

Communities Living Sustainably:

Climate resilience information directory

Dealing with impacts of climate change in your area...



...What you need to know



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Introduction

What is Communities Living Sustainably?

Communities Living Sustainably (CLS) is a £12 million programme funded by the Big Lottery Fund and coordinated by The Groundwork UK Learning Partnership.

Twelve community groups in England have received funding to deliver projects which help improve the sustainability of their local community. The programme runs for five years, with these communities providing inspiration to other communities across England and sharing what they have learned with each other.

The communities are supported by the Groundwork UK Learning Partnership which is made up of five organisations, each with expertise in tackling climate change and helping communities to live more sustainably. The partnership comprises Groundwork UK, the Energy Saving Trust, the Federation of City Farms and Community Gardens, the New Economics Foundation and the Building Research Establishment (BRE).



A key strand of CLS is to build climate resilience and help vulnerable people to adapt to climate change. CLS is, in fact, referenced in the National Adaptation Programme as an initiative helping vulnerable groups adapt to climate change.

What is the role of the Information Directory?

In September 2014, the Groundwork UK Learning Partnership published a learning report on how the communities funded by the CLS programme had driven climate adaptation so far which highlighted challenges faced. Two main lessons were identified.

One was that several CLS projects were struggling to instigate community-led climate adaptation and that perhaps greater integration between community-led and council-led climate resilience activities should be encouraged. Another was that CLS Community groups lacked examples of practical processes and types of resilience activities that can be led or influenced by community organisations.

This information directory will address these two issues by helping community groups become more informed and equipped to deal confidently with the impacts of climate change in their area.

The first section provides links to online resources which assist with understanding the global and local impacts of climate change, financial and organisational resources which are at the disposal of communities when looking to build climate resilience and how to adapt to the threats posed by climate change.

Secondly, five case studies have been written to document and highlight the key findings from a number of CLS groups who have successfully driven climate change adaptation in their area.

Definitions

One of the challenges for community groups engaging with this topic is the amount of guidance and literature which is technical and requires specialist knowledge. This information directory aims to use and reference resources which are more accessible to the non-expert audience. However describing certain issues would be difficult without the use of some technical terms. The definitions below should prove useful for understanding terms within this directory.

Weather	Conditions we experience within a short timeframe such as 1 hour or a day.
Climate	The average weather and its variability over longer timeframe such as 5 years or 30 years.
Climate mitigation	Efforts to reduce or prevent emissions of greenhouse gases. This can be through new technology, renewable energy, management changes, consumer behaviour change or policy changes.
Climate adaptation	Measures taken to help individuals, communities and ecosystems cope with climate change impacts. These might be direct adaptation measures, such as building a heatwave-resistant home or indirect, such as providing advice on designing a heatwave-resistant home. It can also involve both adapting in advance of and following a climate change impact. For example, a home can be adapted to become more resistant to flooding and following a flood where public transport is disrupted the occupants of the flooded house can adapt their mode of transport to cycling.
Climate resilience	The ability of communities and ecosystems to resist the impacts of climate change and also change to function more sustainably. Climate adaptation is considered to be a facet of climate resilience; however, becoming climate resilient also involves striving for more holistic goals such as equality and improving wellbeing in society. Adapting to climate change can be said to improve resilience.
Climate risk	A possible impact of climate change affecting humans or nature. These risks can be direct, such as flooding, or indirect, such as loss of biodiversity services following the extinction of a species due to climate change.
Climate vulnerability	Exposure, sensitivity and adaptive capacity to the effects of climate change. Vulnerability therefore takes into account both the risk itself and also factors which will determine how humans will be impacted by the risk.
Fuel Poverty	<p>This is the term used to describe a household who needs to use a large proportion of their wage to pay their heating bill. In England fuel poverty is measured by the Low Income High Costs definition, which states a house is in fuel poverty if:</p> <ul style="list-style-type: none">- They have required fuel costs that are above average (the national median level)- Spending that amount would mean they are left with a residual income below the official poverty line <p>The factors which determine whether a house is fuel poor are the energy efficiency of the property, the cost of energy and household income.</p>
Green & Blue Space	An area consisting predominantly of either vegetation (trees, plants, grass etc) or a body of water (a lake or river etc).

Climate Resilience

Global Climate Change impacts

Climate change involves a long term change in weather patterns. The scientific community today generally accepts that climate change is happening and that humans are the main driving force. The carbon emitted by our transport, buildings, power stations and industrial processes are having a net warming effect on our climate and increasing the acidity of the oceans. The IPCC Assessment Report 5: Working Group 2- Impacts, Adaptation and Vulnerability provides a summary of the scientific consensus on how climate is affecting and will continue to affect the world and how humans can respond. Existing in a socially and economically interconnected world means that climate change impacts felt directly in another country may have indirect impacts (through migration or changes in food prices, for example) on the United Kingdom:

- The [Summary for Policymakers](#) is a readable, non-technical document aimed to summarise the impacts of climate change for people looking to implement a policy response to the threat.
- [Part A: Global and Sectoral aspects](#) and [Part B: Regional aspects](#) provide more in-depth information on the impacts on climate change on specific economic and demographic sectors and on different parts of the world respectively.

UK Climate Change impacts

[Climate: Observations, Projections and Impacts](#) is a report published by the Met Office summarising the main impacts of climate change in the UK in order to inform national, regional and local adaptation policies and strategies.

This [BBC Article on Climate Change impacts](#) gives a simple overview, aimed at the general public, of the threats posed by climate change and how they relate to the UK.



UK Climate Change policy

Once carbon is in the atmosphere, it continues to affect the climate for hundreds or thousands of years. Therefore, while climate mitigation is hugely important for reducing the extent of climate change impacts, climate change will still continue to happen to some extent regardless of any changes we make to our activities. It is widely accepted that the impacts will be mostly negative and will affect every human being to some extent. A wide range of people, public bodies, institutions and companies therefore will need to be incentivised and supported in adapting to climate change.

[The Climate Change Act](#) was passed in 2008 in response to the Kyoto Agreement which was ratified in 2005. It establishes the framework for reducing the UK's carbon emissions along with setting a target of an 80% reduction in greenhouse gas emissions and carbon budgets. The UK Climate Risk Assessment, National Adaptation Programme and Adaptation Reporting Power were instigated by this act and are described below:

- [The UK Climate Risk Assessment](#) first took place in 2012 and will occur every five years. It assesses the major risks posed by climate change and potential opportunities. In 2012 it notably highlighted the increasing prevalence of flooding and dangerous heatwaves.
- [The National Adaptation Programme](#) was created in 2013 as the government strategy for tackling the risks highlighted in the UK Climate Risk Assessment. It will also run every five years and focuses on adaptation to and resilience towards adverse environmental impacts. It targets five thematic areas: buildings and infrastructure, health and wellbeing, businesses, natural environment, agriculture and forestry. The objectives of the programme are to raise awareness, build resilience, implement actions that require a long lead-in time and address evidence gaps.
- [The Adaptation Reporting Power](#) is legislation which, from 2013 requests that public service organisations report to the government on their actions to build resilience to climate change. Under the latest update to the strategy, reporting is only voluntary.

What can community groups do?

Community groups have a key role to play in building climate change resilience, particularly considering local authorities are having to operate with increasingly constrained budgets. Community groups engage with groups of people who have something (such as location or mutual interest) in common. These groups provide an ideal structure for sharing information and conducting strong climate change adaptation efforts.

This is partly because people are more likely to invest in and engage with issues which affect themselves or people close to them. In addition the local knowledge of community groups and local residents can be invaluable in identifying climate vulnerabilities and adaptation measures.

Community groups maintain the interests of their target group as a top priority however they can also encourage and advise a wide range of individuals and organisations in order to maintain these interests. Here are some examples of ways in which community groups and their local partners can drive climate adaptation.

Issue	Encourage	Advise on
Flooding	<ul style="list-style-type: none"> Subscription to Environment Agency flood warning helpline Uptake of sustainable drainage systems and trees for interception 	<ul style="list-style-type: none"> Finding property insurance for homes in a high flood risk area Emergency flood plans Council flood plain management
Excess heat	<ul style="list-style-type: none"> Incorporation of green and blue space un urban areas 	<ul style="list-style-type: none"> Use of solar shading and other measures to avoid summer heat gain
Excess cold	<ul style="list-style-type: none"> Uptake of available funding for energy efficiency (such as ECO) Affected residents to register with a fuel poverty charity 	<ul style="list-style-type: none"> Switching energy provider Installing insulation or a more cost efficient heating system
Biodiversity losses	<ul style="list-style-type: none"> Mapping of local ecology 	<ul style="list-style-type: none"> Protection of local biodiversity
Scarcity of resources & energy	<ul style="list-style-type: none"> Reuse and recycling of waste Energy efficient technology 	<ul style="list-style-type: none"> Changing behaviour and business practice to use less waste and energy
Food & water shortages	<ul style="list-style-type: none"> Water meters and water-saving devices such as rainwater capture 	<ul style="list-style-type: none"> Growing food locally and creating a market for surplus produce
Business financial losses	<ul style="list-style-type: none"> Investors to consider financial implications of climate change 	<ul style="list-style-type: none"> How businesses can manage their supply chain to reduce risk to climate
Impaired public health & wellbeing	<ul style="list-style-type: none"> Local public health officers to take account of climate risks 	<ul style="list-style-type: none"> Safe behaviour during flooding, excess heat and excess cold
Heat impacts on agriculture & forestry	<ul style="list-style-type: none"> Farmers and forest managers to plant species which use less water and are heat-resistant 	<ul style="list-style-type: none"> Farms and forest managers on how climate change will affect them Preventing fires in very dry areas
Disrupted or damaged infrastructure	<ul style="list-style-type: none"> Recognition of interdependencies between the transport, energy, IT and water sectors and that they need to collaboratively adapt 	<ul style="list-style-type: none"> Safe cycling and walking routes when public transport fails Keeping homes and businesses comfortable and functional during power cuts or loss of internet

Tools & Resources

This section provides links to online resources which are at the disposal of communities who are looking to build climate resilience. The first four websites signpost a number of tools and resources. Following this, 25 tools are presented and described. All of the tools and resources are free (unless stated) and are presented with the intention of being useful to community groups.

Signposting websites

A number of websites exist which also signpost other tools and resources associated with climate adaptation. To avoid excessive overlap, this section summarises and provides links to the climate adaptation component of these websites.

<u>Climate Just</u>	<p>Climate Just is a project jointly funded by the Joseph Rowntree Foundation as part of its Climate Change and Social Justice Programme and by the Environment Agency Midlands Region to ensure socially equitable climate resilience measures. The website helps users identify vulnerable people to climate change and develop socially equitable responses to climate change. It contains:</p> <ul style="list-style-type: none">• A climate vulnerability mapping tool (discussed below)• Case studies showing the application of Climate Just• Information on socially just responses to climate change• Links to a number of other relevant resources and tools
<u>Climate UK</u>	<p>Climate UK is a national network coordinating local, bottom-up climate action. The group are interested in partnering with community groups encouraging climate resilience. The website contains:</p> <ul style="list-style-type: none">• The Severe Weather Impacts Monitoring System (discussed below)• Information and contact details for the Climate UK network• A resources page containing links to other useful websites and case studies• Links to a number of other relevant resources and tools for local authorities and businesses
<u>UKCIP</u>	<p>UKCIP is a research and analysis organisation which conducts work in climate adaptation and impacts, climate science, and vulnerability analysis, knowledge exchange, training and communication. Their website contains:</p> <ul style="list-style-type: none">• The AdaptME Wizard climate adaptation tool (discussed below)• Details of current projects conducted by UKCIP• Climate adaptation case studies
<u>Adaptation Planning Database</u>	<p>The convention on biological diversity provide a database with “web-based guidance on the integration of biodiversity within adaptation planning”. The website contains:</p> <ul style="list-style-type: none">• Studies on identifying vulnerable ecosystems• Case studies and assessment tools for assessing threats to these ecosystems• Case studies on implementing changes which benefit ecosystems• Tools for monitoring changes in biodiversity
<u>UNEP: Climate Change</u>	<p>The UNEP is a body of the UN which provides global leadership and information to a range of stakeholders on climate change. The website contains a resources page with links to tools such as:</p> <ul style="list-style-type: none">• Adaptation and Vulnerability to climate change: The Role of the Financial Sector• Climate Change Adaptation and Mitigation in the tourism sector: Frameworks, tools, practices

Structure of tools and resources

This information directory is predominantly created for community groups and this was considered when structuring this tools and resources section. Community groups promoting climate change adaptation will largely work through chronological climate adaptation stages. During each stage they may have to deal with a number of climate risks and engage with a variety of stakeholders. It was therefore appropriate to categorise the tools by the stage of climate adaptation they address and then denote who the tool is useful for and which climate risk is tackled by the tool.

Stage of adaptation

The tools and resources have been broadly divided and grouped under headings according to the stage of climate change adaptation they address. A number of tool and resources exist which assist with more than one of the following stages of adaptation. Where this is the case, the tool or resource has been assigned to the stage at which it was determined to be the most useful:

Identifying vulnerabilities and risks

The impacts of climate change will vary across the UK and will fluctuate within smaller areas. This section presents tools which help the user gather understandable and reliable information on local climate change impacts and who and what will be most vulnerable to those impacts.

Identifying local resources and support

This section highlights resources and support which can be used to build climate resilience:

- National and local sources of funding
- Groups already working on climate resilience related activities with whom there might be opportunity for collaboration
- Organisations working with groups who may be particularly vulnerable to climate change

Adapting to climate change

A huge range of people, groups and systems must adapt to climate change. This section highlights tools and resources which provide non-technical but trusted advice on climate change adaptation.

Who is it useful for?

This information directory is intended for use by community groups. Community groups focusing on climate adaptation can take direct action themselves or provide support to others to take action.

Some of the tools and resources in this section, therefore, can be used by community groups and others are highlighted with the intention of being useful to the partners they engage with. The “who for” column is to assist community groups and other users of the tool to choose what is most appropriate to their needs:

Individuals: Depending on the tool/ resource this can include homeowners, tenants, professionals or members of the public regardless of domestic circumstance

Businesses: Any enterprise involved in provision of goods or services to customers

Community groups: A group or organisation working for public benefit (includes charities)

Statutory authority: Councils, regional and principal authorities, parishes, and central government

Climate risk tools and resources

Colour coded highlighting is used to show the climate risk that each tool or resource addresses:

-  **Multiple climate risks***
-  **Excess cold, fuel poverty****
-  **Excess heat, heat disadvantage**
-  **Flooding**
-  **Biodiversity, agriculture, forestry, food insecurity**
-  **Indirect impacts/business losses*****

**Tools which engage with sustainability as a whole (and therefore with resilience as an aspect of sustainability) are included in this section.*

***Tools to improve building energy efficiency fall within this group. Generally speaking, energy efficiency can refer to methods of improving the efficiency with which a building stays cool during warm weather however in the UK, heating buildings in cold weather represents a much larger annual energy demand. It is expected that community groups and relevant partners will be able to judge which tools within this section are appropriate for the building in question*

****These tools consider the indirect impacts of climate change on businesses and their supply chains.*

Tools for identifying climate risks

Tool	Who is it for?	What does it do?	Features
The Environment Agency: Flood Maps 	Individuals, Community groups, Businesses, Statutory bodies	Visually displays the level of risk from fluvial, surface water and coastal flooding across the UK	<ul style="list-style-type: none"> You can zoom to view varying levels of detail Flood maps show flood defences Contains other relevant maps (basin management, pollution and landfill) The Environment Agency data, which informs the tool, can be downloaded
Met Office: Climate Projection Maps 	Community groups, Businesses, Statutory bodies	Maps Met Office data on future climatic trends across the UK	<ul style="list-style-type: none"> Displays annual maximum and minimum and seasonal mean temperatures and rainfall Contains useful “key findings” maps
BRE: English Housing Survey Fuel Poverty Data 	Statutory bodies, Community groups	Shows distribution of fuel poverty across a local authority (Also produce maps which cover the whole of UK, but with less detail and accuracy)	<ul style="list-style-type: none"> Combines measured energy efficiency ratings and proxy income data with weather data to estimate the number of dwellings on each street which are fuel poor Newest maps must be purchased from the BRE however councils often already possess these
Climate Just: Vulnerability Mapping Tool 	Community groups, Statutory bodies	Demonstrates the spatial distribution and severity of climate vulnerabilities including flooding, heat waves and fuel poverty	<ul style="list-style-type: none"> You can view the risk of each threat and the vulnerability of local people to it. Disadvantage (vulnerability + risk) can also be viewed Contains a guide and set of definitions Data can be downloaded and fed into the tool in collaboration with Joseph Rowntree Foundation
Green and Blue Space Adaptation for Urban Areas and Eco Towns: Planning Toolkit (GRaBS) 	Community groups, Statutory bodies	Maps Green and Blue Space (parks, grassland and water bodies) in conjunction with relevant climate risks such as heat waves and drought	<ul style="list-style-type: none"> Allows the user to see the Green and Blue space which will be at risk from excess heat and drought Also allows the user to see where Green and Blue Space may be used to provide shade and dissipate heat islands in urban areas A user guide is provided
Economics Intelligence Unit: The Global Food Security Index 	Statutory bodies, Businesses, community groups	Assigns a food security ranking to countries and provides a breakdown of the country's ability to feed itself	<ul style="list-style-type: none"> Gives insight into the amount of food a country grows itself, the affordability of food and the security of supply of food into a country
ESPRC: CREW Vulnerability Mapper 	Statutory bodies, community groups	Set of tools that increases understanding and helps to improve community resilience to extreme weather	<ul style="list-style-type: none"> SWERVE tool records past extreme weather Other Crew tools draw up maps of each hazard scenario and assess levels of resilience
Communities Prepared Hub 	Individuals, Businesses	Communities Prepared website for helping LRFs improve community emergency preparedness	<ul style="list-style-type: none"> Information on how flooding, severe cold and pandemic flu can affect your home or business Advice on how to prepare for emergencies Research and government policy papers
Severe Weather Impacts Monitoring Tool 	Businesses	Helps service providers identify the impacts of extreme weather and their vulnerability	<ul style="list-style-type: none"> Measures the impact of extreme weather on service providers, the communities they serve, their reputation and the environment

Who can support & help?

Resource	Who is it for?	What does it do?	Features
<p>Funding and finance: Grants, loans and tariffs are available from various sources such as councils, central government, charities and trust funds. Understanding how to take advantage of them can unlock capital for climate adaptation projects.</p>			
Energy Saving Trust: Grants and Support 	Individuals	A page on the EST website detailing key energy efficiency support for homes	<ul style="list-style-type: none"> • Energy company obligation • Feed-in tariffs and renewable heat incentives • Local authority grants and support
UK Government: Flooding and Coastal Change funding and policy 	Individuals, businesses	National policy towards flood resilience and the funding mechanisms in place for flood adaptation and recovery	<ul style="list-style-type: none"> • Funding for adaptation measures • Funding aimed at relief for the 15/16 flooding • How to make climate change allowances • Case studies
National Flood Forum: Flood insurance 	Individuals, businesses	Advice on obtaining flood-damage insurance in high risk areas	<ul style="list-style-type: none"> • “Flood Friendly insurance” promoting reputable/ high quality flood insurers • How to get flood insurance in high risk areas
Neighbourhoods Green: Funding 	Individuals, community groups,	A resources page with a number of funding sources for allotments and ecology	<ul style="list-style-type: none"> • Funding for growing local, healthy food • Funding for maintaining parks and ecology
Local example: London Energy Efficiency Fund 	Businesses, local authorities	European Regional Development Fund loans for energy efficiency in London	<ul style="list-style-type: none"> • £100m available to LEEF to distribute • Only large developments qualify • Other city-specific funds may be available
Local example: Cumbria flood grants 	Businesses, individuals	Cumbria county council's funding for homes affected by flooding	<ul style="list-style-type: none"> • Many parts of Cumbria are at high flood risk • £500 grants available to flooded homes • Other county-specific funds may be available
Flood Re Insurance 	Businesses, individuals	Helps homeowners and businesses find flood insurance in high risk areas	<ul style="list-style-type: none"> • FloodRe are a collaboration between the government and insurance companies • Contains search tool for most appropriate plan
Eaga charitable trust 	Individuals	Provides financial support to research and efforts to alleviate fuel poverty	<ul style="list-style-type: none"> • Provide grants between £2,500 and £25,000 • Prioritise projects which have the potential to inform national perceptions and policies
Apply for funding for community projects	Community groups	Search tool for community project funding from councils	<ul style="list-style-type: none"> • Postcode based search tool • Provides council contact details
A guide to writing effective funding applications	Community groups, individuals	A generic guide from The Guardian on how to effectively apply for funding	<ul style="list-style-type: none"> • Making an objectives checklist • Breaking down the budget • Writing the application
<p>National charities with local groups: Vulnerable people are often the most marginalised and can be reluctant to engage with public projects. Charities can help with accessing these vulnerable people and may collaborate on delivering adaptation projects.</p>			
Scope and Mencap	Community groups	Engage with physically and mentally handicapped people	<ul style="list-style-type: none"> • Both have a befriending service • Could be used to identify disabled people

Resource	Who is it for?	What does it do?	Features
Ecoactive and Ecoschools	Community groups	Educate school children on climate change	<ul style="list-style-type: none"> Teaching about climate resilience could be built into their services
Migranhelp UK	Community groups	Work with migrant communities	<ul style="list-style-type: none"> Could be used to identify migrant communities, especially those who don't speak English
Edgefund	Community groups	Work with marginalised groups	<ul style="list-style-type: none"> Could be used to identify marginalised people and encourage them to engage with projects
Oxfam UK	Community groups	The largest poor and homeless charity in the UK	<ul style="list-style-type: none"> Could be used to identify the poorest, most vulnerable people to climate change in an area
Age UK and Contact the Elderly	Community groups	Engage with old people	<ul style="list-style-type: none"> Could be partnered with to identify & educate old people to adapt to flooding, excess cold and heat
Local example: Manchester Advocacy Hub	Community groups	A charity working with vulnerable people in Manchester	<ul style="list-style-type: none"> Areas will have local charities which may be interested in collaborating on projects which benefit the vulnerable people they work with
<p>Existing resilience services: A number of organisations may already be taking action on climate adaptation in your area. Utilising their services and expertise could reduce time spent getting a project started and improve financial efficiency.</p>			
Environment Agency Floodline Warnings 	Individuals	A web page on the EA Website with information on levels of flood risk in the UK	<ul style="list-style-type: none"> Contains flood line warnings direct service which warns homeowners of impending floods
Big Barn 	Individuals, businesses	An online market where you can buy and sell local food	<ul style="list-style-type: none"> Could provide a route to market for allotment owners or local growers with a surplus
Farmdrop 	Businesses	Website where local farmers sell fresh produce in bulk	<ul style="list-style-type: none"> Could be used by companies which provide catering and want to use local, fresh produce
Habitat Aid 	Individuals, community groups	Website promoting biodiversity through native plant species	<ul style="list-style-type: none"> Sell, plant and manage native plant species Advise on most suitable species for an area
National Energy Action 	Community groups, individuals	A fuel poverty charity	<ul style="list-style-type: none"> Train fuel poverty practitioners Advise low income- high cost households
Climate Outreach 	Community groups, businesses, individuals	A charity who offer help and training on communicating effectively about sustainability	<ul style="list-style-type: none"> Online resources about communicating with people of varying social and political spectrums Provide training on how to persuade and motivate people to take climate change action
Local Resilience Forum 	Community groups, businesses,	LRFs have representatives from local public services and assist with preparing for localised disasters	<ul style="list-style-type: none"> Utility and infrastructure companies also support the LRFs as Category 2 responders Identify risks and create emergency plans LRFs exist in almost every county in England
Living with Environmental Change 	Businesses, statutory authorities, individuals	LWEC is a partnership of 20 organisations to fund and carry out environmental research and provide tools	<ul style="list-style-type: none"> Collaboratively develop actions with members Provide policy and practice notes such as "Ensuring resilience in care for old people" Provide report cards on climate change impacts on our economy, society and environment

Resources for adapting to climate change

Name	Who for	Function	Features/ use
National Flood Forum 	Individuals, businesses	National charity which provides advice to people who are at risk of flooding	<ul style="list-style-type: none"> Library of useful information on flooding in the UK
UKCIP: AdaptME Wizard 	Businesses	UKCIP tool which assists organisations with climate adaptation by asking them a series of questions and providing a number of tools within five distinct sections	<ul style="list-style-type: none"> Getting Started (building blocks and motivations for adaptation) Current climate vulnerability (previous effects of climate and how did you cope?) Future climate vulnerability (what are my future climate risks and vulnerabilities) Adaptation options (actions already tries and potential new options) Monitor & review success (AdaptME)
Caring for Climate: Climate Adaptation 	Businesses, individuals	Website on how climate change will affect businesses and how they can adapt	<ul style="list-style-type: none"> Includes tips and resources such as: "Business and Climate Change Adaptation: Toward Resilient Companies and Communities"
Building Retrofit Toolkit 	Individuals	This tool assists the user with retrofitting a house to become more resilient to heatwaves	<ul style="list-style-type: none"> Based on scientific research The tool models the impact of retrofit measures on the chance of overheating in a heatwave Takes into account the resulting heating cost
NEA: Fuel Poverty Assessment Tool 	Individuals	Action for Warm Homes' tool for fuel poverty assessment	<ul style="list-style-type: none"> Uses household circumstances and property details to determine if a household is fuel poor Calculates the impact and suitability of energy efficiency measures
Energy Saving Trust: Home Energy Check 	Individuals	This tool allows the user to assess the energy efficiency of their home	<ul style="list-style-type: none"> Requires a small number of simple inputs Takes into account payback of measures Provides a simple EPC rating
Carbon Trust HVAC Efficiency 	Individuals, businesses	The Carbon Trust have a number of guides relating to energy efficiency of HVAC	<ul style="list-style-type: none"> Semi-technical documents Aimed at improving non-domestic mechanical heating, ventilation and cooling efficiency
Low Carbon Retrofit Toolkit 	Businesses	The Better Buildings Partnerships guidance for low-carbon retrofit	<ul style="list-style-type: none"> Aimed at commercial buildings Advises how to tackle financial and corporate barriers to improving energy efficiency
NHS: Summer Health 	Individuals	The NHS guide on staying cool and hydrated in hot weather	<ul style="list-style-type: none"> Why heatwaves are dangerous Keeping your skin safe from sunburn and moles
NHS: Winter Health 	Individuals	The NHS guide on staying warm and avoiding illness in cold weather	<ul style="list-style-type: none"> Staying healthy in winter Keeping your home warm and vulnerable people safe during very cold weather
Julie's bicycle 	Businesses	Julie's bicycle partner with creative businesses to help them become sustainable	<ul style="list-style-type: none"> Tools which allow companies to monitor their environmental impact (and resilience) Offer training consultancy on sustainability

Name	Who for	Function	Features/ use
Climate Ready: Assessing and Managing climate change risks in supply chains 	Businesses	Guidance for businesses on how they can manage and encourage their supply chain so it is more resilient to supply chain impacts	<ul style="list-style-type: none"> • Contains a framework for building resilience into a supply chain • Contains case studies on companies who have improved the resilience of their supply chain
CLIMATE-ADAPT (Including the Adaptation support tool) 	Businesses, community groups, statutory authorities	Climate-Adapt is a collaboration between the European Commission and the European Environment Agency to support climate adaptation in Europe	<ul style="list-style-type: none"> • Data on climate vulnerability across Europe • Information on relevant policy in Europe • A database of climate adaptation case studies • The Adaptation Support Tool which encourages a six step process of climate adaptation
My Climate Change Garden 	Individuals	A blog on how gardens can be adapted to the impacts of climate change	<ul style="list-style-type: none"> • How climate change will affect UK gardens • Which plants are suitable for future climate • How to harvest water in your garden
Climate change guidelines for forest managers 	Businesses	Food and Agriculture of the United Nations document on climate adaptation for forests	<ul style="list-style-type: none"> • Local forest managers can consult this • Details the impact of climate change on forests • Management and policy to adapt forests
Allotment Management 	Individuals	Guide on management of allotments from the National Allotment Society	<ul style="list-style-type: none"> • How to get an allotment and funding for it • How to mitigate against pests and drought • What food to grow and suitable soil types
Northamptonshire County Council Flood Toolkit 	Individuals, businesses, statutory authorities	A Northamptonshire County Council toolkit for assessing flood risk and methods of adaptation for individuals, planners and businesses	<ul style="list-style-type: none"> • Flood risk map of Northamptonshire • Flood prevention funding and planning policy • Preparing for an imminent flood • A flood library and guides on community flood resilience and partnerships

Case Studies

Climate change adaptation is an aspect of sustainability which has become more commonly discussed and acted upon worldwide by individuals, businesses and policy makers in the last ten to fifteen years. There is a policy framework for climate resilience in the United Kingdom and adaptation is incentivised by both financial stimulus and the threat of future climate change impacts.

As shown above, a broad range of stakeholder types can be active in climate change adaptation and they address the issue in many different ways. With our collective understanding of climate risks and methods of adaptation still growing, there is no standard best practice methodology for addressing climate adaptation for communities. In light of this, it is useful to share the experiences of those community groups, individuals and organisations who have used a variety of approaches to address local climate change issues in their areas.

Among the twelve Communities Living Sustainably groups, five have been selected to be the subject of a case study in this directory. These groups were chosen, following the Learning Report in 2014, as those who had made good progress in terms of promoting climate change adaptation in their target area and who can provide valuable lessons for other community groups.

The case studies are:

1. The Irwell Valley Sustainable Communities Project
2. Communities Living Sustainably in Dorset
3. One Planet Middlesbrough
4. Sustain Eden
5. Sustainable Sheppey

In addition to the CLS case studies, a case study on Urban Heat has been provided. This is a research based project that uses case studies on excess heat to draw attention to how community groups can be instrumental in climate adaptation.

Case Study 1:

Communities Living Sustainably in Dorset

Length of project:	3 years
Lead Partner:	Dorset Community Action
Location:	West Dorset
CLS Dorset website:	http://www.clsdorset.org.uk/Default.aspx



Introduction and climate risks:

Communities Living Sustainably in Dorset is a partnership led by Dorset Community Action. The partnership has a number of sustainability-themed work streams including “climate change adaptation”.

The target area for the partnership comprises Dorchester, which is the larger county town and Bridport which is a smaller seaside town. The area has been subject to extremes of weather in recent years such as heavy rain storms which has caused flooding and exacerbated erosion.

This not only affects the community but also the economy. Bridport is a seaside town that relies heavily on the tourist trade, so any weather changes will impact on its economic viability.



A picture of past flooding in Dorset included in the 2033 Bridport weather projection report. The weather projection report helped portray the impacts of climate change to local residents.

Adapting to the risks:

To gain a better understanding of the climate risks in their target area, CLS Dorset:

- Used UK Climate Projections 2009 (UKCP09) and Met Office data to produce a plausible scenario of the climate of Bridport in 2033. A workshop was then conducted with local residents to further refine understanding of climate risks and identify adaptation measures.
- Conducted workshops in Dorchester and the surrounding area on past and future extreme weather. The workshops fitted in with part of an existing programme of community resilience workshops conducted by Town and Parish councils and the Civil Contingencies Unit. Local radio and newspapers were used to generate interest in these workshops.
- Collaborated with the County Council Research and Information Team to create vulnerability maps to identify communities likely to be most vulnerable to climate change.
- Collated and considered ideas from the workshops which included a mix of practical measures such as: Developing local resilience plans, adapting buildings to cope better with extreme temperatures, planting trees to provide shade and providing street seating to help people struggling in extreme temperature. The discussion highlighted different climate impacts between locations and groups of people. Attendees also showed an awareness of the difference between the direct and indirect impacts from the same event.

CLS Dorset used the following techniques and actions to implement climate adaptation:

- Combined a number of activities with non-climate adaptation focused activities. Businesses were engaged to adopt 'green' behaviours and supporting schools to achieve 'eco-school' status. Within both these work streams there were strong elements of climate resilience.
- Utilised the CLS Climate Change Adaptation Officer based in County Council's Sustainability Team. They then developed measures with the Emergency Planning Team, Flood Risk Team, the newly established Civil Contingencies Unit, and the Environment Agency.
- Ensured the workshops in Bridport and Dorchester were attended by local emergency planning officers. This allowed communities to develop their own emergency plans.
- Ran a pilot project to provide free advice to local farmers on climate change risks to their farms. They partnered with the Farming and Wildlife Advisory Group to deliver advice on how to reduce the impacts of severe weather events on their business. This resulted in a farm specific reliance plan prepared for each farm, as well as, two advice fact sheets on how to improve dairy farm resilience and soil resilience to climate change.
- Worked with local Environment Agency Flood wardens to develop emergency flood plans.



Members of the community at a local food growing event. Growing food locally can help preserve the food security of an area.

Barriers to resilience:

The Climate Change Adaptation Officer of CLS Dorset stated they “did not achieve the level of adaptation that was anticipated at the outset. Expecting a big jump from initiating a new project and dialogue to implementing action, when we didn't have resources allocated to paying for implementation, was ambitious”. They identified a number of barriers they encountered to climate adaptation:

- There was low initial awareness of practical measures communities could help adapt to climate change, e.g. help writing plans and making homes flood resistant with sandbags.
- The extensive heat waves and food insecurity predicted in the future are not having great impacts at the present so there is not much motivation in the community to act in advance
- Communities are being asked to do more from themselves. They need, but currently lack, the funding and expertise to do so in a wide scale.
- It is uncertain where the responsibility for climate change adaptation lies. There needs to be clarity about where members of the community can go for help with each aspect of resilience.

Key learning points:

CLS Dorset found that in order to encourage climate adaptation, you should:

- **Focus on local impacts** and past extreme weather events to make adaptation relevant to people rather than referring to global impacts in the future.
- **Work in partnership** with the local town or parish council in rural areas. A good way to access them is through a representative body like the Dorset Association of Town and Parish Councils.
- Try to **recruit a relevant council member** to the cause. This can provide links to council teams such as the Emergency Planning Team, Flood Risk Team.
- **Engage with the Environment Agency** and Met Office's local representatives. They can assist with mapping and understanding climate risks and vulnerabilities.
- **Use local media** (radio, local newspaper and social media) to generate interest.
- **Use simple language** and scenarios to describe the future impacts of climate change to people.

Case Study 2:

The Irwell Valley Sustainable Communities Project

Length of project:	5 years
Lead Partner:	The Broughton Trust
Location:	Salford
Project website:	http://www.clsdorset.org.uk/Default.aspx
Project website 2:	http://www.thebroughtontrust.org.uk/Broughton-Trust-Sustainability.asp



Introduction and climate risks:

The award winning Irwell Valley Sustainable Valley Communities Project encompasses 3 Salford Council wards (Broughton, Irwell Riverside and Kersal) and 30,000 people in the target area. Roger Baldry and his team were tasked with improving social, environmental and economic sustainability within the area which contains significant minority groups and high levels of deprivation.



Peel Park after the flooding in December 1 Peel Park after the flooding in December 2015.

The River Irwell is the largest river in Manchester and has flooded on numerous occasions in the 20th and 21st centuries.

Broughton is in the Environment Agency Flood Zone 3. In December 2015, the Irwell burst its' banks in Salford, flooding hundreds of properties and leaving 25,000 people without power. In addition, Broughton, Irwell Riverside and Kersal are the most fuel-poor wards in Salford.

Adapting to the risks:

The Irwell Valley Sustainable Communities Project and their partners, including Helping Hands, Kersal Vale Allotment and Horticultural Society, St Sebastian's Community Centre, Biospheric Foundation, Salix Homes, WSP Group, Urban Vision, Salford City Council, East Salford Community Committee, East Salford Environmental Task Group, University of Salford:

- Surveyed the Irwell flood plain and found that lack of permeability of the flood plain was a key factor which exacerbates the effects of flooding in the area. The Trust therefore convinced Salford City Council to convert 6.5 hectares of land adjacent to the river to wetland, which not only absorbs flood water but also provides a key habitat for birds and amphibians.



Local residents enjoying an educational food growing event. Learning how to grow food locally means you are less subject to price fluctuations in supermarkets in the future.

- Subscribed 7,000 people to the Environment Agency flood helpline. For the December 2015 floods the alert arrived too late and 663 properties were flooded without warning. The Trust had, however, identified 140 of the most vulnerable people previously and this allowed the emergency services to access them swiftly following the flood.
- Rather than using leaflets for the orthodox Jewish Community, the Trust, in conjunction with Binoh, a local charity, ran 3 workshops for 33 participants on energy efficiency and worked with 28 families on fuel efficiency through door to door communication.
- Offered comprehensive training to volunteers. They trained volunteers to visit and engage with elderly, disabled and dependent people in café/s and community centres. Working in conjunction with the social services, 40 of the most vulnerable people were identified and were educated by the volunteers about what to do to stay safe in case of a flood.
- Educated children in local schools on the impacts of climate change. A number of schoolchildren were taught how to build bug-boxes- a useful method of encouraging biodiversity in an area.

The holistic, long-term view of the Trust and their ability to engage with such a diverse range of people made an outstanding contribution to climate resilience in the area. In 2015 this was recognised through their receipt of the UN Champions of Disaster Risk Reduction Award.

Barriers to resilience:

The Irwell Valley Sustainable Communities Project successfully negotiated a number of the barriers to climate resilience

- Potentially not knowing whether your actions will be taken forward following the timespan of the community group. Not knowing whether you will have a long term impact is an issue.
- Disparate, marginalised communities. These can be difficult to engage with without an existing charity or organisation who work with them

Key learning points:

- Try to **partner with a diverse range of organisations**. This helps identify a large range of vulnerable groups and brings a more varied range of ideas to the table
- Where a community group has a finite time or monetary budget, try to **partner with organisations who will drive initiatives** forward in the future to ensure they have long term impact
- Have a **list of the most vulnerable and hard to reach people** in an area in case they are not forewarned of inclement weather or flooding. This list can be communicated to the emergency services if need be
- **Utilise existing groups** which are trusted by ethnic minorities when engaging with them, such as religious institutions and charities.

Case Study 3:

One Planet Middlesbrough

Length of project:	5 years
Lead Partner:	Middlesbrough Environment City
Location:	Middlesbrough
Project website:	http://www.menvcity.org.uk/opm/



Introduction and climate risks:

One Planet Middlesbrough is a programme run by Middlesbrough Environment City, who promote various aspects of sustainability such as healthy living, local food growing, cycling and energy efficiency. The aim of the project, according to the official website, is “to increase the number of Middlesbrough residents that adopt more sustainable lifestyles and behaviours”. This is with the goal of overcoming “social, economic and environmental challenges”.

Middlesbrough was hit hard economically by de-industrialisation in the 20th and areas of poor quality housing coupled with cold winters in the North East of England means that fuel poverty has been a major issue in the town historically. Although fuel poverty is the predominant concern for One Planet Middlesbrough, flooding is also a key issue and the Environment Agency maps suggest there is high chance of river and coastal flooding in the north-west and centre of Middlesbrough.



A plumber installing dual flush and a Hippo water saving kit in homes. Saving water in the home means you are less vulnerable to water shortages from drought.

Adapting to the risks:

A key aim of One Planet Middlesbrough was to ensure the most vulnerable (often economically deprived and marginalised) communities became more resilient to climate change. To do this they predominantly focused on education and raising awareness however they did engage with some technical solutions through partners who had the required skillsets. To encourage adaptation they:

- Recruited 71 Community Volunteers to work on a number of projects. In one project, members of the wider community came together to knit blankets which would be distributed to those who needed them. This was highly popular with both volunteers and recipients of the blankets.
- Conducted a pilot scheme, “Walking Talkers”. This used face to face engagement to engage with 1600 residents, sign them up to a flood warning system and provide tips on how to protect themselves and their properties in the case of a flood.
- Supported Northumbrian Water on a project to fit water fittings which were both more efficient and reduced fresh water demand and more resilient to flooding.
- Gave a significant boost to The Warmer Homes scheme which was already being run by Middlesbrough Environment City. Under the scheme houses are identified as vulnerable to excess cold and residents are advised on the correct measures to

Stay Warm, Eat Well, Save Money

Are you struggling with your fuel bills?

Free one-2-one advice sessions

Community Hub Thornthwaite Birkhall Rd, Middlesbrough, TS3 9JW	1.00 - 3.00pm Tue 8 Sept Tue 6 Oct Tue 10 Nov Tue 1 Dec	Community Hub North Ormesby Derwent St, Middlesbrough, TS3 6JH	9.30 - 11.30am Fri 11 Sept Fri 6 Oct Fri 6 Nov Fri 4 Dec
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The advice session will help you:

- Make sense of your energy bills
- Get the best deal
- Reduce damp and condensation
- Make the most of your energy
- Identify help that you may be eligible for

For more information and to book a session call 01642 243183 or email oneplanetmbro@menvcity.org.uk www.menvcity.org.uk/opm

www.facebook.com/OnePlanetMiddlesbrough @OnePlanetMbro

ONE PLANET MIDDLESBROUGH
MIDDLESBROUGH Environment City

install. They are then granted free insulation or a boiler replacement. As a direct result of the scheme, within the first three years of the project the equivalent of £3.6 million of energy efficiency measures were installed. One Planet Middlesbrough also delivered the popular Energy Doctors scheme which worked with organisations to help them reduce their energy bills.

Barriers to resilience:

- Without funding, people simply don't have the cash available to install measures which will make them more resilient to the impacts of climate change.
- Sometimes climate mitigation and adaptation are in conflict. Cheaper energy tariffs for customers help combat fuel poverty but they remove the incentive to reduce energy consumption.

Key learning points:

- **Recruiting local volunteers** to achieve concrete tasks in the local area is a great way of harnessing local enthusiasm and building community cohesion.
- **Using local knowledge** in mapping flood vulnerabilities is key. This is because mapping of climate risks are often at a national scale and might not account for local variabilities.
- **Recruiting volunteers early** on is desirable as it harnesses local enthusiasm. As it requires less financial capital, it also allows for a broader range of activities.
- Taking a **holistic approach** to projects, focusing on a number of issues related to sustainable living (such as being more healthy and active) can help boost interest in sustainability and resilience.
- Paper-based information should be provided in **languages other than English**. Middlesbrough has a large migrant community and it was noted that flyers about keeping homes warm in winter were not understood by residents whose first language was not English.

Case Study 4:

Sustain Eden

Length of project:	3 years
Lead Partner:	Cumbria Action for Sustainability
Location:	Penrith/Cumbria
Project website:	http://www.cafs.org.uk/projects/sustaineden/

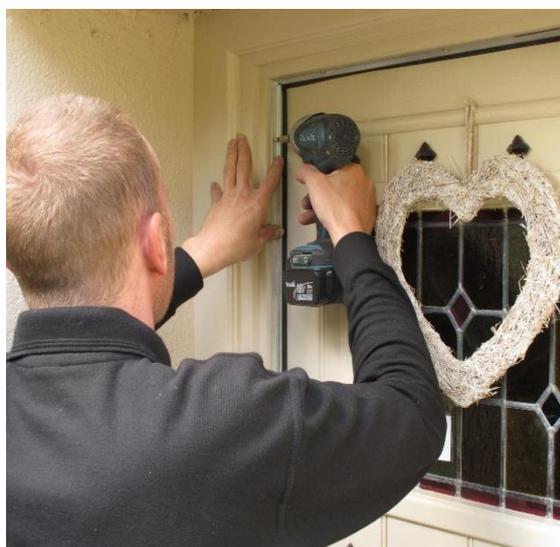


Introduction and climate risks:

Sustain Eden is a three year programme run by Cumbria Action for Sustainability, a charity that works with businesses and individuals to make them more sustainable. The target area of the project is predominantly the Eden Valley, which intersects with a large portion of both the Lake District and the Pennines national parks.

Being in Cumbria, the Eden Valley receives high amounts of rainfall throughout the year. According to The Eden Catchment Flood Management Plan, river flooding from the River Eden poses the greatest flood threat however in December 2015, Storm Desmond brought UK record levels of rainfall and thousands of homes and businesses were flooded by surface runoff flooding. This also led to a loss of tourism throughout December and January 2016, an industry the area's economy relies on. Cumbria also has relatively cold winters and in 2012, 190 excess cold deaths were recorded in Cumbria, with a number of these occurring in the Eden Valley.

According to the 2012 UK climate-risk assessment (2012), biodiversity will be negatively affected by climate change in the UK, with trees in particular suffering from an increased rate of disease and higher mortality. Considering that nature tourism and forestry are key industries in Cumbria, loss of biodiversity and forest productivity are also key climate risks for Sustain Eden to consider.



Free draught proofing for low income residents in the Sustain Eden target area. Draught proofing can protect homes from excess cold and fuel poverty.

Adapting to the risks:

- Sustain Eden chose to combine educating and empowering local communities with linking vulnerable people up with nationwide services. For example, to address flood risk, they developed a phone tree (whereby neighbours relay warning of a flood in a pre-arranged system) whilst also signing up five hundred homeowners to the Environment Agency Flood line.
- Ensuring that businesses continue to function after a flood has also been a key priority for the project. Several businesses were given individual flood plans and detailed advice on how to stay in business during extreme weather.
- The project benefitted from having informed partners who understood the local resources and services available and how to utilise them. Action with Communities in Cumbria, a partner of Sustain Eden successfully utilised local parishes to disseminate advice on keeping homes warm in winter.

- The project also benefitted from having partners who have expertise in climate adaptation. One partner had prior experience in emergency response plans for flooding and successfully delivered these in collaboration with local statutory flood emergency response plans.
- Sustain Eden also sought to learn from the other CLS groups. The Irwell Valley's highly successful Flooding, Hot and Cold Weather and Flu epidemic community emergency response model was shared with the other CLS communities and is something Sustain Eden are looking to utilise.



The Tree Whisperers project taught local children the importance of woodland. Trees are important both for biodiversity and dispersing heat and providing shade in urban areas.

- The project has also focused on fostering a self-sufficient local economy. Sustain Eden gave advice to businesses and farmers on analysing their supply chains and processes and making them more resilient to climate change impacts.

Key learning points:

- **Using ideas from other Community groups** working on resilience and climate change adaptation can prove useful.
- Having **informed partners** with a good knowledge of local resources and services available is a benefit for any similar project.
- **Working with local businesses** to encourage a self-sufficient local economy will make the community more resilient and adaptable to climate change impacts.

Case Study 5:

Sustainable Sheppey

Length of project:	3 years
Lead Partner:	Swale Borough Council
Location:	Isle of Sheppey
Project website:	http://www.swale.gov.uk/sustainable-sheppey-3/
CC2150 website:	http://www.kentcc2150.org.uk



Introduction and climate risks:

Being located in the south east of England, just off the north coast of Kent, the Isle of Sheppey is subject to varied weather patterns at both extremes. Warm weather can lead to excess heat in the summer however the island is also subject to strong offshore winds. Due to being low-lying and in a semi-exposed location at the end of the Thames estuary, the island is both at risk from flooding and subject to high levels of coastal erosion.



An aerial view of the Isle of Sheppey.

When confronting its' environmental challenges, one of the Isle of Sheppey's main assets is its' strong and distinct community which is largely well aware of the risks of climate change. Recent floods, droughts and snow storms have served to increase public awareness of the risks from severe weather and how to take action to safeguard their community. Harnessing local knowledge and community cohesion was therefore at the core of Sustainable Sheppey's strategy. Their vision was to bring the community together to support residents and businesses on the Island to help them understand the potential impacts of climate change, learn what they can do to minimise these, save money and protect the environment.

Adapting to the risks:

Sustainable Sheppey had seven work strands, one of which focused on climate resilience. The resilience strand was Kent Coastal Communities 2150 which formed part of a wider initiative in Kent to build the climate resilience of a number of coastal communities. The Sustainable Sheppey CC2150 project had five stages:

- The first stage was to "build knowledge" of the impacts of climate change among people who worked and lived on the island. An evidence base was gathered from climate change impact/projection data, an inventory of local assets and demographic and economic analysis. This evidence identified high-risk areas and vulnerable groups on the island. A number of stakeholder consultations and site visits added weight to this evidence and enhanced support for the project.
- The second stage was to "widen the working partnership" which harnessed local knowledge. Sustainable Sheppey built partnerships with businesses, NGOs, social enterprises, holiday parks, special interest groups, amenity providers and statutory organisations such as the Environment Agency, Kent County Council and parish councils.

- The third and fourth stages of the programme were to develop visions and plans for climate change adaptation. Here the community was successfully engaged with face-to-face and online interaction, workshops, events and leaflets. The diverse methods of engagement meant over 1100 pieces of feedback were gathered from approximately 800 direct interactions. Following this, 45 actions were put forward and £5k of local action was funded through grants.



A sea wall on the Sheppey Coast. Coastal defences are the first line of defence against coastal erosion and flooding.

- The final stage of the plan was the “community launch” where the resources, databanks, websites and action plans were passed to the community to move forward.
- Post project: Because Sustainable Sheppey was a three year project, following the launch a number of actions were taken forward by the Sheppey Environment Forum, which was established as part of the project’s legacy. Three initiatives delivered in partnership were:
 - Training to support community members to facilitate meetings, apply for grants and support environmental initiatives.
 - Flood awareness events for residents
 - Integration of environmental issues into a regeneration strategy for the island

Barriers to resilience:

- Promoting the idea of climate adaptation to people is difficult as the full effect of climate change is not currently being felt.
- Funding for undertaking adaptation is often either not available or difficult to access as capital investment is often required.
- It is resource intensive to build local capacity to act and continue the momentum of adaptation actions once a project ends.

Key learning points:

- Having a **knowledgeable and experienced individual** with local contacts spearheading the initiative was invaluable for Sustainable Sheppey.
- Ensuring **management of the initiatives could be handed over** to Sheppey Environment Forum after the end of the CLS programme meant these issues could be tackled an effective, long term approach.
- **Engaging with parish councillors, interested individuals and voluntary groups** early on meant they could assist with delivering the project locally and ensured people engaged more positively with the project.
- Developing a **strong evidence base** is necessary before community engagement but “scare mongering” and excess negativity about the effects of climate change should be avoided.
- **Deliver clear messages** to people on climate resilience and ensure they are relevant to the lives of the people you are engaging with.
- **Know your community** and get them involved in developing messages to other members of the community and tools. This can help identify and overcome barriers to engagement.

Case Study 6:

Urban Heat

Project:	Urban heat: emerging findings on enhancing the role of voluntary and community groups in community resilience.
Project website:	http://www.psi.org.uk/site/project_detail/urban_heat



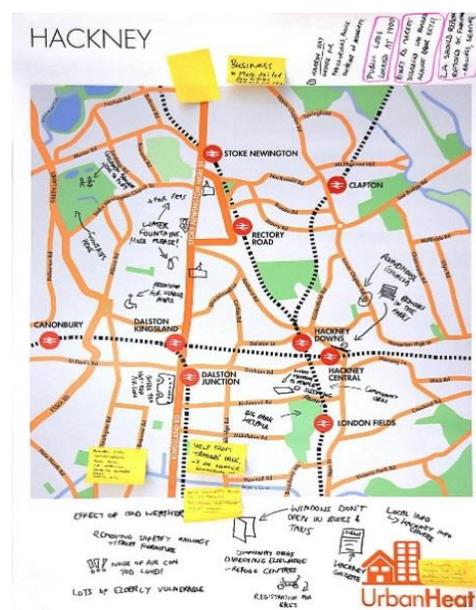
Introduction and climate risks:

Hot weather significantly affects the health of vulnerable people, who begin to experience adverse health effects from around 25°C. Hot weather and heatwaves are predicted to become more frequent in the future. Within this context, Urban Heat employed a case study on heat waves in London to address the question: “how can the role of community and voluntary groups be enhanced in local planning and action on climate change adaptation, community resilience and public health?”

Results so far:

The project runs to June 2016; here are some emerging findings regarding community and voluntary groups:

- Although this varies, community and voluntary sector groups are willing and able to rapidly and productively engage with novel and complex issues, such as the impact of hot weather in the UK on vulnerable people (elderly, disabled, socially isolated, etc);
- These groups can bring new knowledge, ideas, capacity, ‘reach’ and capabilities to both the governance of local resilience and public health strategies and to the practical matter of preparing for and responding to heatwaves and adverse events;
- In particular, the community groups in Urban Heat identified these recommendations for local institutions:
 - The importance of structures for the ongoing inclusion of voluntary and community groups in the local governance of resilience and public health;
 - The value of digitally communicating key alerts and information via local community and voluntary sector hubs – such as the local Council for Voluntary Services (CVS) – as well as through official channels;
 - The particular importance of face-to-face communications with vulnerable people;
 - The potential role of local retailers as a further channel for communication and as a provider of resources such as ‘cool spaces’.
- Although this also varies, local statutory bodies and institutions are willing and able to productively engage with community and voluntary sector groups and find their ideas novel and valuable;
- Government austerity measures are introducing enormous pressures into both the local public sector and the local community and voluntary sector;



A Hackney community group 'local resources' map.

- Action research, evaluation and policy engagement together are a powerful approach to directly producing local change, and drawing broader conclusions that are valuable in relevant regional and national policy.

Project leaders and methodology

Urban Heat examined these issues through three London case studies within an 'action research and evaluation' design. In each case study, the project action consisted of: relationship building with relevant local statutory institutions, two workshops with a selection of community and voluntary groups, a third workshop with some of the community groups and representatives from local statutory institutions, and ongoing engagement with key local, regional and national policy actors.



A project workshop in Tooting.

Urban Heat was devised and implemented by Kevin Burchell and Ben Fagan-Watson at Policy Studies Institute, University of Westminster (k.burchell@westminster.ac.uk), supported by colleagues at Age UK (East London), Resources 4 Change, South West London Environment Network and Transition Town Tooting. The project was funded by Joseph Rowntree Foundation, through its Climate Change and Communities programme.