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CHAPTER 2

Climate Resilience: Interpretations of the Term and Implications for Practice

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1 Introduction

The term 'resilience', which is integral to the UK Climate Resilience Programme (UKCR), has been used increasingly in academic, practice and public discourse around climate change, and crises more generally. The term's appeal comes from its ability to frame crises not as uncontrollable and uncertain phenomena to be feared, but as challenges over which one can triumph, with the potential for improving society. It has

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an everyday meaning that emphasises interconnectedness and the 'bigger picture' of a system. Such optimistic and palatable qualities make it easy to see why it is popular. Who (or what) would not want to be resilient? [1].

However, the term is not universally liked. Some consider the concept too vague, 'restless' [2] or value-laden to be used in practice with any consistency. Some point to a tendency to focus on the technocratic features of resilience policy which provide limited potential to examine how power dynamics underpin how resilience is built ('resilience for whom?'). While this may act to promote political confidence, it does little to create the transformative change needed to unpick entrenched, structural inequalities in society. Framings emerging from recent academic interest in how resilience might better address power and agency present resilience not simply as response to a shock but rather as a dynamic capacity to be nurtured, developed, expanded and negotiated, given the right conditions at an individual, community, organisational or national scale [3, 4, 5, 6].

To provide some clarity, it is worth considering the key interpretations that are in use and demonstrated in the UKCR programme. We group the interpretations relevant to the work of UKCR into two categories: 'broad or narrow' and 'operational or place-based'. The aim of this is to draw out how the different framings influence the kind of activities needed to build greater resilience.

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2   Broad or Narrow

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report [7] glossary defines resilience as:

> The capacity of interconnected social, economic and ecological systems to cope with a hazardous event, trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure.

However, we consider this too generalised to be useful in practice. Narrow framings have value where there is a specific service or entity that can be made resilient without requiring complex negotiation or inputs. The UK government's consultation on a National Resilience Strategy [8] defines resilience as:

> An ability to withstand and quickly recover from a difficult situation. This comes hand-in-hand with the idea of 'bouncing back', of returning to 'normal', of picking up where we left off before whatever difficulty or challenge we experienced.

Both 'bouncing back' and 'normal', written in inverted commas, highlight areas where there is controversy about what this means in practice. Is 'normal' simply the situation as it was before? Can a system (an asset, a community etc.) ever actually return to the same state after a crisis? Should the goal not be to 'build back better' and use the crisis as an opportunity to rethink and improve the existing situation? While this is a common definition of resilience and widely used in emergency planning, it represents a narrow interpretation, implying resilience is simply a *response* to external shocks to a system. Broader interpretations include concepts of anticipation and preparation to reduce exposure and vulnerability (e.g. through internal organisational processes), and see resilience depending not just on the nature of the external shocks but also on the factors that make the system of interest exposed and vulnerable. These different interpretations inevitably influence how organisations seek to enhance resilience.

3   OPERATIONAL OR PLACE-BASED

In addition to the distinction between broad or narrow resilience, further clarity of definition can be achieved by the distinguishing between 'operational resilience' or 'place-based resilience'.

Operational resilience refers to the resilience of a system, or component of a system, designed to deliver a specific outcome. It is used by operators of infrastructure or organisations responsible for delivering a service. For example, the Electronic Communications Resilience and Response Group (EC-RRG) [9] defines resilience as:

> The ability of an organisation, resource or structure to be resistant to a range of internal and external threats, to withstand the effects of a partial loss of capability and to recover and resume its provision of service with the minimum reasonable loss of performance.

Operational resilience is usually expressed in terms of technical standards of service or levels of protection for specific assets. Although this interpretation seems tightly and technically defined, there can still be problems with putting this into practice. As it is not feasible, nor cost effective, to make systems resilient to all conceivable shocks, decisions must be made about what is considered an acceptable standard of service. What 'probability of failure', or failure consequences, can we reasonably be expected to live with? Who defines what is a 'reasonable' loss of performance? A more laissez-faire approach would be for regulators to rely on 'best practice' and let organisations justify their own standards of service. This highlights the challenge of how to incorporate changing, uncertain conditions when setting standards for operational resilience in the face of climate change. For example, the Climate Change Committee [10] recommends adapting to a 2 °C world, assessing the risks for 4 °C and preparing for 'unpredictable extremes'—but how this can be done in practice needs to be defined carefully.

Place-based resilience relates resilience to a location rather than a specific system or service. High-level national strategies aspire to create 'resilient communities'. An example is Outcome 1 of Climate Ready Scotland Climate Adaptation Programme 2019–2024 [11], which is:

> Our communities are inclusive, empowered, resilient and safe in response to the changing climate.

The Environment Agency's National Flood and Coastal Erosion Risk Management (FCERM) strategy [12] meanwhile aims to achieve 'climate resilient places'. This could also apply to sectors, such as 'building a resilient health service'. Describing what place-based resilience looks like is challenging; places are exposed to multiple pressures, and people in a community will have diverse needs, expectations and levels of resource and motivation for engagement. What is considered 'resilient' for a locality, be it a neighbourhood, community, region or nation, is entirely socially constructed. Inevitably this involves political choices about priorities, where responsibility lies, and how decisions are made about what to fund. In the UKCR programme, this has been demonstrated in work developing principles of progressive resilience that recapture and recast the term in ways that resonate locally and with other drivers of change—such as reducing biodiversity loss, addressing poor mental health and access to green space—to make it more meaningful and applicable [13].

In recent years, a key critique of resilience has been that, despite appearing neutral and objective, resilience policies facilitate neoliberal shifts in responsibility for risk governance, particularly from the state to the private sector and communities. Such policies can be intensely competitive, creating both 'winners' and 'losers', and potentially maintaining an unequal status quo.

A distinction between operational and place-based resilience is helpful because approaches to characterising and measuring resilience are different, and because it influences discussions about how to achieve resilience. In summary, operational resilience is easier to characterise, measure and achieve than place-based resilience.

4   Implications for Building Resilience in the UK

How we interpret resilience is important. If we consider resilience as primarily dealing with external shocks, or as addressing underpinning features of the system that increase exposure and vulnerability, this clearly influences how we respond and the role and responsibilities of the state, communities and individuals. The Civil Contingencies Act https://www.legislation.gov.uk/ukpga/2004/36/contents (2004) commits to helping communities 'respond and recover' from external shocks rather than providing protection or support to address the reasons why some places or communities are more vulnerable. This operational interpretation of resilience focuses on measures to restore the status quo in the light of

external events ('shocks'), rather than considering the underpinning characteristics of the system that create inequality. Place-based resilience, with its greater emphasis on anticipation and preparation to reduce exposure and vulnerability to subsequent loss (e.g. through land use planning, building regulations and social support), puts less emphasis on responding to external shocks. There is also a greater sense that 'bouncing back' to a previous state is not only unrealistic but also undesirable and unfair for many [4, 5]. The goal should thus be to 'bounce forward', or transform, to a fairer, better adapted state. To achieve this it helps to see resilience as something that is both contextual and negotiated by those with a stake in the outcome. This emphasises the need for effective mechanisms to facilitate difficult decisions about what is protected and what is lost, in the context of other drivers of change and limited resources.

5   WHAT NEXT?

The term 'climate resilience' is likely to be with us for the near future. To be a useful concept for building climate resilience for the UK we need to ensure that the complexity of this can be addressed with the necessary level of detail and full consideration of interdependencies. To build climate resilience in the UK we need to frame resilience in a progressive way as 'bouncing forward', rather than back. This is an interpretation of resilience as a dynamic capacity that is negotiated and enabled, rather than a fixed state that is imposed. This requires:

- **Legitimate and inclusive mechanism(s) to engage across the whole of society.** We cannot save everything and must be selective. There will be co-benefits, unavoidable trade-offs and, inevitably, winners and losers. To achieve a just outcome this requires careful consideration, deliberation of 'resilience for whom?' and explicit discussion of winners and losers. Without careful inclusion of those most likely to 'lose', the voices of the vulnerable could be marginalised.
- **An informed public with access to accurate, salient information.** If negotiations about resilience need to happen at local, community and even sectoral scales, people need to be better informed of how they may be impacted by resilience policy and practice, directly and indirectly, through the places they live, how they travel, the food

they eat, the work they do, their personal connections and pursuits, and the public services they depend on.

- **An enabling environment with clear coordination and courageous leadership.** There is currently a lack of clear roles, responsibilities and accountability around building climate resilience in the UK. This includes mechanisms to raise public awareness, discuss what needs to change, to link the national policy processes to local experience and ensure it reduces inequality rather than exacerbates it. Citizens' assemblies and juries (such as the Rethinking Water Citizens' Juries https://consult.environment-agency.gov.uk/yorkshire/citizens-jury-for-the-river-wharfe-yorkshire-infor/#:~:text=The%20Rethinking%20Water%20Citizens'%20Jury%20was%20put%20together,experts%20on%20all%20aspects%20of%20the%20water%20environment) that use deliberative democracy to explore place-based approaches to resilience issues could be one solution, but most currently focus on achieving net zero. A greater emphasis on resilience—at least putting it on a par with net zero—is needed to stimulate this vital discussion and ensure fair and appropriate action.

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