Earth System Governance 24 (2025) 100243

Contents lists available at ScienceDirect

Earth System Governance

journal homepage: www.sciencedirect.com/journal/earth-system-governance

Municipal capacities and institutional responses in the age of climate uncertainties

Tanvi V Deshpande [1]

LSE-Fudan Global Public Policy Hub, Department of Social Policy, London School of Economics and Political Science, London, UK

ARTICLE INFO

Keywords:
Municipal capacity
Institutional climate response
Local ideas and organisations
Global South

ABSTRACT

Municipal governments in the global South with weak governance capacities and resources must urgently build their capacities to address climate impacts. Building on the concept 'bringing the state back in', the paper discusses the influence of ideational evolution within municipal governments on their capacity to pursue contextual climate policies. Ideational evolution within the government was traced by unpacking policymaking processes (learning, puzzling, and powering) and actors (governmental and non-governmental) involved. The framework explains how a global South municipal government improved its capacity to formulate and adopt an integrated, cross-sectoral and contextual climate policy without any domestic or international mandate. Triangulated information –(climate) policy documents, existing literature, interviews with policymakers-forms the basis of the study. In theorising from and for the global South, the study presents a framework, supported by empirics, on the influence of local and contextual ideation on municipal decision-making capacity to institutionally respond against climate change.

1. Introduction

The study explains *how Indian municipal governments improve their decision-making capacity to pursue contextual climate policies.* While political-institutional contexts impact urban climate policymaking (Simon et al., 2022), other endogenous factors -local ideas and organisations (Deshpande, 2022)- are instrumental in addressing urban climate governance barriers and pursuing climate policies, which are unpacked here.

Rapid urbanization has exacerbated the struggles of Indian municipal governments, operating with low capacities and diminishing resources (Bhardwaj and Khosla, 2021), in meeting developmental priorities and providing adequate services (ICLEI, 2023; Kundu et al., 1999; Nandi and Gamkhar, 2013; Saroj et al., 2020). India, like most global South cities, is severely impacted[2] by climate impacts (Dodman et al., 2022; Khalid and Okitasari, 2023; Singh et al., 2021), and this situation will worsen in the future (Intergovernmental Panel on Climate Change (IPCC), 2014). Municipal governments therefore need to take climate action (Bhardwaj and Khosla, 2021; Cook and Chu, 2018; Deshpande, 2022; Somokanta, 2022) by improving their governance and institutional capacities (Simon et al., 2022). However, urban climate action requires additional governance capacities and resources (ibid; Stehle et al., 2022; van der Heijden, 2019); such capacities are lacking (Sami, 2018) in the overburdened (Bhardwaj and Khosla, 2017) municipal governments in India (details in section 2.1), and other urban contexts across the global South (Nagendra et al., 2018; Yasmin et al., 2023). Moreover, these challenges are heightened for poorly resourced secondary[3] cities across the global South (Khalid and Okitasari, 2023; Kumar and Stenberg, 2023; Nandi and Gamkhar, 2013; Roberts, 2014; Roberts and Hohmann, 2014).

Municipal governments are essential for planning, adopting and implementing pan-city climate responses (Simon et al., 2022;

This article is part of a special issue entitled: Global South published in Earth System Governance.

[1] Present address (where this article was finalized): LSE-Fudan Global Public Policy Hub, Department of Social Policy, LSE. Houghton Street, London WC2A 2AE. +44 (0)20 7405 7686 Mail: t.deshpande@lse.ac.uk

[2] Climate change has direct impacts (urban flooding, heat island effect, sea-level rise and droughts), and indirect and cascading impacts on a range of urban sectors (Patterson and Huitema, 2019; Shaw et al., 2023).

[3] A secondary Indian city has population between one to five million (Deb, 2017).

https://doi.org/10.1016/j.esg.2025.100243
Received 13 June 2024; Received in revised form 3 February 2025; Accepted 4 February 2025
Available online 27 February 2025

Anguelovski et al., 2014; Cook and Chu, 2018; Khalid and Okitasari, 2023; Lund et al., 2012). In the last ten years,[4] global South municipal governments have addressed climate impacts through local institutional[5] responses, such as climate action plans. Such climate plans are cross-sectoral (transport, water, health, waste, housing etc.) and integrated as they comprise of both climate adaptation and mitigation measures- (Aboagye and Sharifi, 2024; Khalid and Okitasari, 2023; Padmanaban, 2022). Within the urban climate governance hierarchy municipal governments are crucial in undertaking climate action. For instance, these governments are a)proximate to urban risks and vulnerabilities (Carmin et al., 2012; Sami, 2018), b)able to set urban goals and priorities and introduce climate responses (Anguelovski and Carmin, 2011; Deshpande, 2022; Simon et al., 2022), and c)well positioned to form and mediate climate partnerships with diverse organisations working across different governance scales (Chu et al., 2016; Khalid and Okitasari, 2023; Leal and Paterson, 2024). Moreover, scholars find that urban climate action plans, promoted by international non-governmental organisations[6] (INGOs) and transnational municipal networks (TNM), can only become part of a city's institutional paradigm if they are endorsed by municipal governments (Aboagye and Sharifi, 2024; Fünfgeld, 2015; Stehle et al., 2022). Pursuing transformative climate agendas requires negotiating and streamlining diverse stakeholder perspectives into a comprehensive perspective, which urban policymakers have the authority to govern (Simon et al., 2022). Thus, climate institutional responses -a pan-city climate policy with short- and long-term goals-requires the commitment, involvement and leadership of municipal governments.

The study bridges the gap in urban climate governance scholarship by highlighting the influence of global South municipal governments in tackling the global climate crisis. Several global South cities, including under-studied secondary cities, are pursuing climate action (Khalid and Okitasari, 2023; NIUA, 2023; Padmanaban, 2022; Stehle et al., 2022) owing to endogenous factors like municipal governments. While municipal governments play a crucial role in urban climate action, little is known about their internal dynamics and climate responses. Almost a decade ago, Broto and Bulkeley (2013) identified the need to study urban climate policymaking and agenda-setting processes in diverse contexts; this continues to be a gap especially from a global South perspective. Government capacities and climate policies (Dubash, 2021) at the city level have often been overlooked in urban climate governance literature (Da Cruz et al., 2019; van der Heijden, 2019). Furthermore, to decolonize urban climate governance scholarship, the study focuses on secondary cities from the global South as opposed to overstudied large cities of the global North[7] (Nagendra et al., 2018; van der Heijden, 2019). By studying the state/government in the global South this work aligns with decolonizing debates advocating for contextually appropriate urban theories and methodologies for the global South.

A focus on municipal government capacity to undertake climate action brings to focus the concept of state capacity and policymaking processes; an interdisciplinary approach used by this study enables a comprehensive understanding of urban climate governance, which is the need of the hour (van der Heijden, 2019). Here, state capacity, which is the ability to design and execute policies (Akbar and Ostermann, 2015; Cingolani, 2013), is explained through an ideational lens (Deshpande, 2022; Deshpande et al., 2023; Jha, 2020, 2023; Mukherji, 2014). An ideational explanation focuses on changing values and interpretations of policymakers who shape policies (Béland, 2016; Béland and Cox, 2016). This ideational evolution was traced by unpacking the climate policymaking processes (learning, puzzling, and powering (Heclo, 1974)) and identifying key organisations involved (details discussed later). When the two arms of the municipal government -bureaucratic (responsible for policy planning and execution) and political (responsible for policy adoption and budget allocation)- are driven by the same evolved policy idea they can cohesively pursue a policy (Deshpande, 2022).

The ideationally driven state capacity framework explains how Rajkot's Municipal Corporation (RMC) improved its capacity to pursue a contextual climate policy. The city of Rajkot, with a population of just over a million and located in the state/province of Gujarat, formulated and adopted the Climate Resilient City Action Plan (CRCAP) as a policy in 2019 (ICLEI, 2019). This cross-sectoral and integrated climate action plan was undertaken through the CapaCITIES[8] project, coordinated by the International Council for Local Environmental Initiatives (ICLEI) and funded by the Swiss Agency for Development and Coordination (SDC). A formal climate institutional response was uncharacteristic for a secondary city, especially when the climate policy was pursued its own accord (without any domestic and/or international pressure and mandate). A climate action plan tests municipal government capacity to process scientific information and engage with diverse stakeholders, coordinate across urban sectors, and collectively draft and adopt a climate policy with short- and long-term implications. Findings show ideational evolution within the bureaucratic and political arm of the RMC improved its capacity to undertake a climate policy. Policymaking processes created a shared idea favouring the CRCAP, which enabled the RMC to cohesively address its governance challenges and introduce a climate policy. The study highlights the influence of the bureaucratic and political arm of the government on climate action by building on previous studies -focused on the influence of the bureaucracy and formal urban planning processes-on Rajkot's sectoral and time-bound climate mitigation initiatives (Bhardwaj and Khosla, 2017, 2021). Today many Indian and other global South cities have a climate action plan; however, in 2018–19 a secondary city like Rajkot was one of the climate pioneers. Consequently, Rajkot gained domestic and global recognition[9] as an early climate adopter and a dedicated climate champion (ICLEI, 2021).

Section2 contextualises the study by discussing urban climate governance barriers experienced by Indian municipal governments. This is followed by a theoretical section that presents alternative explanations applied to understand Rajkot's case. It then goes to discuss the conceptual framework of state capacity and the causal mechanism (learning, puzzling and powering) of the study. The methodology section explains the field-site and approaches used for data collection and analysis. The empirical section unpacks Rajkot's climate policymaking

[4] The 2015 Paris Agreement introduced 'nationally determined contributions' for obliging Parties to report domestic efforts against the global phenomena (Parsons, 2016). Consequently, global climate discourses focused on domestic and sub-national climate efforts (Dubash, 2021). Before 2015, majority of the urban climate actions were sectoral, and predominantly mitigation focused (De Rosa et al., 2022) which is often not necessary for global South cities who need climate adaptation measures.

[5] Institutions are the rules and norms governing state behaviour and their interactions(North, 1990; Young, 2008). Climate policies and regulations are institutional responses employed by municipal governments to address climate impacts (Bulkeley and Kern, 2006).

[6] For instance, INGOs like C40 Cities and ICLEI guide municipal governments through their climate frameworks (C40 Cities, 2020; Fünfgeld, 2015; ICLEI, 2023).

[7] Scholars find that evidence on urban sustainable governance mechanisms from the global South continue to be scarce (Yasmin et al., 2023).

[8] The objective of this project was to improve awareness and capacity within governments to plan and implement climate adaptation and mitigation measures to ensure low-carbon and climate resilient development (ICLEI, 2023). The CapaCITIES project involved three other Indian cities (Siliguiri, Udaipur and Coimbatore) in phase1 between 2016 and 2019 (CapaCITIES, 2018; ICLEI, 2023). While four cities adopted ICLEI's climate action methodology, each municipal government localized their plan (Interview, 2019; ICLEI South Asia representative).

[9] Rajkot won several climate awards over the years (e.g. the National Earth Hour Capital Award in 2015–16, and the Planet City Challenge award in 2018 and 2020) (Khakhariya, 2020; Parmar and Shastri, 2014; Urban LEDS, 2020; WWF, 2020).

processes and delineates the role of government and non-governmental organisations involved. The discussion section draws connections between the framework and results and critically evaluates the climate policy and policymaking process. The paper concludes with key highlights and contributions of the study for prevalent and future research.

2. Research context

The research context section discusses governance barriers(2.1) hindering climate institutional responses in the global South, particularly India. Sub-section2.2 presents alternative theories on urban climate policies and the conceptual framework explaining improved municipal government capacity to undertake a climate policy.

2.1. Urban climate governance barriers

Urban climate responses are hampered by governance barriers such as institutional, jurisdictional, financial, and technical inadequacies (Cook and Chu, 2018). Indian municipal governments continue to work within a centralised governance framework[10] and lack authority in planning and decision-making processes (Khosla and Bhardwaj, 2019; Pinto, 2000; Sami, 2018; Weinstein et al., 2010). Additionally, domestic climate governance mechanisms (policies and legal context) at the national and sub-national level may leverage but don't mandate urban climate action (Khalid and Okitasari, 2023; Stehle et al., 2022). India still does not have an explicit urban climate policy[11] nor does the country have dedicated institutions to oversee urban climate action. India's first domestic climate policy, the National Action Plan on Climate Change(NAPCC) provides sectoral guidelines (e.g.water, habitat, energy, knowledge) and is predominantly mitigation-oriented. Broadly, the plan (except the Sustainable Habitat mission) makes no provisions for urban climate action (Chu and Michael, 2022; Stehle et al., 2022). Additionally, long standing national institutions like the Ministry of Environment, Forest and Climate Change and other relevant ministries, orchestrating climate action at multiple scales (Bäckstrand and Kuyper, 2017), have not explicitly backed urban climate action (Stehle et al., 2022). Finally, there is no international (binding) obligation for global South cities to undertake climate action (ibid).

Furthermore, municipal governments often lack climate awareness (Sami, 2017; Sharma and Tomar, 2010) and technical knowledge to address climate concerns (Bhardwaj and Khosla, 2021). There are misconceptions amongst cities that climate change cannot be addressed at the local level and requires national and global efforts (Sami, 2017). Institutional silos (poor cross-departmental coordination) (Samaratunge et al., 2017) and inertia further impedes climate action (Simon et al., 2022). Moreover, municipal governments lack financial autonomy as they are financially dependent on central and sub-national governments (Bhardwaj and Khosla, 2021), and lack capacity to generate resources (Sami, 2018) for climate action. This is coupled by the lack of financial support for urban climate action, both from the union and sub-national government (ibid).

Another urban climate governance challenge observed especially in the global South is that climate action compete with development priorities. Given the service deficits, developmental priorities take precedence over urban climate action (Anguelovski et al., 2014; Bhardwaj et al., 2019). Furthermore, there is no incentive for municipal governments to incorporate climate action into urban planning (Khosla and Bhardwaj, 2019; Kumar and Geneletti, 2015) or local agendas (Dewulf et al., 2012). Thus, climate action is not a priority for Indian municipal governments (Deshpande, 2022).

Urban climate action is more challenging for secondary Indian cities. Smaller and medium sized Indian cities struggle more than the better resourced large/mega-cities (Khalid and Okitasari, 2023; Kumar and Stenberg, 2023; Nandi and Gamkhar, 2013; Roberts, 2014; Roberts and Hohmann, 2014). Smaller cities not only have fewer resources (share of state and national revenues and programmatic fund allocations, and both domestic and foreign private investments) (Roberts, 2014; Roberts and Hohmann, 2014), but also have little capacity to generate own resources (less tax collected) (Kumar and Stenberg, 2023). Moreover, secondary Indian cities host a majority of the urban population as compared to large cities (ibid[12]). Under such circumstances, it is challenging for municipal governments of secondary cities to overcome developmental deficits, improve service provision, and simultaneously pursue climate action. In this background the study, focuses on municipal government capacity of a secondary city to undertake climate action.

2.2. Conceptual framework: improved state capacity of municipal governments to pursue climate policies

Municipal governments need to improve their capacity to overcome governance barriers to undertake climate action. Literature on urban climate governance reveals key explanations for urban climate action, especially in the global South, such as-a)interactions between key organisations facilitated by transnational networks (Bäckstrand and Kuyper, 2017; Butun, 2021; Fünfgeld, 2015; Goh, 2020; Heikkinen et al., 2020; Khalid and Okitasari, 2023; Leal and Paterson, 2024), b)role of specific organisations (e.g.INGOs or NGOs; epistemic communities; donor agencies) (Bulkeley et al., 2014; Chu et al., 2016; Foo, 2018; Holgate, 2007; Khalid and Okitasari, 2023; Dobson, 2019; Leal and Paterson, 2024), and c)influence of climate champions (e.g.motivated political leader or bureaucrats/civil servants) (Anguelovski and Carmin, 2011; Castán Broto, 2017; Patterson et al., 2019; Stehle et al., 2022; van der Heijden, 2019). While these are useful explanations, they don't comprehensively explain how municipal governments make decisions against climate change. Firstly, transnational municipal networks facilitate interactions between diverse organisations which leads to information transfer, learning, network building etc. (see Leal and Paterson, 2024; van der Heijden, 2019). However, the influence of such network led interactions on the internal workings -governance structures (policymaking), institutional responses (climate policies)- of government is unclear and often questioned[13] (Kaiser, 2022; Wolfram et al., 2019; Da Cruz et al., 2019). Secondly, the formulation and adoption of institutional climate responses lies within the purview of municipal governments (Anguelovski et al., 2014; Cook and Chu, 2018; Deshpande, 2022; Khalid and Okitasari, 2023; Lund et al., 2012) as opposed to non-governmental organisations. So, presence of non-governmental

[10] The union government prepares policy guidelines and manages resource allocation to the sub-national and city level. The municipal government is mainly involved in executing measures (Sharma and Tomar, 2010).

[11] Since 2005, India has increased its focus on urban development through flagship national government initiatives such as the Jawaharlal Nehru National Urban Renewal Mission (JNNURM, 2005–2014), the Atal Mission for Rejuvenation and Urban Transformation (AMRUT, 2015- on-going) mission and the Smart Cities Mission (2015- on-going).Existing urban planning programmes and schemes do not explicitly focus on environmental objectives (Chu and Michael, 2022).

[12] Kumar and Stenberg (2023) show that 74 per cent of India's urban population lives in smaller and medium sized cities.

[13] Climate action furthered by TMNs are skewed in favour of the global North and perpetuate structural power imbalances between the North and South (Kaiser, 2022). TMNs are governed by organisations predominantly headquartered in the global North (ibid), and further neoliberal agendas through global climate action frameworks which promote technocratic and market-oriented measures (Stehle et al., 2022). These networks exclude local organisations from engaging in climate decision-making processes (ibid) and undermine climate adaptation needs which exacerbates inequalities in cities of the global South cities (Chu and Cannon, 2021). Furthermore, the terms of engagements between organisations are defined and monitored by TMNs.

organisations cannot explain how municipal governments formulate and adopt climate policies. Thirdly, actor/agent-based explanations maybe useful explanations for short-term outcomes as they are influenced by the tenurship or contract of actors; however, a cross-sectoral and integrated climate action plan requires long-term involvement of multiple actors and organisations (Deshpande, 2022). Consequently, the above theories serve as alternative explanations as they fall short in explaining how the RMC improved its policymaking capacity to pursue a climate policy.

Understanding how a government improves its capacity to pursue a policy requires a closer examination of the government and its policymaking processes (Jha, 2023; Deshpande et al., 2023; Deshpande, 2022; Dubash, 2021; Mukherji, 2014). Increasingly, improved state capacity has been viewed through an ideational lens as opposed to the conventional materialistic explanations[14] (Deshpande, 2022, Deshpande et al., 2023; Mukherji, 2014; Mukherji and Jha, 2017). An ideational lens[15] demonstrates the influence of evolving values and beliefs (Béland and Cox, 2010, 2016) of policymakers on decision-making processes and policies (Béland and Cox, 2016; Blyth, 2007; Culpepper, 2002; Hall, 1993; Jha, 2020; Parsons, 2016; Mehta, 2010; Deshpande et al., 2023; Mukherji, 2014; Wood, 2015). The evolution of policy ideas within a government improves its capacity to design, adopt and execute a policy (Deshpande, 2022, Deshpande et al., 2023, Mukherji, 2014; Mukherji and Jha, 2017). For instance, Mukherji and Jha(2017), attribute effective implementation of India's Mahatma Gandhi National Rural Employment Guarantee Act to improved capacity of the Andhra Pradesh government due to evolving ideas within the sub-national government. In a similar vein, India's first domestic climate policy (NAPCC) was launched by the Indian government due to ideational evolution within the policymakers and domain experts (Deshpande et al., 2023).

The study contributes to state capacity scholarship in political science by using an alternative lens -ideational as opposed to materialistic- to explain improved state capacity at the city-level.

Ideational explanations for improved state capacity focuses on endogenous factors (local ideas, actors and organisation) (Deshpande et al., 2023; Jha, 2020; Mukherji, 2014). This study attributes improved municipal government capacity -to formulate and adopt a locally appropriate climate policy- to ideational evolution within the government. Such an approach highlights the agency of the global South as opposed to narratives showcasing climate knowledge and norm dependency on the global north (e.g. influence of transnational municipal networks and external organisations). From an urban climate governance perspective, the study theorises urban climate action and improved municipal government capacity from the global South. Such global South theorises are fundamental since global climate norms, largely set by the global North (Kaiser, 2022), are universalistic and not easily transferable (Parnell and Oldfield, 2014) to diverse global South context.

The paper presents a framework that showcases how ideas evolve favouring a policy which in turn impacts the government's capacity to pursue the policy. Ideational evolution within a government can be traced overtime by unpacking the policymaking processes and identifying policymakers involved. Governments introduce new or redefine existing policies through policy learning, puzzling and powering (details in Table 1) processes (Heclo, 1974; see Deshpande et al., 2023; Jha, 2023; Wood, 2015; Stock et al., 2021; Dewulf et al., 2012). These policymaking processes are inter-related and involve a diverse group of actors from within the government and occasionally from non-governmental organisations who can provide policy relevant information.

The process of policymaking is ideational by nature (Béland and Cox, 2010, 2016) and therefore influenced by changing interpretations of policymakers (Parsons, 2016). Ideas in favour of a policy evolve and take shape through policy learning, puzzling and powering process, which are influenced by the policymakers (Fig. 1).

The process of policy learning involves (re)defining a policy problem, understanding the interpretations of policymakers who designed past and current policies and setting the policy agenda; all of which are ideational in nature (Béland and Cox, 2016; Deshpande et al., 2023; Hall, 1993; Jha, 2023; Mehta, 2010) and alter the perceptions of policymakers involved in this process. Consequently, a policy idea -in this case the climate resilient action plan-emerges through the process of learning and is included in the policy agenda by bureaucrats for further discussions on identifying potential solutions.

During the puzzling process a policy idea matures into a policy proposal due to multiple, iterative, and collaborative discussions to identify technically and politically feasible solutions. Such problem-solving discussions are influenced by the values and knowledge systems of policymakers (Béland and Cox, 2016; Deshpande, 2022; Deshpande et al., 2023; Jha, 2023; Kingdon, 1995; Mehta, 2010; Mukherji, 2014). Finally, a matured policy idea gets adopted as a policy when the political arm of the government approves a policy proposal after assessing its feasibility (Deshpande, 2022; Deshpande et al., 2023; Jha, 2022, 2023; Mukherji, 2014). Policy evaluation is influenced by the interpretations and assumptions of policymakers. Moreover, effective implementation/execution of a policy requires convincing and bringing key stakeholders on board; this entails influencing the values and ideas held by key stakeholders to understand the policy implications. Therefore, like the other policymaking processes, the process of powering is also ideational in nature. Powering is influenced by the values of policymakers and involves framing a policy to align with embedded realities and policy debates (Béland and Cox, 2016; Pan and Kosicki, 2001).

Tracing policymaking processes -learning, puzzling and powering- helps analyse ideation within and across the bureaucratic and political arms of the government. A policy is effectively planned, adopted and executed only when the two arms of a government are driven by the same policy idea; a shared rationality improves the government's capacity to cohesively address its governance barriers and pursue a policy (Deshpande, 2022; Mukherji, 2014). The figure (Fig. 2) illustrates how policymaking processes leads to ideational evolution within a government, which improves its capacity to effectively formulate and adopt a policy. The empirical section details how ideas evolved within Rajkot's municipal government that improved its capacity to pursue a climate resilient action plan. While the conceptual framework was deductively adapted, it was validated inductively through empirical evidence.

3. Materials and method

This section describes the field-site, and methodology used to acquire data. The study focuses on Rajkot city as an explanatory case study of improved municipal capacity to undertake climate action Rajkot is vulnerable to urban and climate risks (Bhardwaj and Khosla, 2021; ICLEI, 2023), and as a secondary city, it is undertheorized (Lamb et al., 2019) despite hosting a large proportion of population (Adelina et al., 2020; Kumar and Stenberg, 2023).

The data collected and analysed was centred on understanding details (how was the plan formulated and adopted and who was involved) about one institutional response- Rajkot's climate resilient action plan.

[14] Conventional conceptualizations of state capacity, developed to explain phenomena in countries of the global North, focus on materialistic factors such as fiscal, extractive, and coercive capacities of states (Besley and Persson, 2010; Migdal, 1988; Tilly, 1985; World Bank, 1977 in Deshpande, 2022). Policy changes or introduction of new policies is explained by material needs, incentives and power (Moore, 1993; North, 1990 in Deshpande, 2022) of a predatory state (Mehta, 2010; Fukuyama, 2012; Kapur, 2020). For instance, Westman et al. (2019), find that climate mitigation agendas in the city of Rizhao (China) were due to economic interests and power dynamics.

[15] Ideas are 'changing historical causal-beliefs' (Goldstein and Keohane, 1993) which define policy problems, identify policy responses (Hall, 1993) and strategies to attain policy goals (Blyth, 1997).

Table 1
Urban climate policymaking process and actors involved.

Details	First stage (policy-learning)	Second stage (puzzling)	Third stage (powering)
Description of process	The process involves assessing previous and current policies, accessing new information, and identifies potential solutions.	A collective process of deliberations/discussions on a set of policy responses/solutions.	Assessing feasibility and backing the policy proposal.
Outcome(s) of process	Problem identification and influences municipal agenda	Identify optimal policy response and formulate policy proposal	Adoption/institutionalization (e.g. resolution or order) of a policy proposal as a policy and allocating budget for implementation.
Actors involved (can vary across governments)	Municipal bureaucrats (state-appointed technical officials), elected representatives/political executives who have experience of dealing with policy problems. Additionally, domain experts[a] for technical knowledge (other governmental and non-governmental actors such as retired bureaucrats, civil society and NGO members, media personnel, academics)	Municipal bureaucrats	Elected representatives/political executives and/or powerful societal actors who have the power and authority to ensure policy adoption and execution

[a] Since governments do not have ready-made solutions to all policy problems they engage with experts or epistemic community who hold domain-specific and policy-relevant knowledge on particular issues (Dobson, 2019; Haas, 1992a, 1992b).
Source: author's analysis of Heclo(1974), Hall(1993) and Howlett et al. (2009).

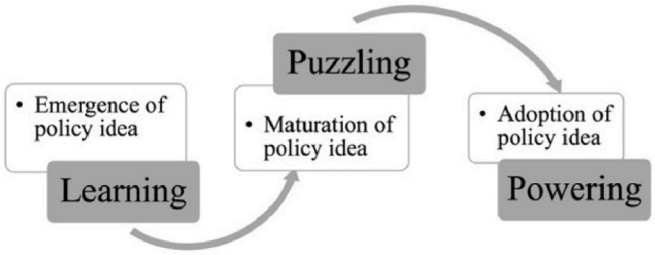

Fig. 1. Ideational evolution through the policymaking processes.
Source: author's analysis of literature (Hall, 1993; Béland and Cox, 2016)

Qualitative methods were used to capture contextual details (see Azungah, 2018) on Rajkot's climate policymaking processes and actors involved in pursuing the climate action plan. Information on Rajkot's CRCAP was triangulated (see Stehle et al., 2022) from multiple sources -interviews with policymakers, policy documents and review of available information-to avoid selection and information biases (Azungah, 2018; Yin, 2013). The initial stage of data collection comprised of extensive literature review on Rajkot city, policymaking processes and climate and urban governance mechanisms. This process helped collate available information related to development policies and climate measures (e.g. government reports, policy briefs, NGO reports and journal articles) and identify missing information (e.g.policy documents, meeting minutes, internal presentations, government resolution and orders). Additionally, relevant stakeholders involved in furthering Rajkot's climate action plan were mapped through this process.

The next stage of data collection on Rajkot's CRCAP was through in-depth and multiple field-engagements between 2018 and 2020 in India; conducted as part of the larger doctoral research. With respect to Rajkot's CRCAP, fieldwork was conducted in three cities of Gujarat (Rajkot, Gandhinagar, Ahmedabad) and New Delhi. Field engagements helped build trust with organisations involved in drafting and adopting Rajkot's CRCAP and subsequently facilitated with data collection. Documents -comprising of written texts, images, presentations etc.- are essential component of qualitative research (Azungah, 2018). Descriptive information on Rajkot's climate policymaking processes (e.g. policy documents such as municipal resolutions and orders, meeting minutes) was acquired from respective government bodies,[16] which are not publicly available and often undocumented. Furthermore, information was also collected from non-governmental organisations[17] (e.g.media articles, NGO reports) to corroborate claims made by the municipal government. With respect to Rajkot's climate plan 11 documents were acquired and analysed.

Finally, information on Rajkot's CRCAP was acquired through 56 semi-structured interviews with key/relevant governmental and non-governmental representatives (see Table 1 in appendices); most interviewees were based out of Rajkot, while a few worked at the sub-national (Gandhinagar and Ahmedabad) and national level (New Delhi). Interviews help localise issues (ibid) and capture undocumented policymaking processes (see Deshpande et al., 2023); it improves understanding on why and who prioritises a policy issue, the collaborations and exchanges, contestations and informal discussions (Beyers et al., 2014). Interviewees, initially identified through Rajkot's CRCAP document (CapaCITIES, 2018), were purposively[18] selected as they were involved in different stages of Rajkot's climate policymaking process (e.g. few municipal bureaucrats, serving Mayor and Commissioner, ICLEI South Asia representatives). This initial list snowballed (Creswell, 2013) into a larger and diverse list (e.g. representatives from citizen groups, local media; academic institutions, former government officials); ultimately, all key stakeholders involved in drafting, reviewing and adopting Rajkot's CRCAP were interviewed during field engagements. Interviews, driven by simple open ended questions (see Jamshed, 2014) and lasting between 30 and 60 min, helped trace past and on-going discussions leading to the formulation and adoption of the plan. Interview questions were framed around the motivation/rationale for pursuing such a plan, key steps/processes and actors involved in furthering the plan, power asymmetries, perceptions and values about a climate policy, discussions and challenges faced in making Rajkot's climate plan. This form of questioning enabled a free flowing conversation on how and who was involved in Rajkot's CRCAP; there was a variation in quality of responses (e.g. memory failures, inadequate rapport and time with certain stakeholders (Azungah, 2018)). Consequently, several meetings (informal discussions) and follow-up interviews were conducted with the multiple (ibid) and more approachable stakeholders[19]

[16] Government documents with respect to Rajkot's climate action plan were acquired from Rajkot Municipal government, Rajkot Urban Development Authority, and Gujarat Climate Change Department.

[17] Reports and media articles were acquired from ICLEI Rajkot office, Rajkot Chitranagari NGO, World Wildlife Fund India, Shakti Sustainable Energy Foundation India, National Institute for Urban Affairs, World Resources Institute India, local and regional newspapers and digital news (Times of India, Scroll) and magazines (Chitralekha, Rajkot).

[18] Purposive sampling has defined characteristics which is governed by the aim of a study (Andrade, 2021), and enables in-depth analysis within a case (Campbell et al., 2020).

[19] Repeated interactions with stakeholders fostered trust and interest among stakeholders to share sensitive information and support the research (funneling approach discussed by Azungah, 2018).

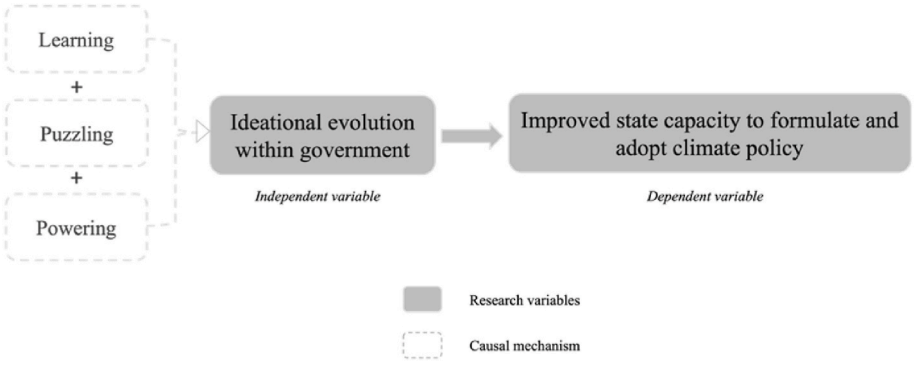

Fig. 2. Policymaking processes leading to ideational evolution that improves state capacity.
Source: author's analysis and adaptation of literature (e.g. Deshpande et al., 2023; Jha, 2020, 2023; Mukherji, 2014; Mukherji and Jha, 2017).

-typically junior officials and representatives who are aware of the (technical) details essential for policymaking-to identify missing information and cross-validate findings.[20] Interviewees have been anonymised (limited to affiliation and/or designation) as a precautionary measure.[21] Similar data collection approaches have been used by scholars studying (urban) institutional responses to climate change (Patterson et al., 2019; Stehle et al., 2022; see Stock et al., 2021).

In data scarce context, triangulated information[22] was analysed to trace how the RMC improved its capacity to pursue a climate policy, the CRCAP. Process tracing teases out causal mechanisms(see Fig. 2) and claims from qualitative information (Bennett and Checkel, 2015) to explain 'how' and 'why' a change occurs overtime within a single case (Patterson et al., 2019). Rajkot's climate resilient action plan formed the basis of deductive[23] analysis as it traced some details about the plan (e.g. information and analysis conducted, stakeholders involved, timespan, climate measures etc.) (CapaCITIES, 2018). A more nuanced analysis of the information collected was driven by the overarching research question-how (process) and who (actors) was involved in Rajkot's CRCAP. Details on the policymaking processes and actors involved were traced from policy documents (e.g.municipal orders and resolutions) and interviews which were guided by the research question. For instance, policy document analysis helped trace the meetings conducted (e.g. aim, location, timing, convenor and participants of meetings, meeting minutes etc.). This information was validated by analysing the interviews (why certain decisions were made and some ruled out, who drove the meeting, how consultative was the process etc.). Process tracing helped inductively[24] analyse Rajkot's climate action plan (within case analysis) overtime a)the climate policymaking processes, events and sequences (how), b)identify key actors involved and their interactions in each process (who; Table 1), and c)delineate research variables and causal mechanisms (why; Fig. 2).

4. Results

The section provides a brief overview of the municipal governance structure, followed by a detailed discussion on how ideational evolution within Rajkot's municipal government improved its capacity to pursue a climate resilient action plan.

4.1. Overview of Rajkot

Rajkot is governed by the Rajkot Municipal Corporation which is responsible for urban service provision and in recent years undertaking climate action (Deshpande, 2022). The bureaucratic arm, headed by a municipal commissioner and comprising of civil servants (often with a technical background), is responsible for formulating policy proposals and implementing policy interventions within a city. The political arm, comprising of elected representatives (e.g.Mayor, standing committee members and ward councilors), is responsible for reviewing and adopting policy proposals and municipal budgets(ibid).

With respect to climate change, the municipal government has actively championed climate measures, majority of which were sectoral, and mitigation oriented since the 2000s (CapaCITIES, 2018). While the province/state of Gujarat has a climate change department it has been ineffective (Jalan, 2017) and did not engage with Rajkot's climate responses (Interview, 2019; RMC bureaucrats). Moreover, there is no dedicated climate institution or an established/formal climate committee (Bhardwaj and Khosla, 2021) overseeing Rajkot's climate action. The RMC, in the absence of domestic climate institutions guiding urban climate action (Chu and Michael, 2022; Stehle et al., 2022), took it upon itself to undertake climate action. The government often engaged with non-governmental organisations (e.g.ICLEI, WWF) to stay updated about global climate debates and convince international donors (e.g. SDC) to support policy relevant research on climate impacts. Furthermore, the RMC has been hosting an ICLEI South Asia representative since the CapaCITIES project to ensure smooth and sustained coordination against climate change (Interview, 2019; ICLEI regional representative).

4.2. Rajkot: the case of an early adopter

This section details Rajkot's climate action plan formulated in 2018 and adopted[25] by the municipal corporation in 2019 (RMC, 2019; ICLEI, 2019; ICLEI, 2023). This meant altering Rajkot's institutional paradigm, that is integrating a climate policy into the municipal agenda. The formulation and adoption of Rajkot's climate resilient city action plan was spearheaded by its municipal government with assistance provided by a select group of actors (discussed later). As mentioned previously, Rajkot's CRCAP was pursued through phase1 of the CapaCITIES project, which was facilitated by ICLEI and funded by the SDC. Roles of key

[20] The interviews were recorded (hand written notes or audio recorder) and transcribed with consent of the interviewees.
[21] Sensitive information (e.g. data misrepresentation, political interreferences, power dynamics and personal biases) was provided off the record by government officials and junior level representatives under the condition that their identities remain concealed.
[22] Interview biases were addressed through document analysis (Azungah, 2018).
[23] Overarching questions or frameworks, guided by a pre-existing theory, help thematically analyse evidence (Azungah, 2018).
[24] The themes are derived by analysis the raw data (Azungah, 2018).
[25] The process of institutionalization legitimizes a plan and enables policy implementation (Anguelovski and Carmin, 2011; Bridges, 2016).

actors in the formulation and adoption of Rajkot's CRCAP are unpacked in sub-section4.3.

Rajkot's plan aims to voluntarily reduce the city's GHG emissions by 14 per cent (263,823 tCO2e) by 2022–23 (CapaCITIES, 2018). A key component of the plan is an evidence base that comprises of a detailed vulnerability assessment, climate risk analysis, and a sectoral Greenhouse gas (GHG) emissions inventory[26] (2011–2015) (Aboagye and Sharifi, 2024; Arikan et al., 2020; ICLEI, 2023). In 2015–16, the city emitted 1.88 million tonnes of carbon dioxide equivalent(tCO2e), which amounts to an average per capita of 1.33 tCO2e GHG emission (CapaCITIES, 2018; ICLEI, 2023). This evidence base is used to develop a plan of action comprising of adaptation and mitigation measures spanning across relevant sectors (e.g.water, housing, sewerage and solid waste management, electricity, transport, health) and pathways to implement them (Table A2 in appendices). Rajkot's CRCAP was developed using the ICLEI climate resilient cities methodology[27] (ICLEI, 2023). The action plans acknowledge synergies between development goals and climate measures, making it easier to pursue both objectives simultaneously. Such convergence[28] of climate objectives with local development priorities, has been defined as superimposition[29] (Bhardwaj and Khosla, 2021), policy integration[30] (Tosun and Lang, 2017), mainstreaming[31] (IPCC, 2007) or layering[32] (Hochstetler, 2021; Patterson et al., 2019). In phase2 of the CapaCITIES project, Rajkot city has updated it climate action plan (ICLEI, 2023) and upholds the requirements set by the Global Covenant of Mayors for Climate and Energy (ICLEI, 2021).

Finally, the action plan identifies potential sources to fund these measures, that is various sub-national and national government schemes and programmes. As of 2018–19, the RMC allocated INR 6026.5 million (~85million USD) from its municipal budget to undertake climate actions from the CRCAP (ICLEI, 2023). Thus, the climate resilient city action plan provides a roadmap for the municipal government to build climate resilience[33] while achieving its development objectives.

4.3. Ideational evolution within Rajkot's municipal government

This section unpacks the climate policymaking processes (learning, puzzling and powering) to show how ideational evolution within the RMC (Fig. 1) improved its capacity to pursue the climate policy.

4.3.1. Learning: emergence of policy idea

The process of learning with respect to Rajkot's CRCAP, led by the municipal government, was path dependent on former experiences. The government had previously pursued several sector-specific climate mitigation measures (e.g.transport,[34] water,[35] electricity[36]) (Bhardwaj and Khosla, 2017, 2021; Stehle et al., 2022). Additionally, domain experts from non-governmental organisations were engaged by the government to provide technical assistance on climate issues. For instance, ICLEI was assigned the responsibility of providing technical assistance to the government in developing the climate action plan (CapaCITIES, 2018; RMC, 2018; ICLEI, 2023). Such technical support was essential in learning about new cross-sectoral and integrated climate measures and ways to pursue them within the urban institutional paradigm. In fact, ICLEI helped build specific skillsets (e.g.cross-sectoral emission inventory, climate data analysis and management) of the RMC bureaucrats so that they could pursue and sustain climate action on their own. The ICLEI regional representative stated that "*our role is to introduce municipal governments to our climate framework, a general template for undertaking climate action, which they need to carry forward in our absence*" (Interview, 2019).

The climate action framework was introduced by ICLE South Asia, which the RMC saw as an essential policy idea to build Rajkot's resilience. The municipal commissioner and select bureaucrats brainstormed with ICLEI South Asia representatives over ICLEI's (generic) climate resilient methodology and advocated for localising it to address contextual needs. Converting the climate action plan into a policy proposal (by the bureaucracy) was contingent on ICLEI South Asia's efforts of adapting its methodology to Rajkot's needs. As part of localisation ICLEI was tasked to conduct a detailed climate analysis for Rajkot (e.g. urban risk and vulnerability assessments and cross-sectoral emission calculations) (CapaCITIES, 2018; RMC, 2018). Select bureaucrats oversaw ICLEI's city-level analysis and provided supporting evidence (e.g.energy consumption, priority sectors) for the analysis. The regional representative of ICLEI emphasised that, "*some RMC bureaucrats, especially engineers, actively engaged with us to learn about our assessments methods*" (Interview, 2019).

Furthermore, the RMC decided to draw on its former climate experiences and trainings, especially in the absence of domestic guidelines for urban climate action, to pursue such a cross-sectoral and integrated climate plan. For instance, previously formulated sectoral climate plans (e.g. the Low Emission Development strategy plan[37]) would serve as guiding documents (e.g. structure, organization and data requirements). Additionally, the approaches employed to develop sectoral climate plans (e.g.specialised teams of government and non-governmental organisation experts involved in planning and reviewing process) would be replicated to develop the CRCAP (CapaCITIES, 2018). A former RMC Commissioner stated that, "*climate policies can be furthered only when municipal governments are convinced and actively involved in the process*" (Interview, 2019).

This process of learning helped define the nature and extent of Rajkot's climate impacts. Additionally, past and current policy instruments that may have a (direct or indirect) climate (adaptation or mitigation) potential were identified. Moreover, an order (RMC, 2018) was passed

[26] The GHG emissions inventory comprises of a emissions from a)community activities (residential, commercial/institutional facilities, industries, agriculture, waste and land-use), and b)operations of government activities (local government buildings, facilities such as street lighting and traffic lighting, water, waste and sewage facilities, municipal vehicle fleet).

[27] The ICLEI climate resilient cities methodology built on former ICLEI programs such as Cities for Climate Protection campaign, mitigation program, the GreenClimateCities program and adaptation toolkit, the ICLEI Asian Climate Change Resilience Network process or IAP toolkit (CapaCITIES, 2018; ICLEI, 2023b).

[28] A study in Mauritius shows that, climate (adaptation) measures need to be mainstreamed into local policy priorities for effective uptake (Williams et al., 2020).

[29] Superimposition involves realigning existing (bureaucratic) practices to novel objectives (e.g.addressing climate risks) (Bhardwaj and Khosla, 2021).

[30] Policymaking processes that have cross-sectoral policy implications (Giessen, 2011).

[31] Development policies and plans are designed to address climate uncertainties.

[32] Climate objectives are layered onto prevalent institutions.

[33] Urban climate resilience is the ability of cities to anticipate, reduce, accommodate or recover from hazardous events (IPCC, 2014).

[34] Rajkot city prepared a low carbon mobility plan with measures to make the transport sector more inclusive and lower Greenhouse gas (GHG) emissions.

[35] As part of the urban nexus project (2016–2019) funded by the German Federal Ministry of Economic Cooperation and Development (promoting integrated resource management) and the CapaCITIES project (2016–2019) funded by the SDC (focusing on building resilience) the city focused on all urban sectors(CapaCITIES, 2018).

[36] The District Energy systems project(2016), undertaken by the United Nation's Environment Programme(UNEP), focused on promotion of modern technology like district cooling systems. Similarly, the Building Efficiency Accelerator project, also by the UNEP, assisted the city in identifying energy efficiency measures (CapaCITIES, 2018).

[37] The low emissions development strategies project (2012–2016) funded by the European Commission focused on low emissions urban development strategies and government capacity building (ICLEI, 2016).

to establish specialised teams (CapaCITIES, 2018)- a climate core team (bureaucrats from relevant departments and select political executives) and a stakeholder team (domain experts from within the municipal government and various non-governmental actors)- to draft and review the plan was proposed through this process.

4.3.2. Puzzling: maturation of policy idea

Puzzling over Rajkot's climate action plan was limited to the bureaucratic arm of the municipal government-bureaucrats of key urban sectors (e.g. electricity, water, transport, housing etc.) and the municipal commissioner. A RMC executive engineer involved in formulating the plan stated that, "*the commissioner regularly engaged with the bureaucrats to oversee the formulation of the plan, which motivated them to carry through the process*" (Interview, 2019). The process of puzzling leading to a policy proposal requires specific skill sets (e.g. knowledge of feasible policy instruments, budget assessment), and so was led by and limited to the RMC bureaucracy.

The idea for a climate action plan, which saw its origins in the learning process, evolved further due to puzzling. Outcomes of the learning process-problem identification, city-level analysis and previous sectoral climate mitigation plans[38]- helped focus on the next steps of the action plan. Puzzling involved discussing a set of solutions and identifying feasible and contextually relevant solutions with an adaptation and/or mitigation potential (RMC, 2018). An action plan was developed through collective and repeated deliberations between RMC bureaucrats. A climate core team -comprising of 41 sectoral municipal bureaucrats, the commissioner, and the mayor's office (Mayor and members of the standing committee)- was formed to draft and finalise the plan (translated into a policy proposal) (CapaCITIES, 2018).

The commissioner handpicked select bureaucrats, with prior experience of climate projects, to drive process. The RMC commissioner stated that "*the bureaucrats could work on the plan whilst fulfilling their duties and engage with experts when required*" (Interview, 2019). These handpicked bureaucrats did the initial groundwork to create a draft plan and identify information required from all sectoral departments of the municipal government. The commissioner invited bureaucrats from all sectoral departments to participate in climate core team meetings (RMC, 2018). Initial core team meetings were dedicated to discussing details of the climate action plan and highlight expectations (e.g. information, coordination and participation etc.) from sectoral bureaucrats. Subsequent meetings focused on reviewing and refining the plan in terms of evaluating the city-level analysis, addressing information gaps and proposing sectoral policy instruments (ibid). ICLEI was invited to assess the climate adaptation and mitigation potential of the identified policy instruments (CapaCITIES, 2018). This plan was converted into a policy proposal for the approval of the political arm of the government.

The outcome of this collective deliberation was a technically feasible policy proposal for a climate action plan; this comprised of city-level analysis, set of policy instruments and budget analysis to execute climate measures. Additionally, the proposal comprised of a list of (government and non-government) experts to formulate the stakeholder team. Finally, the bureaucrats proposed adopting (incorporated in the municipal agenda and budget) the plan to ensure its legacy beyond the CapaCITIES project and/or tenure of senior bureaucrats.

4.3.3. Powering: adoption of policy idea

The policy proposal for a climate action plan was reviewed and ratified into a policy by the political arm in 2019 (RMC, 2019). Given the power of the political arm, in terms of assessing policy feasibility, sanctioning budgets and adopting a policy, the mayor and standing committee members were brought on board to support the climate action plan.

The policy idea for a climate action plan was presented by the commissioner and select bureaucrats to the mayor's office. The mayor and standing committee members were convinced of the idea due to the short- and long-term policy implications and minimalistic resource requirements (e.g. financial and human capital). The idea for a comprehensive climate action plan (proposal) was solidified into a policy due to strong political support provided by the mayor's office. Usually, municipal governments shelve such plans as service provision (e.g. water, energy, transport) take precedence over all other issues. Such plans can only become part of the urban institutional paradigm when they are approved by the political arm of the government. Moreover, such political support enabled effective coordination (e.g.within sectoral municipal bureaucrats, between the bureaucracy and political arm and non-governmental experts) and adoption of the CRCAP proposal. A senior RMC bureaucrat stated that, "*the political arm was extremely supportive of the plan which resulted in its ratification, without their* support *the plan would not become a policy*" (Interview, 2019).

The mayor's office supported the plan in technical and non-technical ways. Technical support involved a feasibility assessment of the proposal (e.g. budget analysis and adoption) and details of the plan (e.g. city analysis and policy instruments proposed as climate measures). The assessment led to political approval and subsequent adoption of the proposal into a policy. Rajkot's standing committee passed a resolution (RMC, 2019) ratifying the action plan as part of the 2019–2020 municipal budget.

Furthermore, political support was extended in non-technical ways. The mayor's office valued expert advice on climate issues and thereby supported the establishment of specialised teams to formulate and review the action plan. For instance, the political and bureaucratic arm collectively sent invitations to experts to join the stakeholder team. Consequently, a 43-member stakeholder team comprising of select bureaucrats, municipal commissioner (chair), members from the mayor's office and several non-governmental actors (e.g.local NGOs, citizen groups members, Rajkot chamber of commerce, community leaders, university partners like CEPT and private sector organisations) was formed to review the plan (CapaCITIES, 2018). Some political executives regularly participated in these stakeholder team meetings held by the RMC. The action plan was collectively scrutinized to ensure incorporation of societal concerns and priorities (ibid).

Another form of non-technical support provided involved convincing Rajkot's general body, comprising of local councilors, and mobilising them to support the climate action plan. For example, the mayor's office was instrumental in addressing concerns raised by councilors about the implications of such a plan on the municipal government and its priorities (e.g. increased pressure on the already burdened bureaucrats, diverting attention from developmental priorities and exhausting limited municipal finances). In an interview a ward councillor revealed that "*standing committee members wanted* support *of the general body members to approve a climate plan. Several councilors including myself raised concerns about resource constraints in terms of municipal budget, and availability of officials to provide us basic services and climate measures. The RMC bureaucrats guaranteed us that the new policy will only benefit us and not hinder services*" (Interview, 2019). Meetings between select bureaucrats, who furthered the plan, and local/ward councilors were facilitated by the mayor's office. Rajkot's councilors were informed about the overlaps between development (improved services) and climate policy (climate resilient development) with minimalistic institutional and financial adjustments. The mayor's office leveraged support of the local councilors to adopt the plan by passing a resolution in 2019 (RMC, 2019); the CRCAP has therefore become an urban climate policy in Rajkot.

4.3.4. Synergised bureaucratic-political rationality

The policymaking processes-learning, puzzling and powering-led to ideational evolution, favouring the CRCAP, within the bureaucratic and

[38] For instance, the city had, as part of other climate projects, prepared a solar city master plan, low carbon mobility plan, and low emission development strategies plan.

political arm of the RMC. Firstly, Rajkot's policymakers, especially the municipal bureaucrats, in 2018 strongly advocated for a cross-sectoral and integrated climate action plan comprising of adaptation and mitigation measures. This is evident in Rajkot's former climate measures until 2018- time-bound climate interventions with a sectoral (e.g. transport, energy, waste, housing) and thematic focus (e.g.adaptation or mitigation measures) (CapaCITIES, 2018). Additionally, given the cross-sectoral nature of the plan, relevant sectoral department bureaucrats and the municipal commissioner were actively involved (ibid; RMC, 2018) as opposed to earlier plans that involved a few bureaucrats and, occasionally the Mayor.

Secondly, the bureaucrats proposed adopting the action plan to ensure its longevity and uptake. The RMC Commissioner and select bureaucrats convinced the mayor's office of the policy idea given its co-benefits of improved services while building climate resilience. This led to the ratification of the plan into a policy in 2019 b y the political arm of the RMC. By adopting and allocating municipal budget for the CRCAP (ICLEI, 2023; RMC, 2019) the RMC made climate adjustments to its institutional paradigm without any legal mandate, incentives and pressures.

Thirdly, ideas held by Rajkot's bureaucrats and political executives were aligned/synergised in favour of the climate plan. RMC policymakers were driven by short- and long-term consequences of the plan, rather than electoral or economic gains. A standing committee member stated in his interview that "*the bureaucracy and political arm worked in tandem to adopt the climate policy in 2019*" (Interview, 2019). The then mayor used his position to actively publicise RMC's effort of pursuing a climate policy (GCoM, n.d.). Consequently, the two arms of the government worked cohesively, which leveraged bureaucratic efforts to formulate the plan (e.g.forming specialised teams), and mobilised support[39] (e.g.convincing local councillors) to adopt the plan as a policy.

Thus, the policy idea for a climate policy evolved overtime within the bureaucratic and political arm of the Rajkot municipal government. This ideational evolution in favour of a contextual climate resilient action plan within the RMC improved its capacity to address its governance challenges and pursue the climate policy (Fig. 2).

5. Discussion

Ideational evolution within a municipal government improved its capacity to overcome governance barriers and pursue contextual climate policies. In the case of Rajkot's climate policy, ideational evolution within the RMC enabled the government to systematically address its governance constraints -technical (limited climate action knowledge, lack of climate expertise within the government), financial (inadequate resources to support the development of a climate plan) and decision-making (poor coordination, institutional inertia, weak domestic climate governance mechanism etc.)- and use innovative governance approaches. Novel/innovative climate governance arrangements are socially embedded and climate informed arrangements (formal and informal) (Simon et al., 2022), comprising of multi-stakeholder collaborations between diverse organisations (Shaw et al., 2023; van der Heijden, 2019).

Firstly, the emergence and maturation of a climate policy idea catalysed Rajkot's municipal government to recognise and address technical and financial needs required to plan and adopt a cross-sectoral and integrated climate action plan. In the absence of in-house climate expertise, the RMC engaged ICLEI South Asia representatives to conduct specific research (e.g. localizing ICLEI's climate resilient methodology, assessing climate information,[40] reviewing feasibility, forming new connections) on their behalf (CapaCITIES, 2018; ICLEI, 2023). Similarly, the RMC proposed the formation of a multi-stakeholder team, inspired by previous climate projects, to comprehensively review the draft climate plan before finalizing and adopting it as a policy. Moreover, given the limited financial resources available to secondary Indian cities, the RMC ideated on channelising resources from the SDC (donor) to conduct research required to draft the CRCAP (CapaCITIES, 2018). The RMC, unlike many global South cities, opened its rigid boundaries and form relations with societal actors and organisations working at different governance levels (Chu et al., 2016; Cook and Chu, 2018; van der Heijden, 2019). Such multi-stakeholder engagements strengthened the climate policy idea, because the RMC was introduced to new knowledge systems and understood societal needs better.

Secondly, different factions of Rajkot's bureaucracy, known to work in silos causing uncoordinated policies (Samaratunge et al., 2017; Simon et al., 2022), came together to collectively understand Rajkot's climate problem and deliberate over cross-sectoral climate measures in the CRCAP (CapaCITIES, 2018). In addition, the bureaucracy worked closely with its political arm, viewed as ceremonial and fragmented from its bureaucratic counterpart (Stehle et al., 2022), to review and adopt the CRCAP. The political arm not only worked closely with its bureaucratic arm, but it also convinced Rajkot's local/ward councilors to support the plan leading to its adoption in 2019. Such collective effort within the government (Deshpande, 2022), as opposed to individual/champion-led action, is essential to introduce, implement and sustain long-term and pan-city climate policies(van der Heijden, 2019). Ideational evolution within the RMC therefore enabled it to address institutional silos and inertia and work as a cohesive unit.

Thirdly, ideational evolution favouring a climate policy enabled the two arms of the RMC to acknowledge and address its decision-making governance barriers. The RMC incorporated climate policies into its municipal agenda -due to interdependencies between development and climate goals (Simon et al., 2022)- despite operating within a centralized governance system (Bhardwaj and Khosla, 2017, 2021) and in the absence of a domestic climate mandates and incentives and international obligations (Sami, 2017; CapaCITIES, 2018; Stehle et al., 2022). Rajkot's government has thus been to mainstream and pursue an integrated and cross-sectoral climate policy since the 2019.

Fourthly, in 2018–19 climate action was a relatively nascent policy issue for municipal governments, which meant engaging diverse stakeholders and streamlining diverse perspectives. The RMC strategically ideated over this complex policy issue and decided to closely monitor the policymaking processes. For instance, the RMC facilitated engagements with climate expertise during the policy-learning process[41] to identify climate issues and possible solutions; this was a relatively easier stage to engage non-governmental organisations. Similarly, the suggestions provided by the multi-stakeholder team were carefully vetted by the government to avoid any biases. Such a monitored approach not only helps address conflicting priorities of diverse stakeholders but also streamline diverse perspectives and knowledge systems into a feasible and locally appropriate climate policy. Furthermore, policy formulation and adoption processes were led by the bureaucratic and political arm of the RMC to ensure insulation from societal and political interreferences. Rajkot's municipal government was therefore embedded[42] within its society but maintained autonomy (Bhavnani and Lee, 2018; Evans, 1995) with respect to the formulation and adoption of the CRCAP (Deshpande, 2022). A new policy problem like climate change was addressed by the RMC through standard procedures (problem identification, proposal development and policy adoption) and approaches

[39] Such mobilization can neutralize any opposition (e.g.vested interest groups who lobby against action (Constantino et al., 2022)) to proposed climate action.

[40] This comprised of climate vulnerabilities and risks, climate adaptation and mitigation potential, all of which are essential for the evidence-base and plan.

[41] Technical assistance and research fund was provided by non-governmental domestic and international organisations(CapaCITIES, 2018; ICLEI, 2023), that aided the learning process.

[42] State embeddedness leads to better understanding of societal needs, identification of gaps and loopholes in the system and improved technical capacity.

(policy instruments).

Finally, the idea for a climate action plan motivated RMC officials to improve their climate knowledge and networks by participating and presenting in domestic and international events such as climate workshops and conferences[43] (ibid) and becoming members of global and regional climate forums[44] (GCoM, n.d.). Such knowledge exchanges not only boosted the skillsets of bureaucrats and political executives but also leveraged the formulation and adoption of the plan and in recent year updating the plan.

Rajkot's government has exemplified its capacity to formulate and adopt a locally relevant climate policy by integrating local ideas and coordinating between local organisations. However, the RMC hasn't been able to engage the general public in the climate policymaking (especially learning) process. This is not unusual, as climate policymaking processes are known to be elite/expert driven (Deshpande et al., 2023; Dubash, 2021; Rahman et al., 2023), who have access to scientific knowledge, funding, and hold decision-making authority. Consequently, Rajkot's elite and government-led CRCAP has made little or no considerations for climate justice concerns, especially for the marginalised and vulnerable urban residents.

Moreover, improved policymaking capacity, especially policy formulation and adoption, is not a testimony of the government's ability to execute the proposed climate measures. Often, municipal bureaucrats face political and/or societal interreferences (e.g. diverting interventions away or to a certain ward/locality, contracting government projects to politically affiliated contractors) during the policy execution stage (Deshpande, 2022). Additionally, executing climate policies requires adequate financial resources, which is an issue for Indian cities as there is no outright domestic support for urban climate action (Sami, 2018). The capacity of the RMC to execute the CRCAP would require more research, which was outside the scope of the current study.

Municipal governments struggling with similar governance barriers can learn and adapt from Rajkot's example. Global South municipal governments can integrate local ideas and facilitate engagements between local organisations to address urban governance barriers and pursue contextually relevant climate policies.

6. Conclusion

In an era of climate uncertainties, municipal governments in the global South must urgently build their capacities to undertake climate action. The study builds on the concept of 'bringing the state back in (Skocpol, 1985)' to focus on how municipal governments improve their capacity to formulate and adopt climate policies. Improved state capacity is explained by ideational evolution within the government (Jha, 2018, 2020; Mukherji, 2014; Mukherji and Jha, 2017), which highlights the agency of domestic factors -both arms of the municipal government, local ideas, and novel urban governance arrangements-within the multi-scalar climate governance realm. The framework was applied to showcase how a secondary city's municipal government from the global South improved its capacity to formulate and adopt a contextually relevant climate policy. An ideationally driven state capacity framework has been applied to explain effective policy adoption at different governance scales -national level (Deshpande et al., 2023; Jha, 2020; Mukherji, 2014), sub-national level (Jha, 2023; Mukherji and Jha, 2017), and local level (Deshpande, 2022) in the global South; this displays the applicability of the framework to other geographical and governance contexts beyond the case discussed in this paper.

This study can serve as a pathway for future urban climate governance research on analysing the internal workings of municipal governments, especially from data scarce and underexplored geographies like the global South. By theorising from and for the global South, this study intends to diversify global urban climate governance scholarship and connect local climate responses with global urban and climate agendas.

Funding sources and disclaimers

This paper emerges from a larger body of doctoral research conducted between 2017 and 2022. The doctoral research received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Sklowdowska-Curie grant agreement No 722446.

Declaration of competing interest

The author confirms there is no declaration of competing interest to report.

Acknowledgements

The author acknowledges all the interviewees (Kishore Detharia, Alpana Mitra, Chhabil Ranpara, Ankit Makvana, Saumya Chaturvedula, Ankit Bhardwaj, Shwetal Shah, Vijay Anadkat and former and current Mayors and Municipal Commissioners of Rajkot) for taking time to answer questions related to the research topics. I thank Dr. Amir Bazaz for encouraging me to study the case of Rajkot from a climate change perspective. Dr. Param Shah helped connect with senior Indian bureaucrats. I acknowledge colleagues from the Political Science Department at the Heidelberg University South Asia Institute (Prof. Rahul Mukerhji, Dr. Himanshu Jha, Dr. Hossein Zarhani and others) and Prof. Jale Tosun and Prof. Marcus Nüsser for their comments on the doctoral research.

Furthermore, I acknowledge Dr. Eric Chu and Dr. Saideepa Kumar for providing detailed comments on the structure and arguments of the article. I thank Dr. Faith Taylor and Professor Mark Pelling for helping emphasize the uniqueness of the research findings.

I appreciate my reviewers for taking time to provide constructive comments that helped improve my work. Finally, I thank the LSE-Fudan Global Public Policy Hub for supporting my research.

[43] For instance, RMC bureaucrats including the commissioner participated in the Renewable Energy Constantino et al. (2022) in Freiburg, Germany.Similarly, RMC officials attended the Low carbon and Resilient City development meeting (2019) and climate change workshops (2019) organised by the national government in Delhi.

[44] Rajkot's mayor is a member of the Global Covenant of Mayors for Climate and Energy and the Gujarat Covenant of Mayor for Climate and Energy.

Appendices.

Table A1
key stakeholders interviewed regarding Rajkot's CRCAP between 2018 and 2020

Key stakeholders	Rajkot
State/governmental actors	
Retired/former municipal bureaucrats (e.g. municipal commissioners)	N = 3
Serving municipal bureaucrats (e.g. ward level water supply engineers, ward level electricity engineers, ward level sanitation engineers, ward level housing engineers, town planning department members, deputy engineers, city engineers, commissioners)	N = 19
Political executives (e.g. Mayor, standing committee members, general council members)	N = 12
Former Mayors and general council members	N = 3
Other official staff (e.g. personal assistant to Mayor and Commissioners, smart city cell members)	N = 2
Total governmental interviews	N = 39
Non-state/governmental actors	
Local media representatives (e.g. newspapers, radio)	N = 3
Civil society members and citizen group members (education, building, industry)	N = 8
Academics (e.g. the Centre for Environmental Planning and Technology) and consultants	N = 2
ICLEI representatives (South Asia)	N = 4
Total non-governmental interviews	N = 17

Table A2
snapshot of sector-wise climate (mitigation and adaptation) action plans

Sector	Example resilience interventions	Total mitigation potential (tCO2e)	Resilience impact
Buildings (residential, commercial and industrial)	• Solar photovoltaic and water heating systems • Energy Efficient (EE) fixtures (e.g. LED lamps, EE fans and star rated appliances) • Implement green building designs	183,138	Reduction of GHG emissions and improvement in micro-climate conditions
Municipal buildings	• Solar photovoltaic systems • Energy Efficient (EE) fixtures (e.g. LED lamps, EE fans) • Reduce heat ingress by adopting heat preventing measures	1, 229	Reduction of GHG emissions, and increase in social adaptive capacity through promotion of climate action
Solid waste	• 18 compost plants • 7.5 MW waste to energy plant • Scientific capping of landfill • Notification by RMC on waste segregation	29,770	Almost all waste generated within city will be treated for next eight to ten years (~700metric tonne per day capacity), which will reduce the GHG emissions and improve socio-economic co-benefits through improved health and livelihood of vulnerable sections.
Transport	• Deployment of electric buses, with solar photo voltaic based charging • Public bike-share system • Compressed Natural Gas goods vehicles in place of locally made diesel vehicles	14,796	Reduction of GHG emissions from public and private vehicles, improved air quality, reduced traffic congestion and accident rate, improved livelihood
Street lighting	• Energy Efficient street lighting (52000 street lights)	6146	Reduced GHG emissions with better visibility and improved safety
Water	• Reuse water • Energy Efficient pumps for water treatment pumps (WTP) and pumping stations • Solar photovoltaic systems for pumping stations and WTP • Augmenting local water resources and ground water recharge • Reduction in non-revenue water (replacement of distribution pipeline with improved pipeline)	16,840	Improved water resource management, reduced water scarcity, better health and lower GHG emission. Also, due to reduction in non-revenue water, 14 million litre water will be saved which can be served to additional ~100,000 people in city
Sewerage	• Energy Efficient pumps for sewerage treatment plant and pumping stations • 100 per cent sewerage network • Improve treatment quality and adequacy of sewerage treatment plant • Stop direct emission from digesters	4006	Reduction in direct methane and GHG emission, contamination of groundwater and health related issues
Smart City initiatives	• Solar park in smart city area • Implementation of green building policy	7898	Reduction in GHG emission and impacts on urban heat island effect
Total		263,823	

Source: CapaCITIES, 2018.

Data availability

Data will be made available on request.

References

Aboagye, P.D., Sharifi, A., 2024. Urban climate adaptation and mitigation action plans: a critical review. Renew. Sustain. Energy Rev. 189. https://doi.org/10.1016/j.rser.2023.113886.

Adelina, C., Archer, D., Romanus, O.J., Opiyo, O., 2020. Governing sustainability in secondary cities of the Global South. www.sei.org.

Akbar, N., Ostermann, S.L., 2015. Understanding, defining, and measuring state capacity in India: traditional, modern, and everything in between. An Asian survey special issue on India. Asian Surv. 55 (5), 845–861. https://doi.org/10.1525/AS.2015.55.5.845. University of California Press.

Andrade, C., 2021. The inconvenient truth about convenience and purposive samples. Indian J. Psychol. Med. 43 (1), 86–88.

Anguelovski, I., Carmin, J., 2011. Something borrowed, everything new: innovation and institutionalization in urban climate governance. Curr. Opin. Environ. Sustain. 3 (3), 169–175.

Anguelovski, I., Chu, E., Carmin, J.A., 2014. Variations in approaches to urban climate adaptation: experiences and experimentation from the global South. Glob. Environ. Change 27 (1), 156–167. https://doi.org/10.1016/j.gloenvcha.2014.05.010.

Arikan, Y., Carreño, C., Van Staden, M., 2020. ICLEI's Climate Neutrality Framework–Accelerating integrated climate action for sustainable urban development. https://e-lib.iclei.org/publications/ICLEIs_Climate_Neutrality_Framework.pdf.

Azungah, T., 2018. Qualitative research: deductive and inductive approaches to data analysis. Qual. Res. J. 18 (4), 383–400.

Bäckstrand, K., Kuyper, J.W., 2017. The democratic legitimacy of orchestration: the UNFCCC, non-state actors, and transnational climate governance. Environ. Polit. 26 (4), 764–788.

Béland, D., 2016. Ideas and institutions in social policy research. Soc. Pol. Adm. 50 (6), 734–750. https://doi.org/10.1111/spol.12258.

Béland, D., Cox, R.H., 2010. Ideas and Politics in Social Science Research. Oxford University Press.

Béland, D., Cox, R.H., 2016. Ideas as coalition magnets: coalition building, policy entrepreneurs, and power relations. J. Eur. Publ. Pol. 3, 428–445.

Bennett, Andrew, Checkel, Jeffrey T., 2015. *Process Tracing* (Andrew Bennett + Jeffrey T. Cambridge University Press, Checkel.

Beyers, J., Braun, C., Marshall, D., De Bruycker, I., 2014. Let's talk! On the practice and method of interviewing policy experts. Interest Groups and Advocacy 3 (2), 174–187. https://doi.org/10.1057/iga.2014.11.

Bhardwaj, A., Khosla, R., 2017. Mainstreaming climate action in Indian cities: case study of Rajkot. In: Policy Brief. Centre for Policy Research. Centre for Policy Research.

Bhardwaj, A., Khosla, R., 2021. Superimposition: how Indian city bureaucracies are responding to climate change. Environ. Plann.: Nature and Space 4 (3), 1139–1170.

Bhardwaj, A., Joshi, M., Khosla, R., Dubash, N.K., 2019. More priorities, more problems? Decision-making with multiple energy, development and climate objectives. Energy Res. Social Sci. 49, 143–157.

Bhavnani, R.R., Lee, A., 2018. Local embeddedness and bureaucratic performance: evidence from India. J. Polit. 80 (1), 71–87.

Blyth, M.M., 1997. Any more bright ideas? The Ideational Turn of Comparative Political Economy. JSTOR.

Blyth, M., 2007. Powering, puzzling, or persuading? The mechanisms of building institutional orders. Int. Stud. Q. 51 (4), 761–777.

Bridges, A., 2016. The role of institutions in sustainable urban governance. Nat. Resour. Forum 40 (4), 169–179. https://doi.org/10.1111/1477-8947.12116.

Broto, V.C., Bulkeley, H., 2013. A survey of urban climate change experiments in 100 cities. Glob. Environ. Change 23 (1), 92–102.

Bulkeley, H., Kern, K., 2006. Local government and the governing of climate change in Germany and the UK. Urban Stud. 43 (12), 2237–2259.

Bulkeley, H., Andonova, L.B., Betsill, M.M., Compagnon, D., Hale, T., Hoffmann, M.J., Newell, P., Paterson, M., Roger, C., Vandeveer, S.D., 2014. Transnational Climate Change Governance. Cambridge University Press.

Butun, B.G.D., 2021. How do transnational municipal networks affect climate policymaking? A qualitative study in Turkey. J. Urban Aff. 43 (8), 1081–1099.

C40 Cities, 2020. Climate Action Planning Framework. C40 Cities. https://c40.my.salesforce.com/sfc/p/#36000001Enhz/a/1Q0000001mw6/Dn5yZGRzu3uSpVrzfllmuJOgU1tqq4jpFiEDfJnTGUM.

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., Walker, K., 2020. Purposive sampling: complex or simple? Research case examples. J. Res. Nurs. 25 (8), 652–661.

CapaCITIES, 2018. Climate Resilient City Action Plan, Rajkot. https://www.capacitiesindia.org/wp-content/uploads/2020/10/CRCAP_Rajkot_July-2018.pdf.

Carmin, J., Anguelovski, I., Roberts, D., 2012. Urban climate adaptation in the global south: planning in an emerging policy domain. J. Plann. Educ. Res. 32 (1), 18–32.

Castán Broto, V., 2017. Urban governance and the politics of climate change. World Dev. 93, 1–15. https://doi.org/10.1016/j.worlddev.2016.12.031. Elsevier Ltd.

Chu, E.K., Cannon, C.E.B., 2021. Equity, inclusion, and justice as criteria for decision-making on climate adaptation in cities. Curr. Opin. Environ. Sustain. 51, 85–94.

Chu, E., Michael, K., 2022. Urban climate justice in India. Climate Justice in India 1, 25.

Chu, E., Anguelovski, I., Carmin, J., 2016. Inclusive approaches to urban climate adaptation planning and implementation in the Global South. Clim. Policy 16 (3), 372–392.

Cingolani, L., 2013. The State of State Capacity: a review of concepts, evidence and measures. UNU-MERIT Working Paper Series on Institutions and Economic Growth.

Constantino, S.M., Sparkman, G., Kraft-Todd, G.T., Bicchieri, C., Centola, D., Shell-Duncan, B., Vogt, S., Weber, E.U., 2022. Scaling up change: a critical review and practical guide to harnessing social norms for climate action. Psychol. Sci. Publ. Interest 23 (2), 50–97.

Cook, M.J., Chu, E.K., 2018. Between policies, programs, and projects: how local actors steer domestic urban climate adaptation finance in India. Climate Change in Cities: Innovations in Multi-Level Governance 255–277.

Creswell, J.W., 2013. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. SAGE.

Culpepper, P.D., 2002. Powering, puzzling, and'pacting': the informational logic of negotiated reforms. J. Eur. Publ. Pol. 9 (5), 774–790.

Da Cruz, N.F., Rode, P., McQuarrie, M., 2019. New urban governance: a review of current themes and future priorities. J. Urban Aff. 41 (1), 1–19.

De Rosa, S.P., de Moor, J., Dabaieh, M., 2022. Vulnerability and activism in urban climate politics: an actor-centered approach to transformational adaptation in Malmö (Sweden). Cities 130, 103848.

Deb, S., 2017. City System in South Asian Urbanization Growth (Issue 2).

Deshpande, T., 2022. India and the Politics of Climate Change: Policy Paradigms and the Local City State.

Deshpande, T., Mukherji, R., Sastry, M., 2023. Policy styles and India's national action plan on climate change (NAPCC). Policy Stud. https://doi.org/10.1080/01442872.2023.2261388.

Dewulf, A., Boezeman, D., Vink, M.J., Leroy, P., 2012. The Interplay of Meaning and Power in the Science-Policy-Society Triangle: Powering, Puzzling and Co-producing Climate Change Adaptation. Knowledge for Climate.

Dobson, J., 2019. Reinterpreting urban institutions for sustainability: how epistemic networks shape knowledge and logics. Environ. Sci. Pol. 92, 133–140. https://doi.org/10.1016/j.envsci.2018.11.018.

Dodman, D., Hayward, B., Pelling, M., Castan Broto, V., Chow, W., Chu, E., Dawson, R., Khirfan, L., McPhearson, T., Prakash, A., Zheng, Y., Ziervogel, G., 2022. Cities, settlements and key infrastructure. In: Pörtner, H.-O., Roberts, D.D., Tignor, M., Poloczanska, E.S., Mintenbeck, K., Alegría, A., Craig, M., Langsdorf, S., Löschke, S., Möller, V., Okem, A., Rama, B. (Eds.), Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, pp. 907–1040. https://doi.org/10.1017/9781009325844.008.

Dubash, N.K., 2021. Varieties of climate governance: the emergence and functioning of climate institutions. Environ. Polit. 30 (Suppl. 1), 1–25. https://doi.org/10.1080/09644016.2021.1979775. Routledge.

Evans, P.B., 1995. Embedded autonomy: states and industrial transformation. In: Embedded Autonomy. Princeton University Press.

Foo, K., 2018. Examining the role of NGOs in urban environmental governance. Cities 77, 67–72.

Fünfgeld, H., 2015. Facilitating local climate change adaptation through transnational municipal networks. Curr. Opin. Environ. Sustain. 12, 67–73.

GCoM. (n.d.). Commitment of Rajkot Municipal Corporation, Gujarat, India: India/South Asia, Global Covenant of Mayors for Climate & Energy. https://covenantofmayors-southasia.eu/uploads/city/FA8CFB97-0CA4-4ABA-911B-9DE4D928D5D4.pdf.

Giessen, L., 2011. Horizontal policy integration. In: Schiffman, H., Robbins, P. (Eds.), Green Issues and Debates. Sage, Thousand Oaks, CA, pp. 293–296.

Goh, K., 2020. Flows in formation: the global-urban networks of climate change adaptation. Urban Stud. 57 (11), 2222–2240.

Goldstein, J., Keohane, R., 1993. Ideas and foreign policy: an analytical framework. In: Goldstein, J., Keohane, R. (Eds.), Ideas and Foreign Policy: Beliefs, Institutions, and Political Change. Cornell University Press.

Haas, P.M., 1992a. Banning chlorofluorocarbons: epistemic community efforts to protect stratospheric ozone. Int. Organ. 46 (1), 187–224.

Haas, P.M., 1992b. Introduction: epistemic communities and international policy coordination. Int. Organ. 46 (1), 1–35.

Hall, P.A., 1993. Policy paradigms, social learning, and the state: the case of economic policymaking in Britain. Comp. Polit. 275–296.

Heclo, H., 1974. Modern Social Politics in Britain and Sweden. Yale University.

Heikkinen, M., Karimo, A., Klein, J., Juhola, S., Ylä-Anttila, T., 2020. Transnational municipal networks and climate change adaptation: a study of 377 cities. J. Clean. Prod. 257. https://doi.org/10.1016/j.jclepro.2020.120474.

Hochstetler, K., 2021. Climate institutions in Brazil: three decades of building and dismantling climate capacity. Environ. Polit. 30 (Suppl. 1), 49–70. https://doi.org/10.1080/09644016.2021.1957614.

Holgate, C., 2007. Factors and actors in climate change mitigation: a tale of two South African cities. Local Environ. 12 (5), 471–484. https://doi.org/10.1080/13549830701656994.

Howlett, M., Ramesh, M., Perl, A., 2009. Studying Public Policy: Policy Cycles and Policy Subsystems, vol. 3. Oxford university press.

ICLEI, 2016. Enhancing "livability" through urban low emission development: Rajkot India. https://urban-leds.org/wp-content/uploads/2019/resources/case_studies/ICLEI_cs_175-Rajkot-UrbanLEDS_2016-web.pdf.

ICLEI, 2019. Gujarat CM Releases Climate Resilient City Action Plan for Rajkot. ICLEI South Asia,News. https://southasiaoffice.iclei.org/news/gujarat-cm-releases-climate-resilient-city-action-plan-for-rajkot/#:~:text=Rajkot%20City%20Council%20adopted%20CRCAP,16%20baseline%20of%20the%20city.

ICLEI, 2021. Rajkot Becomes First GCoM-Compliant City in South Asia Region. ICLEI South Asia. https://southasia.iclei.org/news/rajkot-becomes-first-gcom-compliant-city-in-south-asia-region/.

ICLEI, 2023. Capacity Building for Low Carbon and Climate Resilient Development (CapaCities Project). https://southasia.iclei.org/wp-content/uploads/2023/02/CapaCITIES-II-28-Brochure_low-res.pdf.

Intergovernmental Panel on Climate Change (IPCC), 2007. Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

IPCC, 2014. Climate change: impacts, adaptation, and vulnerability. Part A: global and sectoral aspects. In: Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

Jalan, U., 2017. Are Gujarat's climate change actions 'superficial'. Down Earth. https://www.downtoearth.org.in/blog/climate-change/is-gujarat-s-climate-change-action-superficial–57058.
Jamshed, S., 2014. Qualitative research method-interviewing and observation. J. Basic Clin. Pharm. 5 (4), 87.
Jha, H., 2018. State processes, ideas, and institutional change: the case of the right to information Act in India1. Pac. Aff. 91 (2), 309–328.
Jha, H., 2020. Capturing Institutional Change: the Case of the Right to Information Act in India. Oxford University Press.
Jha, H., 2022. Interrogating the resurgence of administrative state: ideas and state capacity. Int. J. Public Sect. Manag. 35 (4), 513–529.
Jha, H., 2023. Pathways to develop state capacity in a weak state: the sub-national state of Bihar in India. Commonwealth Comp. Polit. 61 (4), 427–450. https://doi.org/10.1080/14662043.2023.2275454.
Kaiser, C., 2022. Rethinking polycentricity: on the North–South imbalances in transnational climate change governance. Int. Environ. Agreements Polit. Law Econ. 22 (4), 693–713. https://doi.org/10.1007/s10784-022-09579-2.
Khakhariya, N., 2020. Rajkot Wins Global Climate Change Challenge Third Time. Times of India. https://timesofindia.indiatimes.com/city/rajkot/rajkot-wins-global-climate-change-challenge-third-time/articleshow/76538381.cms.
Khalid, A.M., Okitasari, M., 2023. Enabling effective climate action plans at city level: insights from India's metropolitan cities. Sustain. Cities Soc. 98. https://doi.org/10.1016/j.scs.2023.104812.
Khosla, R., Bhardwaj, A., 2019. Urbanization in the time of climate change: examining the response of Indian cities. Wiley Interdisciplinary Reviews: Clim. Change 1 (10), e560.
Kingdon, J., 1995. Agendas, Alternatives, a. Public Policy, second ed. The University of Michigan.
Kumar, P., Geneletti, D., 2015. How are climate change concerns addressed by spatial plans? An evaluation framework, and an application to Indian cities. Land Use Policy 42, 210–226.
Kumar, T., Stenberg, M., 2023. Why political scientists should study smaller cities. Urban Aff. Rev. 59 (6), 2005–2042. https://doi.org/10.1177/10780874221124610.
Kundu, A., Bagchi, S., Kundu, D., 1999. Regional distribution of infrastructure and basic amenities in urban India: issues concerning empowerment of local bodies. Econ. Polit. Wkly. 1893–1906.
Lamb, W.F., Creutzig, F., Callaghan, M.W., Minx, J.C., 2019. Learning about urban climate solutions from case studies. Nat. Clim. Change 9 (4), 279–287.
Leal, J.M., Paterson, M., 2024. Transnational city networks, global political economy, and climate governance: C40 in Mexico and Lima. Rev. Int. Polit. Econ. 31 (1), 26–46. https://doi.org/10.1080/09692290.2023.2167849.
Lund, D.H., Sehested, K., Hellesen, T., Nellemann, V., 2012. Climate change adaptation in Denmark: enhancement through collaboration and meta-governance? Local Environ. 17 (6–7), 613–628. https://doi.org/10.1080/13549839.2012.678318.
Mehta, J., 2010. From "whether" to "how": the varied roles of ideas in politics. In: Daniel, B., Cox, B. (Eds.), How Ideas Matter: Reframing Political Research. Oxford University Press.
Mukherji, R., 2014. Globalization and Deregulation: Ideas, Interests, and Institutional Change in India. Oxford University Press.
Mukherji, R., Jha, H., 2017. Bureaucratic rationality, political will, and state capacity: MGNREGS in undivided Andhra Pradesh. Econ. Polit. Wkly. 52 (49), 53–60.
Nagendra, H., Bai, X., Brondizio, E.S., Lwasa, S., 2018. The urban south and the predicament of global sustainability. Nat. Sustain. 1 (7), 341–349. https://doi.org/10.1038/s41893-018-0101-5.
Nandi, S., Gamkhar, S., 2013. Urban challenges in India: a review of recent policy measures. Habitat Int. 39, 55–61. https://doi.org/10.1016/j.habitatint.2012.10.001.
North, D.C., 1990. Institutions, Institutional Change and Economic Performance. Cambridge university press.
Padmanaban, D., 2022. Climate Action Plans Tailored to Indian Cities. Eos. https://eos.org/articles/climate-action-plans-tailored-to-indian-cities.
Pan, Z., Kosicki, G.M., 2001. Framing as a strategic action in public deliberation in framing public life. Perspectives on media and our understanding of the social World. In: Reese, S.D., Gandy, O.H., Grant, A.E. (Eds.), Framing Public Life. Perspectives on Media and Our Understanding of the Social World. Routledge, pp. 51–82.
Parmar, V., Shastri, 2014. Rajkot One of 40 Global Cities to Cut Carbon Emissions. TNN. https://timesofindia.indiatimes.com/city/ahmedabad/Rajkot-one-of-40-global-cities-to-cut-carbon-emissions/articleshow/45424836.cms.
Parnell, S., Oldfield, S., 2014. In: Parnell, S., Oldfield, S. (Eds.), The Routledge Handbook of Global South Cities, first ed. Routledge.
Parsons, C., 2016. Ideas and power: four intersections and how to show them. J. Eur. Publ. Pol. 23 (3), 446–463. https://doi.org/10.1080/13501763.2015.1115538.
Patterson, J.J., Huitema, D., 2019. Institutional innovation in urban governance: the case of climate change adaptation. J. Environ. Plann. Manag. 62 (3), 374–398. https://doi.org/10.1080/09640568.2018.1510767.
Patterson, J., de Voogt, D.L., Sapiains, R., 2019. Beyond inputs and outputs: process-oriented explanation of institutional change in climate adaptation governance. Environmental Policy and Governance 29 (5), 360–375. https://doi.org/10.1002/eet.1865.
Pinto, M.R., 2000. Metropolitan City Governance in India, first ed. SAGE Publications.
Rahman, M.F., Falzon, D., Robinson, S. ann, Kuhl, L., Westoby, R., Omukuti, J., Schipper, E.L.F., McNamara, K.E., Resurrección, B.P., Mfitumukiza, D., Nadiruzzaman, M., 2023. Locally led adaptation: promise, pitfalls, and possibilities. Ambio 52 (10), 1543–1557. https://doi.org/10.1007/s13280-023-01884-7.
RMC, 2018. RMC Standing Committee Resolution Number 289 & Attached Meeting Minutes. Pub. L. No. 289, Rajkot Municipal Corporation.
Roberts, B.H., 2014. Managing Systems of Secondary Cities: Policy Responses in International Development. Cities Alliance/UNOPS, Brussels.
Roberts, B., Hohmann, P., 2014. The Systems of Secondary Cities: the neglected drivers of urbanising economies. https://documents1.worldbank.org/curated/fr/400881468181444474/pdf/898610BRI0CIVI00Box385295B00PUBLIC0.pdf.
Samaratunge, R., O'Neill, D., Coghill, K., Wijayarathne, B., 2017. Building horizontal coordination in Sri Lanka. Publ. Adm. Dev. 37 (5), 319–330. https://doi.org/10.1002/pad.1812.
Sami, N., 2017. Multi-level climate change planning: scale, capacity and the ability for local action. In: Local Action on Climate Change. Routledge, pp. 92–110.
Sami, N., 2018. Localizing environmental governance in India: mapping urban institutional structures. In: Luque-Ayala, A., Marvin, S., Harriet, B. (Eds.), Rethinking Urban Transitions. Routledge, pp. 164–181.
Saroj, S.K., Goli, S., Rana, M.J., Choudhary, B.K., 2020. Availability, accessibility, and inequalities of water, sanitation, and hygiene (WASH) services in Indian metro cities. Sustain. Cities Soc. 54. https://doi.org/10.1016/j.scs.2019.101878.
Sharma, D., Tomar, S., 2010. Mainstreaming climate change adaptation in Indian cities. Environ. Urbanization 22 (2), 451–465. https://doi.org/10.1177/0956247810377390.
Shaw, R., Luo, Y., Cheong, T.S., Abdul Halim, S., Chaturvedi, S., Hashizume, M., Insarov, G.E., Ishikawa, Y., Jafari, M., Kitoh, A., Pulhin, J., Singh, C., Vasant, K., Zhang, Z., 2023. Asia. In: Pörtner, H.-O., Roberts, M. (Eds.), Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, pp. 1457–1580. https://doi.org/10.1017/9781009325844.012.
Simon, D., Bellinson, R., Smit, W., 2022. Transformational climate action at the city scale: comparative South–North perspectives. Buildings and Cities 3 (1), 1000–1018. https://doi.org/10.5334/BC.244.
Singh, C., Madhavan, M., Arvind, J., Bazaz, A., 2021. Climate change adaptation in Indian cities: a review of existing actions and spaces for triple wins. Urban Clim. 36, 100783.
Skocpol, T., 1985. In: Evans, P., Rueschemeyer, D., Skocpol, T. (Eds.), Bringing the State Back in: Strategies of Analysis in Current Research in Bringing the State Back. Cambridge University Press, New York.
Somokanta, T., 2022. Urban climate change experiments in Gandhinagar, India. Urban Clim. 43, 101149.
Stehle, F., Hickmann, T., Lederer, M., Höhne, C., 2022. Urban climate politics in emerging economies: a multi-level governance perspective. Urbanisation 7 (1_Suppl. l), S9–S25. https://doi.org/10.1177/2455747120913185.
Stock, R., Vij, S., Ishtiaque, A., 2021. Powering and puzzling: climate change adaptation policies in Bangladesh and India. Environ. Dev. Sustain. 23 (2), 2314–2336. https://doi.org/10.1007/s10668-020-00676-3.
Tosun, J., Lang, A., 2017. Policy integration: mapping the different concepts. Policy Stud. 38 (6), 553–570. https://doi.org/10.1080/01442872.2017.1339239.
Urban LEDS, 2020. Rajkot Continues to Lead on Ambitious Climate Action and Bags the One Planet City Challenge National Winner Title. Urban Low Emission Development Strategies (LEDS). https://urban-leds.org/rajkot-continues-to-lead-on-ambitious-climate-action-and-bags-the-one-planet-city-challenge-national-winner-title/.
van der Heijden, J., 2019. Studying urban climate governance: where to begin, what to look for, and how to make a meaningful contribution to scholarship and practice. Earth System Governance 1, 100005. https://doi.org/10.1016/j.esg.2019.100005.
Weinstein, L., Sami, N., Shatkin, G., 2010. Contested developments: enduring legacies and emergent political actors in contemporary urban India. In: Contesting the Indian City: Global Visions and the Politics of the Local. Wiley Blackwell.
Westman, L.K., Castán Broto, V., Huang, P., 2019. Revisiting multi-level governance theory: politics and innovation in the urban climate transition in Rizhao, China. Polit. Geogr. 70, 14–23. https://doi.org/10.1016/j.polgeo.2019.01.002.
Williams, D.S., Rosendo, S., Sadasing, O., Celliers, L., 2020. Identifying local governance capacity needs for implementing climate change adaptation in Mauritius. Clim. Policy 20 (5), 548–562. https://doi.org/10.1080/14693062.2020.1745743.
Wolfram, M., van der Heijden, J., Juhola, S., Patterson, J., 2019. Learning in urban climate governance: concepts, key issues and challenges. J. Environ. Pol. Plann. 21 (1), 1–15. https://doi.org/10.1080/1523908X.2018.1558848.
Wood, M., 2015. Puzzling and powering in policy paradigm shifts: politicization, depoliticization and social learning. Crit. Policy Stud. 9 (1), 2–21. https://doi.org/10.1080/19460171.2014.926825.
WWF, 2020. Smart City of Rajkot Declared the National Winner of WWF's Global One Planet City Challenge 2020. WWF, India. https://www.wwfindia.org/?19482/Smart-city-of-Rajkot-declared-the-National-Winner-of-WWFs-global-One-Planet-City-Challenge-2020#:~:text=Rajkot%2C%20with%20its%20strong%20low,by%20the%20year%202022%2D23.
Yasmin, T., Farrelly, M.A., Rogers, B.C., Krause, S., Lynch, I., 2023. A tale of two cities: evidence from the Global South on established versus emerging cities' approaches to adaptive and sustainable water governance. Ecol. Soc. 28 (1). https://doi.org/10.5751/ES-13599-280138.
Yin, R.K., 2013. Validity and generalization in future case study evaluations. Evaluation 19 (3), 321–332. https://doi.org/10.1177/1356389013497081.
Young, O.R., 2008. Building Regimes for Socioecological Systems: Institutional Diagnostics.
RMC, 2019. RMC Standing Committee Resolution Number 388 & Attached Meeting Minutes. Pub. L. No. 388, Rajkot Municipal Corporation.