Assessing India's Enabling Framework Conditions for Subnational Climate Finance

July 2024

CITIES CLIMATE FINANCE LEADERSHIP ALLIANCE

ESCAP
Economic and Social Commission for Asia and the Pacific

Urban-Act
Integrated Urban Climate Action for Low-Carbon & Resilient Cities

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ABOUT CITIES CLIMATE FINANCE LEADERSHIP ALLIANCE (CCFLA)

The Cities Climate Finance Leadership Alliance (CCFLA) is a coalition of leaders committed to deploying finance for city-level climate action at scale by 2030. Trillions of dollars will be required to help cities build the low-emissions, resilient infrastructure necessary to combat and react to climate change. CCFLA is the only multi-level and multi-stakeholder coalition aimed at closing the investment gap for urban subnational climate projects and infrastructure worldwide.

ABOUT THE UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)

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ABOUT URBAN-ACT

The Integrated Urban Climate Action for Low-Carbon and Resilient Cities (UrbanAct) project supports a transformation towards low-carbon and resilient urban development in Asia-Pacific while also contributing to countries' Nationally Determined Contributions (NDCs) and the advancement of the Sustainable Development Goals (SDGs). The project is funded by The Federal Ministry for Economic Affairs and Climate Action (BMWK) under the International Climate Initiative (IKI). The project is implemented in five countries – India, China, Indonesia, the Philippines, and Thailand. In India the project is being implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in collaboration with Ministry of Housing and Urban Affairs (MoHUA). United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), United Cities and Local Governments Asia-Pacific (UCLG-ASPAC), the Technical University Dortmund (TUD) and the University of Stuttgart, Germany are the regional implementing partners of the project. National Institute of Urban Affairs (NIUA) and The Energy and Resources Institute (TERI) are the India implementing partners.

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SPECIAL MESSAGE

As India urbanizes, it is imperative to reflect on our past actions as we chart a course for the future of sustainable urban development. India has demonstrated a robust commitment to climate action, evident through the implementation of national and state-level plans, policies, and strategies. While significant strides have been made, there remain areas for improvement. The Ministry of Housing and Urban Affairs, through its initiatives like the Smart Cities Mission, AMRUT, SBM-U2.0, Climate Smart Cities Assessment Framework, Urban Outcomes Framework, Climate Centre for Cities and Climate Data Observatories has attempted to build local climate action. A lot of effort is still needed to integrate climate action into various existing frameworks, so that cities can nurture a more holistic and integrated approach to climate action.

The fiscal and financial landscape of Indian cities, particularly concerning climate finance, presents both opportunities and challenges. While ULBs rely largely on intergovernmental transfers, their abilities to enhance own source revenues, tap into capital markets and attract private investments remains limited. With ever-increasing demands on them, a multi-faceted approach to overall urban finance including climate finance is needed.

I congratulate United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the Cities Climate Finance Leadership Alliance (CCFLA) for the report "Assessing India's Enabling Framework Conditions for Subnational Climate Finance". The report published as part of the Urban-Act project supported by Federal Republic of Germany presents findings from piloting the CCFLA/Urban-Act National Assessment Tool, which evaluates national-level enabling framework conditions (EFCs) to mobilize subnational climate finance.

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This report highlights the need for coordination between different levels of governments to bring about cohesive climate action. While vertical coordination mechanisms exist between the national government and states, similar structures at the ULB level are in nascent stages. The report advocates for enhanced coordination through active involvement of ULBs in planning processes, establishment of coordinating bodies at the state level, and fostering collaboration among ULBs and parastatals within cities.

I urge all stakeholders to leverage the insights and recommendations presented in this report to accelerate our efforts towards building ClimateSmart Cities. Let us continue working together to realize our vision of a greener, more sustainable urban India.

(KUNAL KUMAR)

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ABBREVIATIONS

Abbreviation	Term
AMPLIFI	Assessment and Monitoring Platform for Liveable, Inclusive, and Future-ready Urban India
AMRUT	Atal Mission for Rejuvenation and Urban Transformation
CAMPA	Compensatory Afforestation Fund Management and Planning Authority (CAMPA) fund
CCAPs	City Climate Action Plans
CCFLA	Cities Climate Finance Leadership Alliance
CEE Assessment	City Enabling Environment Assessment
CFC	Central Finance Commission
CoE	Centres of Excellence
CSCAF	ClimateSmart Cities Assessment Framework
DST	Department of Science and Technology
EESL	Energy Efficiency Services Limited
EFCs	Enabling Framework Conditions
FRBM	Fiscal Responsibility and Budget Management
GHG emissions	Greenhouse gas emissions
HUDCO	Housing and Urban Development Corporation
IGTs	Intergovernmental transfers
INDCs	Intended National Determined Contributions
LT-LEDS	Long-term Low-Carbon Development Strategy
MC	Municipal Corporation
MDB	Multilateral Development Bank
MEEP	Municipal Energy Efficiency Programme
MoEFCC	Ministry of Environment, Forest and Climate Change
MoF	Ministry of Finance

MoHUA	Ministry of Housing and Urban Affairs
MRV	Monitoring, reporting and verification
NAP	National Adaptation Plan
NAPCC	National Action Plan on Climate Change
NBFI	Non-Bank Financial Institutions
NDB	National Development Bank
NDCs	Nationally Determined Contributions
NDRMF	National Disaster Risk Management Fund
NIUA	National Institute of Urban Affairs
NMSKCC	National Mission on Strategic Knowledge for Climate Change
NMSH 2.0	National Mission for Sustainable Habitat 2.0
OSR	Own-source revenue
PDB	Public Development Bank
PPF	Project Preparation Facility
PPP	Public-private partnership
PSEs	Public Sector Enterprises
SAPCC	State Action Plan on Climate Change
SDC	Swiss Agency for Development and Cooperation
SDRF	State Disaster Management Fund
SEBI	Securities Exchange Board of India
SFCs	State Finance Commissions
SNLP	Street Lightning National Programme
SPE	Special Purpose Entity
SPV	Special Purpose Vehicle
TACCC	Transparency, accuracy, consistency, comparability and completeness
TNUDF	Tamil Nadu Urban Development Fund

TNUIFSL	Tamil Nadu Urban Infrastructure Financial Services Limited
UCLG ASPAC	United Cities and Local Governments Asia-Pacific
ULBs	Urban Local Bodies
UNFCCC	United Nations Framework Convention on Climate Change

A glossary of key terms used in this report is included in Appendix 1.

EXECUTIVE SUMMARY

Scaling finance for cities' climate action requires sufficient enabling conditions at the national level. Enabling framework conditions (EFCs) can create a conducive environment for climate finance, thereby helping national and subnational entities to drive climate action and contribute to the achievement of climate goals. Such EFCs improve access to finance by creating the right policy environment, enabling cities' access to finance, strengthening subnational climate data, and ensuring coordination from the national to the city level.

This report presents findings from our pilot application in India of the CCFLA/Urban-Act National Assessment Tool, which evaluates countries' national-level EFCs to mobilize subnational climate finance. As part of Urban-Act's work to strengthen EFCs and cities' capacities to engage in climate action, the assessment focuses on four key categories:

ES Table 1

Category	Detail
Climate Policy	Assess whether and how the national government supports subnational governments' climate policy and planning processes. Determine whether there is a long-term and recently updated national climate strategy in place to provide a clear pathway to achieving subnational climate targets.
Budget and Finance	Assess the country's national and subnational financial architecture to provide an explicit, clear, and stable assignment of expenditures and responsibilities and to put in place incentives for subnational fiscal autonomy.
Climate Data	Assess the data available for mitigation and adaptation planning from national to local levels and how well data and analyses are incorporated into planning and strategy. Assess how the national government can support subnational governments in having better access to good quality climate data and using that in their climate policy and planning.
Vertical and Horizontal Coordination	Assess how the national government can develop stronger climate policy and planning coordination with subnational governments horizontally (across urban systems, processes, and planning) and vertically (from local to national levels).

This analysis aims to support subnational climate finance in India by enhancing understanding of the country's national EFCs, including their strengths, related opportunities, and recommendations for improvement. These findings can inform Cities Climate Finance Leadership Alliance (CCFLA) members' and partners' capacity-building activities with national and subnational government stakeholders.

KEY FINDINGS AND RECOMMENDATIONS

CLIMATE POLICY

India has introduced national and state-level plans, policies, and strategies for climate action, many of which include urban components. Based on this strong national commitment, there are opportunities to enhance the climate policy environment for cities in the following areas:

- While several cities (e.g., Mumbai, Coimbatore, and Shimla) have collected climate data and planned for climate action, urban local bodies (ULBs) are not centrally mandated to collect GHG data, conduct vulnerability assessments, nor establish local climate-related bodies.
- India's 2021 National Mission for Sustainable Habitat 2.0 (NMSH 2.0) policy made progress on filling some of these gaps by encouraging ULBs to conduct vulnerability assessments and draft City Climate Action Plans (CCAPs). These plans can enable a more programmatic approach to cities' climate action.

RECOMMENDATIONS

The Ministry of Housing and Urban Affairs (MoHUA) can further improve the policy environment for subnational climate action by:

- Working with state governments to establish and clarify roles and responsibilities for city-level climate action.
- Scaling up initiatives like the Leaders in Climate Change Management and dedicated training aligned with ClimateSmart Cities Assessment Framework (CSCAF). This can further integrate capacity building on climate data, risk assessments, and action into its existing programs to share knowledge and develop the skills of ULBs to effectively address climate change.
- Integrating climate action in its existing guidelines for Urban and Regional Development Plans Formulation and Implementation (URDPFI) and issuing guidelines for the drafting of CCAPs under the NMSH 2.0.

BUDGET AND FINANCE

Indian cities finance their activities, including on climate, through own-source revenue (OSR), intergovernmental transfers (IGTs), and limited other sources.

- **Own-source revenue:** ULBs have limited options to generate OSR, which typically accounts for 34% of their total revenue (RBI, 2022). A few states (e.g., Maharashtra and Himachal Pradesh) have allowed their ULBs to introduce new taxes to increase climate finance.
- **Intergovernmental transfers:** The national government uses IGTs, budgetary allocations, and thematic domestic funds to finance ULBs. However, these mechanisms do not generally consider climate risk or mitigation potential in their allocation.

- **Other:** Access to private investment and municipal borrowing is limited among Indian ULBs due to poor fiscal management. Municipal corporations' cumulative borrowings constitute less than 0.05% of India's GDP in 2021 (RBI, 2022). ULBs can issue bonds with state government approval. There have been 41 municipal bond issuances in India, one of which was a green bond.

RECOMMENDATIONS

The national government can support ULBs' access to climate finance through various actions across IGTs, OSR, and other sources.

To enhance IGTs, the 16th Central Finance Commission (CFC)[1] can:

- Broaden the scope of ULB grants to include climate action initiatives.
- Continue to incentivize states to establish their State Finance Commissions (SFCs) every five years, to ensure reliable and predictable transfers to ULBs.

To help ULBs enhance their own revenue streams, the MoHUA can:

- Facilitate consultations and peer learning among states to enable ULB revenue diversification for climate action.
- Offer financial incentives (along with states) to ULBs to enhance their OSR streams through improved valuation, billing, and collection of ULB taxes.

To help ULBs raise capital from other sources, the national government can:

- Accelerate the development of a national project preparation facility to build ULBs' capacity to identify viable projects and efficiently allocate funds.
- Through MoHUA, incentivize and build ULBs' fiscal management capacities, particularly for small- and medium-sized towns, and mandate states to implement the MoHUA's municipal accounting manual.
- Provide additional financial incentives and targeted support to small and medium-sized towns for accelerating climate action.
- Support the establishment/revival of state bodies to mitigate risk and facilitate pooled financing for ULBs.

In particular, the national government can further support municipal bond issuance by:

- Enhancing ULBs' capacity to draft proposals and issue bonds.
- IGTs can crowd out bond markets in cities. To address this, MoHUA could mandate ULBs to gradually raise a portion of their funds through PPPs or capital markets.
- Supporting the earmarking of a fixed percentage for ULB bond issuance in the Fiscal Responsibility and Budget Management (FRBM) regulations.
- Mandating ULBs to report on their use of bond proceeds to enhance transparency.

1 The 16th CFC was constituted in January 2024 and is expected to provide recommendations on fiscal devolution by October 2025. These recommendations would cover 5-year period commencing from April 2026 (MoF, 2023).

- Supporting the de-risking of municipal bonds through use of guarantees and other methods.

Finally, the Ministry of Finance can encourage ULBs to conduct green budgeting and tagging to ensure transparency and accountability for urban climate finance.

CLIMATE DATA

India collects GHG emissions data at the national level for UNFCCC reporting and states collect climate vulnerability data when preparing their State Action Plan on Climate Change (SAPCC). However, ULBs collect limited data on both emissions and vulnerability as they are not mandated to do so. However, there have been commendable efforts to improve city-level data collection and availability. For example, MoHUA's ClimateSmart Cities Assessment Framework, launched in 2019, collects data and scores cities/ULBs on their climate initiatives.

RECOMMENDATIONS

MoHUA and the Ministry of Environment, Forest and Climate Change (MoEFCC) are well positioned to boost subnational climate data efforts.

- The MoHUA can work with NIUA to strengthen ongoing initiatives to support ULBs to collect, store, and monitor climate data, including reporting to the ministry's AMPLIFI city database. Additional steps can include expanding the reach of the CSCAF to include all urban areas and providing guidance to cities to transition from data mapping to informed decision-making for climate actions.
- The MoEFCC can also encourage states to collect ULB-level climate data when preparing their SAPCCs.
- The MoEFCC can both encourage states and ULBs to conduct city-level vulnerability assessments. MoHUA can continue to encourage city-level vulnerability assessments through existing programs like CSCAF and NMSH 2.0.

VERTICAL AND HORIZONTAL COORDINATION

There are established channels for vertical coordination between the national government and states, but such mechanisms between states and ULBs vary. NSHM 2.0 encourages ULBs to set up city level climate bodies. Additionally, state climate change cells, set up to coordinate the SAPCC process, present an excellent opportunity for enhancing coordination mechanisms for climate action in cities.

A few states have established bodies to improve horizontal and vertical coordination for climate action. For example, Tamil Nadu has entities, including Tamil Nadu Green Climate Company and Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) that facilitate urban climate action among ULBs.

RECOMMENDATIONS

Central government and state bodies can help to integrate and coordinate ULBs on climate action through the following measures:

- The MoEFCC can require ULBs' involvement in the SAPCC planning process to improve coordination between states and ULBs on climate action.
- States can also improve coordination among different ULBs through bodies like those in Tamil Nadu. This can include actions to facilitate knowledge sharing and collaboration among cities and municipalities through networks and alliances focused on climate action and resilience.
- States can encourage coordination by ULBs and parastatals with overlapping responsibilities within a city for climate action, data collection, and planning.

CONTENTS

1. INTRODUCTION

Increasing climate finance for South Asian cities is vital given their growing scale, as well as their contribution and vulnerability to climate change. South Asian cities collectively require USD 208 billion per year in climate finance from 2018 to 2030 (WWF, 2020) but receive an average of just USD 4 billion per year (CCFLA, 2021). In total, India will require tens of trillions of USD in climate finance cumulatively by 2050 to transition to a low-carbon development pathway (MoEFCC, 2022).

Cities are at the forefront of India's climate risks amid the country's rapid urbanization. About 36% of the country's population lives in cities (World Bank, 2018), representing 11% of the global urban population (UN, 2019). India's urban population is expected to double to 800 million by 2050, which will account for almost 50% of the country's population. Indian cities are extremely vulnerable to the impacts of climate change and are experiencing more frequent heat waves, floods, and water shortages. High building densities, increasing poverty and inequality, limited access to basic services, and infrastructure deficits have raised the vulnerability of cities across the country (MoHUA, 2021). Of the world's 100 most vulnerable cities to environmental and climate-related events, more than 40 are in India (Verisk Maplecroft, 2021).

Indian cities also present unique opportunities for emissions reduction and innovative climate action. Research indicates that adopting low-carbon technologies can reduce urban emissions from buildings, transport, and waste in Indian cities by 89% by 2050 (WRI, 2021). Therefore, cities and subnational climate action must play a pivotal role in achieving India's climate goals, including its commitment to achieve net zero carbon emissions by 2070 and interim targets for 2030.

Subnational funds for climate action can be increased by creating the right enabling conditions at the national level. Enabling framework conditions (EFCs) are essential for scaling subnational climate finance by creating the right policy environment, enabling cities' access to finance, strengthening subnational climate data, and ensuring coordination from the national to the city level.[2] Evaluating countries' national, institutional, and regulatory landscapes can yield valuable insights into boosting their readiness and capacity to attract and effectively use subnational climate finance. A comprehensive understanding of enabling conditions can facilitate the design of tailored and innovative financing mechanisms, including those for incentivizing private sector engagement.

Challenges for urban local bodies (ULBs) to access climate finance persist in India despite an increased focus on urban climate action. Overall, investment is relatively low in Indian cities, with annual budgetary allocations for the urban sector totaling about 1.5% to 1.7% of national GDP, compared to an Asian average of 5.7% (Gogoi et al., 2023). The assessment of climate finance needs and investment is also lacking.

In light of these challenges, Urban-Act and the Cities Climate Finance Leadership Alliance (CCFLA) has assessed the national EFCs for subnational climate finance in India. This work is part of the Urban-Act project, which aims to strengthen both EFCs for

2 See Appendix 1 for definitions of enabling environment and climate finance.

collaborative climate action and the capacities of cities to engage in climate dialogue and climate action in five Urban-Act countries (India, China, Indonesia, the Philippines, and Thailand).

Together with Urban-Act, CCFLA has developed a National Assessment Tool for national government officials and other stakeholders to evaluate national-level EFCs to mobilize subnational climate finance. This tool focuses on four categories: i) Climate Policy, ii) Budget and Finance, iii) Climate Data, and iv) Horizontal and Vertical Coordination. It aims to support national government officials and other stakeholders in identifying potential national EFC gaps and opportunities and to mobilize subnational climate finance in India.

We note that urban governance falls under state jurisdiction in India, causing significant variance in policies, rules, and regulations among states. Given that this report primarily focuses national-level EFCs, it may not fully capture state-specific aspects. These considerations may be assessed using the CCFLA/Urban-Act subnational assessment tool in future.

This report is organized as follows:

- Section 1 lays out responsibilities for subnational climate finance in India multi-level governance framework.
- Section 2 presents findings from the assessment tool.
- Section 3 presents recommendations for national and state governments to improve EFCs.
- The Appendices provide fuller information on the tool's methodology, what research we conducted, and granular findings in India.

2. SUBNATIONAL CLIMATE FINANCE IN INDIA

In India, both national and state governments hold policymaking and regulatory responsibilities for climate action. Urban development is a state subject, meaning that state governments have significant responsibilities for urban climate action (Khosla and Bharadwaj, 2019).

Each state has its own municipal act for governing urban local bodies (ULBs), with varied administrative frameworks for and regulation of ULBs across states (PRS, 2020). A constitutional amendment devolved certain financial and administrative functions from states to ULBs in 1993, largely relating to urban planning, regulation of land, water supply and sanitation, and public health. However, only 42% of these reforms have been implemented (ASICS, 2023).[3] Importantly, states may devolve control of finances to ULBs at their own discretion (Goyal, 2008; Mehta et al., 2023), resulting in a significant mismatch between the functions delegated to ULBs and the resources made available to fulfill them (RBI, 2022).

Cities finance their activities, including climate action, through i) own-source revenue (OSR), ii) intergovernmental transfers (IGTs), and iii) other sources such as debt and issuance of municipal bonds.

1. **Own-source revenue**

   In India, OSR comprises less than 1% of ULBs' annual revenues (NITI Aayog, 2023) and is usually insufficient to meet their spending needs (RBI, 2022). Low OSR in cities is largely due to the following limited revenue sources and a lack of autonomy over those they do have access to.

   a. **Limited sources:** Revenue sources are assigned to ULBs by states and can include tax sources such as property tax, and non-tax sources such as parking fees (RBI, 2022). However, fiscal decentralization between states and ULBs is limited, and state governments assign very few revenue sources to ULBs (RBI, 2022). This means that ULBs cannot generate revenue through direct or indirect taxation (e.g., income tax or goods and services tax, respectively) (Mehta et al., 2023). Only one state (Assam) has devolved the power to levy all key taxes to ULBs (ASICS, 2023).

   b. **Lack of autonomy:** Even when revenue sources are devolved to ULBs, state governments retain authority over setting and revising tax rates, exemptions, and concessions. In many states, this includes setting user charges for public services provided by the ULBs (ASICS, 2023).

ULBs, therefore, rely heavily on IGTs from national and state governments to execute their responsibilities (RBI, 2022).

3 States were expected to enact or amend suitable legislation (mostly state municipal acts) to implement the 74th Constitutional Amendment, which devolved these powers. However, since it was not mandatory to transfer all 18 functions, there are variations across states and ULBs in their functional domain.

2. Intergovernmental transfer

For cities, IGTs can be of two types: a) transfers from the Central Finance Commission (CFC) and State Finance Commissions (SFCs), and b) non-finance commission transfers.

The CFC and SFCs should be established every five years to allocate IGTs, as described in Box 1. However, the sufficiency, predictability, and timely receipt of these grants, particularly from SFCs, is challenging (Janaagraha, 2021).

Box 1: Central and State Finance Commissions

To address the mismatch among different levels of Indian government's resource-raising ability and expenditure responsibility, the CFC and SFCs should be established every five years at the national and state levels, respectively, to recommend the redistribution of financial resources.

The CFC recommends the distribution of financial resources between national and state governments and also provides grants to states and ULBs. SFCs – one for each state – recommend the distribution of the state's resources between the state government and ULBs.

However, unlike the CFC, SFCs are not constituted regularly. All states were expected to establish their 6th SFC by 2019-2020, but only nine of 28 have done so and only two are operational. Experts have also noted issues including inadequate staffing and unreliable data leading to weak SFC reports (The Mint, 2024).

Non-finance commission transfers include those under programs and schemes[4] of national and state governments, as well as transfers from domestic funds, such as the State Disaster Management Fund (SDRF), Adaptation Fund, and National Disaster Response Fund.

3. Other sources

In terms of private and capital markets, borrowing and use of private finance by ULBs is limited and largely concentrated in larger authorities (Mehta et al., 2023). This is due to:

a. Municipalities are mandated to have surplus budgets, limiting their borrowing capacity (RBI, 2022).

b. There is low confidence in ULBs' ability to service debt due to their low OSR levels as well as poor fiscal management and financial transparency (Athar et al., 2022).

c. Crowding out of municipal bonds due to a lack of incentives for borrowing in the program design (Mehta et al., 2023).

Table 1 summarizes some of the main institutions involved in guiding, implementing, and financing urban climate action in India, including from national government (green cells), constitutional/statutory bodies (pink cells), and subnational governments (blue cells).

4 In India, developmental activities (and climate action) are usually financed through schemes and programs. These could be of three types: a) Central Sector, b) Centrally Sponsored, and c) State schemes.

Table 1. India's stakeholder landscape for urban climate action

Institution	Role in urban climate governance	Financing urban climate action
Ministry of Housing and Urban Affairs (MoHUA)	Responsible for urban development and for mainstreaming urban climate action in national policies. It leads the NMSH.	Budgetary allocations through schemes for urban climate action. Financial incentives for issuing municipal bonds.
Ministry of Environment, Forest and Climate Change (MoEFCC)	Coordinates climate action, including NDCs and NAPCC missions.	Budgetary allocations through schemes for urban climate action.
Central Finance Commission (CFC)	Provides measures to improve ULBs' fiscal position. Enables urban reform by setting up conditionalities for ULB grants.	Provides grants to ULBs. In recent years, a portion of ULB grants has been tied to environmental action.
National Disaster Management Authority	Coordinates efforts on disaster management at the national level.	Manages the Central Disaster Management Fund.
State Finance Commission (SFC)	Provides measures to improve ULBs' financial position.	Distribution of the state's net proceeds between states and ULBs. Also provides grants-in-aid for ULBs.
State Government	Responsible for drafting SAPCC and designing state level schemes for financing climate action.	State budgetary allocations for climate action schemes. Also decides revenue sources for ULBs.
State Climate Change cells/ departments5	State-level coordinator for climate action planning and SAPCCs.	N/A
Urban Local Bodies (ULBs)	Responsible for drafting bylaws and urban plans (in most states). Also responsible for implementing national/state schemes on urban climate action among other development initiatives.	Raises OSR and can borrow from capital markets for climate action (with approval from states).

5 Apart from state climate change cells, several states have also set up other climate-focused institutes. For example, Himachal Pradesh set up a State Knowledge Cell on Climate Change and Tamil Nadu set up the Tamil Nadu Green Climate Company.

3. NATIONAL ASSESSMENT TOOL FINDINGS IN INDIA

The CCFLA/Urban-Act National Assessment Tool[6] provides findings across four categories: (i) Climate Policy, (ii) Budget and Finance, (iii) Climate Data, and (iv) Vertical and Horizontal Coordination, enabling the exploration of challenges and opportunities for mobilizing subnational climate finance. See Appendix 2 for details of the research and methodology.

In India, the Tool has been applied at the national level with consideration of Urban-Act pilot cities – Coimbatore, Panaji, and Shimla – and their respective states. Primary and secondary data were collected to ensure a comprehensive understanding of the enabling conditions for urban finance in India. The results are summarized below and presented in more detail in Appendix 3.

CLIMATE POLICY

In the last two decades, India has introduced several plans, policies, and strategies for climate action at both national and state levels, with several including content on mitigation and adaptation in urban areas.

While climate action plans and dedicated bodies exist at the state level, ULBs do not have institutional mandates or clearly designated roles and responsibilities on climate response. National policies do not mandate ULBs to collect GHG data, conduct vulnerability assessments, or establish local climate action bodies. Climate is not explicitly listed among the 18 functions devolved to ULBs, with their roles in such actions limited to implementing national or state programs (IIHS, 2015; Khosla, 2019). While the NSHM 2.0 encourages ULBs to draft City Climate Action Plans (CCAPs) and to set up city-level monitoring committees, it does not provide any mandates, guidelines, support or incentives for them to do so.

Current climate policies do not set any targets or KPIs for states or cities. However, sectoral programs and schemes include some climate-related targets. For example, the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) 2.0 sets a target for cities to reuse 20% of their treated wastewater. These programs and schemes have separate monitoring, reporting, and verification (MRV) systems and there is no integrated MRV for city-level climate action.

Table 2 details the assessment results for climate policy subcategories. Dimension numbers refer to the National Assessment Tool indicator assessed for each subcategory.

6 The CCFLA/Urban-Act National Assessment Tool and forthcoming Subnational Assessment tool builds on the 2021 approach developed by CCFLA and the Penn Institute for Urban Research, University of Pennsylvania. This approach aims to assess national EFCs and intergovernmental relationships to finance urban climate projects.

Table 2. Assessment results for climate policy in India

Subcategory	Details
CP 1.1 National climate change policies	India has several national policies, strategies, and plans for mitigation and adaptation, which are updated regularly (Dimensions 1.1.1 to 1.1.3). • The National Action Plan on Climate Change (NAPCC) 2008 launched eight programs on climate action, including the National Mission for Sustainable Habitat (NMSH), focused on urban development. • In 2009, the national government issued guidelines for each state to draft a State Action Plan for Climate Change (SAPCC). Given that climate vulnerabilities are local, and urban development is a responsibility of states, urban development is included in most SAPCCs (Chakravarty et al., 2024). • In 2015, India published its Intended National Determined Contribution (INDC), which emphasized the development of less carbon-intensive and resilient urban centers. The NMSH was updated in 2021 to become the NMSH 2.0. • In 2022, India updated its NDC and introduced a Long-term Low-Carbon Development Strategy, which includes promoting climate action in cities (MoEFCC, 2022). Monitoring and reporting of national climate goals is largely limited to emissions via India's GHG inventory, which is also used to submit its Biennial Update Report to UNFCCC (Dimension 1.1.4). India conducted vulnerability analysis for states and districts in 2018 but has yet to conduct a climate-risk assessment (Dimension 1.1.5).
CP 1.2 National regulations for subnational climate policies	National plans and strategies include content on mitigation and adaptation in urban areas. With the responsibility for drafting SAPCCs, states have a well-defined role in national climate strategy, but the role of cities is not outlined (Dimension 1.2.1 to 1.2.3). The national SAPCC guidelines require states to establish climate cells/departments. While there are no mandates for dedicated climate bodies at the city level, NMSH 2.0 through the CSCAF encourages cities to establish a city climate cell. Additionally, state-level climate cells exhibit limited engagement with ULBs (Dimension 1.2.5). Additionally, no national policies or regulations require cities to collect GHG inventories or conduct climate-risk assessments, NMSH 2.0 through CSCAF encourages cities to develop a climate action plan which is informed by GHG inventories and climate risk assessments (Dimension 1.2.7 and 1.2.8). Current climate policies (e.g., the NAPCC and NDC) do not set targets for states or cities. However, several sectoral programs/schemes have climate-related KPIs and targets. For example, AMRUT 2.0 sets a target for cities to reuse 20% of their treated wastewater (Dimension 1.2.3). Monitoring and reporting of such schemes' climate targets is done to different ministries and via different channels. The MoHUA oversees urban service delivery where climate considerations are being integrated into specific services within cities, such as water provision. However, urban climate action extends beyond individual services. Currently, there is a gap in planning holistic climate action at the city level through CCAPs (Dimension 1.2.9). The NSHM 2.0, released in 2021 encouraged ULBs to draft CCAPs but does not provide any related guidelines, support, or incentives (Dimension 1.2.9).

Subcategory	Details
CP 1.3 National requirements for involving subnational governments in climate planning	There are currently no requirements to involve state or city governments when planning national climate action. However, the SAPCC guidelines require states to align activities to India's NDC and national policies, incorporating state-specific details.

BUDGET AND FINANCE

Climate action in cities is financed through domestic sources including OSR and IGTs, and international public sources such as bilateral and global funds. Borrowing (through instruments such as loans, public-private partnerships, and bonds) in cities is limited due to poor fiscal management and limited capacity (Janaagraha, 2018; Mehta et al., 2022).

Table 3. Assessment of results for budget and finance in India

Subcategory	Details
BF 2.1 Public financing and national budget	The national government has several mechanisms for funding climate action. These include: i) Transfers from CFC, ii) Programs and schemes, iii) Domestic funds including national and state Disaster Response Fund (Dimension 2.1.2 and 2.1.3).
BF 2.2 National funding sources for subnational climate action	In the last two years, the national government has used both domestic and international public sources to finance climate action (Dimension 2.2.1 and 2.2.2). Other sources of funding, such as city borrowing, are limited due to poor fiscal management and financial transparency in cities. Additionally, previous national and state government programs have lacked incentives for borrowing, leading to program funds crowding out borrowing (Mehta et al, 2023) (Dimension 2.2.3). It is also challenging to attract international private funds for subnational climate action due to the high cost of capital (Dimension 2.2.4). There is no evidence of the national government using innovative sources such as blended finance for urban climate action.
BF 2.3 National support for subnational budgeting	The national government recognizes climate action as a crucial objective and allocates funds to various climate activities. However, no climate-risk assessment is conducted to allocate budgets (Dimension 2.3.2). Urban climate investments are difficult to track as there is no national framework or support for green budgeting or climate tagging (Jain and Padmanabhi, 2021). However, some states (Odisha, Assam, and Bihar) have climate/green budgets (Dimension 2.3.1 and 2.3.3).

Subcategory	Details
BF 2.4 Systems of intergovernmental transfers (IGTs)	India has a robust mechanism for IGTs, including transfers tied to climate action: • The 15th CFC grants earmarked a portion of ULB grants to rainwater harvesting and water recycling. • Domestic funds include the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Fund, Disaster Response Fund and Adaptation Fund. • Programs/schemes such as AMRUT, Smart City Mission, Nagar Van Yojana, 'Solar City Programme,' and others. Transfers via the means listed above enable subnational governments to address climate change and other environmental concerns. For example, a portion of 15th CFC grants is contingent upon improvement in urban air quality (Dimension 2.4.3). However, these transfers do not consider specific or differentiated climate goals or climate vulnerability among subnational governments (Dimension 2.4.1, 2.4.2 and 2.4.5). There are also no transfers that directly incentivize subnational governments to include climate externalities in their policy or planning.
BF 2.5 Fiscal decentralization and subnational revenue generation	There is a clear regulatory framework for fiscal decentralization in India, with the CFC and SFCs mandated to determine the allocation of financial resources among different levels of government every five years. However, several states are irregular in constituting their SFC, as described in Box 1 (Dimension 2.5.1). Municipal revenues in India are low, accounting for less than 1% of their GDP, compared to 6% in South Africa and 7% in Brazil (RBI, 2022). Therefore, there have been efforts to increase OSRs for ULBs through means such as land-based financing. However, there is no indication of the national government encouraging resource diversification for climate action through carbon or other tax systems (Dimension 2.5.2). Nonetheless, states and cities are experimenting with green/pollution taxes. For example, Manali in Himachal Pradesh has implemented a green tax for tourists, albeit collected by a parastatal body and not the ULB (The Mint, 2022). Similarly, Maharashtra charges a 1% metro rate on properties purchased in certain cities to finance clean transport in the state (The Stateman, 2022).
BF 2.6 Private finance mobilization at the subnational level	In general, private investment is limited due to poor fiscal management and limited capacity. However, several programs, such as AMRUT and Smart City Mission, are providing incentives for private involvement in urban development (Dimension 2.6.1 and 2.6.2). National support for PPPs may exist but could not be determined during this initial assessment.
BF 2.7 Subnational creditworthiness and access to capital	The Securities Exchange Board of India (SEBI) released regulations for the issuance of municipal bonds in 2015. ULBs in India can issue bonds with approval from the state government. However, the issuance of municipal bonds is not popular – 41 municipal bonds and 1 municipal climate bond have been issued - due to poor fiscal management at the city level (Dimension 2.7.1, 2.7.2 and 2.7.5). National programs encourage ULBs to apply for credit ratings, but the national government does not provide any technical assistance or capacity building for ULBs to issue municipal bonds (Dimension 2.7.3 and 2.7.6). There are financial incentives for municipal bond issuance, including a lump-sum grant-in-aid of USD 1.5 M per USD 12 M of bonds issued under the MoHUA's AMRUT program. Recognizing the challenges faced by small and medium-sized ULBs in issuing municipal bonds, the national government introduced a Pooled Financing Development Fund in 2006. However, this saw limited uptake for logistical and political reasons; only Tamil Nadu and Karnataka established state-level bodies to implement the scheme (Dimension 2.7.7).

Subcategory	Details
BF 2.8 Potential for co-financing and/or innovative financing	Several domestic public sector entities (PSEs) and development finance institutions (DFIs) such as the Housing and Urban Development Corporation Limited (HUDCO) and Indian Renewable Energy Development Agency Limited (IRIDA) provide co-financing and/or innovative financing. As independent entities, they can raise funds from capital markets and other financial institutions at cheaper rates (NIUA, 2021) (Dimension 2.8.1). Various entities exist to enable financial flows to ULBs, such as the Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) in Tamil Nadu at the state level, and Energy Efficiency Services Limited (EESL) at the national level (NIUA, 2021) (Dimension 2.8.2). The Smart City Mission establishes special purpose vehicles (SPVs) in cities for urban development, aimed at accessing finance from capital markets by limiting liability (Dimension 2.8.5). There is no national support for subnational use of innovative financing mechanisms. Goa launched a Blended Finance Facility in February 2024, though information on this facility is limited.

CLIMATE DATA

In India, climate data is collected at different levels. The national government maintains a GHG Inventory for UNFCCC reporting. In 2018, the Department of Science and Technology (DST) conducted a one-time exercise to collect and provide data on vulnerability drivers for all states and districts. Additionally, states collect data on climate vulnerability as part of their SAPCCs.

Climate data collection at the ULB level remains limited. Several initiatives by MoHUA and NIUA such as the CSCAF framework and AMPLIFI platform aim to improve data collection and reporting on climate action in cities.

Table 4. Assessment of results for climate data in India

Subcategory	Details
CD 3.1 National-level climate data	India has a national GHG inventory. However, this only provides data disaggregated by sector and not by region or state. There is no climate database specific to urban areas. Both the DST and state governments collect data on climate vulnerability. While there is no formal mandate, some cities have created a GHG inventory (e.g., Coimbatore) and conducted vulnerability assessments (e.g., Shimla) with donor support. Through its ClimateSmart Cities Assessment Framework, the MoHUA conducts assessment of urban development from a climate lens with an intent to influence climate actions. In addition to a stocktake, the framework provides cities a way forward to mainstream climate change in urban development.

Subcategory	Details
CD 3.2 National support for subnational climate data	The National Institute of Urban Affairs (NIUA) has developed the AMPLIFI database (which includes CSCAF data) to centralize city-level data. Although participation is voluntary, the number of cities participating in CSCAF has increased from 96 cities in 2019 to 226 cities in 2023. In addition, the India Urban Data Exchange (IUDX) is an initiative of MoHUA for urban data collection. The national government has established 11 research centers under the National Mission on Strategic Knowledge for Climate Change (NMSKCC) and also offers technical assistance to states on data analysis for drafting their SAPCCs.

VERTICAL AND HORIZONTAL COORDINATION

Given India's federal structure, climate action and finance are multi-level governance issues involving national ministries, state governments, and ULBs. While there are established channels for vertical integration between states and the national government for SAPCCs, vertical integration between states and their ULBs remains unclear. However, the recently launched NSHM 2.0 encourages ULBs to set up city-level climate bodies.

Furthermore, horizontal integration for the planning and financing of climate action at the subnational level appears to be at a nascent stage. Few states have bodies to coordinate climate action among different cities. One such example is the Tamil Nadu Green Climate Company which is set up to implement climate action programs in Tamil Nadu.

Table 5. Assessment of results for vertical and horizontal integration.

Subcategory	Details
VHC 4.1 National support for subnational vertical and horizontal coordination	There is currently no national support for horizontal coordination on climate action. However, the state Tamil Nadu have facilitated horizontal coordination within the state through bodies like TNUIFSL. For vertical integration, the MoHUA has established a Climate Centre for Cities (C-Cube) within the NIUA to mainstream climate change in urban development and build climate actions in cities. Since its inception in 2020, C-Cube has been able to conduct climate assessments in more than 200 cities, develop flood vulnerability assessments and climate action plans, build local capacities and foster peer learning among cities, and establish the City Climate Alliance with over 70 partners to streamline and expand efforts in advocating for climate action in cities.
VHC 4.2 Public involvement and subnational stakeholder engagement	Currently, subnational governments are not required to integrate public participation in their climate action planning. There are no domestic forums for subnational governments to collaborate with civil society or the private sector on this issue.
VHC 4.3 National external engagement and peer learning	Desk research and interviews found no details on the national government's engagement in peer learning on climate finance or their cooperation with existing project preparatory facilities to support subnational governments. However, a new project preparation facility is currently being established at NIUA with support from the Shakti Foundation and in association with the MoHUA.

RECOMMENDATIONS

India has several national plans, policies, and programs that incorporate elements of urban climate action. Based on this strong national commitment, there are opportunities to enhance the climate policy environment and accelerate climate action.

Climate action in cities is financed through domestic sources (OSR and IGTs) and international public sources (bilateral and global funds). Lending and innovative finance play limited roles in urban climate action.

Our assessment also points to several systemic urban governance issues that hamper Indian cities' municipal finance and ability to invest in urban climate action:

- ULBs lack autonomy to increase their OSR, given that states allocate these sources and determine the rates and concessions.
- ULBs have poor financial management, financial transparency, and reporting practices, hindering their ability to attract private investment.
- Finally, irregular SFCs also create bottlenecks in municipal finance flows.

In addition, data collection on GHG emissions and climate vulnerability is limited in Indian cities, despite some support from MoHUA. Tracking urban climate investment is also hindered due to a lack of mandate for ULBs to conduct green budgeting/climate tagging.

Vertical and horizontal integration between states and cities for climate action is at a nascent stage, with opportunities for improvement.

Strategies for improving national EFCs are suggested for national government, subnational governments, and relevant stakeholders in Table 6.

Table 6. Recommended actions for improving national EFCs in India

Category	Recommendations	Action by
Climate Policy	**Establish responsibility by incorporating climate action as a function of ULBs' mandates.** This could be done by amending state municipal acts or via MoHUA programs/schemes. Integrate climate elements in the urban planning and infrastructure development ecosystem. To achieve this, the MoHUA could: a. Update its URDPFI guidelines to mainstream climate action in urban planning. b. Incentivize and support climate-risk assessments in cities while developing urban master plans. c. Scale up initiatives like Leaders in Climate Change Management and dedicated training aligned with CSCAF, to further integrate capacity building on climate action, data, and risk assessments in current programs/ schemes. d. Provide training for town planning officials on climate change. This can be done through NIUA and regional training institutions like TNIUS in Tamil Nadu and KILA in Kerala. **Enhance guidelines to enable climate action.** The MoHUA can release guidelines for drafting CCAPs under the NMSH 2.0, which should include: a. Standardized frameworks and methodologies for conducting urban climate risk assessment. b. Standardized guidelines for climate interventions, with technologies tailored to specific climate zones. c. Alignment of mechanisms between CCAPs and SAPCCs to maximize effectiveness and resource allocation. d. Details on funding sources for CCAPs.	National Government

Category	Recommendations	Action by
Budget and Finance	**Establish green national government transfers.** The climate-related elements of the current 15th CFC's ULB grants focus on water recycling and air quality. The 16th CFC can expand its scope to include wider climate action initiatives, and can consider the DST's district-specific vulnerability assessments in the distribution of ULB grants. **Support and incentivize the improvement of municipal finance, which can enhance capacity for climate finance.** a. The CFC can continue to provide incentives for states to improve the functioning of SFCs to provide reliable and timely transfers to ULBs. b. The MoHUA can facilitate consultations and peer learning sessions with states to encourage ULB revenue diversification for climate action. c. The MoHUA (and states) can offer TA and financial incentives to ULBs to enhance their OSR streams by improving valuation, billing, and collection of taxes and fees. The national government can also support the exploration of other revenue streams, such as land-based financing. d. The national government can support capacity building for ULBs to identify viable projects, raise additional capital, and efficiently allocate funds. **To improve incentives to attract private capital, the MoHUA can:** a. Incentivize and support capacity building to improve financial management practices of ULBs, particularly for small- and medium-sized towns, including by adopting accrual accounting and producing financial statements. b. Mandate states to implement the MoHUA municipal accounting manual. c. Support the establishment/revival of state bodies to mitigate risk and facilitate pooled financing for small to medium-sized ULBs. **The national government can improve incentives to support municipal bond issuance to tap alternative sources of climate finance.** a. The MoHUA can support the capacity building of ULBs to draft proposals and issue bonds. b. In the past, IGTs have crowded out bond markets. To address this, the national government can mandate ULBs to raise a percentage of funds through PPPs or capital markets over time. c. The national government can support the inclusion of a fixed percentage earmarked specifically for ULBs in the Fiscal Responsibility and Budget Management norms, to facilitate municipal bond issuance. d. The national government can support the de-risking of municipal bonds, drawing from successful models like the Tamil Nadu Urban Development Fund (TNUFD) bonds, which used four layers of guarantees. **The national government can implement green lending targets for Housing and Urban Development Corporation (HUDCO) and other Public Sector Enterprises (PSEs) to catalyze green investments in cities.** **Finally, the MoF can encourage green budgeting and tagging to ensure transparency and accountability for urban climate action.**	Central Finance Commission, National Government and State governments

Category	Recommendations	Action by
Climate Data	**To help reduce the fragmentation of urban climate data, MoHUA can work with NIUA to strengthen ongoing initiatives to support ULBs to collect, store, and monitor climate data. Specifically, MoHUA and NIUA can:** a. Continue support in collecting climate data through CSCAF and expand its reach to include all urban areas. b. Provide support to cities to transition from data collection to informed decision-making for influencing climate actions. c. Promote citizen participation by strengthening the existing Climate Practitioners India Network (CPIN) established by NIUA. With over 1000 CPIN members across more than 100 cities, there is potential to collect granular data to inform localized climate actions. d. Provide incentives to ULBs to report this data on the AMPLIFI database developed by NIUA. In addition, the MoEFCC can also encourage state climate cells to collect ULB-level climate data. MoEFCC and MoHUA can consider making GHG monitoring and reporting a requirement for all major urban projects.	National Government
Vertical and Horizontal Coordination	**To improve national support for coordination between states and ULBs for climate action, the MoEFCC can include ULBs in the SAPCC planning process.** **States can improve and facilitate coordination among different ULBs through bodies like TNUIFSL[7] in Tamil Nadu.** This can include actions to facilitate knowledge sharing and collaboration among cities and municipalities through networks and alliances focused on climate action and resilience. MoHUA can establish city-level climate cells to strengthen horizontal coordination within the city and streamline vertical coordination with national (C-Cube) and state level bodies. In addition, support to the City Climate Alliance can be continued to strengthen partnerships for climate actions at the city level.	National and state governments

7 For more details on TNUIFSL, see their website (TNUIFSL 2023).

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APPENDICES

APPENDIX 1: GLOSSARY OF TERMS

Term	Explanation
Climate finance	CCFLA's definition of climate finance is based on the definitions developed by Climate Policy Initiative (CPI) for mitigation and adaptation projects in the Global Landscape of Climate Finance. This working definition of climate finance is aligned with the recommended operational definition of the UNFCCC Standing Committee on Finance, which states: "Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts.[8]
Enabling framework conditions (EFCs)	An EFC is a component of a broader enabling environment, in this case for subnational climate finance. EFCs together constitute an enabling environment for achieving minimized and well-managed risks and where the rights, roles and assets of all stakeholders are established. Previous CCFLA work has focused on EFCs for climate-smart cities, which facilitate low-carbon, climate resilient urban development. EFCs can be policies, legal frameworks, governance structures, implementation capacity, and financing and investment structures, among others.[9]
Municipal corporation (MC)	Municipal corporation is the legal term for a local governing body, including (but not limited to) cities, counties, towns, townships, charter townships, villages, and boroughs. The term can also be used to describe municipally owned corporations.
Subnational government	The terms 'subnational' and 'subnational government' are used to refer to the multiple levels of government that operate below the national level. Common terms for subnational governments include states, provinces, territories, regions, counties, municipalities, cities or similar.
Urban areas	The term 'urban' refers to functional urban areas (FUAs), which consist of a densely inhabited city and a less densely populated commuting zone whose labor market is highly integrated with the city.[10] The term 'urban' also includes cities with physical boundaries that are officially locally defined by the city government in question, which, depending on the context, may include less urbanized areas such as peri-urban commuting zones.[11]

8 Climate Policy Initiative (CPI). 2023. The Global Landscape of Climate Finance 2023. Available at: https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/
9 CCFLA/World Bank (2021). 2021 State of Cities Climate Finance. Available at: https://citiesclimatefinance.org/publications/2021-state-of-cities-climate-finance/
10 European Commission/OECD (2019). The EU-OECD definition of a functional urban area. Available at: https://www.oecd-ilibrary.org/urban-rural-and-regional-development/the-eu-oecd-definition-of-a-functional-urban-area_d58cb34d-en
11 CCFLA/World Bank (2021). 2021 State of Cities Climate Finance. Available at: https://citiesclimatefinance.org/publications/2021-state-of-cities-climate-finance/

APPENDIX 2: NATIONAL ASSESSMENT TOOL DESCRIPTION AND METHODOLOGY

The CCFLA/Urban-Act National Assessment Tool aims to improve subnational governments' access to climate finance by evaluating national-level enabling framework conditions (EFCs) and facilitating related recommendations. It is primarily intended for national government officials but can be used by other stakeholders seeking to understand national EFCs, such as local implementers, city networks, NGOs, and subnational officials.

The Tool and the forthcoming Subnational Assessment Tool build on the 2021 approach developed by CCFLA and the Penn Institute for Urban Research, University of Pennsylvania. This approach aims to assess national EFCs and intergovernmental relationships to finance urban climate projects.

The Tool draws upon the findings of the City Enabling Environment (CEE) Assessment conducted by United Cities and Local Governments Asia-Pacific (UCLG ASPAC) in 2023. The CEE Assessment analyzed the legislative frameworks that made up the enabling environments of cities in five countries in the Asia Pacific region, examining elements related to finance and the environment. This work built upon previous Asia-Pacific assessments in 2018, and Africa assessment conducted in 2012 and 2015.

The Tool assesses the regulatory framework and policies for innovative financing mechanisms, PPPs and domestic and international cooperation to bridge the urban finance gap as highlighted in the 2023 Future of Asian and Pacific cities report (ESCAP, 2023a). It emphasizes the pivotal roles that national and subnational governments play in designing, planning, and managing sustainable urban development, as articulated in Resolution 79/7 (ESCAP, 2023b).

CCFLA and Urban-Act enhanced the standardized approach through desk research and CCFLA members' and Urban-Act implementing partners' inputs. The Tool has also been presented to climate finance experts at a roundtable in India organized by Urban-Act and CCFLA. This resulted in the National Assessment Tool, which is structured around four categories: (1) Climate Policy, (2) Budget and Finance, (3) Climate Data, and (4) Vertical and Horizontal Coordination.[12] The tool has been further developed through an iterative process, based on the piloting experience in India, presented in this report, and in Indonesia.

PILOTING THE TOOL IN INDIA

In India, the CCFLA/Urban-Act National Assessment Tool was applied at the national level with consideration of Urban-Act pilot cities – Coimbatore, Panaji, and Shimla – and their respective states for their perspective on national EFCs. Primary and secondary data was collected to ensure a comprehensive understanding of the enabling conditions for urban finance in India.

- Desk research involved thoroughly reviewing regulations, policies, and plans including the 74th CAA, the National Action Plan for Climate Change (NAPCC), and the National Mission for Sustainable Habitat (NMSH). Several reports from government bodies were

12 Considerations regarding the country profile and the administrative structure have been integrated in this report under the introduction.

also reviewed, including the 15th Finance Commission report and Niti Aayog's report on urban planning capacity. In addition, academic papers and reports of other organizations on the subject were also included.

- Based on the desk research results, questionnaires were developed tailored for national and state government stakeholders to address potential knowledge gaps. Seven interviews were conducted organized and facilitated by ESCAP from February to March 2024. Out of these 7 interviews, 3 were with city officials, 2 with national government ministries, 1 with the Reserve Bank of India, and 1 with a climate finance expert. We also discussed our findings with national and subnational governments through roundtables to verify and add input to our analysis. First assessment findings and recommendations were presented to key climate finance experts and national government stakeholders at the second in-person roundtable in India organized by Urban-Act and CCFLA to further strengthen the report's findings.

The toolkit was developed based on the following reports, tools, frameworks, and case studies in Table A1.

Table A1. Summary of literature review conducted for development of the toolkit.

Sources	Reference
Case studies	Advanced Practices for Environmental Excellence platform (APEX 2024)
	City Creditworthiness Initiative (World Bank 2024)
	Joint database of published diagnostics (EBRD 2019)
	Multilevel climate action playbook (GCoM 2022)
Frameworks	Cities Reporting Guidance (CDP/ICLEI 2023)
	Framework for assessing the enabling conditions to finance water security (OECD 2023a)
	Local Autonomy Index (Ladner et al. 2023)
	Policy Framework for Investment (OECD 2015)
	Regional Authority Index (Shair-Rosenfield et al. 2021) and (Hooghe et al. 2016)
	Reporting Framework (GCoM 2018)

Reports	Administrative Decentralization and Climate Change (Smoke/Cook 2022)
	Adapting Fiscal Decentralization Design to Combat Climate Change (Martinez-Vazquez 2021)
	Exploring gaps in city climate planning (Kane et al. 2022)
	Financing Cities of Tomorrow (OECD 2023b)
	Improving Local Enabling Conditions for Private Sector Climate Investments (CCFLA 2023)
Tools	Climate Budgeting Tools (C40 2022)
	Multi-level governance and subnational finance in Asia and the Pacific (OECD/ADB 2023)
	Toolkit on Effective Multi-level Investment (OECD 2019)

The objectives of the National Assessment Tool are to:

1. Gather information to understand the national EFCs for subnational climate finance and intergovernmental relationships in the assessment country.
2. Identify strengths and opportunities for improvement in EFCs at the national level.
3. Facilitate recommendations for the national government based on the analysis of question responses and considering disparate country contexts.

Provide case studies and additional resources on best practices to help countries improve their EFCs and intergovernmental relationships.

The National Assessment Tool is divided into four categories, each with several subcategories. Subcategories were then divided into 64 dimensions to provide concrete parameters for assessment. The tool outline is as follows:

1. **Climate Policy:** Assess how the national government supports climate policy and planning processes for subnational governments within the country. Identify if there is a long-term national climate strategy in place that has been recently updated to provide a clear pathway to achieve subnational climate targets. Subcategories:
    - 1.1 National climate change policies
    - 1.2 National regulations for subnational climate policies
    - 1.3 National requirements for involving subnational governments in climate planning
2. **Budget and Finance:** Assess the country's national and subnational financial architecture to provide an explicit, clear, and stable assignment of expenditures and responsibilities, and to put in place incentives for subnational fiscal autonomy. Subcategories:
    - 2.1 Public financing and national budget
    - 2.2 National funding sources for subnational climate action
    - 2.3 National support for subnational budgeting

2.4 Systems of intergovernmental transfers

2.5 Fiscal decentralization and subnational revenue generation

2.6 Private finance mobilization at the subnational level

2.7 Subnational creditworthiness and access to capital

2.8 Potential for co-financing and/or innovative financing

3. **Climate Data:** Assess the data available for mitigation and adaptation planning from national to local levels and how well data and analysis are incorporated into planning and strategy. Assess how the national government can support subnational governments in having better access to good quality climate data and using that in their climate policy and planning. Subcategories:

   3.1 National-level climate data

   3.2 National support for subnational climate data (data quality, data availability, and incorporation into planning processes)

Vertical and Horizontal Coordination: Assess how the national government can work in cooperation with subnational governments to develop stronger climate policy and planning coordination both horizontally (across urban systems, processes, and planning) and vertically (from local to national levels). Subcategories:

4.1 National support for subnational vertical and horizontal coordination

4.2 Public involvement and subnational stakeholder engagement

4.3 National external engagement and peer learning

Subcategories were then divided into 64 dimensions to provide concrete parameters for each subcategory.

APPENDIX 3: DIMENSION-WISE ASSESSMENT RESULTS

Dimension	Dimension Detail	Assessment Results
Climate Policy (CP)		
CP 1.1 National climate change policies		
1.1.1 National mitigation strategy	The national government has a national climate change mitigation strategy, such as a Nationally Determined Contribution or similar document. The strategy includes a long-term pathway to achieve climate targets. Targets are binding.	India submitted an updated NDC to UNFCCC in 2022 which includes a mitigation target. Along with the updated NDC, India also submitted a 'Long-term Low-Carbon Development Strategy (LT-LEDS)' outlining ways India plans to achieve the low-carbon vision (MoEFCC, 2022).

Dimension	Dimension Detail	Assessment Results
1.1.2 National adaptation strategy	The national government has a national climate change adaptation strategy, such as National Adaptation Plan (NAP) or similar document. The strategy includes a long-term pathway to achieve climate targets. Targets are binding.	While India does not have a National Adaptation Plan, the INDC as well as the NDC acknowledges the importance of adaptation. Therefore, the national government has included several missions on adaptation in the NAPCC (Chakravarty et al. 2024).
1.1.3 National government regularly updates national climate policy	The national government updates climate policies/commitments for both mitigation and adaptation regularly according to the NDC cycle or voluntarily depending on their macroeconomic situation, developmental trajectory, and climate-related disaster incidents or similar.	The national government updates climate policies regularly. India submitted INDC to UNFCCC in 2015 and updated it in 2022. With the updated NDCs, there are guidelines issued to update all the NAPCC Missions as well as the SAPCC (MoEFCC, 2022).
1.1.4 Climate policy monitoring and reporting at the national level	There are transparent monitoring and reporting systems in place that track progress towards climate goals using climate data. There are enforcement mechanisms in place with capacity to enforce any deviation from climate goals.	India regularly maintains a GHG inventory and collects data on emission reduction. This is also used to submit the Biennial Update Report to UNFCCC. The monitoring, reporting and verification (MRV) is done in a fragmented manner with different ministries and different levels of government reporting on the progress of climate-related schemes (MoEFCC, 2021). Currently, there is no MRV for urban climate action (Gogoi, 2023). Therefore, even within a city, different dashboards provide data. For example: The Municipal Energy Efficiency Programme (MEEP) dashboard monitors the energy efficiency initiatives in water pumping in municipal areas. The Street Lighting National Programme (SNLP) dashboard showcases annual energy savings and emission reductions achieved from SLNP (MoEFCC 2021).
1.1.5 National climate change risk assessment	The national government regularly conducts a national climate-risk assessment, which includes various climate change factors, such as temperature changes, extreme weather events, sea-level rise, infrastructure vulnerability, and socio-economic vulnerability, among others.	There is no national climate risk assessment conducted in India. In 2020, the Department of Science and Technology released the results of a vulnerability analysis for states and districts and suggested a climate-risk exercise for the future. However, there has not been much progress on this (DST, 2020).

Dimension	Dimension Detail	Assessment Results
CP 1.2 National regulation for subnational climate policies		
1.2.1 National mitigation strategy has urban content	The national government's mitigation strategies include specific urban and/or subnational content. The national policies / strategies specifically elaborate subnational governments' roles and/or standards of action in climate mitigation actions.	India's NDC describes a host of urban development actions with climate adaptation and mitigation co-benefits, such as access to clean energy, mass rapid transit and electric mobility (GoI, 2015). More recently, the updated NMSH and India's LT-LEDS submitted to UNFCCC include strategies for urban mitigation action. However, the role of cities is not explicitly outlined.
1.2.2 National adaptation strategy has urban content	The national government's adaptation strategies include specific urban and/or subnational content. The national policies / strategies specifically elaborate subnational governments' roles and/or standards of action in climate adaptation actions.	NMSH 2.0 and India's LT-LEDS includes strategies for urban adaptation action. However, the role of cities is not explicitly outlined.
1.2.3 National policies include urban climate targets and specify subnational roles	National urban policies specifically include climate targets. The national urban policies specifically elaborate subnational governments' roles and/or standards of action in climate mitigation and adaptation actions.	Urban governments institutionally have no mandate to respond to climate change and their role is largely limited to implementing national and state programs (Khosla and Bharadwaj, 2020). Recently, the updated NSHM in 2021 mentions CCAPs and a mechanism to set up city-level monitoring committees (MoHUA, 2022). Current climate policies/plans like the NDC or the NAPCC do not set any targets for states or cities. However, several sectoral programs/ schemes can have targets and KPIs to measure progress on climate action. For example, AMRUT 2.0 sets a target for cities to reuse 20% of their treated wastewater.
1.2.4 National government sets KPIs to measure urban climate progress	The national government sets key performance indicators (or additional metrics) to measure urban climate progress towards targets (e.g., percentage reduction in GHG emissions compared to a baseline year, number of climate-reslient infrastructure projects implemented).	
1.2.5 National regulation enables dedicated subnational climate bodies	There is a national legal/ regulation/ policy framework at the national level that enables subnational governments to establish a dedicated local agency/body for planning & implementation of climate actions. Through this body, subnational governments can plan for long-term local climate actions.	Climate Change Cells were set up in each state when the NAPCC was in introduced. These climate cells are responsible for coordinating and drafting of the SAPCCs. Apart from the mandated climate cells, several states have established other bodies for climate action. For example, Tamil Nadu set up Tamil Nadu Green Climate Company to raise climate finance (Chakravarty et al. 2024).

Dimension	Dimension Detail	Assessment Results
1.2.6 National regulation requiring local reporting on climate actions	There is a national legal/ regulation/ policy framework requiring subnational governments to report their implementation of climate actions.	There is no national policy or regulatory framework that requires subnational governments to report their implementation of climate actions. However, as part of Smart City Mission, MoHUA launched the Climate SMART Cities Assessment Framework which is a tool that presents urban climate action in cities. The updated NMSH guidelines mention setting up a city-level monitoring committee for monitoring and reporting on on climate action.
1.2.7 National requirement for subnational GHG inventories	There is a national legal/ regulation/ policy framework requiring subnational GHG inventories to be conducted. The national government provides support for subnational governments to conduct these inventories. For example: support may include technical or financial support for subnational GHG inventories.	There are currently no requirements for maintaining a subnational GHG inventory.
1.2.8 National requirement for city climate change risk assessment	There is a national legal/ regulation/ policy framework requiring city-level climate change risk assessments. The national government provides support for cities to incorporate climate risks into their development planning documents.	There are no requirements for the cities to conduct climate-risk assessments. States are required to conduct a vulnerability assessment while drafting the SAPCCs (MoEFCC 2019).
1.2.9 National requirement for city climate action plan & urban resilience plans	There is a national legal/ regulation/ policy framework that requires subnational governments to develop city-level climate action plans, urban resilience plans, or similar documents. Specify if the city- or municipality-level plans are mandatory or not. For example: specify if city-level climate action plans are required, or if there is a requirement for subnational integration of climate targets into development planning documents.	The updated NMSH encourages the cities to draft climate action plans (MoHUA, 2022). However, it is not mandatory for all cities.

Dimension	Dimension Detail	Assessment Results
CP 1.3 National requirements for involving subnational in planning		
1.3.1 National requirement for involving subnational government in climate planning	There is a national legal/ regulation/ policy framework, such as National Planning Document(s), requiring the integration of subnational government perspectives on local climate actions into national planning processes. This can include national strategies on disaster-risk reduction and biodiversity protection, or similar documents.	Currently, there are no guidelines that require the involvement of state or city governments in the national climate action planning process. However, the guidelines for drafting SAPCCs require states to align activities to NDC and other national policies, while incorporating any state-specific details (MoEFCC, 2019).
Budget and Finance (BF)		
BF 2.1 Public financing and national budget		
2.1.1 National definition for climate finance	The national public financial framework (or similar documents) sets out clear criteria for what counts as climate/ green/ sustainable finance for domestic and donor finance.	The national government establishes a clear criteria for defining 'green' in their 'Green Sovereign Bonds Framework' (MoF, 2022).
2.1.2 National funding mechanism for subnational governments to achieve climate targets	There is a national funding mechanism or program for subnational governments to achieve climate targets attached to national strategies / policy documents. For example: sectors receiving funding may be indicated in NDCs if the national government provides funding support to specific sectors.	There are several programs/schemes that finance subnational climate action. The national government has also set up national funds such as adaptation fund to finance climate action. Besides sources from the national government, the CFC also provides grants to subnational governments for climate action (Chakravarty et al. 2024).
2.1.3 National and subnational disaster-risk management funds	Disaster-risk management or reduction emergency funds, or similar, are in place on the national and subnational level.	The Disaster Management Act (2005) set up Central Disaster Response Fund and State Disaster Response Fund. Along with this, 15th CFC recommended to set up funds for disaster mitigation along with disaster response, which will now together be called National Disaster Risk Management Fund (NDRMF) and State Disaster Risk Management Funds (SDRMF). Apart from that 15th CFC also provides grants for disaster-risk management and mitigation (GoI, 2024).

Dimension	Dimension Detail	Assessment Results
BF 2.2 National funding sources for subnational climate action		

2.2.1 Domestic public finance for subnational climate action	The national government has used domestic public finance sources (e.g., taxes, subsidies) to finance subnational climate action within the last 2 years.	Several public finance sources are used to finance subnational climate action (Chakravarty et al. 2024):
		• 15th CFC Transfers provides:
		  • About USD 383.99 for setting up SDRMF.
		  • It also provides special grants to ULBs for air pollution and water recycle and reuse.
		• Non-CFC Transfers include:
		  • Central sector and centrally sponsored schemes
		  • Domestic funds such as Adaptation Fund and Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Funds

2.2.2 International public finance for subnational climate action	The national government has used international public finance sources (e.g., grants, bilateral/donor funding, MDB, global funds) to finance subnational climate action within the last 2 years.	The national government makes use of international public sources to finance subnational climate action (WWF, 2020). For example: Recently, the World Bank announced support of about USD 300 million to Tamil Nadu Climate Resilient Urban Development Program (World Bank, 2023).
2.2.3 Domestic private finance for subnational climate action	The national government has used domestic private finance sources (incl. private finance generated by NDB's, non-bank financial institutions (NBFI's), financial markets, capital markets) to finance subnational climate action within the last 2 years.	1. All banks have a mandate for Priority sector lending which includes renewable energy. 2. India introduced a Green deposit framework for climate investments. Through both of these policy/ regulatory initiatives ensure domestic private finance in climate action.
2.2.4 International private finance for subnational climate action	The national government has used international private finance sources to finance subnational climate action within the last 2 years.	Currently, due to the poor management of finances at the ULB level, it is very difficult to attract international private finance for the cities. Even if there are investors ready to finance subnational climate action, the high cost of capital would make the projects unviable (Interview, MoF).
2.2.5 Innovative finance for subnational climate action	The national government has used innovative finance sources (e.g. blended finance) to finance subnational climate action within the last 2 years.	Recognizing the challenges faced by small and medium-sized ULBs in issuing bonds, the national government introduced a 'Pooled Financing Development Fund' scheme in 2006. However, the scheme saw limited adoption (RBI, 2023).

Dimension	Dimension Detail	Assessment Results
BF 2.3 National support for subnational budgeting		
2.3.1 National government provides technical assistance for subnational governments for budget/ financing practices	The national government provides technical assistance for subnational governments to implement green budget and financing practices. For example: technical assistance may include support for green subnational procurement and/ or initiatives, taxonomies, bonds, certification etc. to support subnational green budgeting and financing practices.	Currently, there is no support or incentive for green budgeting by the national government (CBGA, 2024).
2.3.2 Climate budgets include climate-risk components	National climate budgets include climate-risk assessment components and support for vulnerable groups on the subnational level. For example: support may include allocations to mitigation and adaptation projects, capacity-building measures for groups at risk, and social safety nets.	The government prioritizes climate action and allocates funds to various initiatives accordingly. However, there is currently no risk assessment conducted for budget allocation in this regard.
2.3.3 National framework allowing subnational budget tagging	There is a framework/policy at the national level which allows subnational governments to develop toolkits, budget tagging, tax tagging and/or revenue tagging for tracking climate-specific revenue or expenditure.	There is no such framework at the national level. A few states have taken initiatives to climate tag their budgets. However, they have used different frameworks and methodologies to conduct this exercise (CGBA, 2023).
BF 2.4 Systems of intergovernmental transfers		
2.4.1 National intergovernmental transfers supporting subnational mitigation goals	Intergovernmental transfers (from national to subnational) are in place which consider subnational mitigation goals. These transfers are reliable. For example: conditional transfers, matching transfers, grants, subsidies, and/or direct performance contracts.	India has a robust mechanism for IGTs. While there are no transfers designed considering climate goals or climate vulnerability, it is important to note that there are IGTs that are tied to climate action. For example: 15th CFC earmarked a part of ULB grants for rainwater harvesting and water recycling.
2.4.2 National intergovernmental transfers supporting subnational adaptation goals	Intergovernmental transfers (from national to subnational) are in place which consider subnational adaptation goals. These transfers are transparent and reliable. 3 For example: conditional transfers, matching transfers, grants, subsidies, and/or direct performance contracts.	

Dimension	Dimension Detail	Assessment Results
2.4.3 National intergovernmental transfers incentivizing subnational policies including climate externalities	Intergovernmental transfers (from national to subnational) are in place which incentivize subnational government officials to consider climate externalities (such as regional pollution) in their policy and planning. For example: conditional transfers, matching transfers, grants, subsidies, and/or direct performance contracts.	There are no transfers that incentivize subnational governments to include externalities in their policy or planning. However, the 15th CFC grants as well as various central sector or centrally sponsored schemes motivate subnational governments to address climate change and other environmental concerns. For example: Funds allocated to MCs under the 15th CFC are contingent upon improvements in air quality.
2.4.5 National government climate-risk vulnerability for subnational transfers	The national government considers climate-risk vulnerability when determining subnational transfers. For example: vulnerability evaluation of subnational regions to climate change impacts (adaptation). Considering the specific needs of each subnational region incl. distributive justice and prioritization of most affected regions.	The national government allocates IGTs through schemes to several vulnerable sectors. However. currently, there are no mechanisms that consider climate-risk vulnerability for determining subnational transfers.
BF 2.5 Fiscal decentralization and subnational revenue generation		
2.5.1 Clear guidelines for fiscal decentralization	There is a clear regulatory framework and operating policy for fiscal decentralization, including climate action, subnational revenue generation, and reporting mechanisms.	There is a clear framework for fiscal decentralization in India. Every 5 years, the CFC recommends share of net proceeds to be shared by central and state governments. Similarly, SFCs recommends the share of net proceeds between state and ULB. However, many states are irregular at constituting SFCs (Mehta et al. 2023).
2.5.2 Subnational revenue diversification allowed & encouraged	Subnational governments are allowed and encouraged to diversify their revenue sources to address climate action through a basket of resources such as taxes incl. carbon tax, fees, and charges.	There have been general efforts to increase OSR for ULBs by exploring options such as land-based financing. However, there is no evidence of the national government encouraging resource diversification for climate action. Several states and cities are experimenting with green/pollution taxes. For example, Manali in Himachal Pradesh has implemented a green tax for tourists, although it is collected by a parastatal body and not the ULB. Similarly, Maharashtra has decided to charge a 1% metro cess on purchase of properties in selected cities to finance clean transport projects in the state.

Dimension	Dimension Detail	Assessment Results
2.5.3 Clarity on expenditures at levels of government (avoid overlapping budgets)	There is clarity on what level of government is responsible for different functions and corresponding expenditures. Laws / regulations determine the level of government responsible for different expenditures, and there are no overlapping budgets between different levels of government.	There is clarity on functions of the government. The division of responsibilities is provided in the Central, State and Concurrent list of the constitution. States defines responsibilities of the ULBs in theory Municipal Acts.
2.5.4 Adequate subnational revenue generation	Subnational governments have adequate revenue generation for climate action and do not rely on emergency funds or other special funds to cover regular expenses for climate planning.	Several SAPCCs provide a funding gap and other SAPCCs 'allude' to having insufficient funds for climate action (Chakravarty et al. 2024). There are no such estimates for ULBs for financing climate action.
BF 2.6 International and private finance mobilization		
2.6.1 Private sector investment possible in municipal infrastructure	Private investment into municipal infrastructure sectors is allowed. There are no procurement laws or policies which prevent or discourage this type of investment. For example, none of the following: preference for local suppliers, high documentation requirements, limited use of technology, complicated bidding process, high prequalification requirements etc.	Private investment in municipal infrastructure is allowed but plays a very limited role (World Bank, 2024).
2.6.2 National policies support private sector investment into subnational climate action	There are national policy and regulatory frameworks which support engaging the private sector in subnational climate projects and across subnational regions. For example: support may include tax benefits and/or subsidies for private sector investment; regulatory incentives such as feed-in tariffs or risk mitigating insurance; or funding pools to combine investment across neighboring subnational jurisdictions.	Several schemes such as AMRUT and Smart City Mission are now incentivizing private participation in urban infrastructure.
2.6.3 MDB financing mobilized for climate investments at national/ subnational level	The national government has mobilized international public financing, from multi-lateral development banks (MDBs) or similar for climate-related investments at the national and/or subnational level.	Several MDB projects support subnational climate action. For example: Capacity Building of Low Carbon and Climate Resilient City Development in India – CapaCITIES is a program funded by the Swiss Agency for Development and Cooperation (SDC) and aims to develop low carbon and climate resilient cities in India (NIUA, 2021).

Dimension	Dimension Detail	Assessment Results
2.6.4 National support for subnational PPPs	There is national support for PPPs for climate action at the subnational level and across subnational regions. For example: support may include national incentives that support PPPs for subnational climate action and also through subnational cooperation.	There is no information found on national support for any such PPF in India.
BF 2.7 Creditworthiness and access to capital		
2.7.1 Subnational borrowing capacity for climate investments	Subnational governments are able to borrow for climate investments. There are fiscal frameworks in place for subnational borrowing. These encourage fiscal responsibility and may include borrowing rules	Subnational governments can borrow. There is a municipal bond framework. Fiscal responsibility is encouraged through the FRBM norms.
2.7.2 Clear process for sovereign guarantees	Subnational governments require a sovereign guarantee/approval from the national government to borrow for climate investments, there is a clear process in place and this has been done successfully before for at least one subnational government in the country.	States require sovereign guarantees to borrow for climate action. ULBs can borrow without a sovereign/ state guarantee.
2.7.3 Subnational credit rating	Subnational governments in the country have applied for and been granted a credit rating.	ULBs are encouraged to apply for credit ratings through multiple national government programs. About 95 ULBs have received investment-grade ratings (City Finance Dashboard, 2024).
2.7.4 Green bond issuance	Subnational governments in the country have issued green bonds. There are frameworks in place for municipal bond issuances at the subnational level.	MoF has released a framework for sovereign green bonds. There are no states that have issued green bonds. Varodara is the only ULB that has issued a green bond in India (and Asia).
2.7.5 Municipal bond issuance	Subnational governments in the country have issued municipal bonds. There are frameworks in place for municipal bond issuances at the subnational level.	SEBI has released a framework for municipal bonds.
2.7.6 National support for first-time subnational bond issuance	The national government provides technical assistance and/or capacity-building programs for subnational governments to issue municipal bonds for the first time, including guidance on managing bonds proceeds.	There is no evidence for technical assistance or support to issue municipal bonds. However, the national government does provide incentives of USD 1.5 M per USD 12 M raised through municipal bonds (RBI, 2022).
2.7.7 National government facilitates pooled financing	The national government facilitates pooled financing mechanisms that can issue bonds on behalf of multiple subnational governments.	There was a scheme for pooled finances.

Dimension	Dimension Detail	Assessment Results
BF 2.8 Potential for co-financing and/or innovative financing		
2.8.1 National Development Bank potential for co-financing	The country has a national development bank(s) (NDB) and/or public development bank(s) (PDB) that support subnational or urban climate infrastructure projects, which could offer the potential for co-financing and de-risking financing for externals.	There are several Public Sector Entities (PSEs) or Development Finance Institutions (DFI) setup by the national government to intermediate finance for development. purposes. Since these entities are independent, they are able to raise funds from capital markets and other FIs at cheaper rates. HUDCO, EESL, IRIDA are all examples of such PSEs (NIUA, 2021).
2.8.2 National investment funds potential for co-financing	There are national and/or regional investment funds which could offer the potential for co-financing of urban climate initiatives/projects.	No information was found through desk research on any such funds.
2.8.3 Blended finance	There is national support for subnational involvement in innovative financing mechanisms for climate action such as blended finance.	There is no national support for subnational involvement in innovative financing mechanisms. However, Goa recently launched a Blended Finance Facility. There is no additional information present on this.
2.8.4 Carbon markets	There is national support for subnational involvement in innovative financing mechanisms for climate action such as carbon markets.	No information was found through desk research.
2.8.5 Special purpose vehicle	There is national support for the use of a special purpose vehicle (SPV) or special purpose entity (SPE) to limit liability, provide innovative project funding, and allow cross-border transactions on the subnational level.	The Smart City Mission establishes SPVs in cities for urban development, aimed at limiting liability and accessing finance from capital markets. Additionally, at the state level, various states may have different bodies, such as TNUIFISL in Tamil Nadu and at the national level, entities like EESL exist to enable greater financial flows to ULBs (NIUA, 2021).
Climate Data (CD)		
CD 3.1 National-level climate data		
3.1.1 Local climate databases	There is a national mechanism for locally centralized & digitalized database services on climate adaptation and mitigation change information (including GHG inventory).	There is a national GHG inventory which is used for reporting progress on emission reduction to UNFCCC. However, the data is only available by different sectors and is not disaggregated by the region/ states.

Dimension	Dimension Detail	Assessment Results
3.1.2 National government has access to good national climate data	The national government has access to good, comprehensive climate data at the national level. This is defined as following TACCC principles: transparency, accuracy, consistency, comparability and completeness. The data should also be timely and cover mitigation and adaptation.	No information was found through desk research.
CD 3.2 Subnational-level climate data		
3.2.1 Self-reporting mechanism for subnational governments to update their climate data	There is a digitalized self-reporting mechanism for subnational governments to update their data on the national database.	There are no frameworks for subnational governments to update their data.
3.2.2 National support for subnational research centers on climate data	The national government provides support to establish regional and/ or local-level research centers to support subnational climate data. For example: these centers could include partnerships with university and/or research bodies, civil society, and the private sector.	The National Mission on Strategic Knowledge for Climate Change, under the NAPCC, focused on research and building knowledge. For this, the government has set up 11 Centres of Excellence (CoE) for research on climate change.
3.2.3 National financial support and technical assistance to analyze climate data.	The national government provides financial support and technical assistance to the subnational government to analyze subnational climate data.	The state governments can reach out to a few institutions for support in analysing data for drafting the SAPCC. However, there is no provision for regular support.
3.2.4 National government ensures good quality and availability of subnational climate data	The national government ensures that there is good quality subnational climate data available for subnational governments. This is defined as following TACCC principles: transparency, accuracy, consistency, comparability and completeness. The data is also timely and cover mitigation and adaptation (including identifying emissions sources, designing GHG inventories, and disaster and climate-risk assessments and long-term climate change scenarios). For example: support may include technical support, developing protocols and associated standardized terms of reference, creating national information technology platforms to host inventory data, etc.	No information was found through desk research.

Dimension	Dimension Detail	Assessment Results
Vertical and Horizontal Coordination (VHC)		
VHC 4.1 National support for subnational coordination		
4.1.1 National support for horizontal coordination for climate planning and risk assessment	The national government supports and/or mandates regional strategies that coordinate climate actions between subnational governments and encourage climate planning & assessment of risks beyond individual boundaries. Specify whether support includes technical and financial support.	There is no support or mandate for subnational governments to coordinate climate action.
4.1.2 National support for horizontal/ vertical coordination for shared climate investment opportunities	The national government supports subnational governments to coordinate and identify opportunities for shared climate investments (whether across levels of government or between jurisdictions). Specify whether support includes technical and financial support.	There is no support for subnational governments to coordinate and identify shared opportunities for climate investments. However, some states such as Tamil Nadu have set up state-level bodies who facilitate this.
4.1.3 National support for vertical coordination on climate action	There are mechanisms in place for vertical coordination (across levels of government) on climate action supported by the national government. Specify whether support includes technical and financial support. For example: there are city deals or contracts, regional or local development strategies, platforms for inter-governmental dialogue and dedicated regional development agencies.	There are established channels for vertical integration between states and the national government for SAPCCs; the vertical integration between ULBs and states remains unclear.
4.1.4 National support for horizontal coordination on climate action	There are mechanisms in place for horizontal coordination (between/ across jurisdictions) on climate action supported by the national government. Specify whether support includes technical and financial support. For example: the national government encourages horizontal coordination through financial or non-financial incentives; agreements between jurisdictions; regional or local development strategies; platforms for intergovernmental dialogue; and/or dedicated regional development agencies.	There is currently no national support for horizontal coordination. However, states like Tamil Nadu have taken initiatives to facilitate horizontal coordination within the state through bodies like TNUIFSL.

Dimension	Dimension Detail	Assessment Results
4.1.5 National support for international coordination on climate action	There are mechanisms in place for strong international coordination and international peer learning for subnational governments supported by the national government. Specify whether support includes technical and financial support.	No information was found through desk research.
VHC 4.2 Public involvement and stakeholder engagement		
4.2.1 National requirements for public participation in subnational climate regulation	There is national regulation / legislation / mechanism which requires subnational governments to integrate public participation into their climate actions regulation/ mechanism.	There is no national policy or regulation which requires subnational governments to integrate public participation into their climate actions
4.2.2 National support to integrate civil society in subnational climate planning	The national government facilitates forums and/or partnerships for subnational governments to integrate civil society, the public and the private sector into their climate actions and planning.	No information was found through desk research.
VHC 4.3 National cooperation and peer learning		
4.3.1 National government engages in peer learning	The national government engages in peer learning (with other countries, networks, or technical advisers) on climate finance and/or subnational climate finance.	National government engaged with several organisations as NIUA, Niti Ayog for learnings on climate action. However, the focus on climate finance is unclear.
4.3.2 National cooperation with PPFs for subnational climate infrastructure projects	There is evidence of national cooperation with Project Preparation Facilities (PPFs) for climate infrastructure projects on the subnational level.	No information was found through desk research.

APPENDIX 4: LIST OF FUNCTIONS ASSIGNED TO ULBS

The 12th Schedule of the Constitution enumerates 18 specific functions to be devolved to ULBs as listed below:

1. Urban Planning including Town Planning	10. Water Supply for domestic, industrial and commercial purposes,
2. Regulation of land use and construction of building	11. Public Health, Sanitation, Conservancy, Solid Waste Management
3. Slum improvement and upgradation	12. Provision of Urban amenities such as parks, gardens, playgrounds
4. Roads and Bridges	13. Promotion of cultural, educational, and aesthetic aspects
5. Urban Forestry, protection of the environment and promotion of ecological aspects	14. Burials and burial grounds and crematoriums
6. Safeguarding the interests of weaker sections of society	15. Cattle pounds, prevention of cruelty to animals
7. Vital Statistics including registration of Births and Deaths.	16. Public amenities including street lighting, parking lots, bus stops
8. Planning for economic and social development	17. Regulation of slaughterhouses and tanneries,
9. Urban poverty alleviation	18. Fire Services

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