Focusing adaptation with climate risk mapping

Posted on Wednesday 17th November 2010

Climate change is now widely accepted as one of the greatest challenges we all face. In our own region, Birmingham City Council has made a bold commitment to tackle this challenge with a target to reduce CO2 emissions by 60% by 2026. However, mitigating any change provides just part of the solution in combating the problem. Arguably, the biggest challenge is in developing focused ways for society to adapt to the new climate, particularly when planning and investment cycles operate on significantly shorter timescales than the projected climatic change. The significance of tackling this issue now is raised by today's Royal Commission on Environmental Pollution report.

The recently published UK Climate Profiles (UKCP 09) show that the central estimate of changes in Birmingham by 2080 are increases in temperature of up to 3.7°C (up to 10°C on the hottest day), reductions in rainfall in the summer by 20% and increases during the winter of up to 18% (up to 30% on the wettest day). If nothing is done, these changes will have serious implications across all services we use every day and ultimately to the health and well being of Birmingham's citizens. What we need to do is start planning for this future now, by building Birmingham's resilience to these challenges, the city can be an even better place to live and do business.

To address this issue, the main focus of current research is the development of a risk based tool to allow the user to map environmental risk (heat wave, flooding, subsidence etc.) as well as social (health, fuel poverty, age etc.) and economic (development zones, critical infrastructure, business type etc) vulnerabilities at a neighbourhood scale. By overlaying environmental risk and socioeconomic vulnerabilities in this way, organisations like the City Council are able to achieve multiple outcomes in implementing adaptive measures. For example, this tool provides spatial representations of the hottest and most flood prone areas, which can be overlaid with maps showing where the most vulnerable people live. This allows adaptive measures (such as green space and heat wave advice) to be targeted in areas where they achieve the maximum impact.

Whilst more work can be done to understand the local impact of climate change, local institutions like councils, businesses need to recognise the importance of accounting for future climate change in their decision making processes today.

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Presently involved with two award winning climate change projects with Birmingham City Council.

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