heatwave Plan (PHE, 2016: 8), the meaning of the term and the benefits of its practice are not explained. With respect to the VCS, the Heatwave Plan contains a useful table of guidance for actions at particular heatwave alert levels (PHE, 2016, Table 3.3: 27). However, this guidance is perhaps limited because there is no reference to the kinds of more collaborative action with local statutory institutions that are part of the broader understandings of community resilience that are discussed in Chapter 2.

Further evidence of a heatwave planning and community resilience policy disconnect can be observed on the community resilience side. As we have mentioned, community resilience is a policy agenda within the Civil Contingencies Secretariat in the Cabinet Office, and a range of practical materials have been produced (Cabinet Office, 2011; 2016). Our experiences suggest that these materials are well used locally. However, the Cabinet Office community resilience materials do not appear to mention heatwaves at all and are overwhelmingly oriented around flooding (as well as some other civil contingencies). This emphasis on flooding is also reflected in many local community resilience materials, and we discuss the implications of this below.

In response to these challenges, the project team was pleased to help reinforce links between the Extreme Events and Health Protection team in Public Health England and the Civil Contingencies Secretariat in the Cabinet Office. Our hope is that the idea of community resilience and the role of the VCS within that can be more fully elaborated in the next version of the PHE Heatwave Plan for England, and that heatwaves can be more explicitly included within the Cabinet Office community resilience materials as they are updated.

'The project has helped by flagging up other partners, specifically Public Health England contacts... I valued the learning and networking opportunities.'
Community resilience professional,
Cabinet Office

2. Heatwaves and hotter weather

Heatwaves are a relatively new policy agenda, they became an issue only in the aftermath of the 2003 heatwave (PHE, 2016). Overall, our observations suggest that heat and heatwaves are a relatively neglected issue in many policy contexts. Definitions of what temperature constitutes a heatwave vary around the country and there is no nationally agreed definition of the broader challenge of non-weather-related overheating. Identifying heat-related excess deaths is also challenging. While policy landscapes are very crowded, with many issues competing for attention and diminishing resources, three dimensions of this were particularly evident: the dominance of flooding, the emphasis on 'excess winter deaths' and the lack of attention to long term urban and spatial planning for heat.

'From my perspective I haven't touched too much on heat.'
Resilience officer in London Fire Brigade

'You may want to state that there is no nationally agreed definition of 'overheating'.
Specialist in the
Greater London Authority

'I write plans for making a response to major incidents, i.e. another July 7 type bombing scenario, hazardous materials or CBRN [chemical, biological, radiological or nuclear] as well. So it's a fairly wide broad range of emergency prepared and resilience and response.'
Hospital resilience officer

The dominance of flooding

Flooding typically overshadows heatwaves in the context of climate change adaptation, emergency response and community resilience. While action on flooding benefits from national regulatory guidance, the work of the National Flood Forum and the government funding for flood defences and community-based activities, none of these exist in the context of hotter weather and heatwaves. Our experiences suggest that this is also the case at the local level, although this is clearly geographically varied as local authorities obviously have varied levels of flood and heat risk. As an example of priorities at the local level, the Local Government Association (2016) guide on civil emergencies does not mention heatwaves and features a photo of a flood on the front cover.

Twigger-Ross et al.'s (2015a) report on local and community action on sustainability and climate change also illustrates this relative lack of attention to heatwaves compared with other resilience issues in this sector. Thus, while heatwave plans appear to typically be in place at the local level, largely based upon the Heatwave Plan for England, the issue clearly receives less attention than flooding in many or most cases (also see Town and Country Planning Association, 2016).

The dominance of flooding is understandable. Floods are significant events due to their impacts on property and infrastructure, transport links and the knock-on effects in terms of working days lost, disrupted supply chains, large-scale rescue operations, and the very high costs of both floods and flood adaptation. For example the 2007 floods are estimated to have incurred costs of £3.7 billion (Environment Agency/Defra, 2010) and capital spending on flood defences for 2015 to 2020 is set at £1.9 billion (Defra, 2015). On the other hand, while the effects of floods on the well-being of those affected should not be underestimated, UK floods do not typically bring the mortality risks that are associated with heatwaves; it is estimated that 13 people died in the 2007 floods (Environment Agency, 2007), compared to 2,000 people in the 2003 heatwave (**PHE, 2016**). More subtly, perhaps, the impacts of heatwaves are 'invisible', typically experienced quietly, in isolation and behind closed doors. In contrast, the physical manifestations of floods (and cold snaps), and some other extreme events are far more dramatic. Further, these characteristics have helped to make flooding, in particular, a highly visible media and political issue.

'To be quite blunt, emergency planners are glory hunters in the sense that they really only talk about the low probability/high impact events.'
Local authority officer

The implications of the dominance of flooding

Given the extent to which the Cabinet Office's emergency response and, in particular, community resilience materials focus on flooding, it is of value to reflect on the challenges that this might produce in the context of heatwaves. This is not a matter of heatwaves not receiving the same amount of attention – and, certainly, resources – as flooding; but rather, a matter of noting the ways in which an emphasis on flooding might frame broader emergency planning and community engagement in the context of extreme weather events. While we support the ongoing efforts of the Cabinet Office to identify the 'common consequences' that are associated with a range of emergencies⁴ – we are also keen to highlight ways in which the characteristics and consequences of heatwaves might differ from those of flooding, and therefore how heatwave planning should differ from planning for floods. Above all, we wish to highlight three issues.

⁴ Identifying the 'common consequences' of a range of emergencies is an important aspect of the National Resilience Planning Assumptions, which are not publicly available. This is also a feature of the Business Resilience Planning Assumptions (Cabinet Office, 2015).

The first relates to the key consequences of these events. Crucially, in the case of flooding, the aforementioned emphasis on rescue services means that the local responsibilities for community engagement and community resilience that are currently held by the fire service make perfect sense. By contrast, heatwaves are largely a public health issue, with infrastructural failure only at the extremes (PHE, 2016). In this context, community engagement by the fire service makes less sense, and this work might be better located within local public health services – such as, in particular: local community and social care providers, local VCS groups, the ambulance service, Clinical Commissioning Groups, the NHS and so on.

The second key distinction between flooding and heatwaves relates to the ways in which the social and spatial dimensions of vulnerability (Lindley et al., 2011) to these events is manifest. There are three key elements to this. First, spatially, while flooding can occur over large areas, it is more typically experienced over relatively small areas compared to the regional scale at which heatwaves are experienced. This means that spatial vulnerability to flooding is typically more concentrated than spatial vulnerability to heatwaves. Second, while vulnerability to flooding is likely to be experienced across social groups within affected areas, social vulnerability to heatwaves is likely to be peppered across these relatively large areas. Finally, the peppered nature of heatwave vulnerability is compounded by the ways in which it is affected by local conditions (the Urban Heat Island effect, the aspect of buildings, the presence of green space and so on). The implication of this is that identifying and appropriately supporting people who are most vulnerable to heatwaves – particularly those who are outside of institutional settings, such as hospitals and care homes – is much more challenging than is the case with flooding; the affected areas are potentially larger and vulnerable people are harder to identify and locate. This serves to emphasise the value of heatwave vulnerability mapping that allows concentrations of vulnerable people to be identified within the large spatial areas that might be affected (Climate Just, 2014). In addition, this further emphasises the importance of working with the VCS groups who will often be in direct contact with people who are more ‘vulnerable’ to heatwaves.

‘Heatwaves are less localised than flooding so you know, it will be all of the South of England.’
Local authority officer

The dominance of ‘excess winter deaths’

In the context of public health, ‘excess winter deaths’ – or, to put it another way, the impacts of cold weather – garner more policy attention than ‘excess summer deaths’ or the impacts of hot weather. For instance, local public institutions have long had plans for cold snaps, and non-statutory ‘excess winter deaths’ groups – constituted on much the same multi-agency basis as the Local Resilience Forums – were either a current or recent feature of the public health scene in two of our case studies. However, while local authorities, NHS trusts and hospitals may have heatwave plans in place, it was also clear that ‘excess summer deaths’ is a much

more novel issue that struggles for policy purchase alongside 'excess winter deaths'. It is obviously important to note that there are many more excess winter deaths each year – for instance: 18,200 in 2013/4 and 43,900 in 2014/5 (ONS, 2015) – than excess summer deaths, which are estimated at 2,000 each year. Despite predicted future reductions in excess winter deaths and increases in excess summer deaths, this difference is likely to remain sizeable. More subtly, however, we note that – within UK culture – hot weather is typically celebrated widely among the population (even, as we have seen, people who might be 'vulnerable' to heatwaves) and in the media.

'I have an interest in heat wave planning because I have to write the heat wave response plan for the Trust and I also look after the cold weather plan.'
Hospital resilience officer

Long term planning for heatwaves

The final domain in which this relative neglect was apparent was longer term urban and spatial planning; this is a crucial issue because inappropriate building design (for instance, building orientation, use, materials, layout, ventilation and heat management), high building density and lack of green space are all key determinants of heatwave vulnerability. This challenge is illustrated by the relative absence of long term planning in the Heatwave Plan for England (PHE, 2016). It was also highlighted by the practical difficulties that we experienced trying to engage with spatial planners in local authorities and at the Greater London Authority. Despite considerable effort in our three cases studies and with the Greater London Authority, we were able to meaningfully engage with only one local authority planner. As this comment illustrates, planning teams are not engaged with the heatwave issue because it is not identified as a priority in legislation or guidance. A start has been made in two areas. Within the Greater London Authority, the Environment team (as opposed to the planning team) convenes regular meetings, maintains a catalogue of all activities, and has published a 7-point plan for managing heat risk in London, which includes these long term spatial planning issues (as well as developing new knowledge, vulnerability mapping, retrofit and so on) (GLA, 2015). The cross-government group on overheating has representatives from the Building Regulations and Planning teams in the Department for Communities and Local Government, and is also beginning to tackle this issue (Defra, 2016).

'I now get consulted by planning: it's in a flood zone can they build there? I've never been asked about heat.'
Emergency planner in local authority

'No, we wouldn't specifically consider heatwaves when determining what is built.'
Local authority planning officer

Responding to these challenges

During the workshop programme and our other engagements with policy actors, consideration of these challenges allowed us to highlight a number of policy opportunities. In the context of the relative neglect of heatwaves, many of the national and local policy actors that we engaged with (as well as the VCS

groups) valued the Urban Heat project simply because it raised the profile of heatwaves and heatwave planning; in particular, the project was valued because it provided space and time within which valuable internal and external conversations – which would not otherwise have happened – could take place. This suggests that there is still a considerable opportunity in the ongoing advocacy of heatwaves as a policy issue. As we have mentioned, the UK Climate Change Risk Assessment evidence report (ASC-CCC, 2016) has particularly emphasised the risks associated with heatwaves, and it is to be hoped that this – and the forthcoming National Adaptation Programme – might raise the profile of the issue.

Within the context of highly crowded policy landscapes and diminishing resources, the idea of **'bundling' planning and action on heat with other existing policy issues** was discussed and operationalised in the project. As we have mentioned, Islington's SHINE project represents an excellent example of 'bundling' because it deals with both winter and summer excess deaths, as well as a range of other issues. For instance, as a result of the project action, in one of our case studies, an already existing 'excess winter deaths' group run by the local authority public health team has redefined its remit and been renamed the 'excess seasonal deaths' group. In another of our case studies, a 'winter excess deaths' group that had stopped meeting is going to be reformed as an 'excess seasonal deaths' group. A key recommendation of the project, therefore, is that – at local, London-wide and national levels – policy actors working on heatwaves should create and – where they already exist – further develop relationships and strategies with others working on associated issues, in particular excess winter deaths and flooding, but also energy efficiency and other public health issues.

The second opportunity that we were able to identify relates to the ways in which issues become actionable priorities for officers in local authorities. While statute, law and regulation relating to heatwave planning and response are unlikely in the short term, our discussions indicate that the **publication of national benchmarking data**, guidelines, specified outcomes and so on all offer routes to greater local policy attention and

'It was valuable for raising personal awareness, and I am looking forward to hearing and sharing the final outcomes.'
Community Resilience specialist,
Cabinet Office

'I learnt a lot about heat and how it affects all kinds of people. It was interesting to learn who is responsible for heat and the government agencies that work together.'
Hackney VCS group

'We're quite keen to focus on heatwave as well as cold weather. We're still formulating our thinking so this project has come at an interesting time for us.'
Local authority housing officer

'Personally, I have policy groups coming out of my ears. Sometimes you think gosh, if only you'd done that in one meeting, instead of me having the same conversation with four separate groups.'
Local authority housing officer

'Yes, public health outcomes are very key, structured outcomes that are all nationally done, so you can compare your local borough against any local borough in the country and look at what everyone's doing.'
Local authority public health officer

action. That said, we are aware that PHE have attempted to gather data about actions at the local level in the past and that this was not successful. While efforts toward benchmarking perhaps bear repeated attention in the future, a more easily actionable recommendation in the short term might be to design the revised Heatwave Plan in ways that more easily facilitate self-assessment at the local level, on the basis of the guidelines that are already offered.

Turning to the issue of **mitigating the impacts of future heatwaves through longer term spatial planning and building design**, it is clear that the cross-government work of the overheating group and the efforts of the GLA Environment team are of great importance and require urgent attention.

3. Community resilience

Enthusiasm and caution about 'community'

Throughout the Urban Heat project, we encountered widespread enthusiasm among policy stakeholders for the general ideas of community engagement, community resilience, and greater community involvement in heatwave planning and community resilience planning. This was the case at local, London-wide and national levels, and across the core sites of policy and practice in these domains, such as: local authorities, PHE, the Cabinet Office, Defra, the Fire Brigade, the Greater London Authority, the London Heat Risk Group, and London Boroughs. Of course, community resilience and its benefits can be understood in many ways. Sometimes, this enthusiasm was couched in terms of the need for greater capacity to act, or a sense of the community taking greater responsibility itself, sometimes within the context of shrinking public sector budgets. On other occasions, the rationale was related to ideas about the special or different things 'the community' might offer, such as local knowledge or a locally appropriate approach.

'We'd like to improve monitoring of heat-related health outcomes at local level, and whilst this is very methodologically challenging using routine data, we are continuing to explore what could be done. The alternative is to look at process measures such as actions taken by health and social care providers. However collecting this data would place additional burden on local partners and previous experience suggests there might be a poor response rate, unless such a data return was made mandatory.'

Officer in Public Health England

'We don't actually have much data, we don't have any indicators, we're not measured on anything for heatwaves in the summer.'

Local authority public health officer

'It would be great to have people that are more empowered basically to help themselves and help others in their communities.'

Local authority emergency planner

'The community is willing to engage if you are willing to engage with them.'

PHE (London) officer

'Community resilience is something that I'm very interested in because we have a duty to go out to the community and try and help them during an incident and if I can build in some resilience there so that I don't have to be worrying about them whilst dealing with a situation that would help me.'

Local authority emergency planning officer

'We are losing resources, we're losing staff, we're losing a lot of corporate knowledge we are whittling away at our resilience and our ability to do things which is also why having something in the community is useful because they are then supporting us as well as us supporting them.'

Emergency planner in local authority

'It's all about being adaptable to ensure that your approach works in local situations – you have to recognise that one size does not fit all.'

PHE (London) officer

In some contexts, community engagement was understood primarily as a means of developing appropriate communications materials. As this comment illustrates, on occasion, we also encountered reflexivity and uncertainty about what community resilience means.

At the same time, a number of the policy stakeholders expressed caution relating to the difficulties of implementing change with respect to community action within their institutions. For instance, one of the policy stakeholders identified the challenge of producing evidence that is compelling in policy circles on the basis of relatively short-term 'community involvement' case studies or pilots. A number of times, the image of case study reports gathering dust was evoked. Another interviewee highlighted this issue in a different way, noting that it is very challenging for policy advocates of community action to gain widespread support within their organisations. The highly bureaucratic nature of local institutions was also highlighted as a potential dampener on any efforts towards community resilience. More broadly, we also identified – through our own experiences and the comments of some of our policy interviewees – two limitations associated with ways in which the idea of community resilience is presented in policy and operationalised in practice.

'Yes, we appreciate that community resilience is important, but we are still trying to figure out exactly what it means.'
Resilience professional in GLA

'It's very difficult because people want evidence of legacy which only comes through implementation, so how do you create pilots that create legacy through community involvement? So, it's always difficult to get the funding to scale up. The reports tend to sit on shelves gathering dust, so the challenge is how to build in legacy right from the beginning.'
Officer in Greater London Authority

'There is commitment on my side to take these community approaches forward but we need to recognise that there is a hearts and minds battle to achieve real change.'
Officer in PHE (London)

'My only reservation would be government authorities might make it a too complicated beast and the effect of that on the enthusiasm at the grassroots level.'
Resilience professional in a hospital

Narrow understandings of the VCS and the 'community'

The first limitation relates to the ways in which the VCS and the 'community' are understood in policy and practice. Possibly due to the strong emphasis on flooding in the community resilience policy agenda (**Cabinet Office, 2011; 2016**), our London case studies and our broader investigations of responses by county councils suggests that the emphasis on rescue services in flooding response often leads to an understanding of the VCS that particularly focuses on the role of 'voluntary emergency responders' – such as local 4 x 4 clubs, St John's Ambulance and Red Cross. The **Cabinet Office (2011)** and **Scottish Government (2013)** materials also emphasise 'voluntary emergency responders'. This is a helpful development, of course. However, we are concerned that it also has the possible effect of downplaying or obscuring the relevance of the rest of the VCS – in particular, those who work most closely with 'vulnerable' people – in the context of community resilience. As we discussed earlier, identifying and finding people who are 'vulnerable' to heatwaves is challenging and the broader VCS offers one opportunity in this regard.

Further, as this comment and the Kent case study in Box 1 illustrate, in local contexts, ideas about 'community' are often elided with or limited to parish councils – these are the smallest scale of elected local government in England (the equivalent in Scotland are community councils). Parish councils are certainly an effective route to some sections of the community, and – from a democratic perspective – parish councils are an appropriate point of engagement. At the same time, it appears that this emphasis on parish councils may lead to a neglect of more effective routes to other, perhaps more vulnerable, sections of the community. In this regard, it is important to note that this emphasis on parish councils – and community councils in Scotland – is also firmly embedded in the online materials provided by government in both England and Scotland (**Cabinet Office, 2011; 2016; Scottish Government, 2013**).

'Parish Councils are the people we mostly engage with to develop a Community Emergency Plan – and I think that's similar to most places, but that's just an easy route first start, there is work with other communities, and there are some plans based on flood action groups and other groups, but the majority are parish councils.'

Local Resilience Forum manager

With these thoughts in mind, it is perhaps not surprising that – although we found that Local Resilience Forums are characterised by effective collaborative action between a range of statutory bodies and, in some cases, 'voluntary emergency responders', such as St John's Ambulance – we did not come across any examples of broader VCS involvement in community resilience planning and implementation. We also did not come across examples of Local Borough Forums working with or through local retailers. Similarly, in the context of communication, our impression is that this system works well within the specific context of the local public sector (local authorities, the emergency services, schools and care homes etc). However, as this comment illustrates, our experiences suggest that emergency planners in local authorities are aware that their communications with the general public could be improved. Further, although it was clear that email communications with VCS groups do form part of some emergency planners' communications with the general public, our understanding is this tends to happen in a somewhat haphazard way and tends to focus on relatively few larger organisations, such as Age UK. Certainly, the evidence from our workshops is that communications regarding heatwaves (and other community resilience issues) do not reach the vast majority of VCS groups.

'I think we're good at talking amongst ourselves and partner organisations through the Borough Resilience Forum. What I think we're not so good at is the actual getting out into the community.'

Emergency planner in local authority

'It's the standard way we do things, government isn't that amazing at doing it, full stop, so I'll put my hand up to say that it could always be better. So we do things like using Twitter, Facebook, our web page and hope that people look at it and inform themselves.'

Emergency planner in local authority

Long term planning for resilience

The final limitation that we identified with respect to the ways in which community resilience is understood and operationalised brings us to the relative neglect of long term spatial and urban planning that we discussed above. As we suggested earlier, a criticism of the resilience agenda is that it focuses too much attention on response in the context of emergencies and extreme events. Of course, emergencies and extreme events are challenging, so such attention is warranted. However, we observed during the project that longer term planning for climate change adaptation or mitigation is typically not a feature of community resilience efforts, either at local or national level (also see Howarth, 2016). Reinforcing this point, one of our policy interviewees noted that community resilience activities focus on current events, but are not future-focused. A further challenge related to longer term planning for heatwaves and hotter weather, as well as other community resilience issues, is that it points to a need for greater multi-disciplinary policy work, including – in particular – specialists in spatial planning and the built environment, as well as social housing and care providers whose services are most used by ‘vulnerable’ people (in addition to emergency planners and public health professionals).

‘Yes, every parish in [county] has a community resilience plan and these are good for dealing with floods and stuff locally, but do they say ‘this is what’s coming down the line in thirty, forty, fifty years’ time due to climate change?’ I don’t think too much is done around that.’
Officer in PHE (London)

Responding to these challenges

The Urban Heat project has illustrated the value of explicitly extending the key stakeholders in community resilience – from just ‘voluntary emergency responders’ and parish councils – to also **include the full range of VCS groups. Including the VCS in community resilience has the potential to bring a distinctive form of local knowledge to bear, which can be effectively triangulated with institutional knowledge to produce new and compelling ideas for community resilience.** The ideas of the VCS groups with respect to: ‘bridges’ or relationships, communications via the VCS, resources and materials and the inclusion of local retailers in community resilience have considerable potential. In support of the implementation of these actions at local level, these findings will be of value in the context of the Cabinet Office’s and Scottish Government’s future work on community resilience. In addition, the project also points to the importance of a **long term planning element to the resilience and community resilience agendas.** As in the specific context of heatwaves, this requires cross-agency and multi-disciplinary collaboration between, for example, the Cabinet Office, and DCLG, informed by the Committee on Climate Change.

7 Key findings and recommendations

In this brief chapter, we summarise our key findings and recommendations in the contexts of heatwaves and hot weather, community resilience and the project design.

1. Key findings

Urban Heat has produced eight key findings:

- Among 'vulnerable' people and the VCS groups that work with them, awareness of the risks associated with heatwaves is relatively low, and the vast majority of VCS groups are not involved in local heatwave planning and response;
- Local and national policy attention to heatwaves is relatively low, and longer term planning for heatwaves is particularly problematic;
- Policy and practice in the context of community resilience are constrained by narrow understandings of 'community' and the dominance of flooding;
- Although this is not unproblematic, within the context of a well-designed and implemented participatory process, representatives of VCS groups are able to rapidly and meaningfully draw on distinctive local knowledge and produce innovative ideas that are of collaborative value to local, regional and national stakeholders in statutory bodies;
- The capacity, capability and knowledge base of the public sector and the VCS are being eroded due to 'austerity';
- Combining workshop-based participatory action research (PAR) case studies with ongoing local, regional and national policy engagement, and independent evaluation has the potential to produce meaningful policy impact at local, regional and national levels;
- At the same time, while it is relatively straightforward to introduce new ways of thinking among some policy actors, it is much more challenging to make practical changes, and the value of participatory approaches is often not widely appreciated in policy contexts;

- Within participatory action research, the following issues are most important: working with local teams; high quality workshop development and implementation; the principles of mutual learning and shared expertise; dealing with 'inclusion' appropriately; and getting the right policy stakeholders in the room.

2. Key recommendations

Community resilience

We recommend the following for consideration by the Cabinet Office and the Community Resilience Working Group for inclusion in future community resilience materials, and implementation at the local level:

- Greater integration of community resilience and heatwave planning, through liaison between the appropriate teams in Public Health England and the Cabinet Office;
- Greater emphasis on the participation of a range of VCS groups (not just 'voluntary emergency responders') in community resilience planning (for instance, in Local Resilience Forums) and response (for instance, in communications and alerts);
- Greater emphasis on the participation of local retailers in community resilience, within the context of planning, communications and the provision of resources;
- Greater emphasis on the role of the community in longer term planning for climate change;
- Engagement with national VCS organisations (such as Age UK) and national VCS co-ordinating organisations (such as National Council for Voluntary Organisations).

Drawing on these findings as well as the broader literature, we are also keen to offer a description of community resilience that we hope will be of value in policy *and* will maximise its potential in practice:

- Community resilience should focus on the most 'vulnerable' and should be mindful of the ways in which the dimensions and spatial distribution of 'vulnerability' vary across different events and issues;

- Community resilience is best understood as both an array of capacities or capabilities and a way of doing things that maximises these:
 - a. Community resilience is the broad-based local capability to plan and prepare for, respond to and recover from adverse events and adverse background conditions. Community resilience is also the capability to learn, plan and adapt (and even transform) in ways that mitigate the impacts of adverse events in the longer term future;
 - b. As a way of doing things, community resilience has the potential to bring to bear a wide and, therefore, powerful variety of forms of *both* local knowledge, insight and ideas *and* capabilities and capacities (particularly with respect to 'vulnerable' people);
- While community resilience might often be led by local statutory bodies, its potential is maximised by approaches to planning and practice that are inclusive of a range of VCS groups (not only 'voluntary emergency responders'), local retailers and individual residents;
- Community resilience is reliant on each of these sectors thriving, and on the good personal relationships and stable cross-sector institutional structures that facilitate effective collaboration;
- While it is implemented at the local level, effective community resilience relies upon appropriate signals and support from regional and national government;
- Finally, community resilience can also be driven from the outside of local statutory bodies, and may be in active resistance to them.

Heatwaves and heatwave planning

We recommend the following issues for consideration by PHE, other lead government bodies and the Cross-Government Group on Overheating, for inclusion in future Heatwave Plans, overheating strategies and implementation at the local level:

- Integration of heatwave planning with the community resilience agenda, though with due consideration of the ways in which the characteristics of heatwaves imply different ways of thinking and responding when compared to flooding;
- In the longer term, revisiting the potential for the development and publication of national benchmarks for local heatwave planning and response;
- In the shorter term, the design of the revised Heatwave Plan could be implemented in ways that facilitate self-assessment at the local level.

- Emphasis on the ways in which local emergency planners and public health professionals can 'bundle in' new action on heatwaves with existing activities (such as advice services and public information campaigns);
- Greater cross-government emphasis on long term urban and spatial planning for heatwaves;
- National public communications on heatwaves that goes beyond leaflets (such as working groups, advice services and public information campaigns).

Knowledge transfer

- Development of a programme within which researchers and policy stakeholder 'champions' work together to explain and demonstrate the distinctive value of community engagement and participatory action research within policy institutions;
- Consideration of new project funding models that would allow longer term impacts to be more fully understood and assessed and the scaling up of the practical insights from case study projects;
- Within the context of the government's research 'impact' agendas, greater emphasis on the importance of ongoing policy engagement throughout projects (as opposed to end-of-project dissemination only).

8 Selected bibliography

The full bibliography is available at: www.psi.org.uk/urban_heat
All web links were working in December 2016.

Adaptation Sub-Committee of the Committee on Climate Change (ASC-CCC) (2016) *UK Climate Change Risk Assessment 2017*, www.theccc.org.uk/uk-climate-change-risk-assessment-2017

Cabinet Office (2011) *Strategic National Framework on Community Resilience*, www.cabinetoffice.gov.uk/resource-library/community-resilience-resources-and-tools

Defra (2016) Addressing the risks from overheating in domestic and non-domestic buildings – a strategic approach, Defra Climate Change Adaptation Policy team, please contact: Nick.Jackson@defra.gsi.gov.uk

Fals Borda, O. (1995) Research for social justice: Some North-South convergences, Plenary Address at the Southern Sociological Society Meeting, Atlanta, April 8 1995, www.comm-org.wisc.edu/si/falsborda.htm

Lindley, S., O'Neill, J., Kandeh, J., Lawson, N., Christian, R. and O'Neill, M. (2011) Climate change, justice and vulnerability, www.jrf.org.uk/report/climate-change-justice-and-vulnerability

Public Health England (2016) Heatwave Plan for England: *Making the Case: the impact of heat on health – now and in the future*, www.gov.uk/government/uploads/system/uploads/attachment_data/file/429572/Heatwave_plan_-_Making_the_case_-_2015.pdf

Public Health England (2016) *Heatwave plan for England*, www.gov.uk/government/publications/heatwave-plan-for-england

Reason, P. and Bradbury, H. (2008) *The Sage Handbook of Action Research: Participative Inquiry and Practice*. London: Sage.

Scottish Borders Council (2016) Resilient Communities, www.scotborders.gov.uk/info/20008/emergencies_and_safety/191/resilient_communities; and Scottish Borders Alert, www.sbalert.co.uk
Contact: Jim.Fraser@scotborders.gcsx.gov.uk

Scottish Government (2013) *Building Community Resilience: Scottish Guidance on Community Resilience*. Edinburgh: Safer Scotland, www.gov.scot/Resource/0042/00421210.pdf

Twigger-Ross, C., Coates, T., Deeming, H., Orr, P., Ramsden M. and Stafford, J. (2011) *Community Resilience Research*. London: Collingwood Environmental Planning Ltd, static1.squarespace.com/static/54c22ee7e4b060a897523254/t/5639054be4b09d39bcec4da4/1446577483128/CEP+DSTL+Community+Resilience_FINAL+REPORT.pdf

Twigger-Ross, C., Brooks, K., Papadopoulou, L., Orr, P., Sadauskis, R., Coke, A., Simcock, N., Stirling, A. and Walker, G. (2015a) *Community Resilience to Climate Change: an evidence review*. York: Joseph Rowntree Foundation, www.jrf.org.uk/report/community-resilience-climate-change

9 Appendix Workshop programmes

Programme for the first VCS workshop

TIME	ACTIVITY	MINUTES
09.00	Arrival of team, set-up	45
09.45	Informal welcomes/Registration/Consenting/evaluation1/Tea and coffee	15
10.00	Welcome, housekeeping, team introductions	5
10.05	Programme outline, Project context. Workshop aims (1+2), basic heatwave info	15
10.20	<p>"Getting to know you."</p> <ol style="list-style-type: none"> 1. Straightforward round the circle introductions, inc. team: Your name, organisation and what it does? 2. Discussions at tables: perspectives/memories about heatwaves? 3. Tables feedback and discussion 	40
11.00	Very short break to go to the loo and get drinks	10
11.10	<p>'Who wants to be a millionaire' Heatwave Game</p> <p>A series of multiple choice questions designed to share and deepen knowledge – and prompt discussion – about the ways in which institutions implement long-term adaptation to heatwaves and respond to heatwave events, including identifying 'gaps'.</p>	20
11.30	At tables (3 or 4): further discussion of issues raised during the earlier sections. Taking notes on flip charts.	20
11.50	<p>Between now and the next workshop</p> <ol style="list-style-type: none"> 1. Discuss urban heat with colleagues and 'clients' 2. Start to consider ways in which 'the community' could start to work with local institutions 	5
11.55	Final questions. Thank you's.	5
1200	Lunch Evaluation2	45
12.45	Start to clear up	15
13.00	Finish packing away	

Programme for the second VCS workshop

TIME	ACTIVITY	MINUTES
09.00	Arrival of team, set-up	45
09.45	Arrival of attendees, informal welcomes, tea and coffee; consent new participants	15
10.00	Welcome, housekeeping, team re-introductions	5
10.05	Programme outline	5
10.10	Re-introduction to the project	10
10.20	Check in and re-forming the group <ul style="list-style-type: none"> • Tell us who you are and which organisation you represent. • Reflections on the first workshop and the discussions you have had in between workshops (this will include some ideas for later in the workshop). 	20
10.40	'Mapping the area (in three groups at tables with maps) <ul style="list-style-type: none"> • Using maps to highlight local resources, venues, spaces, buildings, organisations, networks, risks etc • Feedback and discussion 	15 5
11.00	Long list of ideas for community-led resilience (in three/four groups at tables with flip chart sheets) <ul style="list-style-type: none"> • Brief is for each table to agree on up to five ideas that they would like to recommend to local institutions. 	20
11.20	Short list of ideas for community-led resilience (group discussion) <ul style="list-style-type: none"> • Feedback of up to five ideas from each group. • Whole group discussion to agree on short list of five. 	25
11.45	Next steps <ul style="list-style-type: none"> • Next workshop and process 	Up to 15
12.00	Closing remarks. Thank yous. Close.	
12.05	Lunch until 1pm (team also start to pack away) <ul style="list-style-type: none"> • Evaluation sheet • Pack away 	55
13.00	Finish packing away	

Programme for the VCS-policy workshop (workshop 3)

TIME	ACTIVITY	MINUTES
09.00	Arrival of team, set-up	45
09.45	Arrival of attendees, informal welcomes, tea and coffee (consent those who need it)	15
10.00	Welcome, housekeeping, team introductions	5
10.05	Programme outline	5
10.10	Introduction to Urban Heat project	10
10.20	Introductions <ul style="list-style-type: none"> • Tell us who you are and which organisation you represent. • Tell us an experience relating to heat. 	20
10.40	Introduction to heatwaves	10
10.50	Introduction to the five-step process for discussing proposals	10
11.00	Proposals 1: Bridges (presented by VCS group representative) Discussion	5 15
11.20	Proposals 2: Communication and awareness (presented by VCS group representative) Discussion	5 15
11.40	Proposals 3: Resources (presented by VCS group representative) Discussion	5 15
12.00	Closing remarks. Next steps. Thank yous. Close.	10
12.10	Lunch until 1pm (team also start to pack away) <ul style="list-style-type: none"> • Distribution of 'gift' • Evaluation sheet tbc? 	55
13.00	Finish packing away	

