



# Climate adaptation as strategic urbanism: assessing opportunities and uncertainties for equity and inclusive development in cities



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## ABSTRACT

An increasing number of cities are recognising the impacts of climate change on their development pathways. In this paper, we assess strategic climate adaptation actions in the cities of Durban (South Africa), Indore (India), and Medellín (Colombia), and examine different approaches to integrating emerging adaptation priorities into urban plans, programmes, or governance arrangements. We highlight sources of planning tension – particularly between aspects of the planning process and larger urban political economic forces – that reshape how subsequent adaptation interventions are framed and implemented. We find that when advanced with a focus on alignment with development, strategic actions that transcend individual actor or sectoral interests have a better chance at taking root. However, we note that a procedural focus in strategic urbanism must also be accompanied by an integrated assessment of planning outcomes in order to ensure more equitable and inclusive development in cities. Although strategic approaches may facilitate coherent policy framings, targeted actor coalitions, and opportunities for collaborative action, such approaches are often unable to adequately capture the difficult policy trade-offs or contestations that are required to further overall adaptive capacities of cities. In other words, strategic adaptation actions must be considered in relation to the powerful, and often entrenched, political economic interests that constrain urban equity at-large.

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## 1. Introduction

Cities are increasingly responding to climate change by pursuing strategic adaptation actions. In this paper, we build on the concept of “strategic planning devices” by Salet (2007), which he defines as collective missions, visions, or plans that facilitate broad political coalitions and stimulate certain joint courses of action to promote particular visions of development. We extend the idea of strategic devices to theorise emerging climate adaptation efforts in cities, which refer to processes of adjusting to actual or expected climate impacts in order to moderate or avoid harm (IPCC, 2014). As opposed to comprehensive or fully “mainstreamed” adaptation plans, strategic adaptation actions are often aligned according to a particular sectoral vision, which range from raising risk awareness (Anguelovski & Carmin, 2011; Carmin, Dodman, & Chu, 2013) to combining broad waste reduction, greening, and energy efficiency programmes with plans to combat extreme impacts such as cyclones and heat waves or slow onset risks such as

increasing temperatures, changing precipitation patterns, and sea level rise (Rosenzweig, Solecki, Hammer, & Mehrotra, 2010).

The ability to identify strategic adaptation actions is critical for cities in the global South because of their disproportionate exposure to impacts, lower capacity to respond, relative concentration of low-income groups, and fragmented governance arenas (Ayers & Dodman, 2010; Bicknell, Dodman, & Satterthwaite, 2009). Many cities are in fact connecting adaptation goals with general development needs, and are devising strategic actions to protect housing, infrastructure, public services, and other capital assets against impacts (Anguelovski & Roberts, 2011; Shi, Chu, & Carmin, 2016). However, there is to date little empirical knowledge on how rapidly urbanising cities balance adaptation needs with pre-existing strategic (and often larger-scale) urban development projects – especially those related to environmental protection, poverty reduction, infrastructure, and economic growth – as well as navigate relevant institutional structures and actors who likely have conflicting planning priorities. In response, this paper surveys theories of strategic planning, climate governance, and inclusive development to uncover different opportunities and constraints associated with targeted adaptation actions in cities. Then, we apply these concepts to the case studies of Durban, Indore, and Medellín, and ask: How are

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strategic climate adaptation objectives being integrated into urban development? To what extent are such processes creating new political coalitions and ensuring more equitable planning outcomes?

To answer these questions, we examine Durban's plans to integrate adaptation into strategic ecological infrastructure, Indore's targeted approach to bring climate resilience into community development projects, and Medellin's strategic actions to reduce climate risks through spatial planning and greening projects. We compare these cases and highlight sources of planning tension – especially between aspects of the planning process and larger urban political economic forces traditionally shaping the development of cities – as well as the prospects of strategic adaptation actions for facilitating inclusive development. When advanced with a focus on procedural alignment with development goals, we argue that strategic adaptation actions can promote integration with urban projects, particularly those around land use, water and sanitation, and ecosystem services. However, although strategic plans can promote leadership, resource support, and agenda awareness, the degree to which they trigger more equitable political economic relationships – both within and beyond individual sectors – and catalyse more inclusive outcomes remains uncertain. In particular, strategic adaptation actions often seek to defer difficult policy trade-offs between development and environmental priorities, as well as compartmentalise or repress broad political contestations in cities. In other words, they do not catalyse an essential, larger discussion on political economic restructuring needs. These critiques therefore offer new theoretical insights at the intersection of climate adaptation, urban development, and strategic urbanism.

## 2. Applying theories of strategic urbanism to climate adaptation

In this section, we revisit theories of strategic urbanism to examine the opportunities for integrating adaptation mandates into development plans and policies. We refer to development as processes of wealth and income creation, livelihood improvement, and poverty reduction. We also highlight the particular challenges experienced by cities in the global South when confronted with high poverty, inequality, and resource and capacity deficits. Fig. 1 illustrates our conceptual approach to unpacking the two sources of planning tension inherent in strategic adaptation actions, namely the need for procedural integration (objective 1) and the need for political economic restructuring (objective 2). We argue that these dual objectives present unique challenges for adaptation planning and, if not pursued simultaneously, may result in inequitable and exclusive adaptation outcomes.

Theories of strategic urbanism note the importance of articulating shared visions of the future (Albrechts, 2004, 2006). Strategic planning promotes a set of targeted actions that are synergistic to a city's stated

development goals, allows for interventions aimed at socioeconomic progress, and facilitates collaboration between different stakeholders (Steinberg, 2005). In contrast to comprehensive planning – such as city-wide master planning – strategic plans are derived from operational or normative goals that can be achieved through coordinating within or across sectors, identifying appropriate knowledge, delineating resource support streams, and pursuing joint implementation mandates (Albrechts, 2013; Healey, 2004; Salet, Bertolini, & Giezen, 2013). In this vein, Salet (2007) defines “strategic devices” as collective missions and visions that catalyse action in fragmented urban governance arenas. The strategic dimension is dependent on the ability to transcend individual horizons in scope and time – such as extending beyond single actors, single-purpose behaviours, and singular timeframes of bureaucratic routines – and on the ability to identify issue frames that allow for joint action (Salet, 2007). Climate adaptation is thus an archetypal strategic planning challenge because it requires bridging public and private interests, local and extra-local jurisdictions, and short versus long-term development timeframes.

In the past, strategic plans have helped realise broad sustainability agendas (Malekpour, Brown, & de Haan, 2015), especially when considering them in relation to public health (Bowen & Ebi, 2015), disaster risk reduction (Solecki, Leichenko, & O'Brien, 2011), ecosystem protection (Roberts et al., 2012), and infrastructure needs (Anguelovski et al., 2016; Todes, 2012). The ability to integrate these agendas and identify collective preferences not only requires skillful coordination in cities dominated by fragmented interests and power, it also requires innovations to overcome the barriers of the sector-minded, single-issue approaches typical of municipalities organised according to territorial jurisdictions (Chu, 2016c; Evans & Karvonen, 2014; Salet, 2007). When applied to climate adaptation, strategic planning can be a robust approach because it delineates pathways for institutionalisation, promotes political support and linkage to municipal budgets, and allows for the articulation of interventions despite continued risks and uncertainties (Carmin, Anguelovski, & Roberts, 2012).

For cities in the global South, framing climate change as a development priority – both in terms of economic progress and scientific innovation – can motivate support for strategic efforts (Anguelovski, Chu, & Carmin, 2014; Bain et al., 2016; Carmin et al., 2013; Leck & Roberts, 2015; Leichenko, 2011). However, the socio-economic and spatial restructuring of cities – such as through globalisation, competitive urbanism, and recent austerity measures – has increasingly led to the creation of powerful regimes and interest groups that prevent cities from effectively accounting for collective wellbeing (Brenner & Theodore, 2002). Additionally, the shift from “government” to “governance” entails more democratic power, accountability, and transparency (Bardhan, 2002; Cheema, 2007), but can also lead to the consolidation of decision-making within small groups of elites (Swyngedouw, 2005). In other words, larger urban political economic structures – including the roles of finance, political ideology, and social movements in contesting planning agendas – also have an influential role in directing strategic climate adaptation outcomes (Chu, 2016b).

To tailor adaptation actions to the political economic realities in cities, many have pursued policies that balance both climate change and development goals (Ayers & Dodman, 2010; Halsnæs & Trærup, 2009). Adaptation can be “mainstreamed” into environmental management, asset procurement, and public finance mechanisms (Carmin et al., 2012). Others have cooperated with civil society organisations to improve equity, awareness, and knowledge transfer (Archer et al., 2014; Chu, Anguelovski, & Carmin, 2016) or have engaged with the creative potential of residents (Chu, 2016a; Rodima-Taylor, Olwig, & Chhetri, 2012). As a result, the hallmark of many climate adaptation actions is a pursuit of strategic approaches, as well as a reliance on cross-sectoral tools and experimentation with different participatory arrangements (Anguelovski et al., 2014; Bulkeley, Castán Broto, & Edwards, 2015).

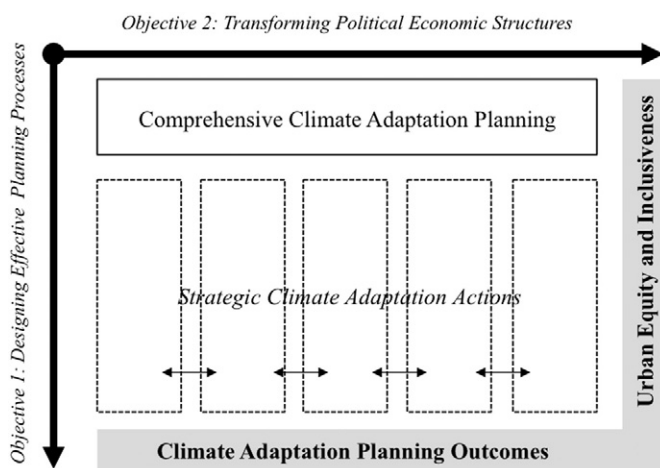


Fig. 1. An illustration of the objectives of strategic climate adaptation planning.

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