UK Climate Change Risk Assessment and the Future of Adaptation Delivery

10th November 2011, NE Office, Hercules House, London

Conference Report

This meeting was looking at the forthcoming UK Climate Change Risk Assessment (CCRA) and approaches to adaptation.

The Enhanced Adaptation Role and work with Climate Change Partnership

Tim Reeder, Environment Agency

The Environment Agency is taking on a new role to deliver the Adapting to Climate Change programme which will run from September 2011 – March 2015, funded £2m per year. Their main outcome is to get key sectors to increase their resilience to climate change. The objective, therefore, is to improve resilience in key sectors to the risks of climate change. More details can be found here: http://www.environment-agency.gov.uk/research/132323.aspx.

There are six main programme strands: business and economy, infrastructure, built environment, health and wellbeing, natural environment and local government. They will continue to work closely with the Climate UK partnerships and Defra and will incorporate learning from other projects, such as 'Coastal Communities 2150', an Intereg project with EA as partners. This latter project is around developing climate change scenarios to examine different routes to adaptation, allowing questions to be explored between planning for worst case scenarios and justifying risk.

Current issues include:

- We need more public facing documents about adaptation, such as 'Your Home in a Changing Environment' (Three Regions Climate Change Group, 2008 - http://www.london.gov.uk/trccg/docs/pub1.pdf)
- Need to consider conflicts between mitigation and adaptation particularly with regard to the retrofit of the built environment.
- Need to engage business – must look at cost implications and the business case for adaptation.
- Strong views on the integration of grey and green infrastructure.

A summary of the programme can be read here: http://www.environment-agency.gov.uk/static/documents/4_Prog_Summary_Condensed_FINAL2.pdf.

UK Climate Change Risk Assessment and National Adaptation Programme

Jonathan Capstick, Defra (soon moving to Landscape and Outdoor Recreation)

The Climate Change Act was implemented in 2008 and section 62 deals with the reporting bodies. This was developed into the UK CCRA – there were no previous examples of risk assessment on this scale; with over 700 risks evaluated. The output from the CCRA is eleven sector reports (for initial analysis) and reports on the CCRA themes plus a synthesis report – all due by January 2012.

The 700 risks were judged on priority – itself built up from scores against the event impact; based upon magnitude, likelihood and urgency. From the original 700 this was reduced to 100 priorities in which to tackle over a five year cycle.

For each risk they are producing an analysis against climate variables to provide;

- Base of projects
- Projections against the various scenarios

Noted positive and negative issues with the report are;

- Difficult to deal with uncertainty
- Able to make comparisons across disparate risks
- Geographical mapping important
- Strengths are; good headlines and data
- Weaknesses are; doomsday predictions that are sensitive for Government

SE specific headlines so far are vulnerabilities around flooding, over-heating and water availability.

A further study on the Economics of Climate Resilience, which will assess the economic implications of climate risk and adaptation, is due mid-2012. This, along with the CCRA, will feed into the National Adaptation Programme (NAP), due to be launched in 2013. This work is looking to establish current policy baseline data, create "assets" around adaptation and produce regional sections. Current information can be found following this link - http://www.defra.gov.uk/environment/climate/government/ - detailed programme information here - http://www.defra.gov.uk/publications/files/pb13486-ep-adapting-climate-change.pdf - and further general information here - http://www.defra.gov.uk/publications/files/summary-report-final-version2.pdf.

Questions arose around;

- How do LAs feed into the NAP? Engagement with LAs likely to be predominantly through the LGA – although this raised concerns over how effective their engagement is.
- Recommended that LNPs/LEPs should engage directly with Defra during the NAP – organisations need to be both efficient in their approach, ie. by partnerships such as LNPs, and proactive in participation.
- Need to be aware of the cross-cutting agendas, such as health impacts, and the variety of structures/directorates across LAs.
- Much of the focus will be around business, encouraging private organisations to positively plan for climate change risk, but they are considering wider partnerships.
- The study will not be looking at international impacts of climate change on the UK.
- The UK is seen as leaders in Europe regarding this issue and therefore have the competitive edge, particularly if we can focus attention on generating a green sector economy and exporting R&D knowledge.

Climate SE; how best to support adaptation sub-nationally
Kristen Guida, Climate SE

Climate SE became a Community Interest Company in 2009 and all the regional partnerships formed an umbrella organisation of Climate UK in 2011. They are currently working in partnership with the Environment Agency to develop a national work plan around adaptation.

Forthcoming work for the region involves;

- Working on a regional CCRA 'pack' with headline information and regionally/locally relevant messages about climate change for partners to use.
- Promote existing tools, data, case studies, evidence (e.g., the regional CC Vulnerability Assessment).

- Provide solutions, fill in gaps in evidence where needed.
- With EA undertake audit of tools, understand use of existing tools and see if there are skills gaps which need addressing.
- Improve links into LAs; sometimes problematic as cross-departmental
    - Need to address training/knowledge for officers and members
- Regional Migration Partnership also linking into CC agenda.
- Treasury are now asking for CC costing within the reporting bodies functions.
- Oxford City Council have produced a paper for cabinet around the cost implications for CC action; looking at, for example, retraining car-drivers, asset management and mobile working.
- Interest in strategic regional delivery funding that LAs can draw-down for implementation.
- Sustainable and Resilient Communities funding through the BIG Lotto is worth investigating Project to be launched with call for proposals in December.
- Exploring 'Science Wise' funding to engage the public in science issues.
- Looking to work across wider partnerships to understand responsibilities and overlaps to avoid duplications.

A Climate Change Vulnerability Assessment for Biodiversity
Sarah Taylor, Natural England

The talk focussed on the updated version of the mapping tool that NE has developed for the SE region. This is due to be rolled out nationally, after successful trials in pilot areas to use the data. The full tool will be available early 2012 for use in the SE. Based upon the 'Hopkins Principles' of value – methodology for sensitivity and exposure – described in the publication 'England's Biodiversity Strategy: Towards Adaptation to Climate Change' (Mitchell et al, 2007 - http://nora.nerc.ac.uk/915/1/Mitchelletalebs-climate-change.pdf).

GIS mapping has been based on the IPCC Vulnerability Model;

- What we have currently – the asset conservation value
- Asset sensitivity and exposure to CC (UKCP09) – based on 'Hopkins Principles' (outlined above)
- Adaptive capacity of asset (connectivity, topography and management) using 'Land Cover Maps 2007'; management looks at status of environmental management schemes, such as HLS, Woodland schemes etc.

Each is weighted the same and the combined scores produce a measure of vulnerability.

Currently working with partners to ground-truth the data using local evidence and aligning this with Biodiversity Opportunity Areas (BOAs). Pilot use areas are with the North Kent Environmental Planning Group and the South Downs National Park. By using this model action can be targeted, for example to make 'better' ecological networks, where management is poor or non-existent, this can be mapped against proximity to other important networks, concentrating on those where improved management will contribute directly through proximity to a quality network. Further developments are underway to produce 'bigger' and 'joined-up' layers.

They are looking to provide the GIS information to LAs to be used within existing datasets, and to cross-reference these against the wider source.

Community Resilience to Extreme Weather

Fuad Ali, Greenwich University

Community Resilience to Extreme Weather (CREW) is an EPSRC-funded research project, established to develop a set of tools for improving the capacity for resilience of local communities to the impacts of future extreme weather events. Taking a case study of five south-London boroughs, CREW is investigating local-level impacts on householders, SMEs and local policy/decision makers of a range of geohazards including flooding, subsidence, heatwaves, wind storm and drought. The research investigates opportunities and limitations for local communities' adaptive capacity, considering the decision making processes across communities and the impediments and drivers of change. A web-portal presents probable extreme weather events for a range of UKCP09 scenarios, with an evaluation of coping mechanisms. CREW comprises a consortium of researchers drawn from 14 Universities. Their website is here: http://www.extreme-weather-impacts.net/twiki/bin/view.

Conclusions for the study for each sector include:
Decision-makers

- Sensitive to image around 'doomsday' scenarios and emergency planning/action
- Scientific capital – there is a different language and focus between departments
- History and experience is an influence
- Resourcing is important
- The loss of National Indicators can be seen as freedom to create
- Need to align themselves with central Government
- Sensitive to local impacts

SMEs (via Federation of Small Business)

- Loss of productivity
- Supply chain interruption
    - Lack of contact with LAs regarding this issue; generally more inclined to place responsibility on LAs, particularly regarding maintenance of drainage systems

Community Based Associations (included residents and housing associations, RSLs, local history and faith groups)

- Contact with LAs based on past experience
- Focussed on different sections of society

All sectors

- Disparity between the size of the issue and resourcing within LAs to cope
- SMEs are generally disinterested unless directly impacted
- Households feel generally powerless
- Interdependencies; good understanding of 'self' and social responsibility

Implications from the project include;

- Enabling the transition between central to local leadership
- Communication and transparency needed
- When events happen the LAs response has an impact for the future, in terms of social memory
- LAs need to understand local expertise and character of citizen/third sector organisations
- Entry for engagement in this issue has multiple points
- LAs need to coordinate activity throughout the organisation

Questions that Fuad posed to the group to generate discussion were;

- What political arguments carry weight at local level?
- Are elected members aware of the impact CSR decisions have on local resilience?
- Delegation of the subject to junior officers is a problem; how can this be resolved?
- Tangibility of the subject is an issue; what can be done to communicate better?

Visualising Sustainability
Steve Magenis, Royal Haskoning

Cities are incredibly complex, with massive amounts of data available to understand detailed mechanisms. However, the transparency and inefficient collaboration between organisations that hold the data, is not currently maximising the potential use. A joint venture between Peterborough City Council and Opportunity Peterborough, Royal Haskoning, IBM and Green Ventures collaborated to create a visualisation tool that brings together the data in order for it to be used effectively.

The Peterborough Model allows fly-through visualisation of the city overlaid with data provided by utilities, transport, land-use and others. A YouTube video of the demonstration can be viewed here: http://www.youtube.com/watch?v=gFciSBYYPnY. They hope that other cities will look to use the tool to effectively collate and collaborate over data.

Further information:

The presentations from the day will be available to download from the Climate SE website here: http://www.climatesoutheast.org.uk/index.php/events/event_detail/climate_se_ccra_adaptation_landscape_event_nov_10/.