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Focales

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Introduction

Introduction

The urban population in India has grown sixfold over the last 60 years, reaching more than 10% of the total world urban population and placing unseen pressure on the existing urban infrastructure. Public service performance is low by international standards, and infrastructure investment requirements in cities are estimated at EUR 550 billion for the next 20 years.

Delivering effective urban services is thus a critical challenge for India's future. Empowering local governance seems key to achieving this goal, but India's institutional framework remains highly complex: the responsibility for funding and creating public infrastructures and managing local services is scattered among state authorities, parastatal agencies and urban local bodies. Moreover, the institutional set-up varies from state to state due to India's federal system of governance.

In order to illustrate this complexity, this study analyzes the municipal and urban sector in India based on 11 case studies of cities and states, thus leading the way to recommendations for improved public services and urban governance.

The first part of this report describes urban momentum and urban service performance in more detail and addresses issues of urban governance and municipal finance. The second part refines the analysis through the findings of the case studies. It explores local governance, conducts a sector analysis of key urban services, and looks at the conclusions of the financial assessments conducted in each case study, as well as the issues raised for municipal funding.

Part One

1. Overview of urban India

1.1. India's urban momentum

India's total population reaches, according to the 2011 census, 1.2 billion people, with a total urban[1] population of more than 377 million, making up 31.2% of the total population.[2] Although markedly less than the world average of 50%, this urban population is larger than the total population of any other country in the world, except China, and represents more than 10% of the total world urban population.

Importantly, this is a relatively recent trend. The share of India's urban population grew from around 11% in 1901 to 31% in 2011. Between 1951 and 2011, the official urban population of India increased sixfold, while its population grew by a factor of 3.3.

The process of urbanization in India has been large city oriented, with a high percentage of urban population concentrated in million plus cities: 53 million plus cities (2011) account for 42% (160.70 million) of the total urban population. Map 1 presents the most highly urbanized states.

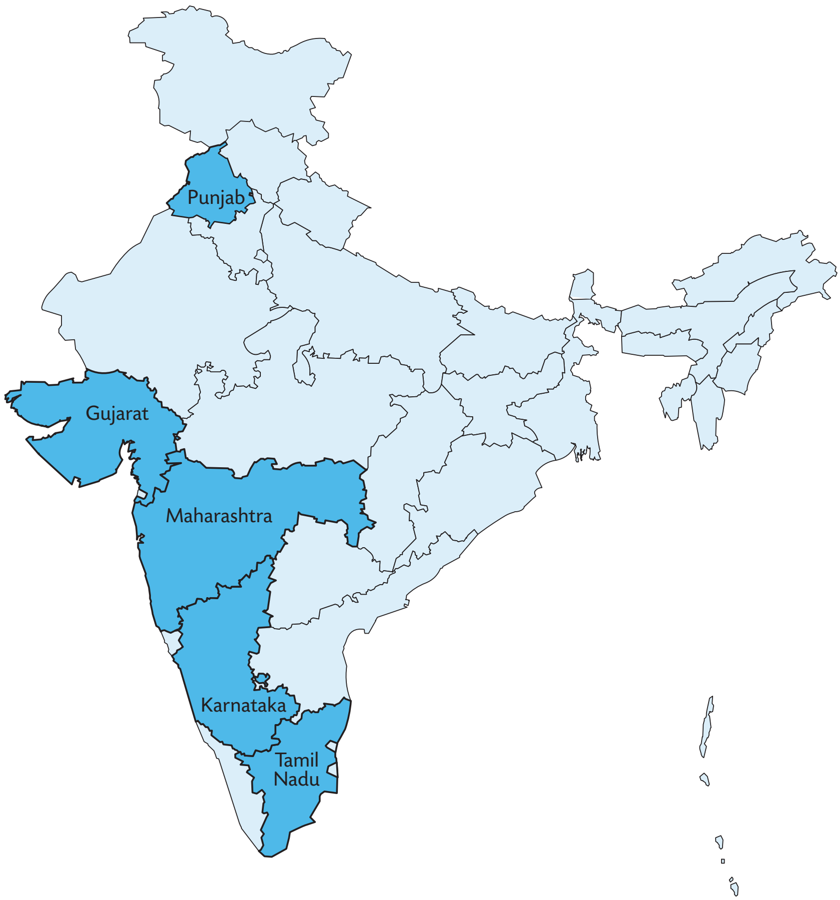
It must be noted that with the exception of Surat, all of the other cities have transitioned to the status of million plus cities only in the last decade. This has not been due only to demographic growth: most of these cities have grown substantially on account of the expansion of city limits by the respective state governments. Further, the absolute growth in population of these cities compared to mega cities like Delhi (3.43 million), Mumbai (1.98 million), Kolkata (0.90 million) and Chennai (2.13 million) is low, but the percentage change in the population is higher due to a smaller population base.

A McKinsey report (2010) estimates that urban population growth in India is expected to continue to increase rapidly and reach 590 million by 2030, representing 40% of India's total population at that time. It must be noted that the level of urbanization varies significantly from state to state and will continue to remain very disparate, despite the strong urbanization growth expected in the next few decades. Table 1 shows the disparity in urbanization levels among the major states.

[1] According to the Census of India, an urban area is defined as an area with a statutory municipal body such as a municipality, municipal corporation, cantonment board, or notified town (town panchayat/nagar panchayat) area committee and/or an area meeting all of the following criteria: (a) a minimum population of 5,000, (b) at least 75% of the main male working population engaged in non-agricultural activities, and (c) population density of at least 400 people per sq. km.

[2] Some experts debate whether this figure is underestimated and should be closer to 40% (Bhagat, 2011; Kundu, 2011; Pradhan, 2012).

Map 1 *Most highly urbanized states*



Source: Authors.

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Table 1 *Current and projected urbanization levels for major Indian states*

State	Urbanization Level (2008)$	Urban population in mn (2008)$	Urbanization Level (2011)#	Urban population in mn (2011)#	Urbanization Level (2030)$	Urban population in mn (2030)$
Tamil Nadu	53%	35.4	48.40%	34.9*	67%	53.4
Gujarat	44%	25.2	43%	26	66%	48
Maharashtra	44%	47.9	45%	50.8	58%	78.1
Karnataka	37%	21.6	38.7	23.6*	57%	39.6
Punjab	36%	10	37%	10.38	52%	19
Haryana	31%	7.5	35%	8.8	45%	15.2
West Bengal	29%	25.8	32%	29.1	40%	41.5
Kerala	28%	9.7	47.70%	15.9*	41%	15.8
Andhra Pradesh	28%	23.4	33%	28.3	46%	45.5
Madhya Pradesh	25%	17.2	28%	20	32%	29.9
Jharkhand	25%	7.6	24%	7.9	31%	12
Rajasthan	24%	15.5	25%	17	33%	29.5
Chhatisgarh	24%	5.8	23%	5.9	40%	11.7
Uttar Pradesh	21%	39.2	22.30%	44.4*	26%	68.9
Odisha	18%	7	16.70%	7*	24%	11
Himachal Pradesh	12%	0.8	10%	0.68	20%	1.8
Bihar	9%	8.9	11%	11.7	17%	21.3

Note: *The urbanization level is defined as the percentage of total urban population to the total population of a given area at a particular point in time. It can be represented as UL= TUP / TP where UL is the urbanization level of area A in Year X, TUP is the total population living in all urban areas falling within area A in year X, and TP is the total population living in area A in year X.*

Source: *Authors, with data from $McKinsey India's Urban Awakening; #Census of India, 2011, PCA and Provisional Data; *Actual figures from PCA, 2011.*

1.2. Urban service performance

Increasing urbanization in India has placed a severe strain on the existing urban infrastructure, which has become grossly inadequate to serve the existing demand. Across geographies in India, urbanization issues have played out in the form of overcrowding, congestion, insufficient infrastructures, and inadequate service provisioning – mainly in terms of drinking water, sanitation, energy, transport, solid waste management, environmental degradation and pollution. All these factors highlight the critical need to address the challenges of delivering urban services in India.

Table 2 *State of delivery of basic urban services in India*

Water Supply	• 64% of the urban population is covered by individual connections and standposts in India. • The duration of water supply in Indian cities ranges from 1 to 6 hours. • The per capita supply of water in Indian cities ranges from 37 to 298 liters per capita per day (lpcd). • Most Indian cities do not have metering for residential water connections. • 70% of water leakage is in distribution networks and due to malfunctioning water meters. • Non-revenue water (NRW) accounts for 50% of water production, compared to 5% in Singapore.
Sewage and Sanitation	• 4,861 out of the 5,161 cities or towns in India do not have even a partial sewerage network. • Almost 50% of households in cities like Bengaluru and Hyderabad do not have sewerage connections. • About 18% of urban households do not have access to any form of latrine facility and defecate in the open. • Less than 20% of roads are covered by storm water drains. • Only 21% of the waste water generated is treated. • In 2007, of the 79 sewage treatment plants under state ownership, 46 were operating under very poor conditions.
Solid Waste Management	• Waste collection coverage ranges from 70% to 90% in major metropolitan cities, and is less than 50% in smaller cities. • Less than 30% of the solid waste is segregated. • Scientific disposal of waste is almost never practiced. • The proportion of organic waste to total waste is much higher in India than in other countries.
Urban Transport and Roads	• Public transport accounts for only 22% of urban transport. • Only 20 of India's 85 cities with a population of 0.5 million or more had a city bus service in 2009. • The share of two-wheelers in the total fleet was 72% in 2006.

Source: Authors, with data from: Census of India (2001); IBNET (2009); NIUA (2005); Ministry of Urban Development, Government of India (2010); ADB (2007); Tortajada (2006); CII and CEEW (2010); Eleventh Five Year Plan (2007); World Bank (2006); Zhu et al. (2008); UN Habitat (2010); MoUD, Government of India (2008); Kenworthy and Laube (2001); Agarwal (2006); City Development Plan of Delhi (2006); Ministry of Roads Transport and Highways, Government of India (2009).

Indian cities have the poorest performance of cities in BRICS countries (Brazil, Russia, India, China and South Africa). As an illustration, Table 3 presents a comparative analysis of benchmarking indicators for water supply and sewerage of select million plus cities in BRICS countries. Indian cities under-perform on almost all indicators, with low sewerage coverage, low per capita water consumption and production, high non-revenue water, less metering, less duration in continuity of water supply, low extent of wastewater treatment and low cost recovery.

Table 3 *Service level benchmarking of urban services in BRICS countries*

Indicator	Brazil		Russia		India		China		South Africa	
	Curitiba	Rio de Janeiro	Moscow	St. Petersburg	Bangalore	Delhi	Weifang	Jinan	Johannesburg	Cape Town
Total Water Consumption (liters/person/day)	149	210	348	394	103	109	121	167	385	183
Non-Revenue Water (%)	22	56	11	11	36	52	34	32	41	18
Metering Level (%)	100	65	N/A	N/A	2	55	95	100	N/A	67
Continuity of Service (Hours/day)	24	24	24	24	13	3	24	24	24	24
Wastewater Treatment – at least primary treatment (%)	98	96	100	100	57	63	N/A	N/A	N/A	94
Collection Ratio (%)	99	78	86	99	97	86	N/A	N/A	98	83
Operating Cost Coverage (ratio)	1.67	2.05	1.46	1.77	0.94	0.3	1.08	0.85	0.98	0.87

Poor performance   Moderate performance   Good performance   N/A = information not available

Source: *Authors, with data from the International Benchmarking Network for Water and Sanitation Utilities (IBNET) accessed from www.ib-net.org;* the data for Cape Town are for 2006, and the data for the rest of the cities are for 2009.

Historically, the urban development sector in India has not received enough attention from successive governments. Historical and political factors created a strong bias in favor of rural areas for both the central and the state governments. Until 2002, the majority of political constituencies were rural as they were based on delimitations carried out in 1973 with 1971 census data (at a time when the urbanization rate was 18%). The latest constituency delimitation was carried out in 2002 based on 2001 census data (the urbanization rate had reached 28%), which for the first time underlined the importance of urban areas in the Indian political context.

This shift is evident from the fact that between 2005 and 2012, Government of India investments in the urban infrastructure sector represented 20 times the investment levels of 1980-2005. The lack of attention to urban areas for decades has led to sub-optimal service levels in cities, through inadequate investments in urban infrastructures, poor maintenance of public infrastructure assets, weak administration, poor delivery systems, inadequate autonomy for urban local bodies (ULBs), and a lack of accountability to the community.

The High-Powered Empowered Committee (HPEC) report on investment requirements for urban infrastructure services estimates that EUR 502.7 billion (at 2009-2010 prices) are required over the 20-year period from 2012 to 2031, including renewal and redevelopment of slums and capacity building. Of the total investment, EUR 397.45 billion is required to overhaul infrastructures in the eight core sectors, *i.e.* water supply, sewerage, solid waste management, urban roads, storm water drains, urban transport, traffic and infrastructure and street lighting.

1.3. Urban governance in India

1.3.1. *The three levels of governance and their role in the urban sector*

India is a union of 28 states and 7 union territories (centrally administered territories). In this union, the functions, responsibilities and powers of the centre and states are laid down in the seventh schedule of the Constitution of India, in what are known as the union, state and concurrent lists. The Indian Constitution states that urban development is a state responsibility. Following the passage of the 74th Constitutional Amendment Act in 1993, municipal governments were granted statutory recognition as the third tier of government.

The three tiers of governance each play a specific role in the management of the urban sector:

- **The union government** has a supervisory, support and policy-making role. Through the intervention of the Ministry of Urban Development (MoUD) and the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), it formulates policies, sponsors and supports programs, coordinates the activities of various central ministries, state governments and other nodal authorities, and monitors the programs concerning all the issues of urban development and housing in the country.

  Major programs managed by the Ministry of Urban Development in the last decades include the schemes of Integrated Development of Small and Medium Towns (IDSMT), the Accelerated Urban Water Supply Program (AUWSP), the Mega Cities Project (MCP), the Urban Reform Incentive Fund (URIF) and more recently, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

- **State governments** play a pivotal role in urban governance. In the Indian Constitution, local government bodies are covered in the state list of the Constitution and are therefore governed by state statutes. State governments have extended regulatory and supervisory powers over municipalities.

  They often bear the responsibility of providing basic amenities and services through various bodies, including state departments (*e.g.* public works departments/urban development departments), state-level boards (*e.g.* water supply and sewerage boards/housing boards, etc.), statutory and non-statutory bodies at the city level (*e.g.* metropolitan water supply boards/development authorities), etc.

  Further, state governments also provide policy guidance, technical expertise, and financial support (including the devolution of funds to ULBs) in planning and implementing urban infrastructure projects.

- **Urban local bodies** also play an important role, but this role is heavily dependent on the functions, powers and funds devolved by state governments. Generally, capital works for urban infrastructures are undertaken by the state government departments, whereas responsibility for operation and maintenance lies with the local governments. However, in many larger cities, municipal corporations also provide capital investment financing for these services.

The other players that can play an important role in urban development are civil societies and the private sector. However, these players are not recognized as formal stakeholders in the decision-making process. In the current configuration, the role of these players is as follows:

- **Civil societies:** The participation of civil societies in the urban development sector is seen primarily under (i) the advocacy for urban issues at formal platforms (formal public participation or stakeholder participation in the development planning process) and informal platforms (issue-based movements for the public interest), and (ii) participation in the implementation of government- or donor-funded programs. Oxfam India (2011) identifies the role of civil societies as (i) delivery, (ii) defending constitutional rights, (iii) accountability, (iv) empowering the poor, and (v) building evidence. Civil societies like the Society for the Promotion of Area Resource Centers (SPARC) (alleviation of urban poverty through government programs), Janagraha and the India Urban Space Foundation (advocacy for transforming urban governance and planning) have made significant contributions in recent years.

- **Private sector:** The private sector is primarily sought by the government (and its arms or subsidiaries) or donor agencies to (i) bring in technical domain expertise, (ii) improve access to finances and (iii) bring in managerial expertise to manage programs to achieve the desired results. The government is also supporting public-private partnerships for infrastructure development. However, in most cases, the approach is primarily reactive and led by the sponsoring authority (government or donor agency).

In practice, at city level, Urban Local Bodies (ULBs) and parastatals cooperate under various schemes, and the sharing of duties in urban infrastructure development and management is advancing, in particular because of progress in the decentralization agenda.

1.3.2. *Moving towards decentralization*

The level of decentralization currently varies from state to state. The decentralization efforts in urban India were spear-headed by the 74th Constitutional Amendment Act enacted in 1994. The Government of India furthered the implementation of decen-tralization by incentivizing urban infrastructure development in states and cities under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). Post-JNNURM, many states have implemented reforms pertaining to decentralization. However, in most cases, these reforms still need to be internalized by the ULBs. Currently, most of these reforms have made progress in establishing enabling frameworks; however, the actual implementation is still at various stages.

Historically, Gujarat and Maharashtra have showed a higher level of decentralization wherein the ULBs are empowered to perform most of the civic functions when compared to other states. A high level of decentralization in these states is backed by legislation like the Bombay Provincial Municipal Corporations Act, 1949, which enabled the ULBs to undertake local civic functions including the provision of water supply and sewerage and urban planning amongst others.

The 74th CAA, a first step to strengthen local governance

The real foundation of decentralization was the adoption of the 74th Constitutional Amendment Act (CAA) in 1993. It was the first serious attempt to stabilize democratic municipal government through constitutional provisions and provide more power and authority to ULBs. With the passage of the 74th CAA in 1993, the municipal governments were provided statutory recognition as the third tier of government.

The main provisions specified in the Act include (i) the constitution of three types of municipality, (ii) the devolution of greater functional responsibilities and financial powers to municipalities, (iii) adequate representation of weaker sections and women in municipalities, (iv) regular and fair conduct of municipal elections, and (v) the constitution of Wards Committees, District Planning Committees, Metropolitan Planning Committees and State Finance Commissions.

The Act thus provides a basis for the state legislatures to guide the state governments in the assignment of various responsibilities to municipalities and strengthen municipal governance.

However, the implementation of this agenda has not been realized completely and remains uneven across Indian states:

- The Act identifies 18 functions to be entrusted to municipalities as functional responsibilities, but it does not make it mandatory to transfer all these functions. As a consequence, in many states, **only part of these 18 functions have effectively been devolved as of today.**

- The Act is primarily focused on administrative aspects, and not much financial decentralization has happened. The Act makes provisions for the State Finance Commission to advise on the revenue share between the states and the ULBs, but most of the state transfers are not formula driven and are in many ways unpredictable and discretionary. Even for measures such as property tax reform, which is a local subject, state government approval is required for changes in the method of assessment or the revision of rates. **This has resulted in municipalities' continued financial dependence on state governments.** The unpredictability of revenues and uncertainty in their timing does not allow city governments to plan for investments or even maintenance expenditures.

- The Act did not trigger any modification in the **appointment procedure for city government officials.** The commissioner – the head of the municipal administration – is appointed by the state government and does not have long enough tenure to allow the implementation of long-term planning strategies. Average tenure mostly ranges from 0 to 2 years.

1.3.3. *Providing impetus to urban development*

The JNNURM, linking funding with urban reform

The JNNURM program was launched at the end of 2005, and changed the scale of central government intervention regarding cities.

Interestingly, to get access to these funds, states and municipalities were required to initiate 23 reforms linked to improved urban governance. The objective was to foster the implementation of the urban governance agenda by allocating funds on a scale sufficient to motivate the initiation of the reform process. Previous programs like IDSMT or URIF were sponsored in the range of EUR 50 to EUR 150 million whereas the JNNURM provisioned for about EUR 9 billion. The total funds allocated for urban development thus rose from around EUR 500 million during the 1980-2005 period to more than EUR 9 billion under the JNNURM program for the 2005-2012 period.

Linking good governance and decentralization, the 23 reforms associated with JNNURM funds were designed with the objective of reinforcing local governments' powers both administratively and financially.

At state level, reforms include the transfer of city planning, water supply and sanitation functions to ULBs, and the enactment of the community participation law, the public disclosure law and other laws.

At municipal level, main reforms include the adoption of accrual-based accounting systems, the implementation of e-government solutions, improvements in property tax collection and better cost recovery for water supply, sanitation and solid waste management.

Therefore, even though the implementation of this reform process is still in progress, and remains uneven across Indian states, the urban development agenda is going to remain strong in the near future. This is reflected by recent trends in municipal funding.

The 13th Finance Commission, increasing focus on financing urban infrastructure and performance improvement

The Central Finance Commissions and State Finance Commissions (see glossary) are consultative bodies appointed every 5 years to advise the executive branch in order to assess and recommend fiscal relations between the different levels of government. These intergovernmental transfers are a key resource for local governments.

The Thirteenth Finance Commission (13th FC),[3] appointed in 2007 for the 2010-2015 period, innovated in two major ways. First of all, the scale of urban infrastructure financing from the union government changed significantly: the 13th FC recommended that grants to be distributed by the central government to the states for local bodies be set at EUR 2.96 billion; this is more than 4.5 times the previous Twelfth Finance Commission devolution of EUR 0.64 billion.

Second, the 13th FC, departing from the previous finance commissions, divided the grants into two parts and introduced an incentive element, initiating an enhanced focus on performance improvement. The breakdown recommended by the Commission included:

– A general basic grant of EUR 1.94 billion; and

– A general performance grant of EUR 1.02 billion.

The performance grant can be accessed only if the state complies with nine conditions, which in other words could be called governance reforms. They are:

- The state government must put in place a supplement to the budget documents for local bodies.
- The state government must put in place an audit system.
- The state government must put in place a system of independent local ombudsmen.
- The state government must put in place a system to electronically transfer local body grants provided by the Commission.

[3] A presidentially-appointed consultative body, which advises the president on the distribution of tax proceeds between the union government and the states and the amounts and allocation factors of grants in aid to the states. See glossary.

- The state government must prescribe, through an act, the qualifications of persons eligible for appointment as a member of the State Finance Commission (SFC).
- All local bodies should be fully enabled to levy property tax without hindrance.
- The state government must put in place a State Property Tax Board.
- The state government must gradually put in place standards for delivery of essential services, *i.e.* service level benchmarks (SLBs).
- All municipal corporations with a population of more than one million (2001 census) must put in place a fire hazard response and mitigation plan for their respective jurisdictions.

The states were given one year, *i.e.* 2010-2011, to comply with these conditions before they could access the performance grant starting in 2011-2012. Until 2012-2013, only 14 states including Gujarat, Maharashtra, Karnataka, Kerala and Odisha had operationalized the eighth condition, *i.e.* the statewide service level benchmarking exercise.

Service level benchmarking, a pilot initiative to increase focus on service improvement

The concept of service level benchmarking (SLB) to measure the performance of utilities was launched by the Government of India in 2008 and is still in the nascent stage. SLB aimed at developing a baseline benchmark against which to measure the performance of municipal services. The framework was then promulgated by the 13th FC as one of the conditions for the release of performance grants (see above). As a result, many – but not all – state governments have implemented service level benchmarking frameworks. The major roadblocks to the successful implementation of the SLB initiative include:

- There is no legal mandate to carry out service level benchmarking and it is up to the discretion of the state government and the ULB. Currently, the 13th FC provides states but not ULBs with incentives to implement the SLB framework.
- No regulator has been established to audit and certify the service level benchmarking assessments.
- The SLB initiative was introduced after the launch of the JNNURM and has not been incorporated into the JNNURM: disbursal of funding under the JNNURM is irrespective of implementation of an SLB framework.

- Performance improvement plans (PIPs)[4] meant to bring service levels up to SLB standards have not been legally mandated and there is no funding window available for them.

This exercise provided supply-side intervention supported by the state governments. However, not much demand-side activities are being implemented, reflecting low ownership by local governments, as evidenced by the lack of SLB updates and time lags in the preparation and implementation of PIPs even by the "best in class" ULBs. Other soft interventions, like awards for best performing cities, have been launched by the central government and some state governments. These efforts have created awareness and developed some pilot cases, but SLBs are yet to be mainstreamed in any true sense.

1.4. Overview of municipal finance

1.4.1. *Budgetary and accounting framework*

The presentation of annual budgets is mandatory for state governments. All budgets adopt the same structure, similar to the French budget structure except that the revenue and capital sections are completed by a debt section.

Municipal budgets are also mandatory but do not follow standard guidelines, as ULBs are governed by state municipal acts. However, the National Municipal Accounting Manual (NMAM) published in 2004 by the Ministry of Urban Development is tending to become a common reference for ULBs. Generally, budgets are presented in three parts: revenue budget, capital budget, and extraordinary budget.

Historically, most state governments and ULBs have been using the **cash-based single-entry** accounting system. Measurement of performances and financial positions is unlikely to yield correct results with cash accounting. Over the last few years, under pressure from development aid agencies and the Government of India (GOI), state governments and ULBs have started to use the **accrual-based double-entry** accounting system.

[4] In the context of urban India, performance improvement plans (PIPs) are essentially action-oriented service improvement plans for improving the service levels of basic services like water supply, sewerage, municipal solid waste management, etc. Typically, these plans are supposed to be prepared by the urban local bodies (or service providers) to prepare a database and information system, benchmark services, monitor service level benchmarks, prioritize needs, and implement solutions that would lead to improved service levels. The PIPs lay down an overall objective, strategic objectives, performance objectives and inputs objectives in the form of a log diagram of processes, activities, actions and timelines.

1.4.2. *Trends in municipal finance*

Low share of municipal revenues and spending in overall GDP

During 2007-2008, **municipal government spending** (both capital and revenue expenditures) on infrastructures and services such as water supply, sewerage systems, solid waste treatment and disposal, storm water drainage, city-wide roads and street lighting reached EUR 6.03 billion (Rs. 47,026 crores) or **1.09% of India's gross domestic product (GDP).**[5] This is particularly low compared to several federal OECD countries and BRICS countries, as demonstrated in Table 4 below.

This municipal government spending can be broken down between EUR 2.38 billion (Rs. 18,594 crores) of expenditure on creating new infrastructure assets (0.43% of GDP) and EUR 3.64 billion (Rs. 28,431 crores) for infrastructure maintenance, establishment charges and salaries (0.66% of GDP).

Currently, **municipalities' capacity to generate resources from their tax and non-tax bases is grossly limited.** In 2007-2008, municipalities' own revenues accounted for 0.54% of GDP. Municipalities' share in the country's total tax resources has also continued to stagnate (1.7%) despite a country-wide trend towards an improved tax-to-GDP ratio.

[5] Based on the National Institute of Public Finance and Policy (NIPFP) report "Municipal Finance Matters: India Municipal Finance Report" (2011).

Table 4 *Local government expenditures per country*

Country	Local Government Expenditures as a Percentage of GDP
India	1.1%
Australia	2.3%
Austria	7.4%
Belgium	6.9%
Canada	7.2%
Germany	7.2%
Russia (2001)*	6.5%
South Africa (2003/04 – 2007/08)#	6.9%
Spain	6.4%
Switzerland	9.7%

*Source: Authors, with data from: NIPFP (2011), Municipal Finance Matters : India Municipal Finance Report; *Chernyavsky, A.V. (2002), Review of the Municipal Finance Development in Russia in 1992-2002, Institute for Urban Economics; and #Local Government Budgets & Expenditure Review 2008: National Treasury Report.*

High disparity in municipal revenues and expenditures across states

It should be noted, however, that the national average per capita municipal revenue is a misnomer, as there are extremely wide variations in the levels of municipal own revenues and revenue expenditures across states.

The municipal bodies in the four states of Maharashtra, Gujarat, Punjab and Andhra Pradesh, accounting for 33% of the country's urban population, generate over 75% of the revenues. In contrast, the five states of Orissa, Jharkhand, Uttar Pradesh, Bihar and Madhya Pradesh generate only 3.4% of the total municipal revenues while accounting for 26% of the urban population.

Such differentials may arise from factors such as the different functional domains of municipal bodies (depending on the state's decentralization status), assignment of fiscal powers, efficiency in the use of such powers, the autonomy of municipal bodies in using their fiscal powers, capacity levels and economy-wide trends. Table 5 demonstrates the extent of these disparities among states:

Table 5 *Disparity in municipal revenues and expenditures across Indian states*

Best Performing States	Per Capita Own Revenue	Per Capita Revenue Expenditure
Maharashtra	33.35	28.70
Gujarat	13.84	14.56
Punjab	13.46	11.87
Andhra Pradesh	9.60	13.60
Himachal Pradesh	7.63	NA

Low Performing States	Per Capita Own Revenue	Per Capita Revenue Expenditure
Bihar	1.35	9.12
Uttar Pradesh	1.21	3.14
Jammu & Kashmir	1.15	5.80
Jharkhand	1.10	1.72
Orissa	0.49	5.20

Figures in euros (exchange rate: EUR 1 = Rs. 77.95)
Source: Authors, with data from NIPFP (2011), Municipal Finance Matters: India Municipal Finance Report.

ULBs' own revenue income is not enough to cover revenue expenditures

In 2007-2008, total municipal revenue income was EUR 5.7 billion (Rs. 44,429 crores) and total municipal expenditure was EUR 6.0 billion (Rs. 47,026 crores). In per capita terms, revenue income was EUR 18.3 (Rs. 1,430) and expenditure was EUR 19.4 (Rs. 1,513). Own revenues made up 53% of total revenue; the balance was accounted for by assignment, devolution, and grants-in-aid from states (33.4%), central government grants (5.3%) and grants from the finance commissions (2.0%). Revenue expenditure made up 60.5% of total expenditures.

ULBs' own revenues made up 0.54% of GDP, while this proportion was 1.09% for municipal expenditure. There was a revenue account surplus of approximately 37% over expenditure and a deficit of about 6% if capital expenditure was accounted for. The details are given in Table 6.

Table 6 *Municipal revenue breakdown*

Revenue Income	Amount in Million Euros (2001-2002)	Euros Per Capita (2001-2002)	Amount in Million Euros (2007-2008)	Euros Per Capita (2007-2008)	CAGR %
Revenue Income					
Own Tax Revenue	1,134	3.99	1,960	6.31	11.57
Own Non-Tax Revenue	570	2.00	1,058	3.40	13.16
Total Own Revenue	1,704	5.98	3,017	9.71	12.11
Assignment and Devolution	469	1.64	1,177	3.78	20.19
Grants-in-Aid	290	1.01	728	2.35	20.23
Other	146	0.51	362	1.17	19.9
Transfers from the Central Government	40	0.14	304	0.97	50.35
Finance Commission Transfers	35	0.13	111	0.36	25.74
Total Revenue Income	2,684	9.40	5,700	18.35	16.26
Revenue Expenditure	2,013	7.06	3,647	11.74	12.62
Capital Expenditure	762	2.67	2,385	7.67	25.64
Total Expenditure	2,775	9.72	6,033	19.41	16.8
Gross Domestic Product (GDP) (India)	290,111	274.73	554,316	487.09	13.83
Own Tax (% of GDP)	0.39		0.35		
Own Revenue (% of GDP)	0.59		0.54		
Municipal Expenditure (% of GDP)	0.96		1.09		

Figures in euros (exchange rate: EUR 1 = Rs. 77.95).
Source: Authors, with data from NIPFP (2011), Municipal Finance Matters: India Municipal Finance Report.

Some of the key highlights of the municipal finance sector are summarized below:

- **More investments are required in the urban infrastructure sector to build inclusive cities and sustain economic growth**. The McKinsey Global Institute (2010) estimated that India needed to invest EUR 0.92 trillion in housing, infrastructure, and services in its cities and towns over the next 20 years, equivalent to EUR 103 (Rs. 8,028) per capita per year. This is almost eight times the current level of spending. They further estimated that more than half of this capital investment was necessary to erase India's existing infrastructure backlog and the balance to fund cities' future needs.

- **Indian ULBs have limited autonomy to impose local taxes.** In comparison with municipalities in other federal countries as well as regional actors, such as China and the Republic of Korea, Indian municipalities play a relatively smaller role, entailing just a few interventions, and are endowed with an extremely small revenue base dominated by property taxation. By comparison, the Republic of Korea permits local governments to levy a property tax, an automobile tax, a motor fuel tax, a tobacco consumption tax and an inhabitant tax. The Indian system is dominated by one local tax, the property tax, other taxes being minor in nature. Further, any major revisions in local taxes or levy of new taxes must be approved by the state government.

- **Abolition of the octroi[6] and sharing of the goods and services tax.** The key impediment to the full devolution of the 18 municipal functions is the lack of an appropriate revenue model. As highlighted above, municipalities' fiscal domain is narrow and has in recent years further been constricted by the abolition of the octroi. Although the abolition of the octroi is a positive step,[7] it has in a sense broken municipalities' link to the local economy. Several state governments currently share a pool of state taxes with municipalities, albeit not consistently. The Thirteenth Finance Commission (13th FC) has proposed that the goods and services tax be shared with local bodies and that other local taxes like the value-added tax or entry tax be subsumed into it.

[6] The octroi is a local tax imposed by the local municipal authority on goods brought into the municipal limits for local consumption.

[7] Octroi collection is not a very effective, accountable and transparent model of a tax collection system. It leads to logistics issues in terms of delays in the entry of goods, and compliance issues in terms of hassles for traders and suppliers regarding the verification of goods for the assessment of the octroi. In many instances, it has been replaced by a local body tax (LBT). A LBT is an account-based system wherein traders and businessmen pay the tax monthly by way of self-declaration directly to the municipal body.

- **High disparity across states.** There is an extremely large variation in the level of municipalities' own revenues and revenue expenditure across states. In Maharashtra, municipalities are able to generate a per capita annual revenue income of EUR 33 (Rs. 2,600) and per capita revenue expenditure of EUR 28 (Rs. 2,237). In comparison, per capita revenues of municipalities in Odisha, Jharkhand, Uttar Pradesh, Bihar, and Madhya Pradesh are EUR 0.48 (Rs. 38), EUR 1.10 (Rs. 86), EUR 1.20 (Rs. 94), EUR 1.34 (Rs. 105) and EUR 1.55 (Rs. 121) respectively.
- **Larger cities have a major share of municipal spending.** During 2007-2008, municipal corporations that made up 41% of the country's total urban population accounted for 72% of total municipal spending.[8] The municipalities that made up 38% of the country's total urban population accounted for 22% of total municipal spending.
- **ULBs have little capacity to sustain investments made under the JNNURM.** Financing municipal services under the flagship JNNURM program contributed to an increase in total expenditures from 0.96% of GDP in 2002-2003 to 1.09% of GDP in 2007-2008. Since its launch in 2005, the JNNURM has directly involved the state governments and municipalities in matching central government grants. Most million plus cities have taken advantage of soft funding made available under the JNNURM in recent years. However, the utilization of these funds is deemed to be beyond their capacity to sustain these investments. As seen with some of the case studies discussed in Part Two, in particular Nashik, Nagpur, Bangalore, Mysore, etc., ULBs' operating ratios have declined in last few years. This seems to be linked to the fact that the governance reforms envisioned under the JNNURM have not significantly improved their revenues, while operation and maintenance (O&M) costs have increased significantly as a result of higher capital investments.

1.4.3. *Urban infrastructure financing*

ULBs' major sources of income for infrastructure financing

As explained above, ULBs have to rely on various sources of revenue to finance urban infrastructures.

The ability to generate their **own revenue** depends on regulations enacted by the state governments, and can thus vary from state to state. Property tax is the common

[8] As stated above, nearly 60% of total municipal expenditures go towards revenue expenditures. Most capital works projects are undertaken through grants from the central and state governments.

tax that municipalities in all states are empowered to levy. The octroi has been abolished in almost all states (Maharashtra is currently progressing on the abolishment of the octroi) and should be replaced by a goods and services tax. Until then, the loss of the octroi is being offset by matching grants from the state governments.

ULBs also rely on **inter-governmental transfers,** receiving revenue and capital grants from central and state governments. Central Finance Commissions and State Finance Commissions are appointed every five years and allocate funds to ULBs, some of which are conditional on ULBs' implementation of governance and tax reforms.

Finally, **borrowing by ULBs to finance capital expenditures** is currently very limited. Borrowing regulations only allow ULBs to borrow from Indian banks or financial institutions, all loans being subject to state government approval. The Constitution of India (Article-293: Borrowing by States) bars lending by a foreign entity directly to state governments and implicitly to local governments. Hence, urban local bodies cannot take out non-sovereign loans directly from foreign development banks. Urban local bodies can only borrow sovereign loans wherein all external funding is routed through the Government of India (GOI), the latter being the borrower and the state government providing a guarantee against the loan.

The state governments, with the help of State Finance Commissions, tend to regulate borrowing by Urban Local Bodies by regulating the following broad aspects of the borrowing process: purpose of the loan, nature of the loan, limitation on borrowing powers, procedure for taking out loans, the type of security to be provided for loans, the sources of revenue, vesting the state government with powers to intervene in the functioning of urban local bodies, etc.

Factors affecting municipal borrowing

Sovereign borrowing is subject to the approval of the concerned line Ministry and the government's Department of Economic Affairs (DEA), on the basis of a request from the State Finance Department. It is important to note that the state government has to meet certain criteria as stipulated by the DEA to be eligible for external funding. One of the key evaluation criteria is the debt sustainability certificate, which indicates the state government's debt-to-GDP ratio. The governments of Tamil Nadu, Karnataka, Kerala, Maharashtra, Odisha and Assam have been issued debt sustainability certificates that indicate their ability to borrow external funds. The two main players in sovereign borrowing are the World Bank and the Asian Development Bank, with respectively EUR 175 billion and EUR 78 billion outstanding as of mid-2012.

The **non-sovereign borrowing sector** is made up of public funds and institutions (HUDCO for housing, the India Infrastructure Finance Company Limited, etc.), as well as private commercial banks, although the latter focus on short-term lending and avoid long-term exposure or project-based lending, leaving a **gap between ULBs' needs and the market supply.**

The current state of **municipal borrowing** is constrained by the following:

- ULBs are not borrowing much from **domestic sources,** primarily due to a lack of financial capacity (weak revenue model, low debt serviceability, weak accounting and budgeting framework), a lack of willingness to borrow due to the availability of soft/grant funds, and a lack of development or performance accountability.
- **Financial institutions** are not lending much to ULBs due to regulatory and systemic issues and a lack of willingness on the part of lenders because other businesses are more lucrative. Currently, the prevailing form of lending is "push lending" in which the state lends to ULBs (for a specific program/scheme/agenda) irrespective of the ULBs' financial capacity. Push lending is prevailing, as the prerogative of lending to ULBs lies with the state and is the ultimate deciding factor in lending to ULBs.

A downward trend in municipal borrowing through bond markets

Finally, **municipal bond markets, pioneered in the early 2000s, have since been halted.** A limited pool of municipalities could potentially raise infrastructure funding through municipal bonds. In 2008, the credit quality of 43 out of the 63 municipal governments under the JNNURM scheme had been assessed by rating agencies. Fourteen municipal governments have been assigned a credit rating of A- or above, which is the minimum acceptable rating threshold for the majority of bond investors in India.

During 1999-2005, 25 municipal bonds were issued, amounting to EUR 198 million (Rs. 1,549 crores). Cities that raised municipal bonds include Ahmedabad, Nashik, Ludhiana, Bengaluru, Nagpur, Kanpur, Madurai, Hyderabad, Vishakhapatnam, Chennai, Thane and Kolkata. Ahmedabad has been a pioneer in the issuance of municipal bonds and has raised municipal bonds multiple times. Most of the municipal bonds were issued without a government guarantee and mostly for water supply and sewerage projects.

Since 2005, however, not much progress has been made in the issuance of bonds. In 2007, the Nagpur Municipal Corporation (NMC) accessed the debt market in order to raise Rs. 128 crores. However, the issue was undersubscribed and NMC raised only 17% of the intended amount.

Although the MoUD promotes the development of bond markets, in spirit, JNNURM grants have crowded out developments in municipal bonds and the bond issues have virtually come to a standstill, mainly because of the availability of grant funds with soft budgetary constraints under the JNNURM.

1.4.4. *Prospective outlook for enhanced resource mobilization*

The *NIPFP Municipal Finance Matters: India Municipal Finance Report* (2011) identifies major challenges faced by the municipal finance sector, such as ULBs' weak capacity to generate resources, an obsolete property taxation system, unpredictable state transfers, lack of performance standards and development accountability, and lack of capacity within ULBs. Further, it points the way forward through six imperatives:

- **Restructuring and broad-basing of the existing municipal finance system** to increase the coverage and collection efficiency of local taxes, and reduce subsidies on service delivery.
- **Sharing the proposed Goods and Services Tax (GST)** with the local bodies and assigning other local taxes to ULBs.
- **Redefining the role for the State Finance Commission and Central Finance Commission** to bridge the gap between the ability of local bodies to raise income and the funding needs for basic service provision.
- **Restructuring of the JNNURM grant facility** to provide states with greater incentive to undertake structural and procedural reforms, which would assist municipalities in improving their finances and capacity to invest in sustainable and inclusive municipal infrastructure.
- **Capacity building aimed at effective implementation of the municipal finance reform agenda** through major training and institutional support programs for municipal functionaries.
- **Introducing fiscal responsibility at municipal level,** such as the preparation of medium-term fiscal plans with municipal-level fiscal indicators and targets, matching expenditures with revenue streams, setting ceilings on administration expenditures, publishing municipal accounts and audit reports to allow public scrutiny, etc.

Part Two

2. Key findings from eleven case studies

2.1. Presentation of the analysis

Eleven states and cities were jointly identified for detailed case studies, with the objective of illustrating the institutional analysis presented above and exploring the diversity of urban governance dynamics in India during this period.

This selection was based on a **three-step process.** States were initially classified according to the level of decentralization, and a representative selection identified, covering the whole spectrum (from least to most decentralized). On the basis of this preliminary breakdown, states and cities were then further assessed according to a more detailed set of ten technical and institutional parameters, including urbanization rates, JNNURM reform score and investment rates, and the existence of sector strategies. Finally, the results of this quantitative assessment were combined with a qualitative selection strategy based on the following considerations:

An explicit focus on a limited number of states

Acknowledging the predominant role of states in the urban infrastructure sector and their diversity in terms of institutional framework, the panorama study chose to focus on a limited number of states (five or six) in order to strengthen its analytical scope and enable a detailed analysis of the institutional and economic context of each case study.

A representative range of case studies

The final list of 11 case studies – three states and eight municipalities across a total of six states – reflects the diversity of India's urban development sector in terms of economic base, demographic profile, legislative framework, institutional structure, etc.

Priority given to geographical coherence

The selection of states and cities also took into consideration the projects and contacts previously established by Agence Française de Développement (AFD) in order to foster coherence and build on the knowledge of partners and existing relationships. Furthermore, the presence of French actors was taken into consideration, including Ministries, public entities, private companies, NGOs, universities and research centers, which have a track record in promoting sustainable urban development through innovative expertise and technical solutions.

The combination of this three-step process led to the final selection of the following 11 case studies: Tamil Nadu, Karnataka, Kerala (states), Pune (Pimpri-Chinchwad), Nagpur, Nashik (in Maharashtra), Bengaluru, Mysore (in Karnataka), Kochi (in Kerala), Bhubaneswar (in Orissa), Guwahati (in Assam). A map of this selection can be found in Appendix C.

These 11 case studies were analyzed using the following broad framework so as to have a consistent and comparable basis for analysis:

A. **State profile:** Brief profile of the state where the case study is located.

B. **City profile:** Socio-economic and demographic profile of the city, *i.e.* surface area, population, population growth and projections, main economic indicators, position compared to other Indian cities, etc.

C. **Institutional framework:** Identification of the main agencies involved in the governance of the urban sectors (urban transportation, water supply and sanitation, solid waste management) and a brief description of their duties and powers, and an overview of the progress of decentralization, projects, etc.

D. **Status of local governance reforms:** Brief overview of the status of reforms undertaken and their status at state and city level.

E. **Urban development strategy of the city:** Brief overviews of the master plan, city development plan, city sanitation plan, city mobility plan, etc.

F. **National and international programs funding urban development:** Brief description of various national or international programs, such as the JNNURM and trust funds operating in the state and providing funding for the development of urban sector projects.

G. **Financial assessment:** Overview of the financial status or health of the municipal corporation.

H. **Borrowing environment:** Brief description of the existing borrowing environment – borrowing entities and key borrowing regulations, based on the institutional assessment and project pipeline.

The detailed analysis of each of the 11 case studies is presented in state- and city-specific notes, with key findings and benchmarking elements showcased below.

2.2. Synthesis and benchmarking

2.2.1. *State profiles*

The three state case studies are Tamil Nadu, Karnataka and Kerala. The eight cities are located in states of Karnataka (Bengaluru and Mysore) and Kerala (Kochi) in the south, Maharashtra (Nagpur, Nashik and Pimpri-Chinchwad) in the west, Odisha (Bhubaneswar) in the east, and Assam (Guwahati) in the northeastern part of India. The states' key characteristics highlight their diversity:

- **Area:** Maharashtra is the 3rd largest state in India while Kerala ranks 21st (in terms of size) among the 28 states in India.
- **Urbanization:** Tamil Nadu, Kerala and Maharashtra are among the most urbanized states, while Odisha and Assam are among the least urbanized states. Kerala has nearly doubled its urban population in the last decade as a result of the reclassification of a large number of rural settlements to urban centers (the number of census towns in Kerala increased from 99 in 2001 to 461 in 2011).
- **Population density:** Kerala and Tamil Nadu are among the most densely populated states with densities much higher than the national average.
- **GDP growth rate:** All six states have a GDP growth rate that is higher than the national GDP growth rate.
- **Per capita income:** Odisha and Assam have low per capita income compared to the other states.
- **Fund utilization:** JNNURM fund utilization is above 70% in Assam, Maharashtra, Karnataka and Kerala.

Table 7 presents some key facts and figures relating to these states.

Table 7 *States: Main facts and figures*

	Tamil Nadu	Karnataka	Kerala	Maharashtra	Odisha	Assam	India
Area (in sq. km)	130,058	191,791	38,863	307,713	155,820	78,550	3,287,263
Total Population in millions (2011)	72.1	61.1	33.4	112.4	41.9	31.4	1210.6
Urban Population in millions	34.9	23.6	15.9	50.8	7.0	4.3	377.1
Percentage of Urban Population	48.3%	38.6%	47.72%	45.23%	16.68%	14.10%	31.15%
Change in Urban Population (2001-2011)	15.6%	31.8%	91.92%	23.64%	26.80%	16.93%	31.80%
Population Density in persons per sq. km	555	300	859	365	269	397	364
Ports (major/minor)	3 + 15	1 + 10	1 + 17	3 + 53	3 +	-	12 + 187
Airports & Airstrips	12	11	4	25	13	11	454
GDP Growth Rate (2011-2012)	9.39%	9.22%	6.50%	8.5%	7.18%	11.7%	6.88%
Per Capita GDP (in euros, 2011-2012)	1,376	1,252	1,360	1,596	792	579	1,177
FDI Equity Inflows (in billion euros, April 2000 to December 2012)	7.7	8.0	0.7	47.2	0.2	0.1	144.9
JNNURM Fund Utilization Rate	55%	72%	71%	100%	27%	102% [9]	-
Year of Next State Election	2016	2018	2016	2014	2014	2016	2014 (general election)

Source: Authors, with data from: www.ibef.org; Economic Survey 2011; Census 2011; www.jnnurm.nic.in.

[9] The utilization rate in Guwahati is higher as the projects that were undertaken under the JNNURM program did not focus specifically on developing core infrastructures. The projects included procurement of buses, solid waste management and water supply for South Guwahati.

Key remarks

It can be noted that all six states have GDP growth rates at or above the national GDP growth rate, indicating a high growth curve for the economy in these states. Higher levels of urbanization are usually associated with higher per capita income and this can indeed be seen in India in states like Tamil Nadu, Karnataka, Kerala and Maharashtra. These states have higher urbanization levels that can be associated with higher per capita incomes, above the national average.

2.2.2. *City profiles*

The eight city case studies are Bengaluru, Mysore and Kochi in the south, Pimpri-Chinchwad and Nashik in the west, Nagpur in the centre, Bhubaneswar in the east, and Guwahati in the northeastern part of India:

- **Surface area:** Bengaluru and Pune are among the ten largest cities in India.
- **Population growth rate:** Bengaluru, Pimpri-Chinchwad and Nashik are growing faster than the national urban average, while the remaining cities are growing slower than the national urban growth rate.
- **Population density:** Bengaluru and Nagpur are among the most densely populated cities in comparison to other cities.
- **Reform achievement:** All cities except Kochi have reform achievement scores of more than 70%.
- **Fund utilization:** JNNURM fund utilization is above 80% in Nashik, Pune (Pimpri-Chinchwad), and Guwahati.
- **Credit rating:** Nagpur, Nashik and Pimpri-Chinchwad are investment-grade cities.
- **Economic activities:** Tourism, manufacturing, trade and commerce, IT and ITES form the economic base of most of the cities. Due to locational advantages, specific economic activities are seen, such as orange-based industries in Nagpur, tea-based industries in Guwahati, sandalwood-based industries in Mysore and shipping-based industries in Kochi.

Some of the key characteristics of these cities are given in Table 8.

Table 8 *Key characteristics of city case studies*

	Bengaluru	Mysore	Kochi	Nagpur	Nashik	Pimpri-Chinchwad	Bhubaneswar	Guwahati
Population (2011) in millions	149	210	348	394	103	109	121	385
Population Growth (2001-2011)	49%	25%	2%	17%	36%	34%	14%	19%
Estimated Population (2031) in millions	12.5	2.1	0.7	4.2	3.7	3.0	1.5	2.25
Municipal Area in sq. km	805	128	330	217	259	177	135	216
Density (thousand persons/ sq. km)	10.4	6.9	1.8	11.0	6.0	9.7	6.2	3.6
City Reform Achievement Score	76%	76%	52%	72%	85%	91%	70%	70%
Credit Rating (Year 2012)	B	BBB+	BBB-	A	AA-	AA-	BBB	BB
JNNURM Fund Utilization Rate	68%	58%	33%	52%	84%	94%	34%	100%
Year of Next Municipal Election	2018	2018	2015	2017	2017	2017	2013	2018
French Presence	Yes	Yes	Yes	Yes	No	Yes	No	No

High performance   Medium performance   Low performance

Source: Authors, with data from: www.ibef.org; Economic Survey 2011; Census 2011; www.jnnurm.nic.in; and specifically collected data.

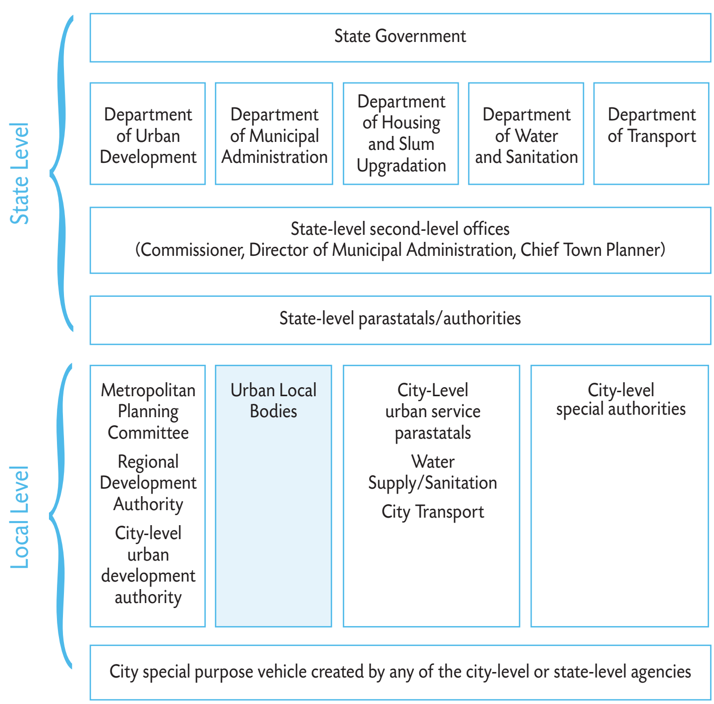
2.2.3. *Institutional frameworks*

Urban development is a state responsibility and the urban development framework varies from state to state. The generic institutional structure is illustrated in Figure 1.

Depending on the legacy, level of decentralization and state's outlook on the urban sector, either **state or city-level agencies take precedence or play a prominent role in urban development.** For instance, in Maharashtra, most of the urban functions are undertaken by city-level agencies, while in Odisha, most of the urban functions are undertaken by state-level agencies, *i.e.* agencies directly controlled by the state government.

The 74th CAA and various schemes/programs of the Government of India (GOI) that followed after the enactment of the 74th CAA, such as the JNNURM, emphasized decentralization and the devolution of local civic functions to urban local bodies. However, despite these initiatives, the **situation and the extent of decentralization still varies significantly from state to state.**

Figure 1 *Generic institutional state structure*



The institutions can be classified into the following categories:

- **Directorate/Commissionerate/Secretariat:** These institutions are constituted based on the business allocation rules of the state departments. They primarily act as the administrative and technical arms of the state departments for specific functions. For example, the Directorate of Town Planning (Odisha), the Directorate of Urban Land Transport (Karnataka), the Commissionerate of Municipal Administration (Tamil Nadu), etc.

- **State parastatal:** These institutions are generally constituted under the provisions of certain State Acts. They have their jurisdiction across the state (with or without exceptions in some places). For example, the Kerala Water Authority, the Odisha Public Health Organization, etc.

- **State-owned companies/body corporates:** These institutions are created under the Companies Act/Societies Act and have a management board comprised of state-appointed officials. These institutions have separate accounts and are responsible for specific functions. Their jurisdiction is defined under the articles of association of the company. For example, the Karnataka Urban Infrastructure Development and Finance Corporation, the Tamil Nadu Urban Development Fund, etc.

- **City parastatal:** These institutions can be of two types – planning or development authorities responsible for development plans, and water supply/sewerage boards at the city level responsible for the development and O&M of water supply and sewerage networks. These institutions are generally constituted under the provisions of the State Act. They have their jurisdiction across the city region and perform functions assigned to them under the State Act. For example, the Guwahati Urban Development Authority, the Bangalore Water Supply and Sewerage Board, etc.

- **Urban local bodies:** These institutions are constituted under the State Municipal Act. They have their jurisdiction across the municipal areas of the city and perform functions assigned to them under the Municipal Act. For example, the Mysore City Corporation, the Kochi Municipal Corporation, the Guwahati Municipal Corporation, etc.

- **Special purpose vehicles:** These institutions are created under the Companies Act/Societies Act by any of the agencies above for specific projects. The SPVs ring-fence the project from the balance sheet of the parent organization and allow the project to be taken up on its own financing strength. Public-private partnership (PPP) projects are mostly implemented through the SPV route. For example, the Bengalore Metro Rail Corporation, the Chennai Metro Rail Corporation, and Orange City Water Private Limited.

State-level framework

At the apex level in the state government, management of the urban sector is looked after by various state departments: the Urban Development Department, the Municipal Administration Department, the Housing Department, the Water Supply and Sanitation Department and the Transport Department. Depending on the state, some of these departments have merged and act as a single department. For instance, urban development and housing are under the same department in Tamil Nadu, while Kerala and Karnataka have separate departments for these functions. Further, urban transport is managed by the Urban Development Department, the Transport Department and the Housing Department. Generally, the Housing Department handles traffic management. In many cases, city bus services fall under the purview of the Transport Department. All government entities working towards the development of the urban sector operate under the umbrella of these state departments. Table 9 below captures the nuances across states.

Table 9 *Institutional structure in the state case studies*

State	Department	Agencies / authorities	Functions
Tamil Nadu	Department of Municipal Administration and Water Supply	Commissionerate of Municipal Administration	Nodal department for coordinating and supervising the functions of all municipalities and municipal corporations except Chennai. Respective ULBs are responsible for functions such as water supply, sewerage, solid waste management, street lighting, storm water drainage and public buildings. In some of the places, the Tamil Nadu Water Supply and Sewerage Board undertakes O&M of water supply and sewerage.
		Chennai Municipal Corporation (CMC)	Responsible for functions such as solid waste management, street lighting, storm water drainage and public buildings.
		Chennai Metropolitan Water Supply & Sewerage Board	Responsible for water supply and sewerage for the city of Chennai.
	Department of Housing and Urban Development	Tamil Nadu Housing Board	Responsible for the development of public housing for all segments of society.
		Department of Town and Country Planning	Responsible for urban planning and land development and providing planning permission, except Chennai.
		Tamil Nadu Slum Development Board	Responsible for slum development.
		Chennai Metropolitan Development Authority	Responsible for urban planning and land development for the city of Chennai.
	Department of Transport	Transport Undertakings	Surface transport, including urban and regional transport, including roads, BRTS and MRTS.

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State	Department	Agencies / authorities	Functions
Karnataka	Department of Urban Development	Municipal Corporations	Responsible for functions such as solid waste management, street lighting, storm water drainage and public buildings.
		Directorate of Municipal Administration	Nodal department for coordinating and supervising the functions of all municipalities and municipal corporations except Bangalore.
		Directorate of Urban Land Transport	Responsible for overseeing all urban land transport initiatives in urban/local planning areas of Karnataka.
		Karnataka Urban Infrastructure Development & Finance Corporation Limited	Financial intermediary and implementation arm for the formulation, appraisal, implementation and monitoring of urban infrastructure development projects throughout the State of Karnataka.
		Karnataka Urban Water Supply and Drainage Board	Responsible for providing adequate water supply from assured and safe sources and proper sanitation to all urban areas except Bangalore.
		Bangalore Water Supply and Sewerage Board	Responsible for providing adequate water supply from assured and safe sources and proper sewerage facilities in Bangalore.
	Department of Housing and Urban Development	Karnataka Housing Board	Responsible for the development of flats for all segments of society.
		Karnataka Slum Clearance Board	Responsible for slum development.
		Rajiv Gandhi Rural Housing Corporation Limited	Responsible for meeting the housing needs of economically and socially weaker segments of society.
	Department of Transport	Karnataka State Road Transport Corporation	Surface transport including urban and regional transport excluding roads in all urban areas except the Bengaluru metropolitan area.

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State	Department	Agencies / authorities	Functions
		Bengaluru Metropolitan Transport Corporation	Surface transport including urban and regional transport excluding roads in the Bengaluru metropolitan area.
	Department of Public Works	Karnataka Road Development Corporation Limited	Promote surface infrastructure by taking up road works, bridges, etc., and improve the road network by taking up construction widening and strengthening roads, building bridges, maintaining roads etc., and take up projects on BOT, BOOT, and BOLT [10] in urban areas.
Kerala	Department of Local Self-Government	Urban Affairs Directorate	Responsible for the administration of all urban local bodies (60 municipalities and 5 municipal corporations) in Kerala.
		Country & Town Planning Department	Responsible for urban planning and land development.
		Urban Local Bodies	Responsible for undertaking functions such as solid waste management, street lighting, storm water drainage and public buildings.
		Kerala Sustainable Urban Development Project	Implementing agency involved in implementing urban infrastructure and service improvement projects in 5 corporations under the ADB assisted program.
		Kerala Urban and Rural Development Finance Corporation Limited	Government-owned company responsible for providing financial aid to local bodies to undertake development programs.
		Kerala Local Government Service Delivery Project	Implementing agency involved in implementing urban infrastructure benefitting all Gram Panchayats (GPs) and municipalities in the state under the World Bank program.

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[10] BOT (Build Operate Transfer), BOOT (Build Own Operate Transfer), BOLT (Build Own Lease Transfer).

State	Department	Agencies / authorities	Functions
		Suchitwa Mission	Registered under the Societies Act, it looks after sanitation projects throughout the state.
	Department of Water Resources	Kerala Water Authority	Responsible for the development and O&M of water supply and sewerage across the state of Kerala.
	Department of Housing	Kerala State Housing Board	Responsible for providing organized direction, planning and execution of housing and development schemes across the state.
	Department of Transport	Kerala State Road Transport Corporation	Surface transport, including urban and regional transport, excluding roads.
		Kerala Transport Development Finance Corporation Limited	Non-banking financial company involved in financing the KSRTC through loans, loan schemes to the public, undertaking BOT projects, etc.
	Department of Public Works	Kerala Road Fund Board	Statutory body of the government of Kerala primarily to oversee and manage non-budgetary funds and deploy such funds to implement innovative roads and other related infrastructures.
		Roads & Bridges Development Corporation of Kerala Limited	Develops road projects and railway over bridge projects, and operates toll collection.

Source: Authors, from specifically collected data.

City-level framework

City-level governance is primarily the responsibility of the urban local body, *i.e.* a municipal corporation, municipality, etc. Other agencies include a city urban development authority or water supply and sewerage board, also called a public health engineering organization. The roles of these agencies are discussed below:

- **Urban local bodies:** Urban local bodies are entities of the state governments, enabling local self-governance. They are the constitutionally-provided administrative units that provide basic infrastructure and services in cities and towns. The municipal laws governing local bodies are enacted and amended by the state governments. These Acts empower local bodies to undertake local functions, as provided for in the 74th Constitutional Amendment. Mostly, these functions relate to local taxation (property tax, advertisement tax, etc.), the issuing of certificates and licenses (birth certificates, death certificates, trade licenses, etc.), service delivery (solid waste management and other services like water supply, sewerage, transportation in some instances), and local welfare activities (employment schemes, slum upgrading schemes, park maintenance and upkeep, health care and primary education facilities, etc.). The level of empowerment of ULBs varies from state to state.

- **Development authorities:** Development authorities are created by the states as city parastatals to ensure planned development of the city and prepare the statutory master plans/development plans. Development authorities are also responsible for the creation of layouts for expansion beyond municipal limits and for public housing. Generally, and despite being city-level actors, development authorities are accountable to state governments and not to the ULBs.

- **Water supply and sewerage boards/public health engineering organizations:** These organizations are responsible for the formulation of water supply and sewerage schemes, their implementation, and operations and maintenance. In certain states, O&M functions are taken care of by the ULB, for example in Mysore (Karnataka).

Specific city-level institutional structures are discussed in the respective city notes.

Sectoral framework

From a sectoral perspective, responsibilities are split between the state and city agencies and vary from city to city. The sectoral allocation of roles in each case study is shown in Table 10.

Table 10 *Sectoral responsibilities in the city case studies*

	Bengaluru	Mysore	Kochi	Nagpur	Nashik	Pimpri-Chinchwad	Bhubaneswar	Guwahati
Urban Planning	BMRDA, BDA	MUDA	DTCP	NIT	Nashik MC	PCNTDA	BDA	GMDA
Water Supply	BWSSB	KUWSDB MCC (O&M)	KWA	Nagpur MC	Nashik MC	PCMC	PHEO	GMDA
Sewerage	BWSSB	KUWSDB MCC (O&M)	KWA	Nagpur MC	Nashik MC	PCMC	PHEO	GMDA
Solid Waste Management	BBMP	MCC	KMC	Nagpur MC	Nashik MC	PCMC	BMC	GMC
Urban Transport								
Commuter Rail	DULT	-	-	-	-	-	-	
MRTS	BMRC	-	KMRL	Nagpur MC	-	PMPML	-	-
BRTS	DULT	-	-	-	-	PMPML	BDA	
City Bus Service	BMTC	KSRTC	KSRTC	MSRTC	MSRTC	PMPML	BDA	ASTC
Non-Motorized Transport	DULT	DULT	-	-	-	PMC	BMC / BDA	GMC

Source: Authors from specifically collected data.

Generally, urban infrastructure PPP projects for the above functions are designed by the respective competent authority. The state PPP cell provides technical assistance in the preparation of such PPP projects. The state government's approval is required when viability gap funding is needed.

Interplay between institutional framework and enhanced service delivery

Urban development is a state responsibility and the state government has complete prerogative over urban affairs. The central government plays an advisory role and facilitates financial and technical support to states and city-level agencies through policies, programs and schemes. The 74th CAA, the JNNURM and 13th FC have sought to promulgate decentralization and a unified governance structure at the local level.

However, the level of decentralization differs from state to state and local bodies are still far from being unified governance structures. City level functions are managed by both state- and city-level agencies: state and city parastatals therefore still play an important role in the service delivery of local functions. Further, the ULBs have low autonomy and are controlled directly or indirectly by the state government.

The recent federal initiatives aim at converging these functions at local level and making ULBs more accountable. Some statewide programs, like the Integrated Urban Development Mission (IUDM) in Tamil Nadu, further emphasize the development of ULB capacities to take up local functions through the financing of urban infrastructure projects, such as solid waste management projects.

However, there is a further need to empower ULBs to develop their technical and financial capacities and accountability through a reassignment of functions under the legal and policy framework.

Key findings

- The **decentralization process is highly uneven across states.** Solid waste management and street lighting are the only local functions consistently undertaken by municipal bodies. Urban planning is undertaken by independent development authorities in all of the case studies examined. Functions like water supply, sewerage, urban transport and housing, however, have varying institutional structures across states.

- Despite this diverse institutional set-up, the case studies highlight that **state governments have across the board a decisive bearing on urban service delivery,** in particular through the role of parastatal agencies. With the exception of Maharashtra, the water supply and sewerage, housing, and transport sectors are still assigned to city- or state-level parastatals in all of the other case studies. For example, in cities like Bengaluru and Chennai, specialized city parastatals have been created to undertake water supply and sewerage functions, while secondary cities and towns in the rest of the state are looked after by state-level parastatals like the Karnataka Water Supply and Sewerage Board or the Kerala Water Authority. Municipal bodies barely play any role in their decision-making.

- As such, with the current configuration, the **local authorities do not have a unified governance structure.** Post-JNNURM, interim arrangements have been made in some cases to increase city and state parastatals' accountability to ULBs, with the objective of enhancing service delivery. For instance, in Karnataka, master plans now have to be vetted by the ULBs at both draft and final stage prior to submission to the state government for approval. In Bhubaneswar, a tripartite agreement between the state government, the Bhubaneswar Municipal Corporation and the Public Health Engineering Organization (PHEO) has been signed so that planning of new water supply schemes by PHEO can be vetted by the ULB. These initiatives remain to be consolidated.
- State control is also exercised through other means. In the case studies, city budgets, PPP projects (wherein Viability Gap Funding [VGF] is required), and city master plans have to be approved by the state government.
- The political economy of decentralization therefore demonstrates an **equilibrium trap between service delivery and the competency of ULBs.** Since ULBs in Gujarat and Maharashtra were assigned these service delivery functions ahead of other ULBs in the country, they have gained experience in the management of these functions. The other states are still struggling to transfer key local functions in the absence of ULBs' competency to undertake these functions.
- Finally, the civil societies in India are not formally engaged in the planning and service delivery of urban basic services. Mostly, their implication is limited to engagement on an ad hoc basis on the advocacy model.

2.2.4. *Urban development strategies and planning tools*

Urban development strategies are generally formulated at two levels, namely, the state level and the city level.

States like Karnataka have formulated a draft state urbanization policy, and Kerala and Tamil Nadu have prepared state infrastructure master plans/vision plans. However, these documents remain policy documents and their implementation depends on the state's initiative to translate these policies into legislation, rules, regulations, government orders, etc. The policies present the state's vision to direct urban development in the state. Infrastructure master plans or vision plans at state-level identify the key infrastructure projects amongst different sectors, including urban development.

The **main planning documents** at the city level are given in Table 11.

Table 11 *Main planning documents at city level*

	Master Plan/ Development Plan	City Development Plan	City Mobility Plan	City Sanitation Plan
Status	statutory	non-statutory	non-statutory	non-statutory
Sector	integrated	integrated	transport	sanitation
Enabling Framework Program	State Town and Country Planning Act	JNNURM	National Urban Transport Policy	National Urban Sanitation Policy
Horizon Period	15-30 years	15-30 years	15-30 years	15-30 years
Agency Responsible	development authority or ULB or state Town and Country Planning Department	ULB or appointed nodal agency such as state Town and Country Planning Department	ULB or appointed nodal agency	ULB or appointed nodal agency

Source: Authors, from national and state regulatory acts.

- **Master Plans/Development Plans:** These plans are statutory tools that provide the framework for urban planning, land use zoning and zoning regulations for the city region (including municipal city limits, future urbanizable area for the plan period, and controlled area for no urban development, which could be utilized for future expansion beyond the plan period).

  Entities [11] responsible for the development of master plans vary as they are designated by the state government: city development authorities or city improvement trusts (for large cities), state Town and Country Planning departments (for small and medium towns), and municipalities (in some cases, such as Maharashtra where the urban planning function is completely devolved). The plan is statutorily approved by the state government, even when the municipality is responsible for its development.

[11] These local planning authorities are also responsible for delivering building permits.

Urban development, plan formulation and implementation (UDPFI) guidelines issued by the Ministry of Urban Development (MoUD) are generally followed when preparing master plans. Master plans typically forecast the population over the horizon period, assess urban infrastructure requirements and present policy and city-level project proposals for larger urban areas taking into account future urban growth.

- **City Development Plans:** These CDPs are urban infrastructure development plans mandatorily prepared to avail funding under the JNNURM program. The plans undertake holistic assessments of city infrastructures and future demand and identify sectoral projects. The plans involve stakeholder consultation with government officials, civil societies and citizens to understand the priorities for the holistic development of the city. The plans present financing and operating plans to meet the envisaged investments in the creation of the required urban infrastructures. The plans are prepared on the basis of a JNNURM toolkit designed for CDP preparation.
- **City Mobility Plans/Comprehensive Traffic and Transportation Plans:** These plans are sectoral plans for the transportation sector. The plans undertake holistic assessments of the traffic and transportation sector in terms of existing transport infrastructures and existing and potential future demand, and identify urban transport projects. The plans include financing and operating plans to meet the envisaged investments in the creation of the required transport infrastructures.
- **City Sanitation Plans:** These plans are sectoral plans for city sanitation. They undertake a holistic assessment of the sanitation sector in terms of existing infrastructures and existing and potential future demand, and identify urban sanitation projects. The plans present financing and operating plans to meet the envisaged investments in the creation of the required sanitation infrastructure.

It must be noted that multiple agencies are involved in the preparation of various planning documents. The non-statutory plans generally identify the roles and responsibilities of various agencies, but are not binding on any of the agencies because of their non-statutory status.

The **statutory plans** are spatially integrated and follow a tree structure: regional plan » master plan » zonal plan » local area plan or regional plan » development plan » town planning scheme. However, **non-statutory plans**, such as city development plans, city mobility plans and city sanitation plans, are not necessarily required to be spatially integrated with the statutory plans. These non-statutory plans focus primarily on infrastructure development projects and their prioritization.

Challenges in spatial integration

- Generally, major **delays are** seen in the preparation of the lineage of statutory plans. In the past, these delays affected the coherent and timely development of infrastructures. For example, some zonal plans under the Master Plan of Delhi for the perspective year 2001 (MPD 2001) were prepared and approved after 2001. Further, major delays are seen during the plan preparation and administrative approval processes. For example, the MPD 2001 (which was approved in the late 1980s) was replaced by the MPD 2021 in 2007.

- The **planning period for and phasing of the plans** are not necessarily coherent. Thus, it becomes difficult to integrate the projects and policies proposed under the various planning documents.

- The basic planning units (or zones) are not coherent in these plans. Different plans use different planning units, which generally do not coincide, such as census wards, administrative zones or municipal wards, solid waste management zones, water supply zones, sewerage zones, etc.

Key findings

- Master plans focus mainly on physical planning and their implementation has been confined to land use and building regulations.

- With the exception of statutory master plans, all of the other planning documents described above are of recent origin and have no history: they are "first generation" documents, prepared by the ULBs or relevant agencies, with limited return of experience.

- Generally, the **scope of implementation of these documents has been limited,** mainly due to the fact that implementing agencies did not have any prior experience in preparing and implementing these plans. In general, these plans were merely "wish lists" of projects. Other factors include varying political priorities, inadequate financial resources and the limited capability of agencies to design and implement projects.

- The master plans and other newly introduced plan documents have tried to cover the urban infrastructure sector in an integrated manner, but **some of the aspects systematically missing** are climate change, disaster risk management, institutional interplay (allocation of roles and responsibilities), active public participation in decision-making, etc.

- An overarching reason for **inadequate implementation** of the various development plans is that the agencies responsible for urban planning (development agencies) do not have any development accountability to meet the urban development agenda or urban service delivery standards, although almost all these plans have been prepared considering the urban service delivery standards.

2.2.5. *Sector overviews*

Water Supply

Sector Regulation

The water supply sector has a policy at the national level. However, this policy is an umbrella policy for all types of water uses for both urban and rural areas. There is no specific water policy for the urban sector at the national level. At the state level, Karnataka has a state-level urban water policy, while Odisha and Kerala have water policies in line with the national water policy. The Central Public Health and Environmental Engineering Organization (CPHEEO) manual on water supply provides guidelines on water supply project planning, design and implementation.

Key indicators

The service level benchmarks for the city case studies are as shown in Table 12.

Table 12 *Water supply service level benchmarks for city case studies*

City	Coverage	Per Capita Water Supply (LPCD)	Extent of Metering	Extent of Non-Revenue Water	Duration of Water Supply in Hours	O&M Cost Recovery	Collection Efficiency of Charges
Benchmark	100%	135	100%	20%	24	100%	90%
Bengaluru	51%	96	98%	46%	5	92%	97%
Mysore	79%	135	65%	22%	4.5	62%	70%
Kochi	67%	130	82%	40%	18	40%	83%
Nagpur	80%	135	77%	50%	12	93%	73%
Nashik	88%	140	95%	57%	3	72%	92%
Pimpri-Chinchwad	77%	170	78%	25%	6	85%	42%
Bhubaneswar	20%	76	1%	69%	2	39%	94%
Guwahati	20%	77	13%	40%	1-3	70%	N/A

Stronger than peers   Medium performance   Low performance

Source: Authors, from data on SLBs published by ASCI.

The key findings are as follows:

- Nashik, Nagpur, Mysore and Pimpri-Chinchwad have relatively good coverage.
- Non-revenue water losses are the lowest in Mysore and Pimpri-Chinchwad.
- Cost recovery is highest in Nagpur and Bengaluru.
- Bengaluru has low coverage since its municipal limits were recently expanded to include future urbanizable areas not previously covered by urban water supply.

Sewerage

Sector Regulation

The sewerage sector has been recently covered by the National Urban Sanitation Policy (NUSP) 2008 at the national level. The NUSP 2008 lays out a vision for urban sanitation in India. It instructs states to come up with their own detailed state-level urban sanitation strategies and city sanitation plans. It promotes the idea of totally sanitized and open-defecation free cities as a target and recommends the setting up of a multi-stakeholder city sanitation task force to achieve this. Environmental considerations, public health implications, and reaching the unserved and urban poor are given significant emphasis in the policy.

Funding options are laid out including direct central and state support through existing schemes, public-private partnerships, and external funding agencies. It directs that at least 20% of the funds should be earmarked for servicing the urban poor. Until 2012-2013, the states of Odisha and Tamil Nadu had prepared draft state sanitation strategies, and the cities of Mysore, Kochi, Nagpur, Nashik, Pune and Bhubaneswar had prepared draft city sanitation plans.

The CPHEEO manual on sewerage provides guidelines on sewerage system planning, design and implementation. Of the case studies, only Karnataka had implemented the urban water and sanitation policy in 2002.

Key indicators

The service level benchmarks for selected city case studies are shown in Table 13.

Table 13 *Sewerage service level benchmarks for the city case studies*

City	Coverage of Toilets	Coverage of Sewerage	Collection Efficiency of Sewerage	Adequacy of Sewage Treatment Capacity	Reuse and Recycling of Sewage	O&M Cost Recovery	Collection Efficiency of Charges
Benchmar	100%	100%	100%	100%	20%	100%	90%
Bengaluru	100%	38%	55%	106%	36%	110%	97%
Mysore	74%	78%	91%	100%	0%	N/A	26%
Kochi	95%	5%	100%	4.5%	N/A	0%	0%
Nagpur	80%	70%	24%	24%	100%	100%	60%
Nashik	100%	90%	100%	60%	91%	48%	71%
Pimpri-Chinchwad	98%	98%	70%	67%	100%	76%	69%
Bhubaneswar	70%	20%	80%	0%	0%	5%	80%
Guwahati	N/A	0%	0%	0%	0%	0%	0%

Stronger than peers   Medium performance   Low performance

Source: Authors, from data on SLBs published by ASCI.

The key observations are as follows:

- Nashik and Pimpri-Chinchwad have relatively good sewerage network coverage.
- The extent of recycling in Nagpur, Nashik and Pimpri-Chinchwad is high.
- O&M cost recovery is high in Bengaluru and Nagpur.
- Nagpur has good coverage and cost recovery but low treatment capacity.
- Bhubaneswar, Guwahati and Kochi have very low treatment capacities.

Solid waste management

Sector regulation

The municipal solid waste management sector is primarily governed by Municipal Solid Waste (Management and Handling) Rules 2000. These rules entrust responsibility for municipal solid waste management to ULBs. The ULB responsibilities under the rules include collection, segregation, storage, transportation, processing and disposal of municipal solid waste. Biomedical waste has to be disposed of in accordance with the Bio-Medical Waste (Management and Handling) Rules 1998, and hazardous waste has to be managed in accordance with the Hazardous Waste (Management and Handling) Rules 1989 as amended from time to time.

The CPHEEO manual on municipal solid waste management provides guidelines on solid waste management system planning, design and implementation.

The National Urban Sanitation Policy (NUSP) 2008 lays out a vision for urban sanitation (including municipal solid waste management) in India. It instructs states to prepare and implement state sanitation strategies and cities to prepare and implement city sanitation plans. To date, the states of Odisha and Tamil Nadu have prepared draft state sanitation strategies, and the cities of Mysore, Kochi, Nagpur, Nashik, Pune and Bhubaneswar have prepared draft city sanitation plans.

Key indicators

The service level benchmarks for the city case studies are shown in Table 14.

Table 14 *Solid waste management service level benchmarks for the city case studies*

City	Household Coverage	Collection Efficiency of MSW	Extent of Segregation	Extent of MSW Recovered	Extent of Scientific Disposal	O&M Cost Recovery	Collection Efficiency of Charges
Benchmar	100%	100%	100%	80%	100%	100%	90%
Bengaluru	70%	60%	2%	33%	54%	1%	16%
Mysore	56%	89%	1%	29%	0%	3%	16%
Kochi	50%	53%	65%	95%	0%	1%	0%
Nagpur	90%	80%	60%	40%	50%	10%	40%
Nashik	87%	87%	35%	100%	0%	33%	35%
Pimpri-Chinchwad	54%	83%	50%	25%	4%	22%	64%
Bhubaneswar	75%	N/A	0%	0%	0%	0%	0%
Guwahati	50%	83%	0%	N/A	0%	65%	N/A

Stronger than peers / Medium performance / Low performance

Source: Authors, from data on SLBs published by ASCI.

The key observations are as follows:

- Nagpur and Nashik have relatively good household coverage.
- The extent of solid waste segregation is insignificant in Bengaluru and Mysore.
- Significant scientific disposal of MSW is seen in Bengaluru and Nagpur.
- O&M cost recovery is higher in Guwahati than in other cities. However, it must be noted that coverage is low and therefore less solid waste is being managed.

Urban transport

Sector regulation

Urban transport is a state responsibility. This sector is covered by several sectoral regulations; but there is currently no single legislation that covers the requirements of urban transport comprehensively. The Motor Vehicles Act deals with the licensing of vehicles, the Railway Act covers inter-city traffic, the Metro Construction Act deals with specific issues related to the construction of the metro rail, and the Tramways Act deals with at-grade free access tramways. Other modes of mass rapid transit such as bus rapid transit, light rail transit, monorail and several other guided modes of transport, and issues of transport planning, multi-modal integration, safety, tariffs and financing are not covered under any act.

The National Urban Transport Policy 2006 is the overarching policy formulated to address urban transport concerns at the national level. However, no state has developed a state-level urban transport policy yet.

Key indicators

The handbook for benchmarking has been prepared and the union and state governments are currently undertaking activities to establish urban transport service level benchmarks for major cities. Currently, no such benchmarks are available for evaluation and comparison.

This sector is a strong focus for state and local governments, with most state case studies focusing on regional rail connectivity and city case studies developing mass rapid transit system projects.

2.2.6. *Urban development funding programs*

National-level programs

In 2005, the Ministry of Urban Development (MoUD) launched the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The Mission was launched with the aim of encouraging urban-level reforms and fast tracking the planned infrastructure development of 65 identified mission cities. Under the JNNURM, financial assistance was provided to each of the cities for specific project planning, development and implementation for projects in eight core sectors: water supply, sewerage, drainage, solid waste, urban transport, urban renewal, heritage preservation and slum improvement.

Post-independence, the JNNURM was the country's first national flagship program of this nature and critical mass for the urban sector. The JNNURM aimed to provide a strong impetus to invest in the urban sector and give cities an incentive to develop sustainable investment frameworks through service delivery reform and cost recovery from the services provided. The JNNURM was launched with an allocation of about EUR 9,116.02 million to fund urban infrastructure development. The total Additional Central Assistance (ACA) budgeted under the Urban Infrastructure and Governance (UIG) component is EUR 4,350.83 million. Table 15 shows the sector-wise composition of projects approved.

Table 15 *JNNURM urban infrastructure and governance fund consumption*

N°	Sector	N° of Projects Approved	N° of Projects Completed	Approved Cost	ACA Committed	ACA Released
1	Drainage/Storm Water Drains	76	26	1,103	447	330
2	Roads/Flyovers/ROB	100	59	1,038	428	295
3	Water Supply	166	64	2,746	1,340	962
4	Sewerage	115	32	1,955	926	603
5	Urban Renewal	10	4	60	25	13
6	Mass Rapid Transit System	23	7	694	315	234
7	Other Urban Transport	17	12	101	48	34
8	Solid Waste Management	44	12	247	128	89
9	Development of Heritage Areas	7	1	29	18	9
10	Preservation of Water Bodies	4	0	15	9	7
11	Parking Lots and Spaces on PPP Basis	5	0	110	43	13
Total		567	217	8,098	3,726	2,589

Figures in million euros (exchange rate: EUR 1 = Rs. 77.95).

Source: Authors, from www.jnnurm.nic.in; status as of November 2013.

Table 15 highlights that less than 50% of the projects have been completed to date. Nearly 50% of the approved projects are for the water supply and sewerage sector. Roads and other urban transport projects have the highest completion rate. No projects for parking lots and spaces on a PPP basis have been completed. Further, the proportion of ACA released for such projects is the lowest.

In 2011, the Planning Commission formed a committee on JNNURM-II based on the HPEC report recommendation for launching a new improved JNNURM. The committee report released in March 2013 underlined the important lessons learned from JNNURM-I and recommended the following for JNNURM-II, which could be designed in 2014/2015.

Table 16 *JNNURM: Lessons learned and future strategies*

Lessons learned from the JNNURM-I	Strategies under JNNURM-II
• poor planning process and exclusion of peri-urban areas • failure to adopt service level benchmarks • lack of adequate capacity • one size fits all approach • slow implementation of reforms • process-heavy implementation	• build adequate capacity including dedicated municipal framework • plan urbanization by drawing up development plans through a participatory process • establish efficient governance structures removing overlapping functions • promote the financial sustainability and accountability of ULBs • attract private investments through PPPs • adopt service level benchmarks • plan the development of smaller towns and peri-urban areas • incentivize innovation and more rapid learning across urban systems • simplify schemes

Source: Authors from the HPEC report, March 2013.

With respect to city case studies under this study, the progress on JNNURM projects is given in Table 17.

Table 17 *JNNURM: Progression of projects for city case studies*

City	Number of Projects	Number of Projects Completed	Approved Cost of Projects	ACA Committed	ACA Released to Date	Utilized Amount	Fund Utilization Rate (%)
Bengaluru	38	23	332	102	77	251	76%
Mysore	9	0	137	82	59	87	64%
Kochi	6	0	65	33	16	23	35%
Nagpur	17	8	192	96	57	120	62%
Nashik	6	3	102	51	36	91	90%
Pune#	20	8	410	199	183	418	102%
Bhubaneswar	3	1	74	59	37	28	38%
Guwahati	2	0	41	36	32	41	101%

Projects included for Pune and Pimpri-Chinchwad.
Source: Authors from data from www.jnnurm.nic.in; ACA: Additional Central Assistance as of 30 June 2013; figures in million euros.

Under the JNNURM program, all the cities signed a tripartite memorandum of understanding with the central government and state governments to implement 23 reforms. The reform achievement score is highest in Bengaluru, Mysore, Nashik and Pune. Bhubaneswar and Guwahati have shown less progress than other cities in implementing reforms. Most cities have not achieved 100% O&M cost recovery in water supply and solid waste management (SWM) reforms. This may be attributed to the poor quality and low coverage of services and to local political resistance in implementing user charges. The details of the reform scores are presented in Appendix A.

State level programs

In addition to this flagship national program, in Tamil Nadu, Karnataka and Kerala, several state-level programs have been ongoing in the urban development sphere. Generally, these programs are either statewide or focused on particular regions within the state or particular classes of towns. These programs are generally reform-oriented and require the state and the local government to initiate reforms to increase equity and efficiency. Most of these programs include technical assistance and capacity building. Broadly, these programs can be classified into the following categories:

1. Government-led integrated urban development programs;
2. Donor-funded programs for the financing of urban infrastructure projects (includes urban transport, urban water supply and sewerage schemes, and others); and
3. Funds or trusts set up to leverage urban development projects.

A brief overview of these programs is given below:

Government-led integrated urban development programs: These statewide programs are focused on the development of urban infrastructure projects and are supported by a reform framework. The objective is to put in place basic infrastructures and build the capacities of local authorities to sustainably operate and maintain the projects.

Table 18 *Government-led urban development programs in the state case studies*

Program	Components	Coverage	Corpus Size
Chennai Mega City Development Mission (CMCDM)	implementation of urban infrastructure projects	Chennai and its suburban areas	EUR 192 million
Integrated Urban Development Mission (IUDM)	implementation of urban infrastructure projects	all ULBs in Tamil Nadu except Chennai Municipal	EUR 188 million
IGOI Megacity Scheme	revolving fund for urban infrastructure projects	Bengaluru	EUR 57 million
Chief Minister's Small and Medium Towns Development Program (CMSMTDP)	implementation of urban infrastructure projects	all ULBs except Bengaluru	EUR 187 million

Source: Authors, from state regulatory sources.

Development agency–funded programs for the financing of urban infrastructure projects: These programs focus on sustainable urban development in specific sectors and geographies. These programs provide loans for the development of urban infrastructure projects and finance-plus elements, such as institutional strengthening, reform implementation and the development of new development models (such as PPPs in urban infrastructure projects, 24/7 water supply, GIS-based property taxation systems, e-governance, etc.).

Table 19 *Development agency urban development programs in the state case studies*

Program	Components	Coverage	Corpus Size
Tamil Nadu Urban Development Project (TNUDP) – III assisted by the World Bank	implementation of urban infrastructure projects	all ULBs in Tamil Nadu	EUR 256 million
Tamil Nadu Urban Infrastructure Project (TNUIP) assisted by the Japan International Cooperation Agency	implementation of six water supply projects and technical assistance	all ULBs in Tamil Nadu	EUR 44 million
Karnataka Urban Development and Coastal Environmental Management Project (KUDCEMP) assisted by ADB	implementation of urban infrastructure projects	coastal towns in Karnataka	EUR 128 million
Karnataka Urban Water Sector Improvement Project (KUWASIP) assisted by the World Bank	urban water and sanitation projects emphasizing 24/7 water supply	Gulbarga and Hubli-Dharwad	EUR 226 million
Karnataka Integrated and Sustainable Water Resources Management Investment Program (KISWRMIP) assisted by ADB	integrated and sustainable water resources management investment program	upper Tungabhadra sub-basin of the Krishna River basin	EUR 174 million
Karnataka Municipal Reform Project (KMRP) assisted by the World Bank	implementation of urban infrastructure projects	32 towns in Karnataka	EUR 30 million

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Program	Components	Coverage	Corpus Size
North Karnataka Urban Sector Investment Program (NKUSIP) assisted by ADB	multi-tranche financing facility for the implementation of urban infrastructure projects	25 towns in North Karnataka	EUR 218 million
Kerala Sustainable Urban Development Project (KSUDP) assisted by ADB	implementation of urban infrastructure projects	five municipal corporations in Kerala	EUR 182 million
Kerala Local Government Service Delivery Project (KLGSDP) assisted by the World Bank	strengthening of local self-governments (Panchayati Raj Institutions [PRIs] and ULBs)	978 gram panchayats and 60 municipalities in Kerala	EUR 18 million

Source: Authors, from state regulatory sources.

Funds or trusts set up to leverage urban development projects: These funds are set up as pooled financing facilities to develop bankable infrastructure projects. Eligible components include project costs, project preparation and development costs and viability gap funding.

Table 20 *Urban development funds in the state case studies*

Program	Components	Coverage	Corpus Size
Tamil Nadu Urban Development Fund (TNUDF)	PPP providing long-term finance for urban infrastructure projects on a non-guarantee mode	all ULBs in Tamil Nadu	EUR 181 million
Tamil Nadu Infrastructure Development Fund (TNIDF)	viability gap funding for PPPs	any sponsoring agency of the Govt. of Tamil Nadu	EUR 256 million
Tamil Nadu Project Preparation Fund (TNPPF)	financial support for project preparation and capacity building	ny sponsoring agency of the Govt. of Tamil Nadu	EUR 25 million
Sustainable Municipal Infrastructure Financing – Tamil Nadu (SMIF-TN) assisted by KfW	financing of urban infrastructure projects (term loans to ULBs, loans to the Water and Sanitation Pooled Fund for the development of the bond market)	all ULBs in Tamil Nadu	EUR 64 million

Source: Authors, from state regulatory sources.

Key findings

- **Finance-plus elements in funding:** Funding for urban infrastructures projects has not been a constraint for the states of Tamil Nadu, Karnataka and Kerala. However, interest has been expressed in additional financing for primarily two reasons. Firstly, the investment requirements are huge given the current infrastructure deficit. Secondly, finance-plus elements are expected to come along with donor funding, *e.g.* for conditions mandating the up-gradation of technology, and institutional reforms (for better service delivery, transparency and effectiveness in operations).
- **Focus on small and medium towns:** Funding is primarily sought for small and medium towns. The larger towns are already benefitting from the JNNURM. There are needs and opportunities for statewide programs and demonstration projects in a limited number of ULBs.
- **Focus sectors:** Solid waste management is one of the most neglected sectors in terms of funding. In addition, new technologies are expected to be introduced through finance-plus elements of funding, with particular interest in sectors such as rail-based transport and water supply.
- **Focus cities:** Implementation capabilities, as demonstrated under the JNNURM, vary significantly between cities.

2.2.7. *Financial assessment*

The civic administration of the city is the responsibility of the municipal corporation, while there are various government departments and their directorates with development-related responsibilities. Among all the service providers, only municipal corporations and parastatals with O&M responsibilities have their own sources of revenue, which are collected in the form of **taxes and/or user charges**, though most of their revenue/income is in the form of **assigned revenues** and/or **budgetary revenue grants.**

Generally, taxes for services are collected along with property tax as a cess, while user charges are billed and collected based on service category (*e.g.* based on connection pipe size for water supply) or actual metered usage. The collection efficiency of user charges in various cities is given in Table 21.

Table 21 *Collection efficiency of user charges in the city case studies*

Benchmark	Bengaluru	Mysore	Kochi	Nagpur	Nashik	Pimpri-Chinchwad	Bhubaneswar	Guwahati
90%	97%	70%	83%	73%	92%	42%	94%	N/A

Source: Authors, from data on SLBs published by ASCI .

This financial assessment covers the assessment of the municipal finances of the municipal corporations of selected city case studies. Financial assessments were carried out by the consultant team based on the financial information collected from these municipal corporations for the last three years (2009-2012).

Accounting and budgeting systems

Table 22 *Accounting and budgeting systems in the city case studies*

Single-entry, cash-based / double-entry accrual-based systems	• Municipal corporations use the single entry (cash-based) accounting system or double entry accrual-based accounting system. Most corporations work on the cash-based accounting system, but they also produce accounts using the double-entry accounting system (DEAS) and are slowly migrating to DEAS. The municipal corporations currently using DEAS are Bengaluru, Mysore, Nagpur, Nashik and Pimpri-Chinchwad. Kochi, Guwahati and Bhubaneswar are in the process of migrating to DEAS and currently use both accounting systems.
Description of the budgeting process	• The corporation prepares a single budget, *i.e.* a general budget (exception: there is a separate budget for the urban poor in Maharashtra). The budgeting process in the ULB starts in the month of December. Based on the last 9 months' actual figures, a budget is prepared for the remaining 3 months of the existing financial year. Accordingly, based on the projected (3 months) and actual (9 months), the budget is prepared for the next financial year. • Each department in the ULB prepares its own budget, which is consolidated by the accounts department. The accounts department presents the final budget to the Municipal Commissioner.

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	• The Municipal Commissioner presents the budget to the standing committee of the elected body following which the same is presented to the elected body, which passes the final budget after its recommendations. The budget process starts from December and is supposed to end by March.

Source: Authors, from specifically collected data.

Income and expenditure trends

Table 23 indicates the cumulative average growth rate in the income and expenditure of the municipal corporations in the selected city case studies.

Table 23 *Income and expenditure growth rates in the city case studies*

	Income CAGR	Expenditure CAGR
Bengaluru (2007-2011)	23%	28%
Mysore (2006-2012)	16%	13%
Kochi (2009-2012)	6%	14%
Nagpur (2009-2012)	19%	8%
Nashik (2008-2012)	16%	7%
Pimpri-Chinchwad (2006-2011)	16%	17%
Bhubaneswar (2009-2012)	12%	0%
Guwahati (2008-2012)	6%	17%

Source: Authors.

Key findings

- Bengaluru has the highest income compounded annual growth rate (CAGR), followed by Nagpur, Mysore, Nashik and Pimpri-Chinchwad.
- Expenditure CAGRs are higher than income CAGRs for Bengaluru, Kochi, Guwahati and Pimpri-Chinchwad. This indicates that expenditure is growing faster than income in these ULBs.
- Compounded annual growth in income is higher than compounded annual growth in expenditure in Mysore, Nagpur and Nashik, indicating a positive financial position.

Financial sustainability

Table 24 compares average income and expenditure patterns (for the latest three or four years) of municipal corporations in the selected city case studies.

Table 24 *Average income and expenditure in the city case studies*

	Income			Expenditure			Surplus/Deficit			Operating Ratio
	Revenue	Capital	Total	Revenue	Capital	Total	Revenue	Capital	Total	
Bengaluru	152	173	325	147	184	331	5	(11)	(6)	0.97
Mysore#	23	25	48	18	24	42	5	1	6	0.80
Kochi	16	12	28	13	17	29	4	(5)	(1)	0.77
Nagpur	83	16	99	56	37	93	27	(21)	6	0.67
Nashik	89	13	102	48	54	102	42	(42)	(0)	0.54
Pimpri-Chinchwad	126	34	161	54	106	160	72	(71)	1	0.43
Bhubaneswar	12	9	21	8	10	18	4	(1)	3	0.67
Guwahati	12	3	15	8	4	12	4	(0)	4	0.66

Note: Figures in million euros; #Data for 2011-2012.
Source: Authors, from city budgets.

Key findings

- A favorable operating ratio of 0.4 to 0.7 is seen in Nagpur, Nashik, Pimpri-Chinchwad, Bhubaneswar and Guwahati. This demonstrates their ability to invest in capital projects.
- Bengaluru does not have much capacity to finance capital expenditures through its operative surplus as its operating ratio is close to 1 (that is 0.97), while Nagpur, Nashik and Pimpri-Chinchwad have very favorable operating ratios and the capacity to fund capital expenditures. Other cities also have good operating ratios, but they are small and suffer from various other weak indicators as discussed earlier.

Key financial indicators

Table 25 compares the key financial indicators of the municipal corporations in the selected city case studies. These figures are provisional and based on analysis of available budget documents.

Table 25 *Key financial indicators for the city case studies*

Key Financial Indicators	Bengaluru	Mysore	Kochi	Nagpur	Nashik	Pimpri-Chinchwad	Bhubaneswar	Guwahati
Financial Autonomy								
1 City-levied taxes/all resources	45%	13%	48%	93.5%	85.4%	54%	23%	34%
2 Share of user charges to total income	21%	13%	74%	12.4%	14.6%	2%	0.14%	60.81%
3 Share of holding tax to tax revenues	95%	71%	72%	22.4%	9.0%	10%	43%	65%
4 Share of holding tax to total income	52%	17%	35%	16.2%	7.7%	6%	10%	22%
Debt Sustainability								
5 Repayment capacity = amount of debt outstanding / operating surplus	46.93%	3.43%	Nil	8.29%	Nil	Nil	Nil	Nil
6 Debt repayments (interest and capital) / operating surplus	5.74%	0.32%	Nil	0.05%	Nil	Nil	Nil	Nil
Administration and Salary Costs								
7 Establishment / operating revenue (includes only salaries & wages)	17%	20%	26%	N/A	19.8%	21%	32%	47%
8 Establishment & administrative expenses / operating revenue (includes salaries, wages and administrative expenses)	34%	25%	31%	31%	53.9%	46%	36%	47%
9 Repairs & maintenance / operating revenue	20%	42%	23%	34%	34.2%	25%	13%	N/A

Note: Nil = no debt outstanding.
Source: Authors, from city budgets.

Key findings

- Bengaluru, Nagpur and Mysore have borrowed from lenders and are currently servicing the debt.
- Nagpur, Nashik and Pimpri-Chinchwad are relatively autonomous. More than 85% of their income comes from their own resources. It should be noted, however, that the main source of income for Nagpur, Nashik and Pimpri-Chinchwad has been the octroi and the replacement of the octroi by the local benefit tax could burden their financial position somewhat.[12]

ULBs' capacity to sustain investments

The above analysis demonstrates that different ULBs have very different financial capacities. ULBs like Pimpri-Chinchwad, Nagpur and Nashik have relatively better financial capacities. Kochi, Bhubaneswar and Guwahati have little capacity to generate their own income and are highly dependent on the state government. Bengaluru and Mysore have very high operating ratios, indicating weak capability to service any further debt. Table 26 provides a snapshot of the performance of ULBs on key financial indicators as they relate to investment capacities.

[12] The Government of Maharashtra replaced the octroi with the local benefit tax (LBT) from 1 April 2012 onwards. In general, the compensation is provided at a rate of normally 5%-7% per annum on the past year's octroi collection. Based on discussion with stakeholders, it is understood that, compared with the growth in the octroi, the LBT would relatively be less than the current octroi amount as the octroi amount in the past few years has grown at a rate of 10%. Hence, there would be burden on these corporations.

Table 26 *Investment capacities for the city case studies*

	Income CAGR	Expenditure CAGR	Operating Ratio	Reform Achievement	Fund Utilization Rate
Bengaluru	23%	28%	1.97	95%	76%
Mysore	16%	3%	1.80	90%	64%
Kochi	6%	4%	1.77	99%	35%
Nagpur	19%	8%	1.67	93%	62%
Nashik	16%	7%	1.54	100%	90%
Pimpri-Chinchwad	16%	17%	1.43	100%	102%
Bhubaneswar	12%	0%	1.67	75%	38%
Guwahati	6%	17%	0.66	60%	101%

Source: Authors, from specifically collected data.

Impact of the JNNURM on municipal finances

- The case studies further highlight that the share of own source revenue to total income has decreased since 2007. This has happened mainly because of the substantial increase in the capital income infused through the JNNURM.
- The baseline and operating ratio of ULBs in the case studies has declined in the last few years. This has happened mainly on account of (i) an increase in O&M expenditure for newly created assets, (ii) servicing of debt raised by ULBs for their contribution of capital projects under the JNNURM, and (iii) capital projects taken up through accumulated revenue surplus.

Conclusion

Conclusion

The requirements for effective management of urban services remain to be met in most of the eleven case studies analyzed. Insufficient functional empowerment and financial autonomy of local authorities hinder their capacity to improve local public services. The decentralization process is highly uneven across states, but overall state goverments still have a decisive bearing on urban service delivery, either directly through parastatals, or through ULB budget control measures. As a result, local authorities have not achieved a unified governance structure. As an interim intervention, and in the absence of further institutional reforms, development accountability of state or city parastatals (towards service levels and citizens) is needed to improve local services.

Even though funding has been made available under the JNNURM and externally aided projects, most of the ULBs have not demonstrated a capacity to manage the operations and maintenance of the large infrastructure projects financed. The revenue-related reforms have not made adequate progress. This has eroded the financial base of even the best-performing ULBs.

The long-term financial sustainability of urban investments is not the only bottleneck: at the investment stage, and even in states where funding is plentiful, the improvement of urban services is impaired by a lack of expertise in project preparation and procurement. Thus, ULBs express needs for technical assistance programs from international donors, without which funds risk being underutilized.

As highlighted by the India Municipal Finance Report 2011, this finding calls for further revenue mobilization reforms: the revenue base of ULBs should be broadened, with the allocation of exclusive taxes and greater resort to user charges; grants should be further linked to service delivery performance; and major capacity building programs should be undertaken to strengthen investment planning, project implementation and financial management.

Key findings related to municipal borrowing

The state government is a key stakeholder in municipal borrowing. Decisions relative to the mobilization of loan financing for urban infrastructure investments are made at the state level:

- India does not have a rule-based or market-based municipal borrowing system. It is a case-by-case approval system. The ULBs in all Indian states are required to receive state government approval each time they wish to borrow funds.
- Most of the ULBs do not have borrowing capacity. Even the ULBs that demonstrate adequate borrowing capacity face other constraints including lack of willingness, lack of technical capacity, easy availability of other funds with soft budgetary constraints, etc.
- In particular, the JNNURM provided grant money with soft budgetary constraints to ULBs. However, most of the ULBs did not have the capacity to manage the O&M of the large infrastructure projects financed. The revenue-related reforms did not progress adequately. This has eroded the financial base of even the best-performing ULBs. There will be a lag between the JNNURM-I and the next JNNURM-II federal program, but this does not mean that lending will be sought during this period.

Appendices

Appendices

Appendix A.
Status of reform implementation under the JNNURM

The status of implementation of JNNURM reforms as of July 2013 was as follows:

Table 27 *JNNURM Implementation Status – July 2013*

	Max. score	Bengaluru	Mysore	Kochi	Nagpur	Nashik	Pune	Bhubaneswar	Guwahati
ULB-LEVEL REFORMS	60	57	54	59.5	55.5	60	60	45	35.8
e-Governance	10	10	10	10	10	10	10	7.5	1.3
Shift to Accrual-Based Double-Entry Accounting	10	10	10	10	10	10	10	10	8.5
Property Tax (85% coverage & 90% collection efficiency)	10	10	9.5	10	10	10	10	6.5	8.5
100% O&M Cost Recovery in Water Supply & SWM	10	8.5	6	9.5	5.5	10	10	3.5	0
Internal Earmarking of Funds for Services to the Urban Poor	10	10	10	10	10	10	10	7.5	7.5
Provision of Basic Services to the Urban Poor	10	8.5	8.5	10	10	10	10	10	10
STATE-LEVEL REFORMS	70	65.5	65.5	60.5	60	60	60	53	57
Implementation of the 74th CAA	15	12.5	12.5	15	15	15	15	15	14
Integration of City Planning & Delivery Functions	5	3	3	5	5	5	5	3	3
Reform in Rent Control	10	10	10	8	0	0	0	0	0
Stamp Duty Rationalization to 5%	10	10	10	2.5	10	10	10	10	10
Repeal of ULCRA	10	10	10	10	10	10	10	10	10
Enactment of Community Participation Law	10	10	10	10	10	10	10	5	10
Enactment of Public Disclosure Law	10	10	10	10	10	10	10	10	10

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	Max. score	Bengaluru	Mysore	Kochi	Nagpur	Nashik	Pune	Bhubaneswar	Guwahati
OPTIONAL REFORMS (State Level/ULB Level)	100	95	95	82.5	90	90	90	80	73.5
Introduction of Property Title Certification System in ULBs	10	10	10	2.5	0	0	0	0	0
Revision of Building Byelaws – Streamlining the Approval Process	10	10	10	10	10	10	10	10	10
Revision of Building Byelaws to Make Rainwater Harvesting Mandatory	10	10	10	10	10	10	10	10	10
Earmarking 25% of Developed Land in All Housing Projects for EWS/LIG	10	5	5	0	10	10	10	10	2.5
Simplification of Legal and Procedural Framework for the Conversion of Agricultural Land for Non-Agricultural Purposes	10	10	10	10	10	10	10	10	10
Introduction of a Computerized Land and Property Registration Process	10	10	10	10	10	10	10	10	10
By-laws on Reuse of Recycled Water	10	10	10	10	10	10	10	10	10
Administrative Reforms	10	10	10	10	10	10	10	6	6
Structural Reforms	10	10	10	10	10	10	10	4	5
Encouraging Public-Private Participation	10	10	10	10	10	10	10	10	10
Total Score	230	217.5	214.5	202.5	205.5	210	210	178	166.3
REFORM ACHIEVEMENT (%)	100	95	93	88	89	91	91	77	72

Source: www.jnnurm.nic.in.

Appendix B.
List of research centers working on urban development

In 2009, the Ministry of Urban Development designated the following institutions as centers of excellence to strengthen capacity building measures and promote awareness, research and training in priority areas. These centers of excellence seek to address urban development issues at national, state and local levels and will provide support to state and local governments in key areas of urban development.

Table 28 *Centers of excellence in urban development*

#	Centre of Excellence	Areas of Operation
1	Administrative Staff College of India, Hyderabad	municipal service delivery, urban reforms, and public-private partnerships
2	Centre for Environment and Development, Thiruvananthapuram	waste water management and solid waste management
3	Centre for Science and Environment, New Delhi	sustainable water management
4	Indian Institute of Management, Bengaluru	urban administration and financial management
5	Indian Institute of Technology, Guwahati	integrated land use planning & water resource management
6	Indian Institute of Technology, Chennai	decentralized waste water management, PPPs and urban transport
7	Integrated Research and Action for Development (IRADe), New Delhi	climate change vulnerability and adaptation
8	Lal Bahadur Shastri National Academy of Administration, Mussoorie	urban development and management
9	The Energy and Resources Institute, New Delhi	urban development

Source: Ministry of Urban Development.

In addition, research units have been set up in the following institutions for specific aspects of urban development.

Table 29 *Research units in urban development*

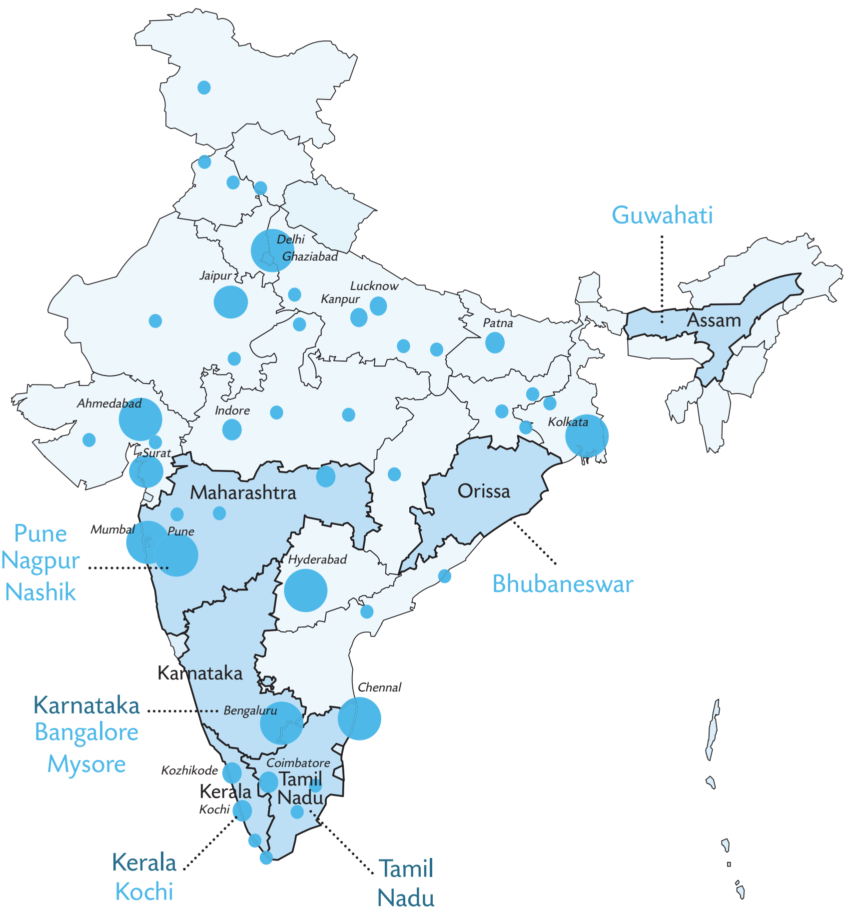
#	Institution	Research Unit
1	Centre for Environmental Planning & Technology, Ahmedabad	Centre for Excellence – Urban Transport and Centre for Urban Equity
2	Indian Institute of Technology, Delhi	Centre for Excellence – Urban Transport
3	Indian Institute of Technology, Chennai	Centre for Excellence – Urban Transport
4	National Institute of Technology, Warangal	Centre for Excellence – Urban Transport
5	School of Planning and Architecture, New Delhi	National Resource Centre on Urban Poverty

Source: Ministry of Urban Development.

Other prestigious research institutes in urban development also include the following:

- Janagraha, Bengaluru and Indian Urban Space Foundation, Bengaluru
- Centre for Good Governance, Hyderabad
- National Institute of Urban Affairs, Delhi
- National Institute of Public Finance and Policy, Delhi
- National Council for Applied Economic Research, Delhi
- Indian Institute of Human Settlements, Bengaluru
- Human Settlements Management Institute, Delhi
- Society for Participatory Research in Asia, Delhi
- Indian Institute of Public Administration, Delhi
- Yashwantrao Chavan Academy of Development Administration, Pune

Appendix C.
Map of the case studies selected



Million plus cities of india

Case studies Cities (light blue): Nagpur, Nashik, Pune, Bangalore, Mysore, Kochi, Bhubaneswar and Guwahati.
Case studies States (dark blue): Karnataka, Kerala and Tamil Nadu.

Source: Authors.

Acronyms and abbreviations

Acronyms and abbreviations

ACA	Additional Central Assistance
ADB	Asian Development Bank
AFD	*Agence Française de Développement*
BBMP	Bruhat Bengaluru Mahanagara Palike
BDA	Bangalore Development Authority
BMA	Bangalore Metropolitan Area
BMC	Bhubaneswar Municipal Corporation
BMRC	Bangalore Metro Rail Corporation
BMRDA	Bangalore Metropolitan Region Development Authority
BMTC	Bangalore Metropolitan Transport Corporation
BOT	Build Operate Transfer
BOLT	Build Own Lease Transfer
BOOT	Build Own Operate Transfer
BRTS	Bus Rapid Transit System
BWSSB	Bangalore Water Supply and Sewerage Board
CAA	Constitutional Amendment Act
CAGR	Compounded Annual Growth Rate
CDP	City Development Plan
CMA	Commissionerate of Municipal Administration
CMWSSB	Chennai Metropolitan Water Supply and Sewerage Board
CPHEEO	Central Public Health and Environmental Engineering Organization

DEA	Department of Economic Affairs
DEAS	Double Entry Accounting System
DPR	Detailed Project Report
DSCR	Debt Service Coverage Ratio
DULT	Directorate of Urban Land Transport
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GMC	Guwahati Municipal Corporation
GMDA	Guwahati Metropolitan Development Authority
GOI	Government of India
GOK	Government of Karnataka
GSDP	Gross State Domestic Product
IDSMT	Integrated Development Schemes of Small & Medium Towns
INR	Indian National Rupee
ITES	Information Technology Enabled Services
IUDM	Integrated Urban Development Mission
IWRM	Integrated Water Resource Management
JICA	Japan International Cooperation Agency
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
KINFRA	Kerala Industrial Infrastructure Development Corporation
KLGSDP	Kerala Local Government Service Delivery Project
KMC	Kochi Municipal Corporation
KMRL	Kochi Metro Rail Limited
KMRP	Karnataka Municipal Reforms Project
KRDFB	Kerala Road Development Fund Board

KSRTC	Kerala State Road Transport Corporation
KSUDP	Kerala Sustainable Urban Development Project
KUDCEMP	Karnataka Urban Development and Coastal Environmental Management Project
KUIDFC	Karnataka Urban Infrastructure Development and Finance Corporation Limited
KUWASIP	Karnataka Urban Infrastructure Development & Finance Corporation
KUWSDB	Karnataka Urban Water Supply and Drainage Board
KWA	Kerala Water Authority
KWSPF	Karnataka Water & Sanitation Pooled Fund
LPCD	Liters Per Capita Per Day
MCC	Mysore City Corporation
MFF	Multi-tranche Financing Facility
MLD	Million Liters Per Day
MRTS	Mass Road Transport System
MSRTC	Maharashtra State Road Transport Corporation
MSW	Municipal Solid Waste
MUDA	Mysore Urban Development Authority
NKUSIP	North Karnataka Urban Sector Investment Program
NUSP	National Urban Sanitation Policy
ODA	Official Development Assistance
OWSSB	Odisha Water Supply & Sewerage Board
PCMC	Pimpri-Chinchwad Municipal Corporation
PCNTDA	Pimpri-Chinchwad New Town Development Authority
PHEO	Public Health Engineering Office
PMC	Pune Municipal Corporation

PPP	Public-Private Partnership
SFC	State Finance Commission
SMIF	Sustainable Municipal Infrastructure Financing
SPV	Special Purpose Vehicle
STP	Sewerage Treatment Plant
SWM	Solid Waste Management
TNRDC	Tamil Nadu Road Development Company Limited
TNUDF	Tamil Nadu Urban Development Fund
TNUDP	Tamil Nadu Urban Development Project
TNUIP	Tamil Nadu Urban Infrastructure Project
TTMC	Traffic Transit Management Centre
UDPFI	Urban Development Plan Formulation and Implementation
UGD	Under Ground Drainage
UIG	Urban Infrastructure and Governance
ULB	Urban Local Body
ULCRA	Urban Land Ceiling and Regulation Act
URIF	Urban Reform Incentive Fund
USD	US Dollars
UWSS	Underground Water and Sewerage System
VGF	Viability Gap Funding

Currency Symbols

EUR euro

Rs. Indian rupee

USD US dollar

Exchange Rate as of 4 July 2013 (used in case studies)

EUR1 = Rs. 77.95

USD1 = Rs. 60.10

(reference: Reserve Bank of India)

Indian Numbering System

1 lakh = 105 = 100,000

1 crore = 107 = 10,000,000

1 crore = 100 lakh

Glossary

Glossary

74th Constitution Amendment Act (CAA) – The 1992 parliamentary amendment to the Constitution of India decentralizing authority and creating a third tier of democratically elected government for local urban areas of various sizes (municipal corporations, municipal councils, and nagar panchayats). The CAA had to be ratified and implemented by state governments. It includes a list of functional responsibilities; adequate representation of weaker sections and women in government; regular and fair conduct of local elections; and the creation of ward committees, district planning committees, metropolitan planning committees and State Finance Commissions.

Accounting System – The total structure of records and procedures that identify, record, classify and report information on the financial position and operations of a governmental unit or any of its funds, account groups and organizational components.

Accrual Basis of Accounting – A method of accounting that recognizes the financial effect of transactions, events and inter-fund activities when they occur, regardless of the timing of the related cash flows.

Betterment Levy – Whenever part of a community benefits from a public improvement, or betterment (*e.g.* water, sewer, sidewalks, etc.), special property taxes may be assessed on the property owners of that area to reimburse the governmental entity for all or part of the costs it incurred in completing the project.

Bond – A means to raise money through the issuance of debt. A bond issuer/borrower undertakes in writing to repay a specific sum of money, alternately referred to as the face value, par value or bond principal, to the buyer of the bond on a specific future date (the maturity date), together with periodic interest at a set rate.

Budget – A plan for allocating resources to support particular services, purposes and functions over a specific period of time.

Capital Expenditure – Cash investments to acquire or improve an asset that will have a lifespan of more than one year, distinct from cash outflows for expense items normally considered as part of current operations.

Cash Basis – An accounting convention in which transactions are recorded in the period in which payment is made or received as opposed to the period in which the transaction took place (accruals basis).

Central Finance Commission – A government body appointed by the President of India every five years to recommend overall allocations of non-planned revenue resources (resources that the Planning Commission does not prescribe). The CFC is also responsible for making decisions on the distribution of taxes to be shared between the centre and states; the allocation of proceeds between states; setting principles that govern grants-in-aid by the centre to the states; and measures needed to augment the consolidated funds of state governments.

Collection Efficiency – Ratio of property tax collection to property tax demand.

Coverage Ratio – Ratio of assessed properties to total properties within municipal limits.

Credit Rating – Estimation of the credit worthiness of an individual, corporation or even a country. It is the evaluation of a potential borrower by rating agencies on the basis of his or her overall credit history, current assets and liabilities and indicates to the lender the probability of the subject being able to pay back a loan.

Deficit – An excess of expenditures over revenues during an accounting period. Also refers to an excess of liabilities of a fund over its assets.

Exempted Property – A property that enjoys a property tax waiver in accordance with statutory directives. For example, properties owned by the central government are often exempted from property taxes on the grounds that a sovereign cannot tax itself.

Grants – All non-repayable transfers received from other levels of government or from private individuals or institutions, including reparations and gifts given for particular projects or programs, or for general budget support.

Intergovernmental Grants/Transfers – Sometimes called grants-in-aid, these are transfers of funds from one government to another, most often from a higher-level government in the federal system to a set of lower-level governments.

Master Plan – A long-term visualization of a city or other area, to be realized with future development. It uses maps in assigning the intended land use for each part of the city, such as the allocation of residential or manufacturing space, and uses regulatory powers to encourage/enforce such prescriptions.

Municipal Bond – Debt issued by a city or other local government agency to finance capital expenditures. A number of investors can participate in a bond issuance through the country's capital markets, where the debt is publicized and regulated. Municipal bonds are often tax-free (*i.e.* investors do not pay income tax on the interest earned) because the financing is meant to serve public interest projects.

Non-Tax Revenue – Revenue collected from sources other than compulsory tax levies. Includes those collected in exchange for direct services rendered by government agencies to the public, or those arising from the government's regulatory and investment activities.

Operating Ratio – Ratio of municipal revenue expenditure to municipal revenue income.

Own Revenue – Revenue a government raises by means of its own legislation or other action, as opposed to grants-in-aid or transfers from another government.

Per Capita Revenue/Expenditure – Revenue or expenditure accruing to each individual within municipal limits. Calculated as total revenue or expenditure divided by the population residing within the municipal area.

Revenue Expenditure – The operating costs incurred by the authority during the financial year in providing its day-to-day services. It generally consists of establishment, operation and maintenance and other expenses.

State Finance Commissions (SFCs) – State-level entities, established by the 74th Constitution Amendment Act, to provide a bottom-up mechanism for assessing municipal finance requirements and recommending fiscal relations between the state and local governments. SFCs are constituted once every five years by state governors.

User Charges/Fees – A municipal funding source wherein payment is collected from the users of a service to help defray the cost of providing the service.

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Panorama of the Urban and Municipal Sector in India

India's urban transition will be a structuring trend of the next twenty years. Compared to the global average of 50%, India's urbanization rate, just above 30%, is still low. However, its total urban population is already the second largest in the world after China: in 2011, India accounted for one in ten urban dwellers in the world.

This rapid and recent urbanization has resulted in a severe strain on the country's infrastructures, playing out in the form of overcrowding, congestion, and inadequate service provision. Furthermore, demographic drivers and internal migrations will continue to sustain strong urban growth, with the urban population expected to reach over 600 million people by 2030.

Ensuring that Indian cities are inclusive, productive and livable will therefore be a key factor of India's competitiveness. Empowering local governance seems to be one of the levers to address this challenge. However, India's institutional framework remains highly complex. The recent decentralization agenda has resulted in intricate governance structures, and calls for city and sector-specific responses to urban service provision.

Based on the findings of eleven detailed case studies, this study aims to provide an introduction to urban governance in India and to highlight key insights into the institutional stakes of local urban development interventions.

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