



Eco Cities launch workshop

Adapting Greater Manchester to climate change: key challenges and opportunities

Jeremy Carter - University of Manchester
jeremy.carter@manchester.ac.uk

Introduction

As part of the Eco Cities launch event on the 23rd July 2009, a facilitated workshop was undertaken which aimed to discuss and help prioritise the key challenges and opportunities relating to adaptation to climate change in Greater Manchester. The collective input of 50 individuals from a range of backgrounds provided the Eco Cities project with a valuable insight into this issue. The outputs of the workshop are also of value to those interested and engaged in climate change adaptation in Greater Manchester and beyond. By identifying challenges and opportunities stakeholders working on adapting to climate change in Greater Manchester can:

- better anticipate and manage challenges;
- begin to identify and capitalise on opportunities.

The results of the launch workshop, which summarise and integrate the key points raised by the individuals contributing to the event, are presented below.

Challenges and opportunities

The aim of the workshop was to better understand key challenges and opportunities concerning climate change adaptation in the city-region. The workshop helped to identify what are considered to be the most significant issues with the potential to shape this agenda in Greater Manchester.

Challenges: 'Challenges' are issues that it could constrain efforts to adapt effectively to climate change in Greater Manchester. Challenges can relate to issues concerning Greater Manchester itself (e.g. topography) and to generic issues operating at wider spatial scales (e.g. national legislation).

Opportunities: 'Opportunities' relate to issues that could help to encourage an effective adaptation response to climate change impacts in the city-region. Opportunities relate to specific characteristics of Greater Manchester, and to issues beyond its boundaries, which could support efforts to adapt to climate change. Opportunities also concern positive outcomes linked to adapting to climate impacts.

Identification and prioritisation of challenges and opportunities will encourage better informed adaptation responses in the city region, and help to support long term strategic planning for climate change adaptation.

Contribution of the workshop to Eco Cities

The outputs of the workshop, as summarised in this document, have an important contribution to make to the Eco Cities project. They link to one of the core goals of Eco Cities, which is to produce a climate change adaptation 'blueprint' for Greater Manchester. The blueprint aims to build capacity and strengthen decision making around adapting to climate change, and will benefit from insights into issues that are perceived to matter the most in the context of climate change adaptation.

Also, it is important for the Eco Cities project to encourage input from stakeholders from across the region. It is positive that delegates from a wide range of organisations (including local authorities, United Utilities, the Environment Agency, private sector developers and consultants, and the third sector) contributed to the workshop. The Eco Cities project will undertake research and provide guidance relating to adaptation. However, it is others who will ultimately be responsible for implementing strategies and actions to respond to climate change, and this workshop provided an opportunity to listen to some of their perspectives concerning climate change adaptation in Greater Manchester.

Aside from contributing to the Eco Cities project, it is hoped that the insights gained during the launch workshop and presented within this paper will be of wider benefit to stakeholders interested and engaged in adapting to climate change.

Opportunities

Behaviour change	<p>Communicating the possible threats and opportunities linked to climate change, and the benefits of developing adaptation responses, could stimulate behaviour change within organisations and the wider public. Adaptation will have to happen, it is not optional. If peoples behaviour can be oriented towards the agenda, then adaptation would begin to happen more quickly and more effectively. A new way of thinking that challenges people's perceptions of living in Manchester in the future is necessary, and adaptation could offer a route into this energising this change.</p>
Localising adaptation activity	<p>It is important to communicate to local communities and stakeholders in the public and private sector that developing adaptation responses is about 'future-proofing' their area in response to a changing climate, and that they have much to gain from this. Due to the slow turnover of the building stock, this will often involve retrofitting what already exists. This can have an educational dimension in helping to bring a global debate to the local level.</p>
Encouraging economic growth	<p>It is important to communicate the links between adaptation and economic growth potential. Ultimately, the negative impacts of climatic events such as floods and droughts are damaging to the economy of Greater Manchester and beyond, and should therefore be guarded against. More development opportunities may arise as the benefits of adaptation become more widely recognised.</p>
Tourism potential	<p>Strategies to adapt Greater Manchester to climate change impacts, particularly the threat of high temperatures in the urban core, have the potential to enhance the tourism offer of the city in the future. The economy of the city-region could benefit as a result. Aside from attracting tourists, adaptation measures that improve the local environment could encourage local people to stay within the area for tourism and recreation.</p>
Employment prospects	<p>There is potential for new jobs to be created in the process of better adapting Greater Manchester to future climate change. In particular, adaptation provides a range of opportunities for 'entry level' employment and training. For example, if retrofitting existing buildings and public spaces becomes accepted as an important element of adapting urban areas to climate change, jobs in areas relating to green infrastructure and flood risk management would become more common.</p>
Capacity building	<p>Capacity building can be distinguished from employment prospects, which focuses on benefits associated with job creation. Capacity building goes further and links to issues including education, training and knowledge transfer. Capacity building ranges across issues including strengthening governance structures, implementing systems for sharing knowledge, undertaking research into adaptation theory and practice, and developing education programmes. A greater commitment to adaptation would help to foster these developments, which would have wider benefits beyond the adaptation agenda.</p>
Developing partnerships	<p>Managing change is more successful if organisations work together. The scale and scope of the adaptation challenge has the potential to drive the development of partnerships within and between organisations. Partnership working increases the likelihood of effective adaptation responses being developed at appropriate spatial scales. With emerging activity around city-region status for Greater Manchester, partnerships are likely to become increasingly important.</p>

Strengthening governance frameworks	There is an opportunity to use the adaptation agenda to strengthen legislation and policy on related issues and to embed adaptation more firmly in decision making. Alongside providing mechanisms to better utilise and enforce relevant existing legislation and guidance, there is a need for new regulation around adaptation. This would extend the debate to a wider range of stakeholders and activities. Greater recognition of the adaptation 'imperative' amongst policy makers would stimulate a rethink on the extent to which current frameworks are fit-for-purpose, potentially leading to new ways to recognise and manage climate risks.
Strengthening the planning profession	There are strong links between the development and use of land and adapting to climate change. Consequently, adaptation has the potential to strengthen the role of the planning profession in shaping the future of urban areas. Adaptation should be regarded as a significant opportunity for planners. The Association of Greater Manchester Authorities (AGMA) provides a valuable framework for the ten local authorities within Greater Manchester to develop and implement a coordinated adaptation response.
Multifunctional benefits	Adaptation to climate change has the potential to deliver a wide range of benefits. This is one of the key 'selling points' of implementing adaptation responses. Green infrastructure provides a good example. The maintenance and enhancement of green infrastructure has value in terms of adaptation (e.g. reducing flood risk, moderating temperatures), but also can stimulate health benefits stemming from expanding recreation resources and provide a haven for urban biodiversity for example. Green infrastructure can also generate economic benefits, for example through increasing property values, reducing energy bills (e.g. linked to air conditioning) and increasing footfall into shops. Multifunctional benefits need to be communicated as widely as possible in order to strengthen the case for adaptation actions.

Challenges

Public attitudes, perceptions and behaviours	<p>The public does not fully accept the need to take action to adapt to climate change, which can in turn limit the desire of politicians to take action. There is a need to overcome this apathy and inform people that adaptation is not optional. However, engaging communities in the adaptation agenda is difficult, with potential barriers existing in terms of health, education, poverty, unemployment and exclusion.</p>
Communication of information	<p>A lack of understanding remains over climate change amongst policy makers and the public. Significantly, there is a lack of clarity over the distinction between mitigation and adaptation, and also what adaptation means and what it constitutes. Media messages are often confusing, and there is currently much mis-information around climate change. Ultimately, political will and action comes from a more informed society, and communication of climate change messages is currently not supporting this goal.</p>
Political will	<p>At present, there is insufficient political will and long term vision to respond to the adaptation challenge. Reasons include limited public support for adaptation and a perceived lack of certainty around the nature and extent of climate change impacts and therefore investment in adaptation options. Short term thinking often dominates decision making, with health and education prioritised at the expense of challenges such as adaptation to climate change.</p>
Understanding adaptation benefits	<p>There is an important gap in the evidence base around understanding the benefits of adaptation responses. Linked to this issue is the need to develop approaches for monitoring the success (or failure) of adaptation interventions, and to communicate this information to the stakeholder community. Decision makers need to be able to connect adaptation investment decisions more closely to their potential benefits.</p>
Appropriate data and information	<p>Decision making around climate change adaptation requires a wide range of information on the potential nature and extent of climate change impacts, and which locations and communities are most vulnerable to these impacts. This data is often lacking, can sometimes be in unsuitable formats, and there are questions over whether stakeholders have the required knowledge and expertise to use available data effectively.</p>
Growth agendas	<p>Growth and development is a priority for many cities and regions. In the push for economic development and housing growth, adaptation objectives may be compromised. Indeed, where land resources are limited, green and blue space for adaptation may loose out to more traditionally economically productive land uses.</p>
Availability of funding	<p>Although consensus around the need to adapt to climate change is beginning to emerge in some sections of the policy making community, it could be challenging to secure funding to deliver adaptation action. Within the current economic climate, the private sector may argue that adaptation actions are too costly to introduce into plans for new development. Alongside the potential for reduced levels of public sector funding over the coming years, financing adaptation responses over the medium term could be difficult.</p>
Private sector engagement and actions	<p>It is important to ensure that any new development is adapted to range of climate futures it may experience. However, there is a general lack of private sector engagement in the adaptation agenda. Further, as developers often work on a site-by-site basis, it can be difficult to develop coordinated strategic responses. Until there are statutory requirements relating to adaptation, developers will have little encouragement to act on this agenda.</p>

Cross-cutting spatial scales	A coordinated mosaic of adaptation responses is necessary at interlinked spatial levels, from the strategic to local. Adaptation responses must acknowledge the cross boundary nature of climate change impacts such as flooding and heat waves. Governance arrangements need to evolve to support this approach to climate change adaptation. However, examples of cross boundary action are not common, which is a significant barrier to progress.
Organisational and sectoral fragmentation	Due to the scope of the impacts of climate change, a broad range of sectors and stakeholders must be involved in the development and implementation of adaptation responses. However, structures to support necessary integration are lacking, which limits the potential of coordinated activity. Further, there are often conflicting objectives and action within organisations. A common and transferable 'language' of adaptation to climate change is needed to support collaborative strategy making.
Legislation and guidance	Given the scale and complexity of challenges associated with adaptation to climate change, new legislation and guidance is needed. Particular attention should be paid to linking adaptation and spatial planning. There is also the need to ensure more robust enforcement of new and existing powers relating to adaptation.
Critical infrastructure	Critical infrastructure includes, for example, schools and hospitals, and energy, water and transport infrastructure. It is going to be a real challenge to adapt existing critical infrastructure. Ultimately, some existing infrastructure not appropriate for a changing climate, either a result of its design or location. Key issues include keeping buildings cool and flood risk management.
Geography of the city	Every city has its own specific set of strengths and weaknesses that influence its capacity to adapt to climate change. Particular challenges for Manchester include that there is little green infrastructure (parks, trees, gardens etc) in the urban core. Similarly, many of Manchester's urban rivers are either covered or largely inaccessible. The complexity and scale of the city-region makes planning and implementing strategic climate change adaptation responses a real challenge.
Dominance of mitigation	The development of long-term proactive adaptation responses is being overshadowed by mitigation (reducing greenhouse gas emissions). Mitigation is dominating the climate change debate and is taking priority for funding and policy and strategy development. This poses a real danger for the development of adaptation responses to future climate change impacts, particularly in the short term, before integration adaptation and mitigation responses become more commonplace.