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resilience initiatives in the UK

Peter Jones and Daphne Comfort examine the concept of resilience and consider three case studies of resilience initiatives within the UK

Responding to climate change is often a key element of 'resilience' approaches

The concept of resilience has been attracting increasing attention in planning policies and in the academic planning literature. The National Policy Planning Framework says that:

> *'planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change, and supporting the delivery of renewable and low carbon energy and associated infrastructure. This is central to the economic, social and environmental dimensions of sustainable development.'*[1]

That said, research undertaken by TCPA[2] revealed that the majority of Local Plans in England were failing to cut carbon dioxide emissions and plan for the scale of future severe weather predictions.

One of the 'core values' of the Scottish Planning Service is that it should 'play a key role in facilitating sustainable economic growth, particularly the creation of new jobs and the strengthening of economic capacity and resilience within communities'.[3] At the same time, one of the desired outcomes of the Scottish planning system is a spatial strategy 'which aims to build resilience and promotes protection and sustainable use of our world-class environmental assets'.[3] In Wales, development plans should look 'to locate development in settlements that are resilient to the effects of climate change'; and 'where development takes place in areas of known

risk, [they should] ensure that development is designed to be resilient over its whole lifetime'.[4]

In the academic planning literature the principal focus has been on planning for urban resilience. Within the UK, for example, Mehmood[5] has traced the origins of resilience thinking in planning back to the late 1990s and to 'urban renaissance' thinking and the work of the Urban Task Force. Two decades later, Shaw asserted that 'it should come as no surprise that a concern with resilience has now firmly entered debates in planning theory and practice',[6] while Porter argued that 'a growing number of planning scholars are also turning their attention to resilience, exploring what it means for both planning practices and planning institutions and governance'.[7] However, Shaw also argued that 'resilience enshrines a radical challenge for the status quo' and that 'the use of a resilience framework should not be for the faint-hearted' in that it 'offers nothing less than a paradigm shift: a fundamental questioning of the central tenets of contemporary approaches to planning'.[6]

Whether local authority planning authorities in the UK currently have the political will, the resources, the expertise and the enthusiasm to rise to such a challenge remains very much to be seen. Nevertheless, Mehmood[5] has argued that 'in a world of limited resources, resilience thinking can help integrate the issues of social, economic, and environmental well-being by strategically navigating the policy and planning to proactively create, assume and shape change'.

With these thoughts in mind, this article provides contrasting cameo case studies of three resilience initiatives within the UK – namely, the Bristol Resilience Strategy, the Urban Forestry and Woodlands Advisory Committee's vision for a resilient forest, and the Scottish Borders Climate Resilient Communities project.

The concept of resilience

In everyday language, resilience is seen as the ability to withstand or bounce back from adversity and disruption. However, in the professional and academic world a number of meanings can be identified, and Sharifi and Yamagata[8] have argued that 'despite the abundance of research on resilience … there is still no single, universally accepted definition in the literature'.

Indeed, a number of origins and meanings are claimed for resilience. Hassler and Kohler,[9] for example, claimed that 'resilience as a design principle was an implicit part of construction knowledge before the 19th century', and Sharifi and Yamagata suggested that the concept of resilience stems from physics and psychology'.[8] Davoudi acknowledged that 'resilience was first used by physical scientists' and argued that in the 1960s 'resilience entered the field of ecology'. MacKinnon and Derickson[11] suggested that 'the concept of 'resilience' has migrated from the natural and physical sciences to the social sciences and public policy as the identification of global threats such as economic crisis, climate change and international terrorism has focused attention on the responsive capacities of places and social systems'.

Holling[12] drew a distinction between 'engineering resilience' and 'ecological resilience'. Mehmood,[5] for example, argued that 'whereas engineering resilience gives the optimal design features in which an entity could recover back into its original form after a certain level of disturbance, ecological resistance explains the situation of multiple equilibria in which a system could adapt to change by bouncing forth into a slightly different form'. Adger[13] defined social resilience as 'the ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental change', and argued that it 'is an important component of the circumstances under which individuals and social groups adapt to environmental change'.

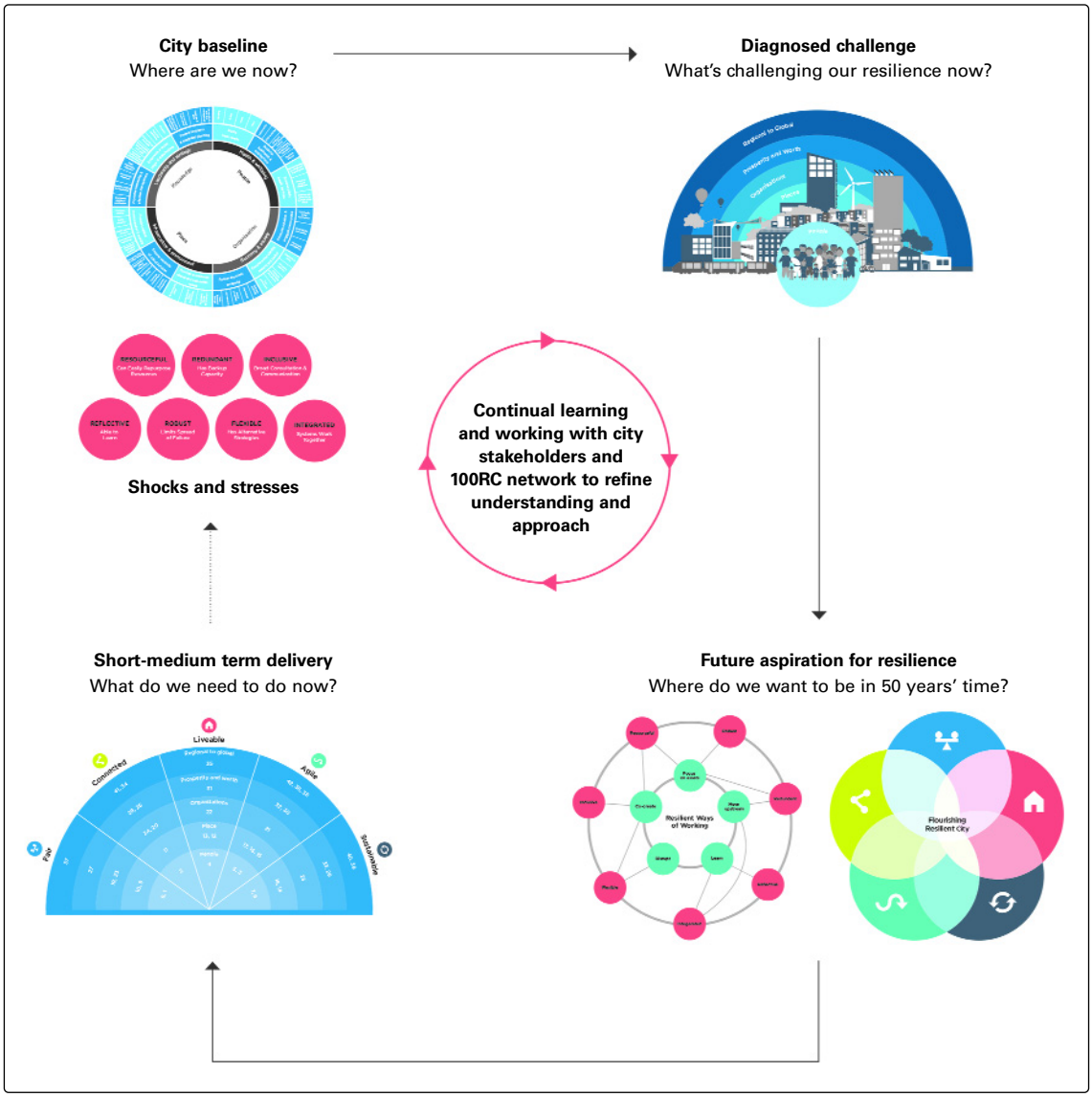
At the same time it is important to recognise the importance of looking to balance environmental and economic resilience, and this in turn can be seen to emphasise the growing importance of resilience within the corporate world. PricewaterhouseCoopers[14] emphasised a belief that 'enterprise resilience is the most important capability in business today'. Here, enterprise resilience is defined as 'an organisation's capacity to anticipate and react to change, not only to survive, but also to evolve',[14] and it is the survival dimension that can often be the most pressing and continuing priority for many small and medium-sized business enterprises.

Resilience initiatives in UK

At the city level, Bristol is one of five UK members of the 100 Resilient Cities Network. The Bristol Resilience Strategy[15] recognises that the city 'faces challenges from a growing and changing population, climate change, resource scarcity, ageing infrastructure, changing patterns of world markets and employment, disruptive technologies and social and health inequalities' and argues that that city is on a trajectory that it will be unable to sustain if it continues to expand. The vision, which is seen to reflect the need for change, is that:

> *'By 2066 Bristol is a flourishing, welcoming city which inspires confidence in local and global investors, and our success is shared by all. Our neighbourhoods are affordable, attractive, healthy and well-connected places where people of all ages and backgrounds trust and help each other. Our infrastructure and services are flexibly designed and managed to cope with uncertainty'.*[15]

In moving towards this vision and in 'reimaging the city'[15] the focus is upon people, place,



Bristol City Council

Bristol City Council's Resilience Strategy development approach[15]

organisations, prosperity and worth. In addressing people, for example, the focus includes tackling homelessness, cultural engagement to build social cohesion, and social action volunteering. New models of housing delivery, repurposing neighbourhood partnerships, establishing a resilient city financing structure, managing the city's future flood risk and a climate change action plan are key components in the focus on place.

In operationalising the vision of a resilient Bristol five ways of working are identified:

- building on the city's physical, human and social capital;
- tackling housing, neighbourhood conditions and access to jobs as an effective way of addressing disparities in health and social and racial inequalities;
- co-creation – namely bringing individuals, communities and businesses together to jointly produce a mutually valued outcome;
- disrupting – namely challenging a 'business as usual' approach to move more effectively towards a resilient future; and
- learning from, and reflecting on, past decisions to inform future decisions.

The Urban Forestry and Woodlands Advisory Committee (FWAC), established by the Forestry Commission in 2014, has outlined its vision for 'a resilient urban forest'[16] in England. In an opening message, Rory Stewart, then Parliamentary Under Secretary of State for the Environment, Food and Rural Affairs, claimed that trees have always been

admired for their aesthetic beauty. However, he argued that they are now coming to be admired for a 'deeper beauty', which encapsulates their 'contribution to air quality, to carbon capture and to the health and wellbeing of animals, insects and humans'.[16] FWAC's vision for an urban forest is:

- *'Where the many benefits of trees are recognised and invested in.'*
- *'The urban forest is integral to the form and function of all our urban areas.'*
- *'It helps create healthy and economically successful communities and liveable places for people and wildlife.'*[16]

There is a clear recognition that, if an urban forest is to be resilient, diversity must be celebrated by planting a wide range of tree species and by encouraging and fostering a wide range of locally inspired solutions. At the same time FWAC suggested that an urban forest will be considered as critical infrastructure for urban areas, and that it should be viewed and managed holistically in that trees in parks, streets, highways, public land and urban woodlands can all make a contribution to delivering the vision.

More specifically, the vision for a resilient urban forest embraces eight main themes:

- strategic planning and green infrastructure;
- climate change;
- the natural environment;
- human health and quality of life;
- planning and development;
- economy and growth;
- value and resources; and
- risk and resilience.

In addressing strategic planning and green infrastructure, for example, FWAC hopes that its vision will be shared by developers, planning authorities and communities as a vital element of plans for new investment, infrastructure and retrofitting, and that towns and cities will have robust strategies for the planning and management of urban forests. The Atlantic Gateway's Parkland, the Mersey Forest Plan and London's Infrastructure Plan to 2015 were cited as illustrations of what might be achieved elsewhere in England.

Urban forests are seen to be important in tackling climate change through the removal of carbon dioxide from the atmosphere, in reducing urban air temperatures, and in reducing the risk of flooding. FWAC further argues that urban forests will contribute to the physical and mental health and wellbeing of urban populations by reducing pollution and the harmful effects of ultra-violet light and noise levels, and by improving access to green spaces. Economically, it is argued that urban forests will create urban areas that attract investment and generate products and services that can be productively used locally.

The aims of the Scottish Borders Climate Resilient Communities project[17] were to 'support a local process of community change through building partnerships, learning and capacity building' and to 'understand the critical factors involved in facilitating the development of community resilience to climate change to draw out key levers for change nationally'. The collaborative project involved the University of Dundee, Scottish Borders Council, the Tweed Forum, the Southern Uplands Partnership, the International Futures Forum and the Scottish Association of Marine Sciences, and was supported by the Joseph Rowntree Foundation.

Geographically, the project was based in three communities within the Scottish Borders – Peebles, Hawick, and Newcastleton – and was structured around a series of workshops in each community. These workshops brought together local authorities, local organisations and community members to explore a range of local issues, including climate change, flooding and flood resilience, community resilience, rural development, and urban regeneration. In addressing community resilience, for example, the project explored the dynamics of climate disadvantage, and six groups of people within communities were identified as particularly disadvantaged – the elderly and those with health issues, local businesses, tenants, people on low incomes, essential-infrastructure users, and families with young children.

A number of key general findings emerged from the project, but perhaps the overriding feature of the findings was the need to take a holistic, rather than a piecemeal, approach to community resilience. This is reflected, for example, in the findings that support for the different groups experiencing climate disadvantage is generally not well integrated. The focus has been on adaptation rather than mitigation in that few attempts have been made within communities to reduce carbon dioxide emissions, despite the belief that this is one of the most important ways to enhance resilience.

At the same time the study recognised that improving community resilience to climate change is a complex process, and stressed the importance of encouraging learning – and that the application of this learning is central to resilience thinking and behaviour. The project concluded that strategic action is required not only to enhance community capacity for resilience but also, arguably more importantly, to challenge the underlying values and behaviours that are driving climate change.

Discussion

The concept of resilience is increasingly being employed to inform, and in many cases to underpin, sustainability and sustainable growth strategies and policies at a wide range of scales. The resilience initiatives outlined in the three cameo case studies

set out above are, albeit in their own ways, aspirational, but they are very different, not only in their focus but also, arguably more importantly, in their level of analysis. That said, the cameo case studies provide illustrations of resilience thinking within the UK. More generally, a number of issues merit discussion and reflection.

First, there are problems of definition in that, as outlined earlier, resilience has a range of meanings and has been used in a variety of contexts, and as such it can be seen to mean all things to all people and therefore to have little genuine meaning. Davoudi[10] argued that 'it is not quite clear what resilience means, beyond the simple assumption that it is good to be resilient', and posed the question 'is resilience in danger of becoming just another buzzword?'. While Weichselgartner and Kelman[18] acknowledged that 'the 'elasticity' of the term' and 'the 'flexibility' of the concept' help to explain its popularity, they argued that 'there is an inherent danger that the term becomes an empty signifier that can easily be filled with any meaning to justify any specific goal.' Arguably more critically, Schipper and Langston[19] have argued that resilience 'runs the risk of being used and abused to the point that it becomes meaningless'.

Secondly, notwithstanding the issue discussed above, if organisations are to employ the concept of resilience to frame their strategies and policies, then measuring resilience is an important issue. However, there are a number of conceptual and methodological challenges here.

Conceptually, different definitions of resilience do not make measurement an easy task, and given that resilience is generally seen as being both time and place specific, it is difficult to establish generic measures which facilitate comparisons over time and space. Methodologically, the collection of reliable and meaningful data, particularly in environments and communities which have suffered shocks, crises and threats, may prove difficult, and here companies, organisations and researchers may resort to using available and/or surrogate data rather than looking to collect original data in the field. That said, a number of resilience measurement frameworks have been developed. Schipper and Langston,[19] for example, listed 17 such frameworks, but variations in their aims, scale and method of analysis make comparisons difficult.

Thirdly, there are a set of issues around distributional equity: although the literature on these issues relates principally to socio-ecological and urban resilience, they have a wider relevance. Meerow and Newell,[20] for example, have argued that in the policy discourses of urban resilience the 'underlying politics of resilience have been ignored' and have stressed the importance of questioning what they describe as 'the five w's of urban resilience', namely resilience for whom, of what, when, where and why. In addressing the question of resilience for whom, Vale[21] suggested that 'the significance of resilience depends on whose resilience is being described' and argued that while many governments and corporations, for example, may seek to claim the term it is worth asking how 'they decide whose resilience to care about' and 'whose resilience is omitted in the process'.

'If organisations are to employ the concept of resilience to frame their strategies, then measuring resilience is an important issue. However, there are a number of conceptual and methodological challenges here'

In analysing the resilience of food security to climate change in Huehuetenango in north-western Guatemala, Herrera[22] revealed that many of the solutions reflected the views of a minority of stakeholders and effectively ignored the views of the farmers. In outlining the importance of the 'when' question, Meerow and Newell[20] question whether the primary goal is to 'build resistance to short term disruptions (e.g. hurricanes) or long term stress (e.g. precipitation changes caused by climatic change'.

Finally, there are issues surrounding development and change. On the one hand, resilience is seen as being progressive and integral to sustainable development and growth at the global scale. In a review of the United Nations Sustainable Development Goals, the UK's Overseas Development Institute,[23] for example, argued that 'a focus on strengthening resilience can protect development gains and ensure people have the resources and capacities to reduce, prevent, anticipate, absorb and adapt to a range of shocks, stresses, risks and uncertainties'. In a similar vein, the United Nations Office for Disaster Risk Reduction[24] argued that 'building disaster resilience is critical to achieving the goal of eradicating poverty' and that 'there is an urgent need to build and strengthen the resilience of poor communities to prevent future events from pulling more people into poverty and to protect their livelihoods and assets to help them recover'.

On the other hand, Martin and Sunley,[25] for example, have argued that the notion of 'resilience privileges the idea of a 'return to normal'', while MacKinnon and Derickson[11] have suggested that 'the concept of resilience, derived from ecology and systems theory, is conservative when applied to

the social sphere'. As such, resilience might be seen to favour the status quo and to work against progressive social change.

By way of an illustrative example, Zellmer and Gunderson's[26] comparative analysis of ecological restoration in Glen Canyon revealed that 'resilience may not always be a good thing, particularly when it exhibits itself as entrenched stakeholder interests or institutions that do not embrace change'.

Arguably more contentiously, some critics have argued that popular conceptions of resilience privilege the existing social framework of production, distribution, exchange and consumption and more specifically the capitalist mode of production. Martin and Sunley[25] have argued that 'the concept of resilience is easily captured by neoliberal ideology, to prioritise the status quo, and the importance of self-reliance, flexibility and the role of self-correcting market adjustments'. More pointedly, MacKinnon and Derickson[11] concluded that 'resilience thinking has become implicated within the hegemonic modes of thought that support global capitalism'.

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Notes

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