

# INDIA HABITAT III

NATIONAL REPORT

2016



सत्यमेव जयते

Ministry of Housing and Urban Poverty Alleviation  
GOVERNMENT OF INDIA







INDIA  
HABITAT III  
NATIONAL REPORT  
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GOVERNMENT OF INDIA

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Urban Initiatives and the New Urban Agenda

# LIST OF ACRONYMS

<b>AEGR</b>	Annual Exponential Growth Rate
<b>AMRUT</b>	Atal Mission for Rejuvenation of Urban Transformation
<b>BEE</b>	Bureau of Energy Efficiency
<b>BMTPC</b>	Building Materials and Technology Promotion Council
<b>BRTS</b>	Bus Rapid Transit System
<b>CAA</b>	Constitution Amendment Act
<b>CDM</b>	Clean Development Mechanism
<b>CDP</b>	City Development Plan
<b>CFL</b>	Compact Fluorescent Lamp
<b>CMP</b>	Comprehensive Mobility Plan
<b>CoE</b>	Centres of Excellence
<b>CPWD</b>	Central Public Works Department
<b>CSR</b>	Child Sex Ratio
<b>DAY-NULM</b>	Deendayal Antyodaya Yojana—National Urban Livelihoods Mission
<b>DDA</b>	Delhi Development Authority
<b>DPC</b>	District Planning Committee
<b>DRF</b>	Disaster Relief Fund
<b>ECB</b>	External Commercial Borrowing
<b>ECBC</b>	Energy Conservation Building Code
<b>EIUS</b>	Environmental Improvement of Urban Slums
<b>FAR</b>	Floor Area Ratio
<b>FC</b>	Finance Commission
<b>FDI</b>	Foreign Direct Investment
<b>FFC</b>	Fourteenth Finance Commission
<b>FSI</b>	Floor Space Index
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Green House Gas
<b>GoI</b>	Government of India
<b>GPRS</b>	General Packet Radio Services
<b>GPS</b>	Global Positioning System

<b>GRIHA</b>	Green Rating for Integrated Habitat Assessment
<b>GW</b>	Giga Watts
<b>HPEC</b>	High-Powered Expert Committee
<b>HRIDAY</b>	Heritage City Development and Augmentation Yojana
<b>HSMI</b>	Human Settlement Management Institute
<b>IIT</b>	Indian Institute of Technologies
<b>IMC</b>	Indore Municipal Corporation
<b>INDC</b>	Intended Nationally Determined Contribution
<b>IT</b>	Information Technology
<b>JnNURM</b>	Jawaharlal Nehru National Urban Renewal Mission
<b>LPG</b>	Liquid Petroleum Gas
<b>MLD</b>	Million Litres per Day
<b>MML</b>	Model Municipal Law
<b>MoEF&amp;CC</b>	Ministry of Environment, Forests and Climate Change
<b>MoHUPA</b>	Ministry of Housing and Urban Poverty Alleviation
<b>MoUD</b>	Ministry of Urban Development
<b>MPC</b>	Metropolitan Planning Committee
<b>MRTS</b>	Mass Rapid Transit System
<b>MSDE</b>	Ministry of Skill Development and Entrepreneurship
<b>NCAER</b>	National Council of Applied Economic Research
<b>NCR</b>	National Capital Region
<b>NDMA</b>	National Disaster Management Authority
<b>NGO</b>	Non-Governmental Organization
<b>NHB</b>	National Housing Bank
<b>NIIF</b>	National Investment and Infrastructure Fund
<b>NIUA</b>	National Institute of Urban Affairs

<b>NMSH</b>	National Mission on Sustainable Habitat
<b>NMT</b>	Non-Motorized Transport
<b>NSDP</b>	National Slum Development Programme
<b>NSSO</b>	National Sample Survey Organization
<b>NTS</b>	National Training Strategy
<b>NUHHP</b>	National Urban Housing and Habitat Policy
<b>NULM</b>	National Urban Livelihood Mission
<b>OSRT</b>	Off-Site Real Time Monitoring System
<b>PMAY</b>	Pradhan Mantri Awas Yojana
<b>PPP</b>	Public Private Partnership

<b>RAY</b>	Rajiv Awas Yojana
<b>REIT</b>	Real Estate Investment Trust
<b>SAPCC</b>	State Action Plan on Climate Change
<b>SDG</b>	Sustainable Development Goal
<b>SUHAP</b>	Sustainable Urban Habitat Action Plan
<b>TDR</b>	Transferable Development Right
<b>TOD</b>	Transit Oriented Development
<b>TPS</b>	Town Planning Scheme
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>URIF</b>	Urban Reform Incentive Fund
<b>UT</b>	Urban Transport

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M. VENKAIAH NAIDU




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आवास और शहरी गरीबी उपशमन एवं  
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“Urbanization” is one of the singularly important transformations that India has witnessed in recent decades. From a relatively modest urban population of 79 million persons in 1961, India now has a population of 428 million in its cities and towns (2015: UN), which is poised to rise to 606 million by the year 2030 AD. Urbanization has brought in an important shift in the structure of the Indian economy where 60 percent of the country's gross domestic product accrues in its cities and which has contributed significantly to reduction in poverty levels.

At the same time, urbanization presents challenges of noticeable proportions, largely in the form of demand-supply gaps in housing, infrastructure and services. Urban governance and fiscal systems have also lagged behind in adjusting to the complexities that the present-day urbanization is associated with. The Government of India is seized of these challenges and has introduced a network of initiatives that are designed to address the challenges and to simultaneously tap the vast opportunities and potentials that urbanization offers. Smart Cities Mission, Housing for All, AMRUT, HRIDAY, RURBAN Mission and Swachh Bharat Mission are a few of such initiatives.

The India National Report presents an overview of the country's approach to urbanization. This approach is cast in the context of the overarching principle of cooperative federalism. The centre and the states have accordingly taken forward in an integrated fashion the objectives embedded in urban initiatives and competitive federalism. In pursuance of the principle of cooperative federalism, the Central Government has devolved higher share of central taxes (42 percent) to the states and further recognized the role of Urban Local Bodies by making them financially empowered, by increasing their share of central taxes up to 5 percent, so as to strengthen city-level infrastructure and services to the citizens. This has permitted cities to portray their own distinctive priorities and goals in developing and implementing the urban agenda. Apart from bringing in a qualitative shift in the country's approach to urbanization, it is expected to bring in huge dividends and synergy to the Indian economy.

India recognizes the importance of the global initiatives as encapsulated in the Sustainable Development Goals, the Paris Agreement on Climate Change, and the draft New Urban Agenda. These initiatives place enormous responsibilities upon countries such as India. We stand committed to these international goalposts consistent with our development priorities. Many of these goalposts, as the India National Report outlines, form an integral part of the urban strategy that India proffers.



(M. Venkaiah Naidu)



राव इन्द्रजीत सिंह  
RAO INDERJIT SINGH



राज्य मंत्री (स्वतंत्र प्रभार)  
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## FOREWORD

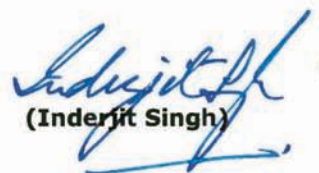
Managing urbanization and planning for future urban growth is among the most formidable challenges that confront India. India's current urban population accounts for close to 11 percent of the world's urban population and is expected to increase up to 13 percent by the year 2030 (UN projections). Its urban system comprising 7932 cities and towns of different population sizes, is the second largest in the world. The urban system has registered an extraordinary expansion in its base over the decade, 2001-2011 and this trend is expected to persist.

Slowly but steadily, India is undergoing a demographic transition altering the past notions on urbanization. For the first time in the past decade, the net increment of urban population exceeded the net increment of rural population, pointing towards the need for a new form of urban planning and governance system geared for tackling the situation.

In order to tap the opportunities offered by urbanisation and also address the various challenges posed by this process, Government of India has launched various missions to address urban governance issues, gaps in infrastructure and requirement of housing cutting across all economic groups. Some of the Key Missions include the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Smart Cities Mission, Housing for All (HFA), Heritage City Development and Augmentation Yojana (HRIDAY), R-urban Mission, and Clean India Mission.

India, through its Habitat III National Report, re-affirms its commitments towards COP21 through the Intended Nationally Determined Contribution (INDC) and the Sustainable Development Goal 11 of making cities and human settlements inclusive, safe, resilient and sustainable. The National Report consist of seven chapters, of which the first 6 present an assessment of the country's urban sector and an account of various urban initiatives, while chapter 7 summarises the ongoing urban initiatives and lays down the prospective vision for a New Urban Agenda.

As India develops, so do the opportunities that urbanization offers and the challenges it creates. From a rather limited perspective of urbanization which equated urban problems with the provision of basic services, India's contemporary response to urbanization is wide-ranging and aimed at serving larger macroeconomic transformational goals, together with meeting local priorities. The Habitat III report outlines the urban strategy adopted for India that resonates with the global priorities.

  
(Inderjit Singh)



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## FOREWORD

Urbanization is a major driver of development. In the coming decades, the urban sector will play a critical role in the structural transformation of Indian economy. India's urban future offers immense challenges and splendid opportunities – both of which require immediate policy and planning attention.

In order to systematically look at the Rural-urban continuum and to address the challenges of this transition, the Government of India is creating an enabling framework for planning, developing, governing and managing urban areas. Several flagship Missions have been launched, including the Smart City Mission, Housing for All, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Heritage City Development and Augmentation Yojana (HRIDAY) and the Swachh Bharat Mission. Together, these Missions are expected to significantly improve infrastructure, livability and economic productivity in urban areas.

The broad focus of all these interlinked game changing Missions is to plan for achieving incremental and qualitative improvements in the living conditions of all urban Indians. The aim is not only to create a conducive environment for creation of infrastructure and improved service delivery but also to ensure that growth is environmentally sustainable and equitable.

The focus of the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) is to reinvigorate commitments to the sustainable development of towns, cities and other human settlements, both rural and urban. This clearly aligns with Government of India's vision of National Transformation, wherein the focus is on applying holistic, integrated, inclusive, people-driven, convergence based collaborative approaches for developing cities as sustainable human settlements and also to move ahead in meeting the expectations of Sustainable Development Goals.

This report reinforces the vision and strategies adopted by Government of India to not only address the challenges of urbanization but also to provide the direction to meet aspirations and needs of future generations.

  
(N. Chatterjee)



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Recognizing the role and importance of urbanisation in the process of socio-economic transformation, the India (Habitat-III) National Report presents a brief account of the state of the urban sector, the challenges and complexities, the initiatives, strategies and opportunities for not only addressing the urban challenges but also to meet the requirements of New Urban Agenda. The report, consisting of seven chapters, outlines Urbanization Trends in the country; Developments and Challenges in the spheres of urban land and housing market; Governance and Financing System of Urban Local Bodies, Urban Initiatives and a perspective vision for the New Urban Agenda. The report reinforces the vision and strategies adopted by Government of India to not only address the challenges of urbanization but also provide the direction to meet the aspirations and needs of the future generations.

The Ministry of Housing and Urban Poverty Alleviation (MoHUPA), as the nodal Ministry for preparing the India (Habitat-III) National Report, wishes to place on record its appreciation for the valuable contributions made by various Ministries, Departments and Organisations under the Government of India, relevant departments of the State Governments and Union Territories, and the Urban Local Bodies for their inputs/comments provided for compilation of the National Report. During this process, the Ministry has also been fortunate to receive valuable inputs/comments for this report from a number of stakeholders.

The Ministry would like to place on record its gratitude to all the Members of the National Habitat Committee, experts, academicians, researchers, Multilateral and Bilateral Agencies and national and international institutions for their valuable contribution towards finalising this report. The technical support from Human Settlement Management Institute (HSMI), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and UNHABITAT (India) is also acknowledged.

The continuous support and guidance, to formulate the New Urban Agenda for India, provided by Mr. M. Venkaiah Naidu, Hon'ble Union Minister of Urban Development, Housing and Urban Poverty Alleviation and Information & Broadcasting; Mr. Rao Inderjit Singh, Hon'ble Union Minister of State (Independent Charge) for Ministry of Planning and Minister of State in the Ministry of Urban Development and Ministry of Housing and Urban Poverty Alleviation and the valuable inputs by Dr. Nandita Chatterjee, Secretary, MoHUPA have helped in flashing out the contours of the report.

(Rajiv Ranjan Mishra)



# P R E A M B L E

The India National Report is a sequel to resolution 24/14 of the UN Habitat Governing Council, adopted in its twenty-fourth session by which the Council invited its member states to prepare national reports on the “implementation of the Habitat-II agenda and of the other relevant internationally agreed goals and targets as well as new challenges, emerging trends, and a prospective vision for sustainable human settlements and urban development”. Since the adoption of Habitat II agenda in 1996, India’s urban sector has witnessed important changes, and, in many ways, has posted departures from the earlier ways of looking at urbanization in the country’s growth and development processes. First, between 1996 and 2015, India has added approximately 171 million people to its urban population base. Its urban footprints have expanded to 7,933 settlements, several of which are “census towns,” i.e., settlements that have the required urban characteristics but have structures of rural governance. Economic composition as represented by the Gross Domestic Product (GDP) has decisively changed in favour of non-primary-sector activities, especially the services sector which currently contributes over 55 per cent to the GDP. Second, between 2004–05 and 2011–12 India has lifted over 15 million persons out of poverty in the urban areas; likewise, the proportion of slum population has dipped to

17.4 per cent within a decade. Infrastructure and services now reach out to 75 per cent in case of water and 81 per cent in case of latrines. However, at the same time, challenges in the form of service deficits persist. Also, the structures of governance and financial systems have not kept pace with the changes in the demographic and economic compositions and the levels of urbanization.

India explicitly recognizes the role and importance of urbanization and cities in the process of its socio-economic transformation, and affirms its commitment to the larger goals of urban equity and eradication of poverty; inclusive urban prosperity and opportunities for all; productivity, competitiveness, diversification and innovation; and urban resilience. Its current approach to urbanization is focussed on several objectives: (i) urbanization must generate growth and enhance economic productivity and competitiveness; (ii) it should be inclusive and sustainable; (iii) it should aim at preservation and revitalization of history, culture and heritage; and (iv) it should contribute to the development of rural areas and strengthen rural-urban interdependencies. Consistent with these goals and objectives, the Government of India has launched a number of missions, the key ones being the Smart Cities Mission, Atal Mission for Rejuvenation of Urban Transformation (AMRUT), Swachh Bharat (Clean India)

Mission, Pradhan Mantri Awas Yojana- Housing For All (HFA), Heritage City Development and Augmentation Yojana (HRIDAY), and Rurban Mission. This report lays out a brief account of the state of the urban sector and the challenges and complexities it faces, and outlines the initiatives and strategies that have been taken to address these.

The India National Report consists of seven chapters. Chapter 1 provides an assessment of the urbanization trends in the country, focussing on how the trends are being shaped, on the one hand, by domestic priorities such as the accelerated development of rural areas and the need to forge stronger urban-rural linkages, and on the other hand, by factors driven by competition between cities for improved productivity and

economic vibrancy. Chapters 2–4 outline the developments and challenges in the spheres of urban land and housing market, urban environment, infrastructure and services. The governance and financing systems of cities (urban local bodies) are discussed in chapters 5 and 6, referring especially to putting in place a strong system of inter-governmental system of transfers, increased local government autonomy, a focussed use of the nascent but growing capital market for financing priority infrastructure services and the development of public-private partnership facility. Chapter 7 gives an account of the urban initiatives and a perspective vision for the new urban agenda, affirming its commitment to the new international benchmarks as embodied in the Sustainable Development Goals (SDGs), and the Paris Agreement on climate change.

# EXECUTIVE SUMMARY

**P**repared in response to resolution 24/14 of the UN Habitat Governing Council, the India National Report presents an assessment of the country's urban sector and its contemporary and emerging challenges and opportunities, and gives a brief account of the urban initiatives and a prospective vision for the new urban agenda.

## **1 Urbanization is an important emerging reality in India**

Urbanization is one of the important realities of recent decades in India. Its urban system consists of 7933 cities and towns of different population sizes, and a population of 377.16 million (Census 2011) which is the second largest in the world. The urban system has registered an extraordinary expansion in its base over the 2001–11 decade, and this trend is expected to continue. An estimated 180 million rural people live next to India's 70 largest urban centres, a number that will increase to about 210 million by 2030 (McKinsey Global Institute, 2010).

## **2 Growth in the numbers and population of metropolitan cities and census towns represent the most recent trend in India's urbanization**

In recent decades, the pattern of India's urbanization has undergone an important shift which is characterised by (i) increasing numbers and rising population share of metropolitan cities, and (ii) an unprecedented increase in the

numbers and population of census towns whose share in urban population has risen to 14.5 per cent (Census 2011) from 7.6 per cent in 2001. Metropolitan cities continue to be a collection of municipalities and other settlements, drawing powers directly from the respective statutes and presenting a monumental challenge of "who governs". Census towns, on the other hand, present problems of sprawl and unregulated development, fuelling fears of weakening of agglomeration economies.

## **3 India's urbanization is poised to accelerate in the coming decades**

In 2011, India entered into a different demographic trajectory with the net increment to urban population exceeding the net increment to rural population. The United Nations (2014) estimates that much of the population increase in India between 2015 and 2030 will take place in urban areas during which it will add 164 million people to its urban base. The scale of the projected urban population increase is extraordinary, offering both an opportunity as well as a challenge for it to mobilize its resources and capacity to manage the transition.

## **4 Urbanization has made significant contributions to India's economic growth and poverty reduction**

Urbanization is central to India's economy, contributing close to 60 per cent to its Gross

Domestic Product (GDP). Recent studies attest to the increasing linkages between urbanization and per capita GDP; however, these are low compared to other large Asian economies. There exist large, untapped economies of scale which require effective interventions in the spheres of urban and spatial planning, urban land markets, and governance. Urban poverty levels have declined substantially, from 25.7 per cent in 2004–05 to about 13.7 per cent in 2011–12.

## **5 Managing and facilitating the process of urbanization is essential for India's structural transformation**

India recognizes that managing the process of urbanization is a necessary condition for India's structural transformation. In comparative terms, India is at a low level of urbanization (31.16 per cent in 2011). But much of the increase in urban population will take place in the coming decades. Urbanization will need to be viewed as a shared responsibility between governments at various levels and between public and private sectors, and civil society.

## **6 Aligning urban land markets to the forces of India's urbanization continues to be a challenge**

Urban lands in India, constituting 3.1 per cent of the country's land area, present a complex situation where high urban densities co-exist with sub-optimal utilization. Although the overall supply of urban lands has risen over the 2001–11 period, the general perception that supply lags behind the demand persists.

Supply and usage of urban lands are regulated across the globe, India is no exception. However, the processes of land acquisition for urban use are cumbersome and constrained by factors such as the purpose underlying land acquisition, the amount of compensation, and the likes. Several initiatives have been taken in recent years to lay

down fresh rules for land acquisition (The Land Acquisition, Resettlement and Rehabilitation Act, 2013), and to increase land supplies with innovative practices such as land pooling, land readjustment, negotiated land purchases, and transit-oriented development. Other important initiatives in this sphere relate to introducing online procedures for land registration, reduction of stamp duties and repeal of the Urban Land (Ceilings and Regulation) Act, 1976.

## **7 Strengthening public transport forms the core of the National Urban Transport Policy**

Urban transport infrastructure and services are grossly inadequate, both in quantity and quality. Private motor vehicles have multiplied over a hundred times in recent decades, while the road network and capacity stand severely stressed. Public bus services which are state-owned public entities are limited to large cities. The use of modes such as walking and bicycling, and other para-transport modes is on the decline—the overall result being increasing road congestion, falling road speed, increasing air pollution, and reduced road safety.

The National Urban Transport Policy (2006) focusses on planning for people rather than vehicles, by providing sustainable mobility and accessibility to places of work, education, services and recreation at affordable costs. It has involved internalizing urban transport as a key variable in urban planning exercises. It calls for putting in place intelligent transport systems for traffic management, and establishing institutional mechanisms and capacity building for better planning and management of transport systems.

## **8 Urban air and water pollution and emission levels are an increasing concern and are engaging dedicated attention**

That urbanization is not neutral in its impact

on environment and climate change is beginning to enter India's development strategy. The key environmental concerns that confront India are: (i) to strike a balance where the benefits of urbanization (agglomeration economies) are maximized without compromising the environmental benchmarks, and (ii) to address environmental challenges triggered by extreme weather conditions, requiring substantial adjustments to urban planning, land-use management and infrastructure strategies and norms.

Studies on cities and their environment have underlined the economic cost that the country bears on the account of poor air and water quality. Several steps have been taken to address environment-related issues, which in the main include a National Mission on Sustainable Habitat. The main objectives of the Mission are promotion of energy efficiency as a core component in urban planning, enforcement of fuel efficiencies, management of urban waste, and promotion of public transport. Other linked incentives include reduction of subsidies on unclean fuels, promotion of transit-oriented development, and development of compact cities and mixed land-use Master Plans. India, being a signatory to the Paris accord, stands committed to meeting its stated goals and objectives.

## 9 Housing is a key sector with significant economic and social impacts for the Indian economy

The construction sector, of which housing is a major component, accounts for 8.2 per cent of the GDP, 11.39 per cent of the total output, and 11.5 per cent of employment. For reasons of its forward and backward linkages, the governments at the central and state levels have been long engaged in addressing the challenges of adequate and affordable housing in cities and towns. These have involved initiatives for direct production of

housing for the urban poor, provision of credit and interest subsidies to the poorer sections of urban population, promoting alternative construction materials and technologies, and involvement of stakeholders in the housing activity.

The recent census data indicates that absolute housing shortages in cities and towns have declined from 1.63 million units in 2001 to 0.39 million in 2011. At the same time, however, the relative shortages, measured in terms of congestion and obsolescence, are high at 18.8 million units (2012).

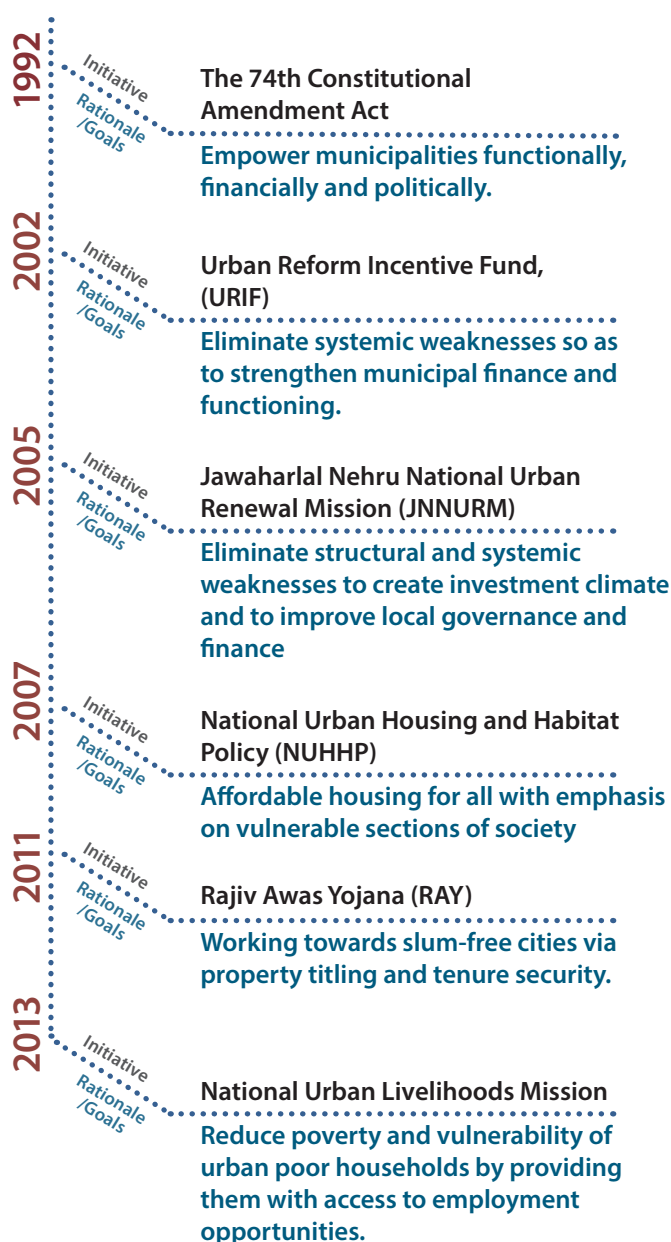
A National Housing Policy (NHP) was put in place in 1988. It was revised in 1994 with provision for Foreign Direct Investment in the real estate sector. This policy was further modified as the National Urban Housing and Habitat Policy (NUHHP, 2007) which seeks to earmark lands for economically weaker and low-income households in the new housing projects. Building codes and bye-laws have been modified and now consist of provisions for green buildings, natural-disaster resilience, and inclusive design for the elderly and the physically challenged. More recently, a mission on Housing For All (Pradhan Mantri Awas Yojana) has been launched with the aim of constructing 20 million housing units for the urban poor and slum households.

## 10 Infrastructure deficits are severe across cities and towns, and have dented urban quality of life and local economic development

The importance of urban infrastructure is commonly highlighted in terms of its centrality to productivity and quality of life, and on grounds of the close association between infrastructure flows and GDP. Despite this, infrastructure deficits and deprivation in Indian cities persist. Studies have noted structural dysfunctionalities, like non-revenue water, low-level of metering and below-cost pricing, as barriers to both public and private

 Figure 1

## URBAN INITIATIVES, 1992-2014



investment. The government has been concerned with these deficits and has attempted to address them under the JnNURM, and has mounted a concerted effort via its recently launched missions which include Smart Cities Mission, AMRUT, and Clean India Mission. Several good practices involving the private sector are cited as examples for replication.

### 11 Governance holds the key to well-managed cities and towns. Urban development is being taken as a shared responsibility of the different tiers of government and of the public and private sectors

Urban development is a subject of states under the India's federal structure. State governments define state-specific urban development policies, establish institutions including local governments for advancing the urban policy agenda, and design and implement urban development programmes and projects. The role of the central government is to define an overall approach to urban development, compatible with macroeconomic parameters. As cities have acquired increasing importance in the national economy, the central government has, in partnership with the state and local governments, introduced a slew of initiatives to enable the participation of local governments in nation-building agenda, making urban development a shared responsibility.

Urban local governments are central to the implementation of urban development agenda. The purpose underlying the constitutional amendment (1992), which is built on the principle of subsidiarity, is to empower urban local governments across the political, functional, and financial spectrum; the progress in this direction is being accelerated by redefining the relationships between urban local governments and other institutions and stakeholders.

## Box 1

## URBAN INITIATIVES IN THE POST-2014 PERIOD

Fresh impetus to the role of cities via:	Goals	Strategies
Development of 100 smart cities	Enhance the quality of urban life and provide a clean and suitable environment.	Employ smart solutions for the efficient use of available resources and the available infrastructure.
Rejuvenation and transformation of 500 cities (>100,000 population)	Create infrastructure that has a direct link to the provision of better services to the people.	Use reform to improve service delivery, mobilize resources, and make municipal functioning transparent and accountable.
Housing for All	Address the housing requirements of the urban poor including slum dwellers.	Use verticals comprising: <ul style="list-style-type: none"> <li>• Slum rehabilitation with participation of private developers using land as a resource,</li> <li>• Promotion of affordable housing by credit-linked subsidy,</li> <li>• Affordable housing in partnership with public and private sector</li> <li>• Subsidy for beneficiary-led housing construction or enhancement</li> </ul>
Swachh Bharat (Clean India Mission)	<ul style="list-style-type: none"> <li>• Access to sanitation</li> <li>• Scientific management of solid waste</li> </ul>	Creating awareness about sanitation, behaviour change, and capacity augmentation.
Heritage City Development and Augmentation Yojana (HRIDAY)	Support core infrastructure aimed at revitalization of areas close to heritage sites.	Focus on water supply, sanitation, landscaping and tourist conveniences.
RURBAN Mission	Accelerate rural development with urban services.	Focus on basic services.

## 12 Financing urban development is one of the most demanding challenges that India faces in managing urbanization

The two recent studies (McKinsey Global Institute

in 2010 and High-Powered Expert Committee in 2011) place the investment requirements for urban infrastructure between U.S.\$810 million and U.S. \$1.2 trillion for a period of 20 years.

Recent decades have been marked by a large number of initiatives aimed at the structural,

functional and financial components of India's municipal system. A common underlying thrust of these initiatives is to strengthen municipal finance and governance by modifying what are deemed to be the problematic elements of the system and to align them with the contemporary changes. These initiatives are accompanied by an array of institutions and proposals for modifications in the existing statutory and regulatory structures to bring about a change in the finances and functions of urban local governments. These include setting up of State Finance Commissions (SFCs), District Planning Committees (DPCs), Metropolitan Planning Committees (MPCs), and Property Tax Boards, and an array of new initiatives which include Public-Private Partnership (PPP) in the delivery of services, capital market financing, debt financing, National Investment and Infrastructure Fund (NIIF), and land-based instruments for financing urban infrastructure.

### **13 Addressing the challenges of urbanization and tapping urban opportunities lies at the core of the recent urban sector initiatives**

In India, the post 1990 period has witnessed an explicit recognition of the role of urbanization and cities in the country's socio-economic transformation. Successive five-year plans have focussed on efforts to enhance the role of urbanization in the development process. The specific initiatives undertaken during 1992–2014 and their stated rationales and goals as represented in Figure 1.

### **14 Smart Cities Mission, AMRUT, HRIDAY, Housing for All, and Clean India Mission, and development of RURBAN clusters provide a fresh impetus to the urban sector**

Over the past two years, the urban sector in India has received a major boost via the launch of new initiatives (Box 1), which aim at enhancing the quality of life and providing a clean environment, creating infrastructure, addressing the housing requirements of the poor and slum households, promoting India's heritage, creating

awareness about sanitation, and forging and strengthening rural-urban linkages and inter-dependencies.

### **15 India recognizes the place of cities in the country's transformation and notes its commitment to implementing the Sustainable Development Goal 11 and the New Urban Agenda**

India is at a crucial stage in its urban transition, having crossed the threshold of 30 per cent level of urbanization, which is the stage from where urban population growth begins to accelerate. It plans to reinforce the urbanization process with an agenda that comprises the following levers that would make cities work towards greater productivity, inclusion, sustainability, and rural-urban linkages. The levers are:

- Putting in place integrated and coherent urban policies consistent with the principle of cooperative federalism;
- Harmonizing agglomeration economies with focus on the promotion of compact and cluster urban development within a regional, rural-urban framework;
- Harnessing rural-urban continuum;
- Promoting inclusive urban development, inter alia, comprising universalization of basic services, social cohesion, and strategies for reducing working poverty;
- Recognize and actively promote the centrality of sustainability in urban policy;
- Empower municipalities and other local-level institutions;
- Strengthen housing-finance systems;
- Enhance access to social justice and gender equity; and
- Development of a robust urban information system.

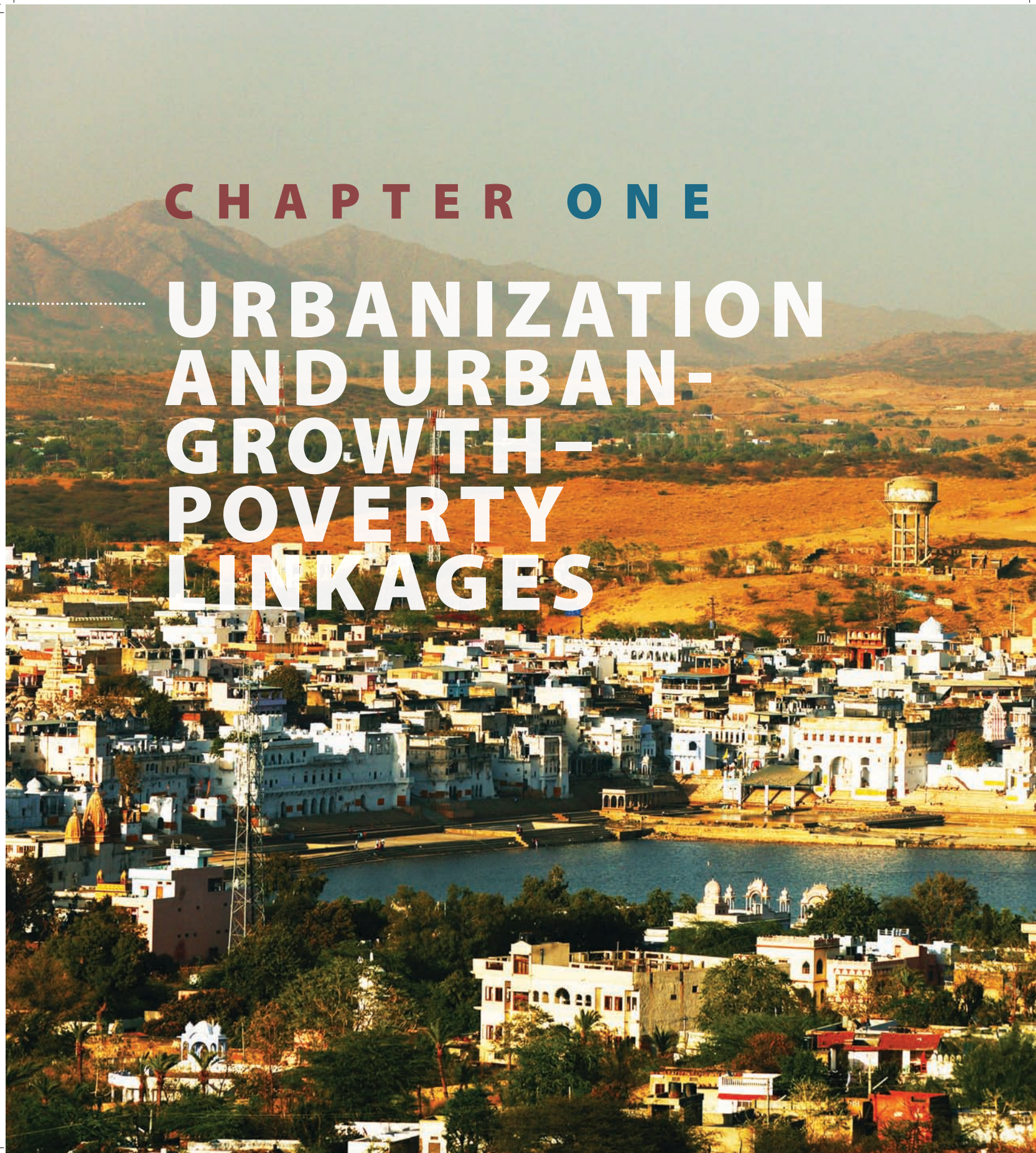
India stands at a juncture in history where ambiguities about what urbanization can do to transform the country's

economy have been overcome and an environment exists where a bolder push to use urbanization for country's socio-economy is on the horizon. Globally, the UN Habitat is striving to arrive at a consensus on an urban agenda that would commit countries to sustainable

urbanization “which is now more critical than ever as populations, social interactions, economic activities, and environmental impacts are increasingly concentrated in cities”. India's new urban agenda has been envisioned in this context.

## CHAPTER ONE

# URBANIZATION AND URBAN- GROWTH- POVERTY LINKAGES





**U**rbanization, scholars contend, is an essential condition for growth and poverty reduction. Urbanization produces economies, knowledge, and innovations, which contribute to economic growth and reduction in poverty levels. However, urbanization, commonly understood as more and more people living in the urban areas, occurs in multiple ways—via natural increase, rural-urban migration, reclassification of the rural into urban settlements, and changes in the existing boundaries. It can be a metropolitan-based urban population growth or be distributed evenly across cities of different sizes. The impacts of these different forms of urbanizing on growth and urbanization vary. India's urbanization has been described as sometimes slow, on account of the low level of changes in the proportion of population that is urban, and often rapid when seen in terms of the scale of urban population growth, and hidden (World Bank, 2015). This chapter looks at India's urbanization and its characteristics, and later explores urbanization-growth-poverty linkage.

“

**INDIA'S URBAN  
SIGNIFICANCE**

India's urban population accounts for close to 11 per cent of the world's urban population. The UN projections indicate that India's share in world urban population will rise to 13 per cent by the year 2030.

”

Urbanization is one of the important realities of recent decades in India. Its urban system consists of 7,933 cities and towns of different population size, and a population of 377.16 million (Census 2011), the second largest in the world. The urban system has registered an extraordinary expansion in its base over the 2001–11 decade, and this trend is expected to persist. An estimated 180 million rural people live next to India's 70 largest urban centres, a number that will increase to about 210 million by 2030 (McKinsey Global Institute, 2010).

India's urbanization has several important characteristics. First, with just about 31 per cent, urban India ranks low in global urban hierarchy. The Census of India designates a settlement as urban

in two complementary ways: (i) all places that satisfy the following criteria: a minimum population of 5,000 persons; at least 75 per cent of the male working force engaged in non-agricultural activities; and a density of population of at least 400 persons per sq. km., and (ii) all settlements which have a statutory recognition. This definition is restrictive compared to definitions used by most other countries like China, Indonesia, Brazil and Mexico which consider fewer numbers of criteria and lower cut-off for defining a settlement as urban.

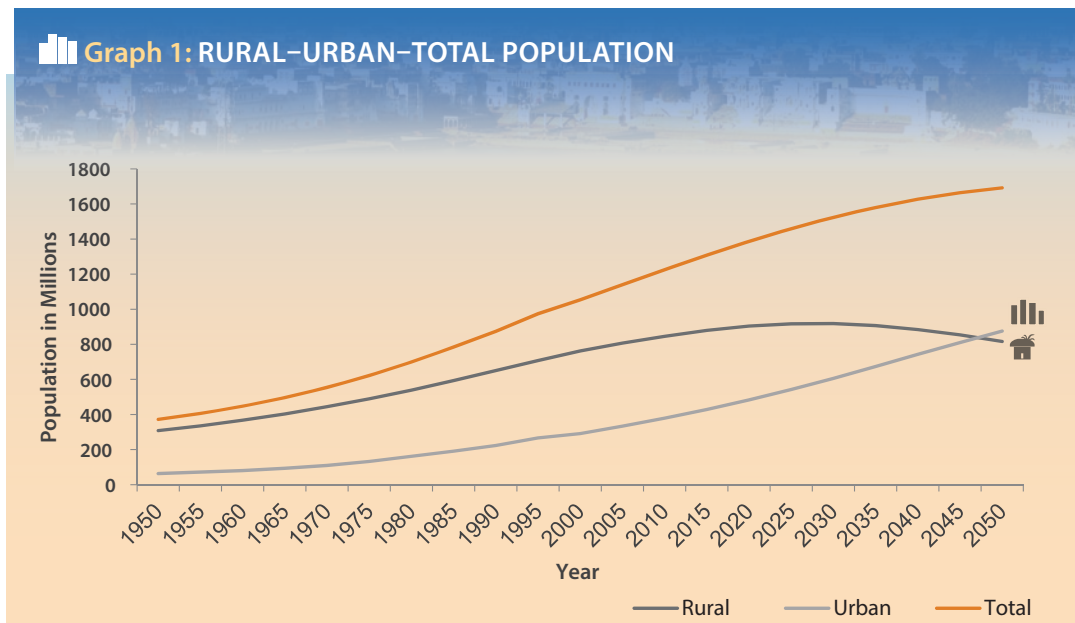
Second, India's pace of urban population growth is moderate. Between 2001–11 urban population increased at an Annual Exponential Growth Rate (AEGR) of 2.76 per cent, reversing the declining trend in the AEGR observed over the census decades of 1981–91 and 1991–2001 (Table 1). The AEGR is expected to range between 2.3 and 2.5 per cent over the next two decades (United Nations, 2011).

**Table 1: INDIA'S URBAN TRANSITION**

Year	Number of Towns & Cities	Urban Population (in millions)	% of Urban Population to Total Population	Annual Exponential Growth Rate of Urban Population (in %)
1901	1917	25.8	10.84	—
1911	1909	25.9	10.29	0.03
1921	2047	28.1	11.18	0.79
1931	2219	33.4	11.99	1.75
1941	2424	44.1	13.86	2.77
1951	3060	62.4	17.29	3.47
1961	2700	78.9	17.97	2.34
1971	3126	109.1	19.91	3.21
1981 <sup>1</sup>	3949	159.5	23.31	3.83
1991 <sup>1</sup>	4615	217.6	25.71	3.09
2001	5161	286.1	27.82	2.74
2011	7933	377.1	31.15	2.76

Source: Compiled from various Census Reports, Registrar General of India

<sup>1</sup> The 1981 population for Assam and 1991 population for Jammu & Kashmir are estimated



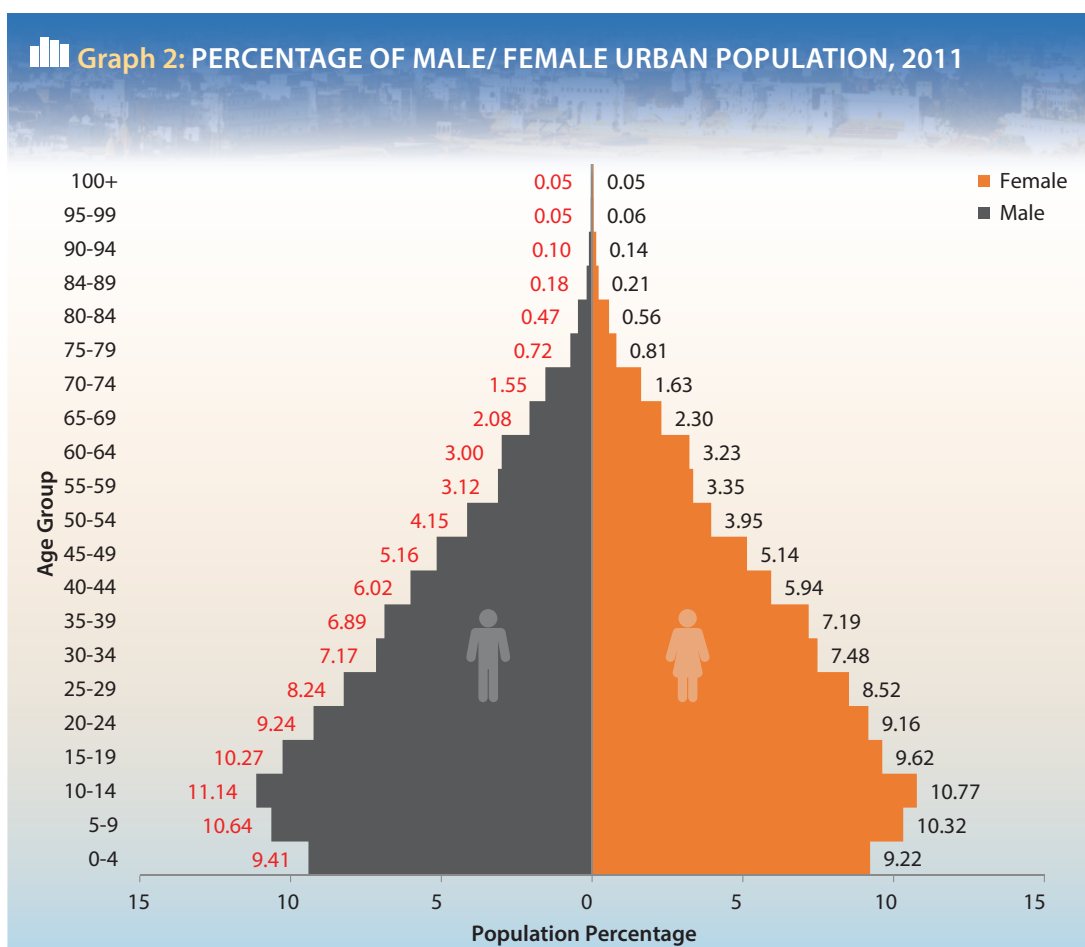
Source: Compiled from various Census Reports, Registrar General of India

Third, in recent decades, the pattern of India's urbanization has undergone an important shift (Graph 1), which is characterized by (i) increasing number and rising population of metropolitan cities, and (ii) unprecedented rise in the number and population of census towns. The number of metropolitan cities (population of 71 million) has risen from 35 in 2001 to 52 in 2011 and accounts for 42.6 per cent of the country's total urban population. The metropolitan cities continue to be a collection of municipalities and other settlements, drawing powers directly from the respective statutes and presenting a monumental governance challenge. Census towns have also registered a phenomenal growth in the census decade of 2001–11 with an addition of 2,532 towns. This unprecedented increase in the number of census towns implies that "the increased level of urbanization in the country is not a result of acceleration in the growth rate of small and medium towns but because of an increase in the number of census towns" (Kundu, 2015). It also implies that a large number of settlements in the country are

undergoing rapid urbanization as part of an urban agglomeration beyond the municipal boundary (World Bank, 2013) in the form of peri-urban growth, reaping the benefits from the adjoining urban centres.

Fourth, India's urbanization is driven largely by high fertility rates, which accounts for 55–60 per cent of the net increase in urban population, and reclassification of rural settlements into urban. Rural-urban migration constitutes an estimated 20–22 per cent of urban population growth.

Most estimates point out that India's urbanization is poised to accelerate in the coming decades. In 2011 India entered into a different demographic trajectory with the net increment to urban population exceeding the net increment to rural population. The United Nations estimates that much of the population increase in India between 2015 and 2030 will take place in urban areas during which it will add 165 million people to its urban base. The scale of the projected urban population increase is extraordinary, offering both an oppor-



Source: Census 2011, Registrar General of India

### Box 1

## DIGITAL INDIA

Digital India is a flagship programme of Government of India, which envisages transforming India into a digitally empowered society and knowledge economy. The programme envisions three key areas of interventions: digital infrastructure as a core utility to the citizen, governance and services on demand and digital empowerment of the citizens. Nine aspects are being covered within the programme, which are: broadband highways, universal access to mobile connectivity, public internet access programme, e-governance, e-kranti, information for all, electronics manufacturing, IT for jobs and early harvest programmes. In the first year of implementation: electronic transactions related to e-governance projects in the country have almost been doubled, more than 12,000 rural post office branches have been linked digitally. Setting up of 'digital villages' across the country, by linking all the government schemes with technology is being planned.



tunity as well as a challenge for mobilization of resources and capacity to manage the transition.

### The Regional Planning Approach

Indian cities carry rich historical legacy and geographical diversity. They offer an array of economic and cultural profile. The urbanization process in India has resulted in the development of urban conurbations or polycentric urban agglomerations and metropolization. An example

of such urban conurbation is the Mumbai Metropolitan Region (MMR) which has a population of around 21 million, consisting of the metropolis of Mumbai and its satellite towns, covering seven municipal corporations and 15 smaller municipal councils. In this context, the Urban and Regional Development Plans Formulation and Implementation Guidelines (URDPFI) of 2014, by acknowledging the symbiotic relationship of the rural and urban areas, emphasize on the “Regional Planning Approach” as a guide for future develop-

#### Box 2

### MAKE IN INDIA

Make in India is an initiative of the Government of India to encourage multi-national as well as domestic companies to manufacture their products in India. The initiative focusses on 25 sectors of the economy: Automobiles; Automobile Components; Aviation; Bio-technology; Chemicals; Construction; Defence Manufacturing; Electrical Machinery; Electronic Systems; Food Processing; Information Technology and Business Process Management; Leather; Media and Entertainment; Mining; Oil and Gas; Pharmaceutical; Ports and Shipping; Railways; Renewable Energy; Roads and Highways; Space and astronomy; Textiles and Garments; Thermal Power; Tourism and Hospitality and Wellness. Many new Initiatives have been undertaken by the Government of India to facilitate investment, foster innovation, protect intellectual property, and build best-in-class manufacturing infrastructure. 100 per cent FDI norms in 15 major sectors under automatic route have been allowed, and measures for “Ease of Doing Business” have been incorporated.



ment. This approach will maintain a rural-urban continuum and facilitate regional hierarchy by integrating and strengthening the urban centres and surrounding rural areas.

### Demographic Dividend of Young India

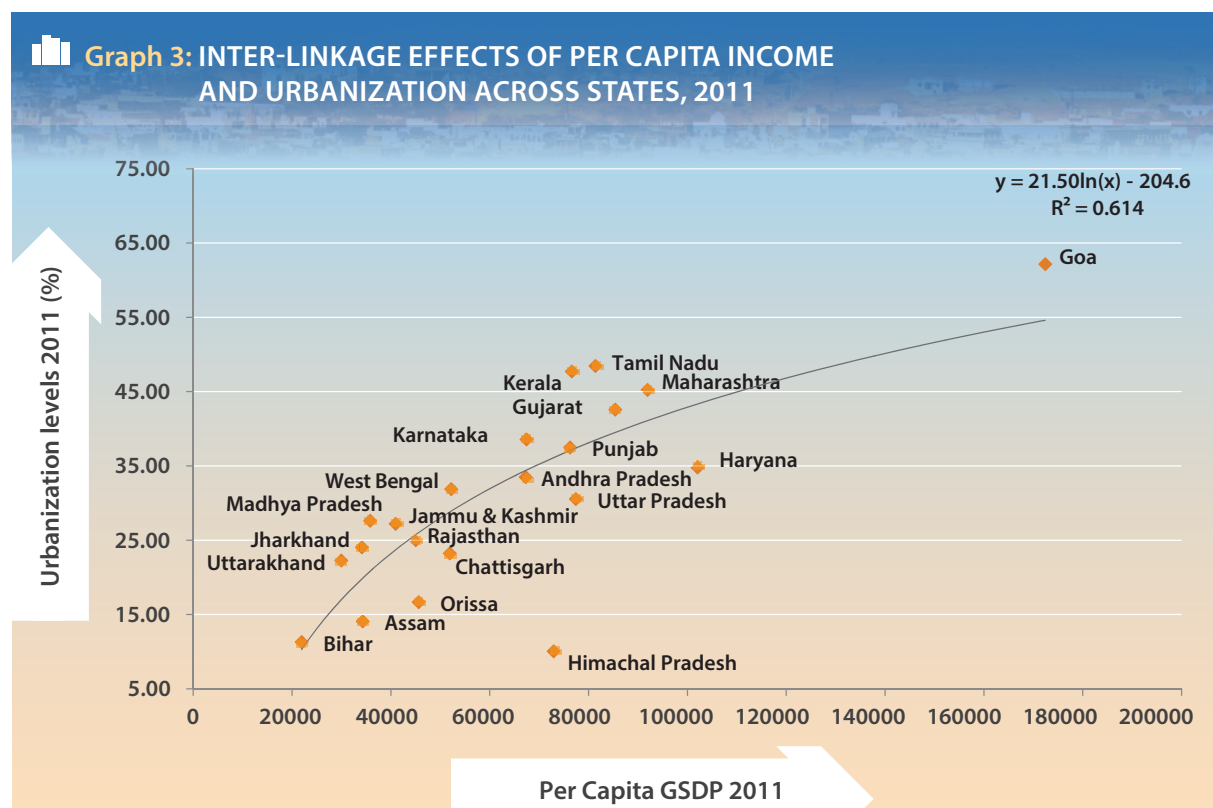
India's young and rapidly growing population with a potential demographic dividend is vital to India's economic growth and prosperity in the coming decades. As per Census 2011, 27.6 per cent population in India is in the age-group 25–44 years, 53.7 per cent of the population is less than 25 years, and more than 62 per cent of the population is in the working age group (15–59 years) (Graph 2). This is potentially beneficial to cities and towns in view of the increasing expansion in value addition by their tertiary economies and the role the young migrants can play in such expansion. McKinsey Global Institute's report (2010) highlights that India will have the largest workforce for the next 20 years, as 270 million Indians will join the net working-age population between 2010 and 2030. Addressing the needs of these

youths and providing meaningful job opportunities are therefore important along with fast-paced governance strengthened with the Information Technology (IT) revolution as well as penetration of internet and smart phones in urban India. While the "Digital India" (Box 1) Programme of the Government of India has a vision to transform India into a digitally empowered society and knowledge economy, the "Make in India" Programme (Box 2) has been initiated to facilitate and foster investments.

### Gender, Elderly and Safety in Urban Development

Women's work participation rate in urban areas has been growing at 5.4 per cent annually since 1991. The corresponding figure for the rural fe-males is 2.0 per cent while that of urban males is 3.2 per cent.

Women, especially young women, are entering or are aspiring to enter the urban workforce in large numbers. As a measure of inclusiveness and equity towards women, the Government of India's



Source: *Metropolitan Cities in India, HSMI and HUDCO-Chair NIUA Collaborative Research Report, 2014*

flagship programme, “Pradhan Mantri Awas Yojana (PMAY)”—Housing for All (Urban), launched in 2015, makes provision for right to property/ house registration either in the name of the female head of household, or both the male and female heads of household jointly, thereby ensuring gender equality in the housing provisions.

The decline in the Child Sex Ratio (CSR) from 945 in 1991 to 918 in 2011, defined as number of girls per 1000 boys between 0–6 age group in India, is a matter of concern. In order to ensure survival, protection and empowerment of the girl child, the Ministry of Women and Child Development, Government of India announced “Beti Bachao, Beti Padhao” (save the girl child, educate the girl child) initiative in 2015. This is being implemented through a national campaign which

focusses on multi-sectoral action in 100 selected districts which are low in CSR, covering all states and union territories in India. The key objectives of this initiative include: (i) prevention of gender-based sex-selective elimination; (ii) ensuring survival and protection of the girl child; and (iii) ensuring education and participation of the girl child.

The Government of India acknowledges women’s safety as a matter of concern and measures such as use of information technology for women’s safety, introducing self-defence as a part of the school curriculum, making police stations women-friendly, setting up of all-women police stations, etc. have been initiated. Due to amendments in the legal system, women have come forward to report these issues and fight for their

**Table 2 : URBAN-RURAL PERCENTAGE SHARES OF NET DOMESTIC PRODUCT (NDP)**  
(Current prices)

Years	Per cent Net Domestic Product		Per cent Population Shares	
	Urban	Rural	Urban	Rural
1980-81	41.1	58.9	23.1	76.9
1993-94	45.7	54.3	26.5	73.5
1999-00	51.6	48.4	27.5	72.5
2004-05	52.0	48.0	28.6	71.4
2011 (Estimated)	60.0	40.0	31.2	68.8

Source: Central Statistical Organization, 2010

**Table 3: GROWTH AND CONCENTRATION OF EMPLOYMENT IN RURAL  
AND URBAN INDIA** (In million)

	2004-05			2011-12		
	Self-employed and casual labourers	Regular salaried	Total employment	Self-employed and casual labourers	Regular salaried	Total employment
India	399.3	66.4	465.6	388.1	84.3	472.4
Urban India	70.2	45.9	116.1	77.4	59.0	136.4
Rural India	322.7	24.5	347.2	305.6	29.1	334.7

Source: Calculations based on the Unit Level Data of NSSO, Employment and Unemployment Rounds of 2004-05 and 2011-12, NSSO, GoI.

rights. Appropriate urban planning and design can also help to make the cities safer.

Urban elderly population (above 60 years of age) to total urban population has increased from 6.7 per cent in 2001 to 8.1 per cent in 2011. This increment of elderly population in cities calls for a range of socio-economic provisions for this segment. The Government of India has been undertaking a number of programmes in response to the needs of the aged. For the provision of decent living for the elderly, the Ministry of Social Justice and Empowerment, Government of India has an “Integrated Programme for Older Persons”. Under this programme, up to 90 per cent of the cost of maintaining an Old Age Home is available

to institutions (up to a maximum of INR 2,250 per person per month, including rental). Similar schemes for senior citizens’ housing and social security are being introduced for a quality and dignified living for the elderly population. Recently, the Delhi Development Authority introduced a senior citizen housing scheme which proposes to build 2,500 one-room studio apartments, measuring 40-45 sq.m. for the senior citizen of 60 years of age or above.

### Urbanization-Growth-Poverty Linkages

A strong urban economy is the backbone of national development. The productivity of urban



economy in India is gauged from the fact that 31 per cent of the total population that is urban generates approximately 60 per cent of the country's GDP. The potential of the urban economy, however, is crucially dependent on the levels of employment, socio-economic and demographic issues, spatial planning, inflation, financing requirement, etc. India is an integral part of the urban transformation that the world is a witness to and is engaged with a balanced regional development through sustainable rural-urban convergence. A collaborative research study by Human Settlements Management Institute and National Institute of Urban Affairs (2014) has established the fact that urbanization and the State Domestic Products (SDP) have quite high positive in-

ter-linkage effects in India, established through logarithmic regressions between urbanization and Per Capita Gross State Domestic Product (PCGSDP) almost synonymously used with per capita income.

### Integration of the Urban Economy into National Development Policy

Graph 3 shows the relationship between urbanization and states' per capita income, which has a strong correlation with R-square or the explanatory power, being 0.614, indicating that cities hold the key to economic growth. Urbanization is gradually aligning itself with the economic growth processes in India. But, the inter-linkage effects are quite low by international standards,

indicating the fact that the positive impact of agglomeration economies on urbanization is far from being saturated. Thus, for a developing country like India, the next few years present great challenges but also greater opportunities because only the successful exploitation and harnessing of the growth potential of the agglomeration and

urbanization economies can catapult it to a high-growth path and help sustain the growth momentum thereafter.

### Share of the Urban Sector in National Income

In line with the global trends, urbanization in In-

**Table 4: SECTOR-WISE EMPLOYMENT TREND**

	ABSOLUTE NUMBER (MILLION) (SHARE IN PER CENT, GIVEN IN PARENTHESES)					EMPLOYMENT ELASTICITY			
	1993-94	1999-2000	2004-05	2009-10	2011-12	1993-94 to 1999-00	1999-2000 to 2004-05	2004-05 to 2009-10	2009-10 to 2011-12
Agriculture	204.3 (61.1)	214.7 (58.5)	226.8 (54.5)	220.5 (51.6)	204.4 (47.1)	0.3	0.7	-0.2	-0.5
Industry	53.5 (16.0)	61.7 (16.8)	81.0 (19.5)	93.1 (21.8)	106.1 (24.4)	0.4	0.9	0.3	0.9
Services	76.6 (22.6)	90.6 (24.7)	108.0 (26.0)	113.7 (26.6)	123.9 (28.5)	0.3	0.5	0.1	0.5
Trade, Hotels and Restaurants	26.8 (8.0)	34.1 (9.3)	46.5 (11.2)	48.4 (11.3)	50.5 (11.6)	0.4	0.8	0.1	0.3
Transport, Storage, and Communication	11.0 (3.3)	15.0 (4.1)	18.7 (4.5)	19.9 (4.6)	22.8 (5.2)	0.5	0.4	0.1	0.6
Financial, Insurance, Real Estate and Business Services	3.7 (1.1)	4.8 (1.3)	7.5 (1.8)	9.4 (2.2)	10.7 (2.5)	0.5	1.6	0.4	0.6
Community, Social and Personal Services	35.1 (10.5)	36.7 (10.0)	35.3 (8.5)	36.1 (8.4)	39.9 (9.2)	0.1	-0.2	0.1	1.1
<b>Total</b>	<b>334.4 (100.0)</b>	<b>367.0 (100.0)</b>	<b>415.7 (100.0)</b>	<b>427.4 (100.0)</b>	<b>434.4 (100.0)</b>	<b>0.2</b>	<b>0.4</b>	<b>0.1</b>	<b>0.1</b>

Source: Economic Survey 2015-16, Ministry of Finance, Government of India

dia has been a catalyst for economic growth. The contribution of urban economy to India's GDP has increased from 29 per cent in 1950–51 to an estimated 60 per cent in 2011 (Table 2), which is further expected to increase to about 75 per cent by 2031.

In addition to facilitating industrial service and research development, the process of urbanization in the country has also contributed towards

development in other sectors including agriculture, social, cultural and political. The Twelfth Five-Year Plan (2012–17) of India has noted that urbanization would be central to India's strategy of achieving faster and more inclusive growth because agglomeration and densification of economic activities stimulate economic efficiencies and provide more opportunities for earning livelihoods, and thereby enable faster inclusion of

### Box 3

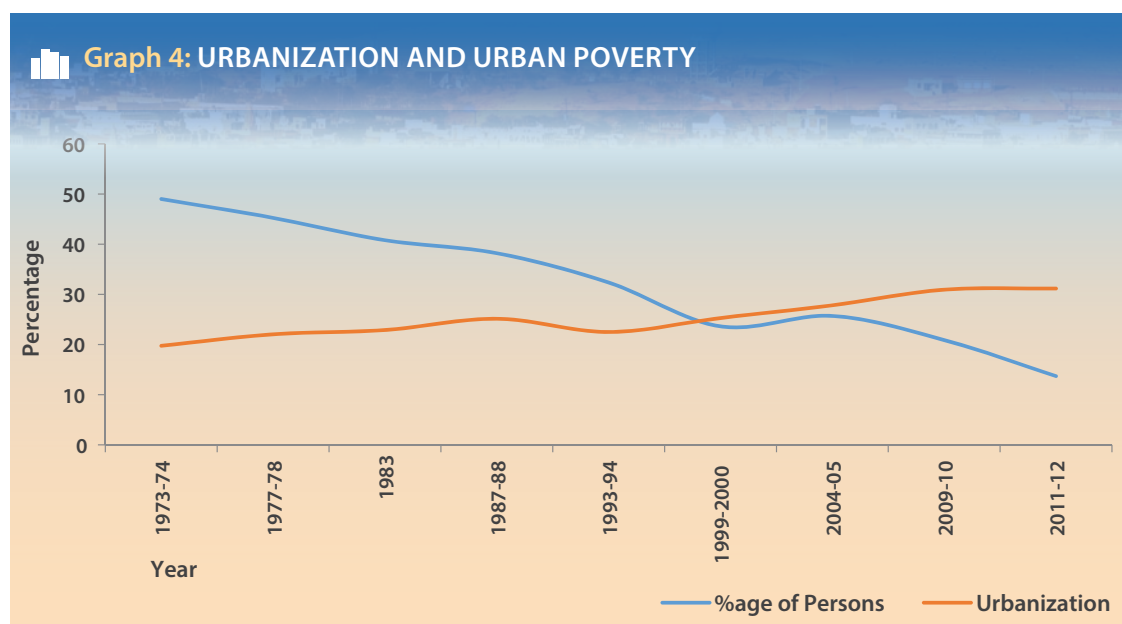
## SKILL INDIA MISSION

"Skill India Mission" or the National Skill Development Mission is a flagship programme of Government of India launched in 2015 under the aegis of Ministry of Skill Development and Entrepreneurship (MSDE). The Mission seeks to create an end-to-end implementation framework for skill development, which provides opportunities for life-long learning. This includes: incorporation of skilling in the school curriculum, providing opportunities for quality training, providing gainful employment and ensuring career progression that meets the aspirations of trainees. The Mission also aims to build capacity for skill development in critical un-organized sectors and provide pathways for re-skilling and up-skilling workers in these identified sectors, to enable them to transit into formal sector employment. With a target of skilling 402 million youth by year 2022, the Mission envisions convergence across sectors and states in terms of skill-training activities.

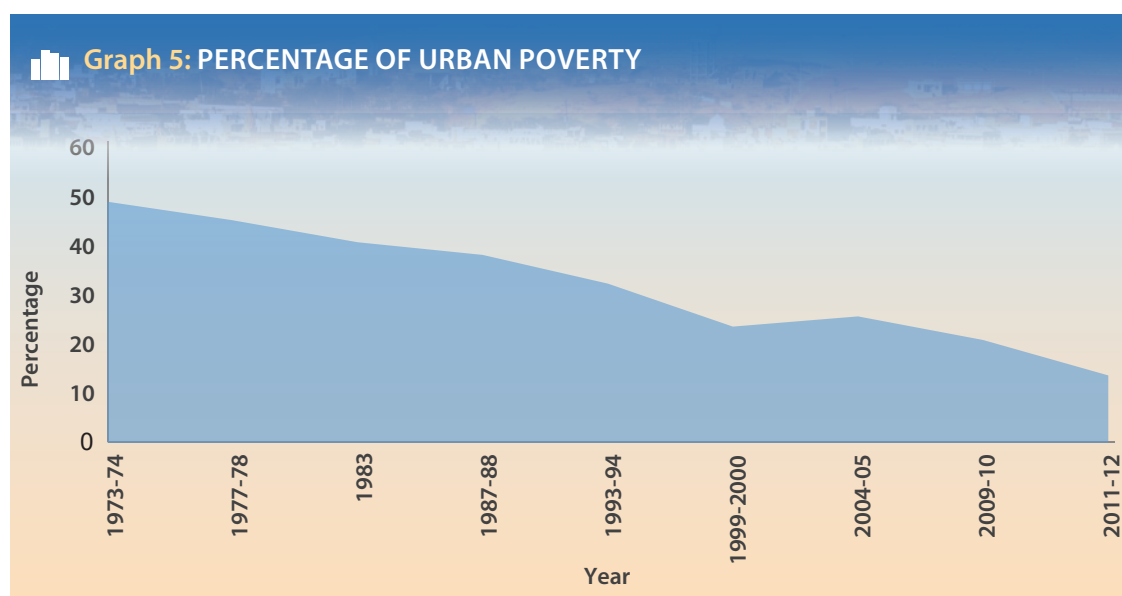
**Table 5: LEVELS OF URBAN POVERTY**

Year	Urban India	
	Number of persons below poverty line (in million)	Per centage of population below poverty line
1973–74	60.05	49.01
1977–78	64.65	45.24
1983	70.94	40.79
1987–88	75.17	38.20
1993–94	76.34	32.36
1999–2000	67.01	23.62
2004–05	80.80	25.70
2009–10	76.47	20.90
2011–12	53.12	13.70

Source: Planning Commission



Source: Planning Commission and Census of India.



Source: Planning Commission, estimates for successive years.

more people in the process of economic growth.

### Creating Decent Jobs and Livelihoods in the Urban Sector

According to the 2011 Census, 26 per cent of

the total workforce resided in urban areas; 83 per cent of the urban workforce falls in the category of “main workers” and the balance in the category of “marginal workers.” The male-female composition of the urban workforce is structured



in favour of male workers (the male-female ratio being 78:22 in 2011), although there is some improvement in this ratio, which was 84:16 in 2001, due to increase in the volume of female employment during 2001–11. Urban India has seen an increasing concentration of employment during the seven-year period of 2004–05 to 2011–12. As per the National Sample Survey Organisation (NSSO) data, in India as a whole, jobs have risen in these seven years by only 1.5 per cent, while in urban India these have grown by 17.5 per cent, from 116.1 million in 2004–05 to 136.4 million in 2011–12 (Table 3). The unemployment rate in urban India has gone down from 4.5 per cent in 2004–05 to 3.4 per cent in 2011–12.

It is important to highlight that the informal sector in urban areas is growing rapidly. Consequent-

ly, a notable aspect of the employment situation in India is the large share of informal employment and growth in informal employment in the organized sector. The share of informal employment in the organized sector increased from 48 per cent to 54.6 per cent in 2004–05 to 2011–12. Its share in total employment remained above 90 per cent throughout this period (Economic Survey 2015–16). The growth in informal employment and its heterogeneity have to be given due consideration to achieve the stated development objectives. In this context, promoting growth of Micro, Small, and Medium Enterprises (MSME) is critical from the perspective of job creation which has been recognized as a prime mover of the development agenda in India.

In order to bring compliance in the system,

catalyse job creation, and ensure ease of doing business while safeguarding safety, health and social security of all workers in both organized and unorganized sectors, the Government of India as well as the state governments have initiated various reforms in the labour market.

The pattern of the sectoral share of employment has changed over the last two decades with the share of agriculture falling and of industry and services rising steadily, as can be seen from Table 4. Services share in employment at 28.5 per cent in 2011–12 is higher than of industry at 24.4 per cent. Employment elasticity has increased for both services and industry during 2009–10 to 2011–12 compared to 2004–05 to 2009–10, reaffirming the importance of urban sector for job creation, absorption of surplus workforce from rural areas and better living opportunities.

A reduction in poverty and vulnerability of the urban-poor households has occurred by enabling them to access gainful self-employment and skilled-wage-employment opportunities. This has resulted in an appreciable improvement in their livelihoods on a sustainable basis, made possible by building strong grassroots-level institutions for the poor, like the Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM), a Government of India initiative. Under this Mission, urban poor are organized in self-help groups, imparted with skill training for self and wage employment, and are assisted to set up self-employment ventures by providing credit at subsidized rate of interest. Also, the Mission provides for shelters for urban homeless and infrastructure for street vendors. The government aims at bringing about greater convergence among various skill-development programmes which are being administered.

Towards enhanced employment opportunities, there is a need for developing and using skills. As per the Labour Bureau Report, 2014, the current size of India's formally skilled workforce is small, approximately two per cent. As per studies con-

ducted by National Skill Development Corporation (NSDC) for the period between 2013 and 2022, there is an incremental requirement of 120 million skilled people in the non-farm sector. The current capacity for skilling is grossly inadequate and needs to be speedily scaled up to meet immediate skill needs of the country. Some recent initiatives that aim to enhance access, equality, quality, innovation, etc. in the area of higher and vocational education are the "Rashtriya Uchchatar Shiksha Abhiyan" (RUSA) i.e., National Higher Education Campaign; Technical Education Quality Improvement Programme (TEQIP); and National Skill Qualification Framework (NSQF). A dedicated Ministry of Skill Development and Entrepreneurship (MSDE) has been created to accord focussed attention in this area. Recently, the Government of India has come out with a "Skill India Mission" to bring about convergence across sectors and states in terms of skill-training activities (Box 3).

The Government of India has also launched the Start-up India movement in January 2016, aimed at promoting bank financing for start-up ventures to boost entrepreneurship and creation of jobs.

### Urbanization-Poverty Linkages

There is a regular debate in the development literature on the effects of growth on poverty. Some scholars contend that it is not "growth" but the quality of growth that affects poverty levels; others argue that growth is an essential factor in poverty reduction. India's evidence points to a substantial decline in poverty levels, including in levels of urban poverty (Graph 5). While causalities are difficult to establish, there is no denial of the fact that urban-led economic growth of recent decades has had a decisive positive impact on the levels of urban poverty.

### Conclusion

The sheer scale of the structural transformation presents tremendous challenges as well as opportunities for bridging the rural-urban divide

in India. The medium-term growth potential is an essential prerequisite to manage and facilitate the process of urbanization which is an inevitable consequence of rapid growth and structural transformation. Participatory formulation of national urban policies accompanied with efficient urban governance will hence lead to shared responsibility of the new urban agenda.

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## CHAPTER TWO

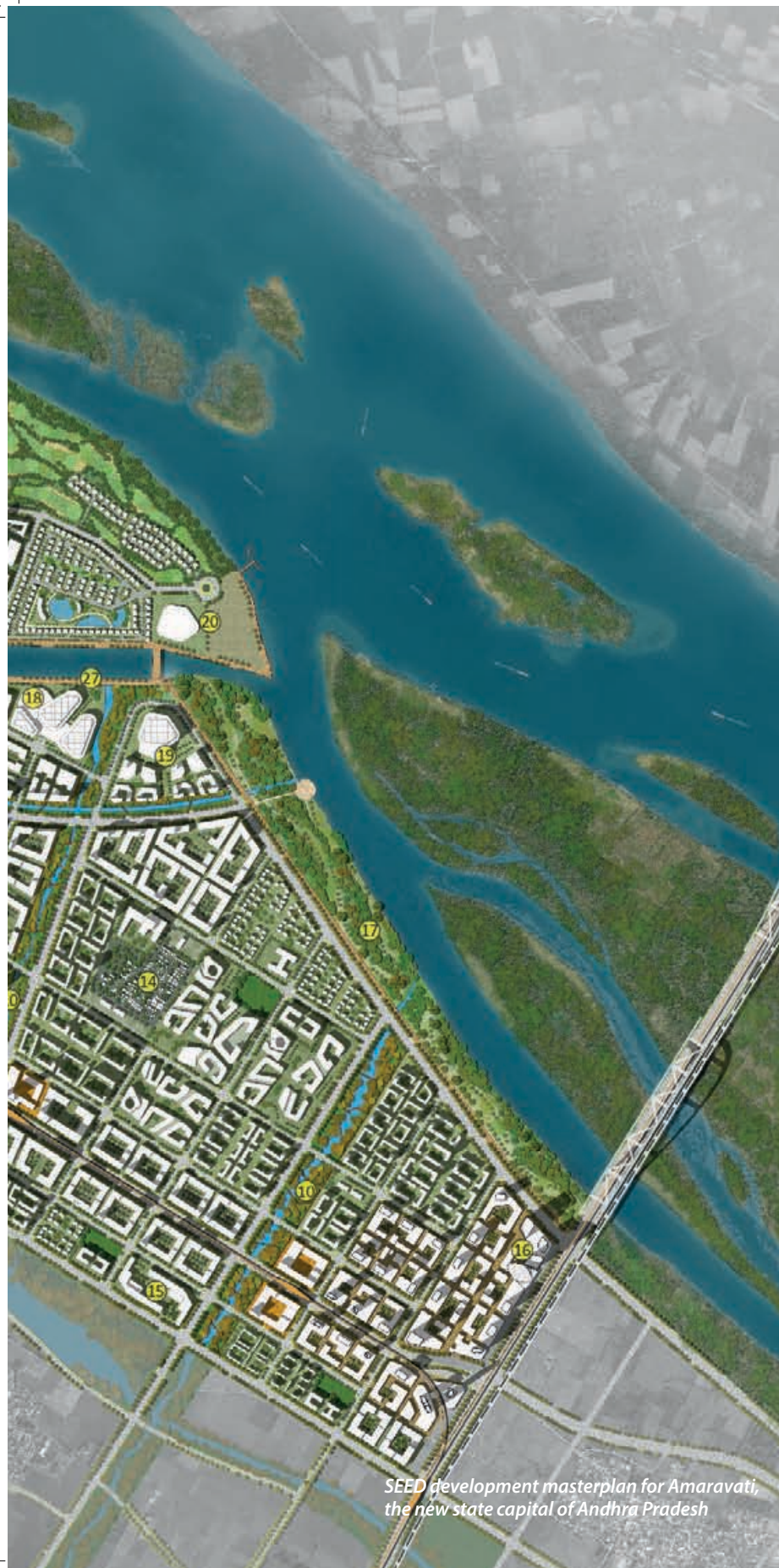
# URBAN LAND, PLANNING AND MOBILITY

### Legend :

- |                              |                            |
|------------------------------|----------------------------|
| 1. Assembly and Secretariate | 15. University             |
| 2. Civic Axis                | 16. Gateway Tower          |
| 3. State Ministries          | 17. Wetland Park           |
| 4. State Gallery             | 18. Performance Centre     |
| 5. Civic Plaza               | 19. Art and Culture Centre |
| 6. Lingayapalem Village      | 20. Jetty Downtown         |
| 7. Hospitality Node          | 21. Downtown Core          |
| 8. Regional Hospital         | 22. Iconic Tower           |
| 9. Uddandrayanipalem Village | 23. Indoor Sport Centre    |
| 10. Canal Parks              | 24. Food and Beverage      |
| 11. Botanical Garden         | 25. Golf Course            |
| 12. Botanical Jetty          | 26. Convention Centre      |
| 13. Downtown Core            | 27. Promenade              |
| 14. Tallayapalem Village     |                            |



0 100 500 1000 M



SEED development masterplan for Amaravati,  
the new state capital of Andhra Pradesh

**T**he management of land resource derives importance from the unprecedented population pressures and demands of the society on land, water and other natural resources. Urban land supply, besides being scarce, till recently, has also been constrained by regulatory requirements and a dominant public-sector presence in land transactions. The competition and conflict in use of land require an integrated approach to land use planning taking into consideration the environmental, social as well as economic factors so as to ensure that the overall good of the society is achieved. Planning is one of the critical tools in ensuring this. The limited resources and capacity of the urban local bodies combined with the loopholes in regulations have constrained ULBs from proper implementation of master plans, often leading to haphazard urban growth with its inherent problems. Many states have now instituted measures to reduce barriers to private supply of land by abolishing archaic land legislations and taking up several relevant reforms. Urbanization brings increased mobility followed by congestion, requiring related infrastructure to support it. In urban India growth in numbers of automobile is growing faster than the population; automobile-ownership growth rates are of the order of 15–20 per cent per annum in most cities (Indiastat.com, 2008). In this chapter, the issues related to land management and urban sprawl, urban planning and design, mobility and sustainable transportation are highlighted.

## Urban Land Management and Addressing Urban Sprawl

For accommodating urbanization in a planned and effective manner, actions taken so far include the constitutional provisions of empowering the states to develop policies and enact laws. State governments have jurisdictions on almost all matters related to land, planning and development. Efforts to enhance planned urban land supply have been limited and there has been a proliferation of informal land subdivisions and land markets. Some of the recent efforts to address this challenge include the following:

### Facilitating urban land supply

Land being the scarce resource capital gains from this lead to intense inflationary conditions, making it more difficult for the urban poor to have access to land. Recognizing this, the state governments have developed various schemes for providing land and housing for the urban poor.

Innovative land pooling models in Delhi (Box 1), Amaravati in the state of Andhra Pradesh

(Box 2), and Naya Raipur in the state of Chhattisgarh (Box 3) are worth mentioning, which would help in facilitating land supply.

Land reservations have also been mandated for the urban poor in townships and layouts, ensuring the benefits of urban development to the poor through increased access to urban spaces and enhanced employment opportunities. Reservations normally vary from 15–25 per cent of the total units.

### Review of legislative framework to acquire land for public purposes

The Central Land Acquisition Act, 1894 has been under review. The land acquisition carried out under this Act has been a time-consuming process leading to unending litigation that encourages speculative tendencies. To eliminate these shortcomings, the existing Land Acquisition Act has been amended, and Right to Fair Compensation, Transparency and Land Acquisition, Rehabilitation and Resettlement Act, 2013 has been introduced. The latter addresses issues with respect to fair compensation (when private land is acquired for public use) and fair rehabilitation of land



#### Box 1

### DELHI URBAN LAND POOLING POLICY

The Master Plan of Delhi (MPD), 2021 stipulates that the Land Pooling Policy would be based on the optimum utilization of available resources in land assembly, development/ redevelopment and housing. Delhi Development Authority (DDA), the concerned Land Pooling Agency, envisions assembling around 20,000 hectares of land from 89 villages located on the periphery of Delhi. It aims to construct around 2.5 million housing units within a span of six to eight years to meet the housing shortage spelt out in MPD 2021. It is believed that the policy would help develop housing and infrastructure without acquiring land, which is a cumbersome and lengthy process. The Ministry of Urban Development approved the Land Pooling Policy in September 2013. The policy aims to prevent selling of land without the owner's consent. Under this policy, landowners can surrender their landholding into the central pool, and be stakeholders to the development proposed on their land. Once the land is pooled, the landowner would get back 40–60 per cent of the total land surrendered, as developable land. The 40–60 per cent of land that DDA would retain with them would be utilized for creation of infrastructure as well as monetize it against specific purpose (Delhi Development Authority, 2013).

## Box 2

**AMARAVATI—LAND POOLING FOR A STATE CAPITAL**

In the year 2014, the state of Andhra Pradesh got divided into two states: Telangana and Andhra Pradesh. While Hyderabad remained the capital of Telangana, the residual state of Andhra Pradesh needed a new capital. The Government of Andhra Pradesh has envisaged the development of a world-class people's capital of Andhra Pradesh, which is being located in Amaravati, between the cities of Vijayawada and Guntur, with an extent of capital region of 7068 sq.km. The plan for the new capital city was to be accommodated in over 217 sq. km. The lands at the chosen location were all in private ownership with standing crops. The cost of land acquisition would have been phenomenal. Instead of acquiring the land and paying market compensation, or even purchasing land at market rates, the Government of Andhra Pradesh resorted to a land-pooling methodology where for every acre of land taken from the farmers, 40 per cent of developed land would be returned. Also, the government will compensate INR 75,000—125,000 per hectare for a period of 10 years with an increase of 10 per cent for each year. Within a record time of less than 2 months, 33,000 ha. of land was mobilized for the new capital city without any expense.

owners and those directly affected from loss of livelihoods besides defining limits to acquisition of agricultural land. Incorporations/legislations of further amendments to strengthen the Act are under process/contemplation.

### Integrating land use with transport planning

Opportunities for urban planning with integrated transport and land use on a large scale are emerging in the planned highway expansions in the country, with the Golden Quadrilateral, freight corridors, and other networks. The Golden Quadrilateral, connecting four metropolitan cities, namely Delhi (north), Chennai (south), Kolkata (east) and Mumbai (west), connects major commercial and industrial townships providing vast opportunities for transport of agricultural produce and other manufactured goods from the hinterland to major cities and ports for export. The Delhi-Mumbai Industrial Corridor (DMIC) spanning over six states of India, envisages the development of a number of hubs for manufacturing and commerce and self-contained, state-of-the-art townships with world-class infrastructure.

Similarly, the Eastern Dedicated Freight Corridor passes through six states, bypassing the densely populated towns in these states, thereby offering new opportunities for planned urban and regional development. These projects are aimed at providing an impulse to smoother movement of products and people, helping reduce the traffic flow, enabling industrial and job development in smaller towns through access to markets, offering scope for planning new cities at the nodes of the major transport systems, ensuring inter-city connectivity, providing job opportunities in its construction as well as demand for cement, steel and other construction materials, and consequently going a long way in reducing rural-urban migration and urban sprawl.

### Urban Planning and Design

Urban planning in India is concerned with i) the determination of use of lands for various purposes and ii) the laying down of the principles, rules and strategies for the development of lands. Development is seen as a physical manifestation in most of the town-planning legislations. Vide the 74th Constitutional Amendment Act of 1992, the states now bestow municipalities with necessary powers

## Box 3

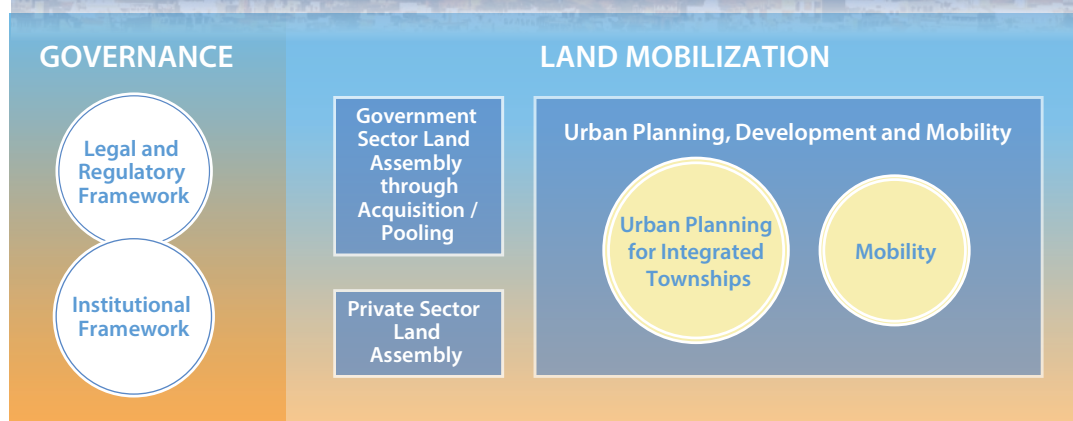
## NAYA RAIPUR—NEGOTIATED LAND PURCHASE FOR A NEW STATE CAPITAL

The new state of Chhattisgarh was created over a decade ago, with the town of Raipur as its capital. In order to properly house the capital administrative functions, the new capital city of Naya Raipur was envisaged at a distance of about 17 km in the south-east of the present day capital city Raipur. Naya Raipur Development Authority (NRDA) has been constituted for the planning and development of the new city, covering a total area of 237.42 sq. km. Of the total land required, the government owned about 29 per cent and the remaining 71 per cent was privately owned. Using the existing instruments of land acquisition would have meant inviting litigation, which could delay the project. In order to overcome this, NRDA started purchasing private land in the year 2006 by mutual agreement with the landowners. NRDA has purchased 4798.75 hectares private land through mutual consent and has paid INR 8759.40 million to the private parties as cost of land. The private negotiation process had a series of public consultation meetings with landowners, and after obtaining their consent on replacement value of the land, the land procurement process was completed. Thus, of the total private land (6365 ha.), 4798.75ha, land has been purchased by mutual agreement, 1387 ha. (of 82 title holders), which could not be purchased despite best effort, is under different stages of land-acquisition process under the Land Acquisition Act, 1894 (NRDA, 2012).

to prepare plans for economic development and social justice as well as matters covered under the Twelfth Schedule of the Constitution of India. The basic notion of “development” thereby incorporates economic development, inclusive growth,

and environmental sustainability in the planning of urban development. Figure 1 indicates the manner in which land, urban planning and mobility are organized in India. In every state there is a legislative and regulatory regime for land and

 **Figure 1: THE URBAN PLANNING FRAMEWORK IN INDIA**



## Box 4

## INITIATIVES TOWARDS TRANSIT-ORIENTED DEVELOPMENT

In Indore, in an attempt at a more compact development in the Master Plan, recognizing that there is higher demand around these nodes, the Floor-Area-Ratio (FAR) along the Bus Rapid Transit System (BRTS) corridor has been increased from 1.25 to 3. There are similar proposals for increasing FARs along other BRTS corridors in the state.

Gujarat has also been moving towards a flexible FSI regime and FSI pricing, and zone changes are being determined according to a specified set of rules and regulations.

The development of Outer Ring Road (169 km long, 8 lane expressways) in the Hyderabad metropolitan region is another example of ensuring sustainable urban planning and design. A stretch of 1 km. each on the two sides of the Outer Ring Road is designated as a Growth Corridor and is classified as mixed-use zone. Satellite townships are planned at major transportation nodes along the corridor, with provision for a green belt and metro in the growth corridor. A special impact fee will be levied on any development taking place inside the corridor, to be collected at the time of granting building permissions. The city has also recognized the need for radial road construction, to balance the centripetal forces that will be unleashed by the new Outer Ring Road, enabling development to extend outwards from the core city to the Outer Ring Road (ideally in a phased manner). This development is expected to radically reshape the city's structure over the next 20 years, operating in conjunction with other economic drivers, particularly the rise of the ICT sector.

urban planning. This is governed by state governments, parastatal agencies and municipal organisations. Land is mobilized either by the public sector or the private sector for urban infrastructure housing and township development. All such developments are connected in a seamless manner with proper mobility networks (Box 4).

The new approach on planning builds on bringing broad consensus around a long-term vision for cities identified projects, funding, and management structures to help turn the vision into reality. There are different hierarchies of Planning Authorities at different levels. However, the lack of one institution at the local level with clear planning authority and institutional accountability for delivery of municipal services continues to challenge urban India. In order to meet this challenge and support cities and states a national level Town and Country Planning Organization (TCPO) has been constituted to provide assis-

tance to the State Governments, Public Sector Undertakings and Local Bodies/Development on matters pertaining to urbanisation, town planning, urban transportation, metropolitan planning, and human settlement policies.

However different states/cities have adopted different institutional arrangements to meet regional planning challenges as well as address rural urban linkages. For example, National Capital Region (NCR) of Delhi, in order to avoid haphazard development and deflect/adjust the rising population of Delhi and its adjoining states constituted National Capital Regional Planning Board to promote balanced and harmonized development of the Region. This inter-state regional planning and development authority covers thirteen districts of State of Haryana, seven districts of State of Uttar Pradesh and two districts of State of Rajasthan, with the Nation Capital as its core not only prepares the regional and the functional plans but

## Box 5

**TOWN PLANNING SCHEME, GUJARAT**

To develop urban land on the fringes of cities, the State of Gujarat has been using Town Planning Schemes (TPS), a form of land readjustment system roughly similar in principle to the ones that had been used in South Korea, Taiwan, and Germany, whereby irregular plots of land are pooled together, serviced and reconstituted into systematic plots before returning a proportion of improved land to the land owners. The legal framework for the TPS of Gujarat is originally based on the Gujarat Town Planning and Urban Development Act of 1976. Eventually, as of 2009, the TPS became fully operational. The implementation process, from initiation to final approval of a TPS, on average requires less than one year. Since 1999, the Ahmedabad Urban Development Authority (AUDA) has managed to develop on average about 700 hectares of land a year using the TPS. The average area developed each year is roughly equivalent to about 3.2 per cent of the current built-up area of the Municipality of Ahmedabad. The TPS of Gujarat have demonstrated that they are an efficient way of developing suburban infrastructure in India.

also arranges financing of selected development projects in the National Capital Region. Similarly, Mumbai Metropolitan Development Authority was constituted to provide for a strategic framework for sustainable growth of Mumbai Metropolitan region.

Box 5 is another example of land-pooling model with land readjustment system using Town Planning Scheme. The land-sharing model in partnership with the landowners at Vijayawada (Box 6) is an example of how “inclusion” can be accomplished within a framework of integrated planning of a city. The latest Rajasthan Land Pooling Scheme Bill, 2016 (Box 7) provides for implementation of urban development schemes and projects through land-pooling system. Another way to increase the supply of urban land in the market and reduce its cost is to release large tracts of unused or underused government-owned land in cities. This land would be freed up for development and half the land would be used by the state government for rehousing slum dwellers.

**Planning for Public Space**

Public spaces act as important places to enhance community cohesion through activities that ensure participation of all sections of the society.

It is therefore important that policies on urban planning should adhere to norms, which set aside adequate open spaces in a layout, so that social interactions become a practice not only during festivities but also in everyday life. However, over the years, the planned neighbourhoods have also ensured open spaces at community level. But these spaces are being encroached and misused by the people due to lack of ownership by the community to which they belong. It is therefore important that public spaces be designed in a way that a community is able to own and maintain it. The Government of India recently launched the Smart Cities Mission and the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), in which Indian cities have better possibilities to increase or improve their public spaces. One of the examples of revitalisation and restoration of public spaces is well demonstrated in Delhi (Box 8). Ensuring city-wide distribution of public spaces is a way for governments to reduce inequalities and reallocate benefits. Spatial or area-based planning shall prevail above master or socio-economic planning when it comes to planning public spaces (Box 9).

This is a great opportunity to enhance the accessibility of public spaces to all citizens.

## Box 6

## LAND-SHARING MODEL OF VIJAYAWADA— AN INCLUSIVE EXPANSION

Vijayawada Municipal Corporation (VMC) has a population of 1.05 million (2011 Census) and slum population of 0.29 million in 111 slums, out of which 20 are untenable with a population of 0.05 million and need to be relocated. VMC estimated that about 1000 acres of land is required to construct 50,000 dwelling units (DUs) for accommodating urban poor households of the city. Due to non-availability of land within the city limits, two villages Gollapudi and Jakkampudi have been identified considering their proximity, accessibility and growth. VMC explored the typical land-sharing model followed in the private sector through Public Private Partnership (PPP) and successfully acquired 226.54 acres. The land owners and VMC agreed to share their land in 60:40 (Farmers:VMC) ratios, a win-win situation for both parties. PPP approach has benefitted VMC with savings of 15per cent over the conventional method, and farmers received developed land with an increased value by 1.5 to 3 times. Farmers also saved on layout development charges (INR 0.48 million or U.S. \$7,446 per acre), land use conversion charges and registration charges (10per cent on land value). On the 40per cent land obtained by VMC, 7,776 DUs were proposed and about 90per cent of the DUs have been constructed and the remaining are in the final stages of completion. (VMC, 2011)

### Regional Planning Approach

With a view to guide planned urbanization in India, urban-rural integration approach in a regional framework aims at paving the way for “sustainable settlement planning,” emphasizing on human living environment rather than overtly concentrating on built environment and the accompanying administrative structures. Drawing upon the lessons learnt from the past programmes and in order to have symbiotic, balanced regional development, the Government of India has launched the National Rurban Mission which is being administered by the Ministry of Rural Development and is aimed towards making villages smart by stimulating local economic development, enhancing basic services and creating well-planned Rurban clusters aiming at catalyzing overall regional growth. The objective is to strengthen the rural areas and to de-burden the urban areas for balanced regional development and growth of the country. The Rurban Mission will help develop a rural-urban continuum by provisioning for urban infrastructure and services in the rural and peri-urban areas.

### Urban Mobility: Improving Access to Sustainable Transport

While urban India has seen an unprecedented growth of motor vehicles in the last two to three decades, the road space per vehicle has come down leading to congestion. Between 1981 and 2011 the average growth rate of total registered vehicles has been 11.7 per cent per annum as against the total population increase of 2 per cent per annum. As per 2013 estimates, the total road network in India covers 4.69 million kilometres. The National Urban Transport Policy (NUTP) 2014 focuses on planning for people rather than vehicles, by providing sustainable mobility and accessibility to all citizens to places of work, education, social services and recreation at affordable cost and within reasonable time. This involves incorporating urban transportation as an important parameter at the urban-planning stage rather than being a consequential requirement, introducing Intelligent Transport Systems (ITS) for traffic management, raising finances through innovative mechanisms, establishing institutional mechanisms and build-

## Box 7

**RAJASTHAN LAND POOLING SCHEME BILL, 2016**

The most recent development among the land-pooling models is the Rajasthan Land Pooling Scheme Bill, 2016. The bill provides for implementation of urban development schemes and projects through land-pooling system. The objects and reasons annexed to the Bill states: "The concept of land pooling has emerged as the most effective and equitable self-financing mechanism for land consolidation, wherein land parcels owned by individual or group of land owners are legally consolidated by transfer of ownership rights to appropriate authority, which is obligated to develop physical and social infrastructure on the consolidated land against a guaranteed return of developed and reconstituted land/plot. This creates a mutually beneficial system for the landowner, development agencies and the city at large. The land owner gets developed land in exchange of his undeveloped land and the development agencies saves on land acquisition and development cost, as a small per centage of land will be reserved for finance mobilization, and the city gets better physical and social infrastructure. This provides equal opportunity to every landowner to play a role of land developer. The process is in line with progressive principles of public participation and provides a roadmap for integrated infrastructure development, and optimum utilization of available resource and importance is to be given in equal measure to ownership rights, sustainability, and planned development. The said emergent policy also recommends strengthening the role of citizens."



*Proposed Transit Oriented Development in Amaravati city.*



ing capacity for enhanced coordination in the planning and management of transport systems. Cities in the recent years, recognising the challenges of the climate change are moving towards adopting public transport system and integrating land use and transport planning.

### **Mass Rapid Transit System (MRTS)**

MRTS is an integral component of India's urban transport infrastructure and its importance is growing (Box 10). The metro systems have an impact on the development and land use in cities but the fact that land-use planning has not been integrated with the metro project plans is a missed opportunity for Transit Oriented Development (TOD). However, the Hyderabad metro rail project (71 km) is being implemented under public-private-partnership, not as a simple mass transit system, but as an urban redesign concept

with emphasis on last-mile connectivity and using an innovative financial design so as to require very little public funds.

Delhi has adopted Transit oriented Development Policy in 2012. The objective of this policy is to promote low-carbon, high-density, compact, mixed land use and sustainable development by minimizing travel time for citizens, promoting use of public transport, reducing pollution and congestion, creating more homogeneous neighborhoods, having work places near residences, creating public amenities within walking distances and providing safe environment through redevelopment along MRTS (Mass Rapid Transport System) corridors in the national capital.

Some of the recent initiatives taken by the Government of India for efficient mobility needs and reducing congestion include:

- Integrating intermediate public transport


**Box 8**

## URBAN RENEWAL INITIATIVE BY AGA KHAN TRUST

The Humayun's Tomb-Nizamuddin area in Delhi has continuously evolved and been inhabited since the thirteenth century. Over the past 700 years, a profusion of monumental tomb building occurred in close proximity to the Dargah of Hazrat Nizamuddin Auliya, a revered Sufi saint. Here, the Aga Khan Trust for Culture (AKTC) commenced a major urban renewal initiative spread across 90 hectares following a 2007 MoU with the Archaeological Survey of India (ASI), Central Public Works Department (CPWD) and the Municipal Corporation of Delhi (MCD, now SDMC).

The salient features of this open space for all development are as follows:

- Open-space development for ensuring safe positive spaces for community use
- Urban improvements which are aesthetic, sustainable and participatory
- Enabling recreation and revising arts through reclaiming community places
- Providing platform for arts and culture
- Constructing community toilets
- Educational spaces for all, including amphitheatres

and non-motorized transport.

- Increase road taxes on private vehicles to build a public transport fund. The government has increased taxes on private vehicles, to fund the public transport transition.
- Ban on commercial vehicles, which are more than 15–20 years old and removal of 10-year-old buses from the roads unless they use CNG or some other clean fuels.
- Improve traffic management /traffic flow on


**Box 9**

## KEY DRIVERS FOR ACTION FOR PUBLIC SPACES

### Precepts to achieve sustainable public spaces

As proposed in an Issue Paper guiding the Habitat-III Conference that will be held in Quito in October 2016, the following precepts shall be applied in order to achieve sustainable public spaces:

- At regional and city levels, citywide strategies need to focus not only on places and spaces.
- Local authorities should be able to design the network of public space as part of their development plans.
- At neighbourhood level, urban design should work with communities to foster social inclusion, celebrate multiculturalism, and enable urban livelihoods.
- Laws and regulations need to be reviewed, to establish enabling systems to create, revitalize, manage, and maintain public spaces.
- Land-value sharing and land-readjustment tools to be widely adopted and promoted.
- Investing in public space needs to be harnessed as a driver for economic and social development.
- As cities expand, the necessary land for streets and public spaces as well as public infrastructure networks must be secured.

roads, reducing emission per vehicle kilometre travelled and enhancing mobility.

- Promotion of Transit-Oriented Development (TOD) with densification and re-densification of cities.
- Moving towards Public Transport system. There are more than 11 cities that have initiated Mass Rapid Transit Systems. Cities are also taking special measures to prevent road accidents.

### Comprehensive Mobility Plan (CMP)

Many Indian cities have prepared a Comprehensive Mobility Plan (CMP) with a long-term vision for accessibility and mobility pattern, and are promoting better use of existing infrastructure and integration of land use and transport. Many Indian cities are improving their public transport systems with the help of Mass Rapid Transport Systems (MRTS), monorail, Bus Rapid Transit Systems (BRTS) and city bus services (Box 10).

### Dedicated Freight Corridors (DFCs)

These have been introduced across the country. In the first phase, two corridors viz. 1,520 km. Mumbai-Delhi (Western Dedicated Freight Corridor) and 1,856 km. Ludhiana-Dankuni (Eastern Dedicated Freight Corridor) are being constructed. The project is expected to reduce emissions by about 457 million ton CO<sub>2</sub> over a 30 year period. With a number of energy efficiency measures undertaken, Indian Railways has achieved 19.7 per cent improvement in Specific Fuel Consumption for Freight Service Locomotives and 21.2 per cent improvement for Coaching Service Locomotives during the last 10 years. The government is promoting growth of Coastal Shipping and Inland Water Transport. To enhance inland waterways transport, the government has announced the implementation of Jal Marg Vikas for capacity augmentation of National Waterway 1. It is also proposed to establish integrated waterways transportation grid with a view to provide all existing and proposed national waterways with road, rail

#### Box 10

### PUBLIC TRANSPORT SYSTEM IN INDIA

There have been improvements in public transport in India in recent years. Delhi's rail-based MRTS and Ahmedabad's Bus Rapid Transit System (BRTS) have successfully contributed to improving the situation with respect to public transport. Delhi metro system, currently the world's thirteenth-largest metro system, serves the mobility needs for intra-city trips of commuters in Delhi as well as connects Delhi with its satellite towns like Gurgaon, Noida, and Ghaziabad. It has a total network of 193 km. (including the airport express line) as of June 2014 and carries around 2.5 million commuters daily. Ahmedabad's Bus Rapid Transit System (BRTS) has successfully contributed to improving the situation with respect to public transport. Apart from Ahmedabad, Indore, Jaipur, Pune, Rajkot, Surat, Vijayawada, Bhopal, Bhubaneswar, Hubli-Dharwad, Mumbai, Pimpri-Chinchwad, Vishakhapatnam, Bangalore and Mysore are implementing BRTS. Indore, which did not have a public transportation system until 2006, now has a city bus service with 104 buses run by a special purpose vehicle (SPV), Indore City Transport Services Ltd (ICTSL). Surat's bus fleet of 125, established in 2008, carries 70,000 passengers every day. In both cases, operation of the bus services has been outsourced to the private sector, while the Municipal Corporations have found innovative ways of investing in public transport infrastructure and traffic monitoring systems of regulation and enforcement. Cities like Mumbai, Kozhikode, Chennai and Thiruvananthapuram are also investing in projects like monorail.

and ports connectivity.

Another initiative in this direction is the Sagar-mala Project with the objective to augment port-led development and promote efficient transportation of goods. Bharatmala Project, which envisions constructing about 5,000 km. of road network all along the coastal areas, will further provide connectivity to these ports. Conversion of 111 rivers across the country into waterways is a “revolutionary step” and paves the way for utilization of 35,000 km. of waterways in the country for sustainable development.

Some of the other key initiatives by Government of India and best practices initiated by cities in promoting urban transport are as below:

#### **i. Smart Cities Mission**

The Mission supports cities in preparing and implementing Smart Solutions in green-field and brown-field developments on an area-based approach and a pan-city initiative covering larger parts of the city. A few of the typical features of transportation envisaged in smart cities are promoting mixed land use, creating walkable localities, promotion of public transport and encouragement of Non-Motorized Transport (NMT).

#### **ii. Atal Mission for Rejuvenation and Urban Transformation (AMRUT)**

This programme envisages five thrust areas of which urban transport is one focussing on sidewalks, footover bridges, non-motorized transport, buses, BRTS, multilevel parking, waterways and ferry vessels.

#### **iii. Service Level Benchmarks (SLB) for Urban Transport (UT)**

In order to improve transport services, MoUD has come up with a handbook which provides common framework for monitoring and reporting on SLBs for UT services.

#### **iv. Non-Motorized Transport Policy**

Chennai is the first Indian city to adopt a

Non-Motorized Transport (NMT) Policy initiative to create a quality and dignified environment where citizens are encouraged to walk and cycle. The policy also talks about equitable allocation of public space and infrastructure; and access to opportunities and mobility.

#### **v. Transit-Oriented Development along BRTS corridors**

Pimpri-Chinchwad, a thriving industrial city in the state of Maharashtra, has proposed Transit-Oriented Development (TOD) along the BRTS corridors. The Municipal Corporation of Pimpri-Chinchwad (PCMC) envisions a three-phase metro system.

#### **Barrier-Free Built Environment**

The Central Public Works Department (CPWD), Government of India has come out with the guidelines for Barrier-Free Built Environment, for people with disabilities to enable them to move about safely and freely and to use the facilities within the built environment. The guidelines prescribe the standards for adequate space for persons with mobility devices such as wheelchairs, crutches and walkers, as well as those walking with the assistance of other persons.

#### **Shift in Urban Paradigm**

The Habitat III new urban agenda has called for a transformation of urban policies, legal frameworks, strategies, and actions at the regional, national, sub-national, and local levels to change the way that cities and human settlements are planned, built, governed, and managed, taking into account the contribution of sustainable urbanization to job creation and sustainable development. The three drivers of change to realize the transformative commitments are:

- i.** A renewed local and national partnership,
- ii.** A strategic and integrated urban and territorial planning, and
- iii.** An innovative and effective financing framework.

## Conclusion

Land is a state subject in India and the complex challenges faced by Indian cities are not just unique but typical to the specific city realities. With urbanization on the rise, it is important to ensure that we plan for meaningful public spaces which are accessible to all, foster a sense of safety and community, and act as a shared resource in which experiences and value are created for those all who use it. Addressing the complex challenges of mo-

bility in India, apart from massive investment for creation of mass transit systems, enabling policies and strategies to move from individual modes of transport towards more efficient and sustainable public transport systems is necessary. Indian cities are characterized by informal urban and peri-urban land subdivisions and a consequential informal land market. Efforts are being made by the states and local governments to address the challenges of land market in an integrated manner.

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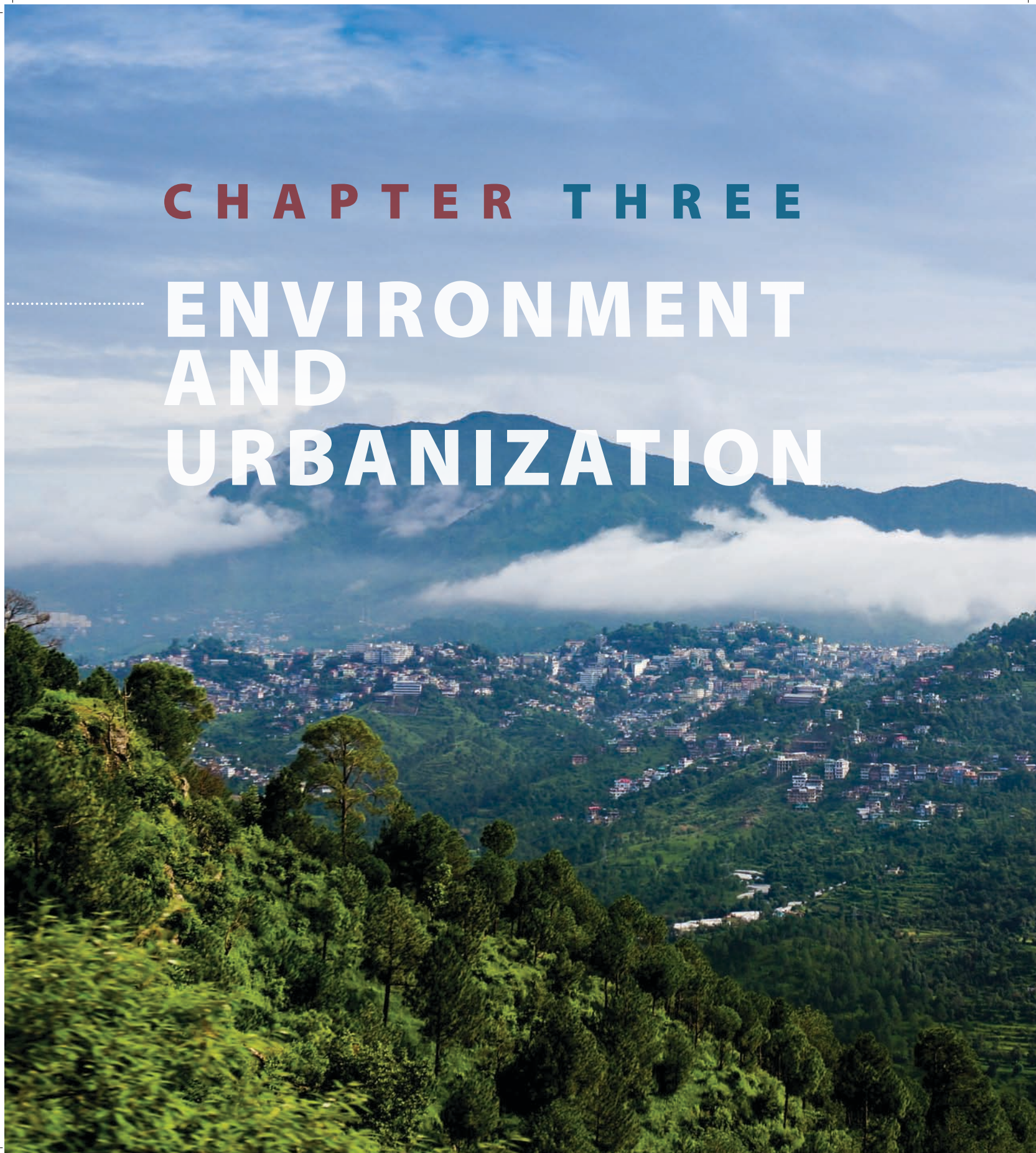
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# CHAPTER THREE

## ENVIRONMENT AND URBANIZATION





**W**hile the urban centres act as the generators of economic growth; rapid pace of urbanization creates burden on the existing natural resources. Cities are more dependent on energy than rural areas and create considerable amount of ecological footprints. Accelerated urbanization creates demands for mass transportation, increment in commercial and industrial activities, and pressure to use the vacant urban land. These activities are often undertaken at the cost of natural landscape, water bodies, increased energy consumption, etc., creating severe damages to the quality of air, water and other natural resources. Along with these, climate change makes human settlements more susceptible to natural disasters, especially for the economically weaker sections of the society, who are more often exposed to and affected by vagaries of extreme weather conditions. For any city, the scale of damage is directly connected to the extent and effectiveness of urban planning, the quality of housing and infrastructure, the level of preparedness among the city's population, the availability of key emergency services, etc. In India, with the increasing rate of urbanization and demand for utilization of natural resources; the role of the planners and policy makers becomes critical in terms of striking the balance between protecting the environment from degradation and reaping the maximum economic benefits from the emergence of rapid urbanization. In this context this chapter provides a description of India's sustained efforts for creation of Sustainable Habitat.

## Addressing Climate Change and Creating a Sustainable Habitat

India adheres to the provisions of the two international treaties of 2015. One, the adoption of the Sustainable Development Goals (SDG) in September 2015, which replaced the Millennium Development Goals, set the development agenda for the next 15 years, and two, the Climate Change Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) in Paris in December 2015 which aims at keeping the rise in global temperatures below 2°C, to set the world towards a low carbon, resilient and sustainable future.

On the domestic front, acknowledging the need for taking appropriate actions on climate change, the Government of India has undertaken some important climate related initiatives in terms of policies and programmes such as launching of the International Solar Alliance and implementation of the low carbon development strategies. Government of India has brought policy focus on sustainable habitat through adoption of National Urban Housing and Habitat Policy in 2007, mainstreaming the elements of ecology, environment and energy efficiency. The policy is being revised and the draft will be ready by 2017. India's Twelfth

Five Year Plan (2012–17) emphasizes on faster, inclusive and sustainable growth of urban areas.

## The First National Action Plan on Climate Change (NAPCC)

An advisory group on climate change was constituted in June 2007 for the first time and reconstituted in November 2014. The objectives were to coordinate national action plans on adaptation and mitigation, to advise the government on pro-active measures to deal with climate change, to facilitate inter-ministerial coordination and to guide policy formulation in relevant areas. NAPCC launched by the Government of India in 2008 consists of eight “National Missions” some of them are discussed in the relevant sections of this chapter.

- **National Mission on Strategic Knowledge for Climate Change (NMSKCC)** aims to identify the challenges and the responses to climate change through research and technology development.
- **National Mission on Sustainable Habitat (NMSH)** seeks to promote sustainability of habitats through improvements in energy efficiency in buildings, urban planning, power generation, improved manage-

### Box 1

## SUSTAINABLE URBAN HABITAT ACTION PLAN, NASHIK

Sustainable Urban Habitat Action Plan (SUHAP) assesses both mitigation and adaptation related climate risks, emissions, vulnerabilities and potential for reducing their impacts through an appropriate mix of implementation measures. The preparation process of SUHAP was divided into six steps: (i) citizen engagement (ii) baseline data collection and analysis (iii) climate research and impact assessment (iv) vulnerability assessment (v) ground verifications and consultations (vi) action planning. The action plan addressed the sectors of waste management, building energy efficiency, storm water drainage, waste supply, transport, urban planning and waste water. Nashik Municipal Corporation incorporates SUHAP in the revised City Development Plan (CDP), planning to integrate with the future urban-development plans also. Implementation of the identified measures is planned through NMC's budget and through the funds of external agencies. Funding is also foreseen under the new urban missions of the Government of India, namely, the Atal Mission for Rejuvenation of Urban Transformation (AMRUT) and the Smart Cities Mission.



ment of solid and liquid waste including recycling, modal shift towards public transport and conservation. It also seeks to improve ability of habitats to adapt to climate change by improving resilience of infrastructure, community-based disaster management and measures for improving advance warning systems for extreme weather events.

- To enhance the knowledge about climate change impacts, Indian Network for Climate Change Assessment (INCCA) was launched in October 2009.

### State Action Plan on Climate Change (SAPCC)

32 Indian States and Union Territories have put in place the SAPCC attempting to mainstream climate change concerns in their planning process. As a step towards implementing urban climate related actions, Nashik Municipal Corporation (NMC) has prepared Sustainable Urban Habitat Action Plan (SUHAP) based on the NMSH (Box 1).

### Environmental Pollution: Problems and Controlling Measures

Major environmental concern with growing urbanization relates to rising levels of air, water and noise

pollution, municipal solid waste and other forms of contamination relating to the urban settlements.

### Air Pollution

Increase in private ownerships of vehicles, growth in construction activities in urban areas without a proper arrangement for disposal of construction wastes, growing mobility demands, increasing demand for power and industrial production, unplanned development of industries and hazardous industrial wastes, inefficient use of energy in buildings, excessive use of biomass for cooking and heating are some of the reasons for the increase in air pollution in urban areas of India.

### Initiatives for reducing air pollution

1. National Air Quality Index (NAQI) was launched to evaluate the status of air pollution in a particular city.
2. Continuous Emission Monitoring System (CEMS) mandates the highly polluting industries to install 24X7 real-time monitoring of emission and effluent discharge points.
3. Faster Adoption and Manufacturing of Hybrid and Electric vehicles scheme (FAME) offers incentives to the owners of electric/hybrid vehicles.

4. Green Highways (Plantation and Maintenance) Policy was launched to develop 140,000 km. long “treeline” along the sides of national highways.
5. Green India Mission (GIM) aims to increase the forest/tree cover up to 5 million hectares (mha) and improve the quality of forest/tree cover on another 5 mha of forest/non-forest lands combining livelihood support.
6. India aims to improve fuel standards by switching from Euro 4 to Euro 6 across the country. First passenger vehicle fuel-efficiency standards have been finalized.
7. The Fly Ash Utilization Policy makes it mandatory to use only fly ash/ fly ash-based products in construction of buildings, roads and reclamation/ compaction of land within a radius of 100 km from a coal-based thermal power plant, thus displacing the use of cement. It also mandates utilization of fly ash for backfilling or stowing of the mines.
8. Currently, 586 ambient air quality monitoring stations are operational, covering 246 cities, towns and industrial areas. Government of India has released a new four coloured classification scheme for industries, based on their pollution levels.
9. India Green House Gas (GHG) Programme is a voluntary programme to support development of India-specific emission factors and for corporates to measure their carbon footprints.
10. For promotion of alternative fuels under National Bio-Fuel Policy of 2009, blending of 20 per cent bio-ethanol in gasoline and 20 per cent bio-diesel in diesel by the year 2017 has been targeted. Five per cent blending of ethanol with gasoline has been taken up by the Oil Marketing Companies (OMCs) in 20 states and four Union Territories.
11. Auto LPG Dispensing Stations (ALDS) have been established in 232 cities/towns.

## Water Pollution

When water is contaminated, both surface water and ground water gets polluted, as water pollution is not restrictive to one place. In India, it is estimated that about 38,000 million litres per day (mld) of wastewater is generated in the urban centres having a population of more than 50,000 accommodating 70 per cent of urban population. The municipal wastewater treatment capacity developed so far in India is about 11,000 mld, treating only 29 per cent of wastewater generated. The untreated wastewater is a major source of pollution of surface water bodies and rivers, and there is an urgent need for augmenting the treatment capacity and promoting recycle and reuse of treated water. Approximately, 816 sewage treatment plants (522 operational and rest at different stages of construction and planning) having a combined capacity of 23,277 million litres per day across 28 states and union territories are planned.

## Initiatives for reducing water pollution

1. Preparation of action plan for sewage management, restoration of water quality and setting up of monitoring network for assessment of water quality by the state governments.
2. Installation of Online Effluent Monitoring System to check the discharge of effluent into the water bodies complying with effluent standards by State Pollution Control Boards / Pollution Control Committees.
3. Issuance of directions for implementation of Zero Liquid Discharge.
4. Common Effluent Treatment Plants (CETPs) are being set up to treat the effluent emanating from the clusters of compatible small-scale industries.
5. Implementation of National Lake Conservation Plan (NLCP) and National Wetland Conservation Programme (NWCP) with an integrated scheme of

National Plan for Conservation of Aquatic Eco-systems (NPCA) to undertake various conservation activities including lake beautification, biodiversity conservation, awareness creation, community participation, etc.

6. States such as Karnataka, Manipur, Odisha and Rajasthan have formed Lake Development Authorities. Rajasthan has passed the Rajasthan Lakes (Protection and Development) Bill, 2015. Andhra Pradesh, Jammu and Kashmir, and West Bengal have strengthened legislations governing wetlands. The Kerala Conservation of Paddy Land and Wetland Act, 2008 prohibits the transfer and reclamation of paddy/wetlands.
7. The National Water Mission (NWM) is formed to conserve water, minimize waste and ensure equitable distribution through development and management of integrated water resources. One of the key goals of the mission is to enhance water use efficiency by 20 per cent.
8. The Government of India, through its various urban development programmes, has been supporting the cities in the improvement of sewerage networks and sewage-treatment facilities. The Atal Mission for Rejuvenation and Urban Transformation (AMRUT) programme and Smart Cities Mission have a component on septage and sewerage management facilities.
9. Namami Gange Mission is launched to clean and protect the National River Ganga and its tributaries in a comprehensive manner (Box 2). Conservation of all other rivers is covered under the National River Conservation Programme (NRCP) implemented by the National River Conservation Directorate.
10. Rainwater harvesting, which replenish-

es and recharges the ground water, is a significant component of Watershed Development Programme, taken up under different schemes of the central and state governments. Several municipal authorities including Delhi have amended their existing building bye-laws, making it compulsory for every large house or hotel (170 square metres or more in area) to undertake rainwater harvesting. Neeranchal is a recent programme (2015–16) by the Government of India to give additional impetus to watershed development in the country.

### Managing Municipal Solid Waste

This is a critical area in urban management. As per estimates, 115,000 tons of municipal solid waste is generated per day in India. It is estimated that solid waste generated in small, medium and large cities and towns in India is about 0.1 kg, 0.3–0.4 kg and 0.5 kg per capita per day respectively. The estimated annual increase in per capita waste quantity is about 1.33 per cent per year (National Environmental Engineering Research Institute).

1. A significant outlay has been allocated for Solid Waste Management (SWM) projects in the country over the years. INR 25 billion (U.S. \$397 million) is allocated as grants-in-aid to states and urban local bodies, specifically for SWM through public-private partnerships.
2. The Union Ministry of Environment, Forests and Climate Change (MoEF&CC) has notified the Solid Waste Management Rules, 2016. This document gives a step-by-step guide (segregation, transportation, treatment and disposal) for waste management.
3. Amendment of Bio-Medical Waste (Management and Handling) Rules and Plastic Waste Management Rules is underway.
4. The Environment Ministry has notified



## Box 2

### NAMAMI GANGE MISSION

River Ganga has been a cradle of India's civilization since time immemorial but today it is one of the most polluted rivers in the country. In the Ganga basin, approximately 12,000 million litres per day (mld) of sewage is generated, for which presently there is a treatment capacity of only around 4,000 mld. "Namami Gange" is an Integrated River Conservation Mission which aims to clean and rejuvenate river Ganga and its tributaries, comprehensively looking into ensuring unpolluted flow, establishing ecological flow, restoring geological and ecological integrity, community participation, river-front development, etc. The programme has a budget outlay of INR 200 billion for the period 2015–2020. A comprehensive Ganga River Basin Management Plan has been prepared by a consortium of seven IITs indicating short-term, medium-term and long-term activities. As an interim measure, around 90 projects in 55 towns have been initiated including restoration and reconstruction of cities sewerage network systems, renovation and creation of sewage treatment and effluent treatment plants, in-situ treatment of waste water in drains using technologies, development of river fronts, etc.



e-Waste Management Rules, 2016. The new rules have provisions for financial penalty for damage caused to ecology and any third party due to improper management of e-waste.

5. The government is planning to ensure recognition and registration of workers

involved in dismantling and recycling of solid waste under the state labour department. The process of dismantling and recycling has been simplified by the Central Pollution Control Board giving a single authorization throughout the country.

6. Swachh Bharat Mission (Clean India Mission), has an objective of making the country clean and litter free with scientific solid-waste management in about 4,041 towns covering a population of 306 million, aims to construct 10.4 million individual household toilets and 0.5 million community and public toilets. It is proposed to implement 100 per cent door-to-door waste collection and transportation of waste in 1,000 cities in the financial year 2015–16. Under Swachh Bharat Mission during 2014–15, 100 per cent door-to-door waste collection and transportation was achieved in 329 cities.

The initiatives towards implementation of the Swachh Bharat Mission are as follows:

<ul style="list-style-type: none"><li>• Improving marketability of city compost.</li><li>• Tariff fixation for waste to energy plants.</li><li>• Nomination of Swachh Bharat Ambassadors.</li><li>• DGS &amp; D rate for procurement of MSW equipments.</li><li>• Model Requests for proposals (RFPs) and tender documents.</li></ul>	<ul style="list-style-type: none"><li>• Handholding and interfacing support to big cities and state capital cities.</li><li>• Showcasing the success stories through learning portals.</li><li>• Independent surveys (Swachh Survekshan) for 74 cities on Swachhata.</li><li>• Swachh Bharat thematic drives.</li></ul>
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Disaster Management

In India, more than 58.6 per cent of the landmass is prone to earthquakes of moderate to very high intensity; over 12 per cent of its land is prone to

floods and river erosion; close to 5,700 km out of the 7,516 km long coastline is prone to cyclones and tsunamis; 68 per cent of its cultivable area is vulnerable to droughts; and, its hilly areas are at risk of landslides and avalanches. During the last 15 years, the country has experienced major earthquakes, cyclones and floods. In view of the higher urban population density and growing urbanization, this disaster profile of the country has special significance for urban areas with a need for planned approach for disaster risk reduction. United Nations Global Assessment Report (GAR, 2015) on disaster risk estimates the country’s average annual economic loss due to disasters to be U.S. \$9.8 billion, of which U.S. \$7 billion loss is on account of floods.

In recent times Indian cities have witnessed repeated incidences of urban flood. Urbanization leads to developed catchments, which increases the flood peaks from 1.8 to 8 times and flood volumes by six times. Consequently, flooding occurs very quickly, sometimes within few minutes, resulting in cities being inundated over a few hours to several days. The impact can also be widespread, including temporary relocation of people, damage to civic amenities, deterioration of water quality and risk of epidemics.

Disaster risk reduction initiatives

1. The National Disaster Management Authority (NDMA) has made various attempts to learn from the national flood experiences over the years in the form of preparing Urban Flood Guidelines. After the devastating Koshi floods in 2008, Bihar is in the process of developing a flood recovery model with the support of the World Bank for the Koshi river. Assam has initiated reviews of its disaster management plans across all districts and four cities that encounter floods each year.
2. There has been a paradigm shift in the

Box 3

## TECHNOLOGY SUB-MISSION (HOUSING FOR ALL—URBAN)

Technology Sub-Mission will facilitate preparation and adoption of layout designs and building plans suitable for various geo-climatic zones. It will also assist states/cities in deploying disaster-resistant and environment-friendly technologies. The Sub-Mission will coordinate with various regulatory and administrative bodies for mainstreaming and upscaling the deployment of modern construction technologies and material in place of conventional construction. Technology Sub-Mission will also coordinate with other agencies working on green and energy-efficient technologies, climate changes, etc. The government envisions development of safe, less carbon-intensive, climate-resilient cities/towns in a manner which promotes healthy environment, encourages use of renewable energy resources, and ensures effective solid waste management.

approach to disaster management with enhanced focus on preparedness, mitigation, policy framework and institutionalization as opposed to only rescue and relief. In order to achieve these goals, India has launched the National Disaster Relief Fund.

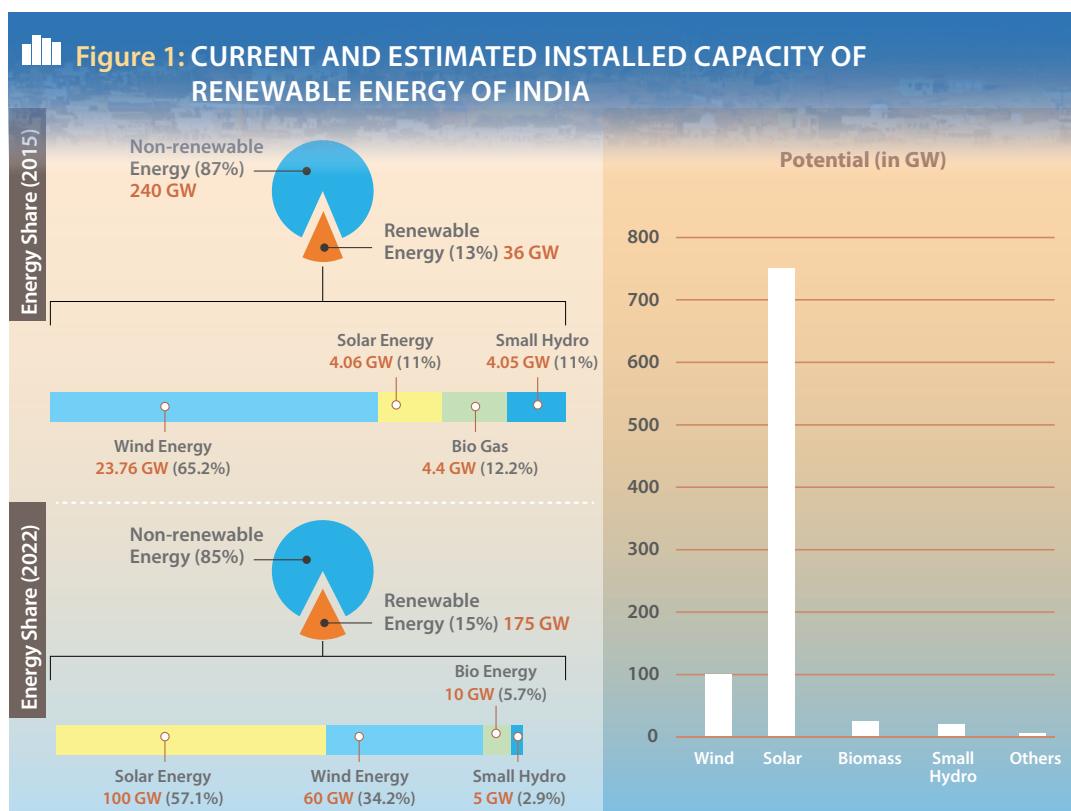
3. On 1st June 2016, Prime Minister of India has released a National Disaster Management Plan (NDMP) for a comprehensive and dynamic strategy to deal with any kind of disaster. This policy framework is also in conformity with the International Strategy for Disaster Reduction, the Rio Declaration, the Millennium Development Goals, the Hyogo Framework (2005–15), the Sendai Framework for Disaster Risk Reduction (2015–30), and the Sustainable Development Goals (September 2015) and COP 21 (December 2015) with the objective of promoting community-based disaster management, capacity development, consolidation of past initiatives, co-operation with agencies at the national, regional and international levels and coordination to generate a multi-sectoral synergy.
4. Building Materials and Technology Promotion Council (BMTPC) is promoting technologies for natural disaster mitigation, vulnerability and risk reduction, and retrofitting/reconstruction of buildings. To help disaster resistant planning for human settlements, BMTPC published the Vulnerability Atlas (in 1996 and updated in 2006) and the Landslide Hazard Zonation Atlas for India (1997 and 2010). It has conducted 10 region specific Disaster Impact Rapid Assessment studies and developed housing designs for multi-hazard zones in different geo-climatic regions. BMTPC is now working on an NDMA project to extend the Vulnerability Atlas of India up to district level, delineating taluka/ward boundaries. The Council is preparing upgraded Earthquake Hazard Maps and Atlases for India, States/UTs and 626 Districts.
5. MoEF&CC has also decided to integrate the environmental concerns into building plan approval process and empowering the concerned local body/development authority to approve and certify compliance of stipulated requirements.
6. A Technology Sub-mission under Housing for All (Urban) has been set up in 2015 to facilitate adoption of modern, innovative and green technologies and building material for faster, safer and quality construction of houses (Box 3).

## Box 4

**GREEN BUILDING: INDIRA PARYAVARAN BHAWAN**

India has developed its own building-energy-rating system named GRIHA which is based on 34 criteria such as site planning, conservation and efficient utilization of resources, to name a few. A number of buildings, including Commonwealth Games Village, have been rated using GRIHA system. Indira Paryavaran Bhawan, i.e., the headquarters of Central Government's Ministry of Environment, Forest and Climate Change is a model building of Government of India and has received LEED India Platinum and a 5-Star GRIHA rating. It is a "Net Zero Energy" building with 100 per cent onsite power generation.

7. India has demarcated vulnerable areas on the coasts and declared them as Coastal Regulation Zone (CRZ) with restrictions imposed on setting up of industries, operations and processes in these areas. India is also implementing programmes for Integrated Coastal Zone Management (ICZM). The vision of the project is to build national capacity for implementation of comprehensive coastal management. Mapping and demarcation of coastal hazard lines for development of emergency response plans is being carried out in all the coastal states and union territories.
  8. Another initiative to protect coastal livelihood is "Mangroves for the Future (MFF)", coordinated by International Union for Conservation of Nature (IUCN) in India. The government notified the Island Protection Zone (IPZ) in 2011 which focuses on disaster-risk reduction through bio-shields with local vegetation (mangroves) and other soft protection measures, and the conservation of beaches and sand dunes.
- Initiatives to Enhance Energy Efficiency**
- Energy Conservation Act, 2001 was enacted to coordinate various activities associated with the efficient use of energy and its conservation. With the goal of reducing energy intensity of the Indian economy, Ministry of Power, through the Bureau of Energy Efficiency (BEE), has launched many Demand Side Management Programmes to replace existing low-efficiency appliances, and has also taken many initiatives, some of which are stated below:
1. India has witnessed rapid transformation in favour of efficient lighting during the last decade with sale of Compact Fluorescent Lamps (CFLs) rising to about 37 per cent of the total lighting requirement in 2014. The Light Emitting Diode (LED) bulbs are expected to lead to energy savings of up to 100 billion KWH per annum in next few years. Under the Bachat Lamp Yojana (BLY) conceived as Clean Development Mechanism (CDM) Programme of Activity (PoA) for mass distribution of CFLs in India, aims to help reduce the peak load in the country leading to potential reduction of over 6,000 MW in electricity demand. Combined GHG emission savings on replacing an estimated 400 million incandescent lamp (ICLs) with CFLs would result in a reduction of 20 million tonnes of CO<sub>2</sub> from grid-connected power plants.
  2. Standards and Labelling Programme enables consumers to make informed decisions by providing information about the energy consumption of appliances. Currently, 21 equipment and appliances are



labelled. Efficient fan, which uses half as much energy as an average fan, has been launched. Further, two sets of Corporate Average Fuel Consumption standards for cars have been notified.

3. Star Rating of Buildings and Green Rating for Integrated Habitat Assessment (GRIHA) Systems have been developed for office buildings, based on the actual performance of a building in terms of its specific energy usage in kwh/sqm/year. The programme rates office buildings on a 1–5-star scale, with a 5-star-labelled building being the most efficient. Buildings with a connected load of 100 KW and above are being considered under the BEE Star rating scheme (Box 4).
4. The Energy Conservation Building Code (ECBC) sets minimum energy standards for new commercial buildings. Eight

states have adopted and notified the ECBC, and over 300 new commercial buildings have become compliant. The Code would be made more stringent to promote construction of even more (near zero) energy-efficient buildings.

5. “Design Guidelines for Energy Efficient Multi-storey Residential Buildings” has been launched.
6. Partial Risk Guarantee Fund for Energy Efficiency (PRGFEE), a risk-sharing mechanism to provide financial institutions with a trust fund to provide “last mile” equity capital to energy efficiency companies, has been established.

### Access to Clean Domestic Energy

There is a wide disparity in the per capita energy consumption pattern between rural and urban areas in India. Urban India uses clean fuels like

liquid petroleum gas (LPG). In urban India, 65 per cent of households use LPG; charcoal, lignite or coal is used by 2.9 per cent; and dung cake by 1.7 per cent (Census 2011). For domestic lighting, in urban India, the proportion of households using kerosene as primary energy source for lighting has come down from 11.6 per cent in 2001 to 6.5 per cent in 2011. Around 92.7 per cent of the 78.8 million urban households use electricity for lighting (Census 2011).

India is implementing the largest cash transfer scheme under “Pahal” - which means an initiative (Direct Benefit Transfer for LPG) with more than 142 million LPG consumers receiving subsidies as per entitlement of subsidized cylinders. Domestic LPG is subsidized by the Government of India. Under the recent “Give It Up India” campaign, many citizens have voluntarily agreed to part with this subsidy which has succeeded in freeing a large subsidy burden on the government.

### Renewable Energy and Promotion of Clean Energy in India

The Government of India has been emphasizing on developing renewable energies to support the agenda of sustainable growth (Box 5). India's INDC builds on its goal of installing 175 gigawatts (GW) of renewable power capacity by 2022 by setting a new target to increase its share of non-fossil-based power capacity from 30 per cent to about 40 per cent by 2030 (Figure 1). Currently around 60 per cent of India's power-generation capacity is based on coal. Net coal import dependency has risen from a negligible percentage in 1990 to approximately 23 per cent in 2014. The Indian power sector is expected to attract investment of U.S. \$250 billion by 2019 across diverse areas of the energy sector. This, in addition to India's increasing dependence on imported oil, is around 28 per cent of India's total energy needs. India has an installed capacity of 267 gigawatt (GW) as on March 2015, dominated by fossil fuels; the additional electricity demand creates a large opportunity for renewable energy sources. To aid fresh in-

vestments into renewable energy, the government is setting up a U.S. \$1.25 billion fund, backed by state-owned Power Finance Corporation Limited and Rural Electrification Corporation Limited along with some private institutions.

India is the fifth-largest wind power producer in the world. The National Offshore Wind Energy Policy 2015 was launched to help in offshore wind energy development. Wind energy has been the predominant contributor to the renewable energy growth in India accounting for 23.76 GW (65.2 per cent) of the renewable installed capacity.

Solar Energy in India is poised to grow significantly with the National Solar Mission (NSM) as a major initiative of the Government of India. Solar power installed capacity has increased from 3.7 MW in 2005 to about 4,060 MW in 2015, with a Compound Annual Growth Rate of more than 100 per cent over the decade. The Government of India is promoting solarization of all the 55,000 petrol pumps across the country, of which about 3,135 petrol pumps have already been solarized. Solar Cities Programme assists Urban Local Bodies in preparation of a master plan for increasing energy efficiency and renewable energy supply in the city. Indian Railways is also installing solar power on its land and rooftops of coaches. Chandigarh city may soon make solar rooftop plants mandatory for all houses and buildings occupying plots larger than 84 square metres in a first-of-its-kind clean energy drive in the country. A one kilowatt solar plant would generate 4–4.5 units of power a day. Haryana state had passed a similar order in early 2015 for new buildings occupying more than 420 square metres of land.

A number of programmes have been initiated for the promotion of biomass energy's cleaner and more efficient use, including biomass-based electricity generation. With a potential of more than 100 GW, a number of policy initiatives and actions are being undertaken to aggressively pursue development of country's vast hydropower potential. National Smart Grid Mission has been launched to bring efficiency in power supply net-

## Box 5

**ACCESS TO CLEAN ENERGY: RECENT INITIATIVES**

1. Smart Power for Environmentally-sound Economic Development (SPEED) is a programme that aims at electrification of rural areas based on a decentralized renewable energy system.
2. National Smart Grid Mission launched for efficient transmission and distribution network. India to spend USD 21.6 billion over the next 10 years on Smart Grid Infrastructure. 14 smart grid pilot projects to be taken up by state-owned distribution utilities.
3. Remote Village Electrification Programme aims to cover all villages.
4. Indian LED industry set to touch INR 216 billion by 2020.
5. Zero Effect, Zero Defect (ZED) with Make in India campaign to enhance energy and resource efficiency, pollution control, use of renewable energy, waste management, etc. Policies to increase production of energy-efficient three-phase locomotives and switchover to 100 per cent of these locos from 2016–17 onwards.
6. Green Energy Corridor projects being rolled out to ensure evacuation from renewable energy plants.
7. National Solar Mission scaled up five-fold from 20 GW to 100 GW by 2022. Kochi Airport is the world's first airport to fully run on solar power. Solar powered toll plazas envisaged for all toll collection booths across the country.
8. Nationwide Campaign for Energy Conservation launched with the target to save 10 per cent of current energy consumption by the year 2018–19.

work and facilitate reduction in losses and outages. Green Energy Corridor projects worth INR 380 billion are also being rolled out to ensure evacuation of renewable energy.

**Non-Renewable Energy Profile of India**

India is promoting environmentally benign and economically viable source of energy. Coal based power accounts for about 60.8 per cent (167.2 GW) of India's installed capacity. Government of India has taken several initiatives to improve the efficiency of coal-based power plants. In future all large coal-based generating stations have been mandated to use the efficient supercritical technology. About 144 old thermal stations have been assigned mandatory targets for improving energy efficiency. Coal beneficiation and ultra-supercritical technology is part of future policy.

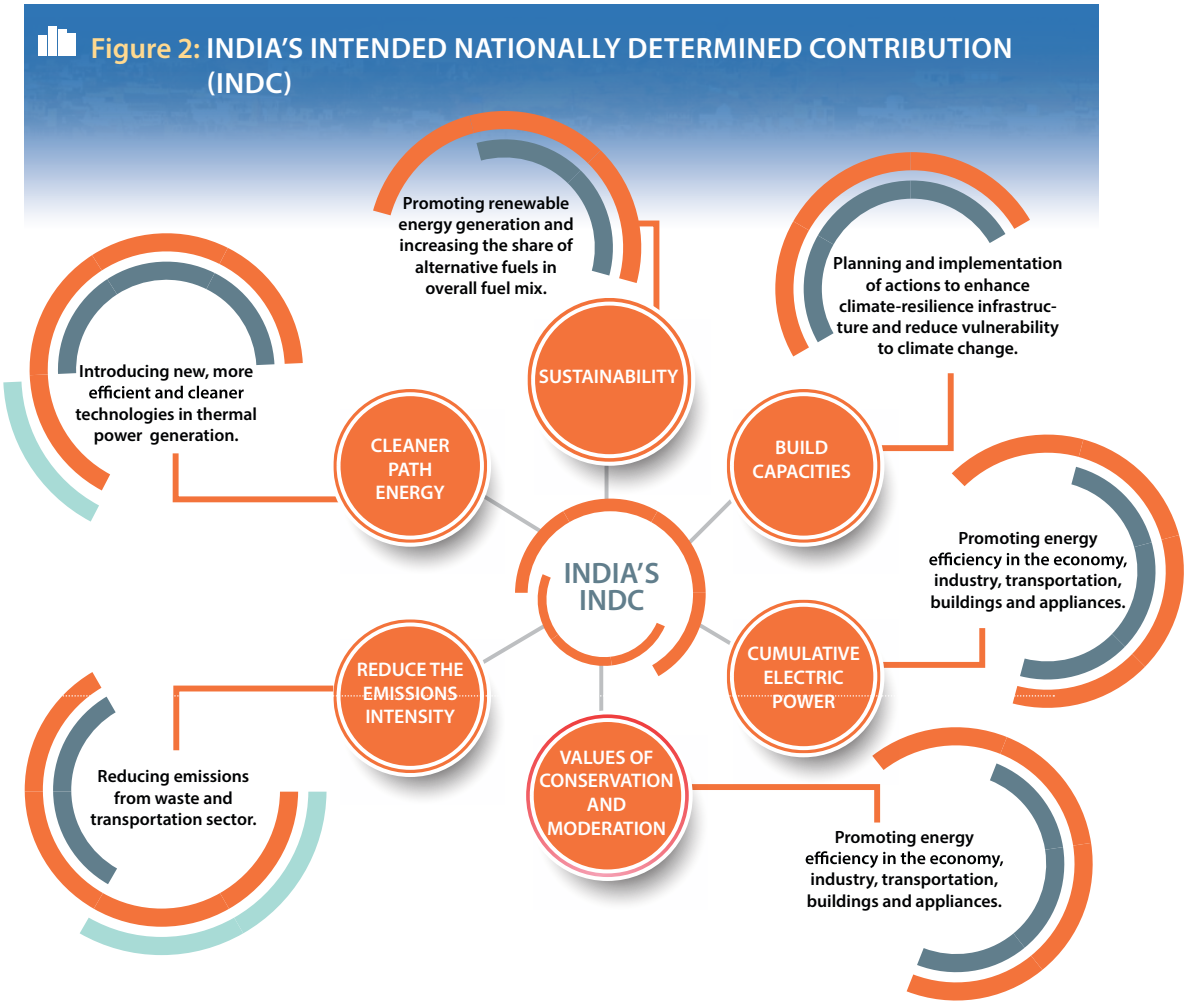
Under Waste to Energy Programme, the government is encouraging conversion of waste to compost by linking it with sale of fertilizers and providing market-development assistance. Waste-to-energy interventions include incineration and bio-methanation as the most common technologies; pyrolysis and gasification are also emerging as preferred options. Twenty four waste-to-energy projects to produce 233 MW are currently in different stages of construction and five projects of 79 MW have already been tendered, adding up to a total of 312 MW. Once all this capacity comes on stream, India's waste-to-energy capacity will go up by six-fold from the current 53 MW produced from five such projects. The central government has allocated INR 150 billion to municipal corporations over the next three years under the Swachh Bharat Mission for cleanliness, waste manage-

ment and waste-to-energy projects.

India's Intended Nationally Determined Contribution (INDC)

On 2 October 2015, India submitted its INDC to United Nation Framework Convention on Climate Change (UNFCCC). The INDC centres around India's policies and programmes on promotion of clean energy; resilient urban centres; promotion of waste to wealth; safe, smart and sustainable green transportation network; abatement of pollution; and India's efforts to enhance carbon sink through creation of forest and tree cover. Keeping in view

of its development agenda, particularly the eradication of poverty, coupled with its commitment to following the low-carbon path to progress and being sanguine about the unencumbered availability of clean technologies and financial resource from around the world. India communicated its Intended Nationally Determined Contribution (INDC) in response to COP decisions 1/CP.19 and 1/CP.20 for the period 2021 to 2030. To achieve the contributions (Box 6), India is determined to continue with its on-going interventions, enhance the existing policies as detailed in previous sections and launch new initiatives (Figure 2).





## Box 6

**INDIA'S INTENDED NATIONALLY DETERMINED CONTRIBUTION (INDC)**

- To put forward and further propagate a healthy and sustainable way of living, based on traditions and values of conservation and moderation.
- To adopt a climate friendly and a cleaner path than the one followed hitherto by others at corresponding level of economic development.
- To reduce the emissions intensity of its GDP by 33 to 35 per cent by 2030 from 2005 level.
- To achieve about 40 per cent cumulative electric power installed capacity from non-fossil-fuel-based energy resources by 2030 with the help of transfer of technology and low-cost international finance including from Green Climate Fund (GCF).
- To create an additional carbon sink of 2.5 to 3 billion tonnes of CO<sub>2</sub> equivalent through additional forest and tree cover by 2030.
- To better adapt to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, Himalayan region, coastal regions, health and disaster management.
- To mobilize domestic as well as new and additional funds from developed countries to implement the above mitigation and adaptation actions in view of the resource required and the resource gap.
- To build capacities, create domestic framework and international architecture for quick diffusion of cutting edge climate technology in India and for joint collaborative R&D for such future technologies.

**Conclusion**

Environmental sustainability could become the next major challenge as India surges along its projected growth trajectory. The prime areas of intervention would be balanced urban planning, cost effective and low-emission strategies, multi-level stakeholder engagement, urban environmental-degradation prevention, financing mitigation, and adaptation actions. With the formulation of National Action Plan on Climate Change in 2008, the issue of climate change has entered into Indian public policy

agenda. Climate change initiatives are linked to local and national action plans. An urban local body is the pivot of city administration, and interventions are best implemented at the level of local government. Planning for climate change actions should be taken on in conjunction with the development functions that municipal governments undertake for their communities. The integration of climate change adaptation considerations at the municipal level becomes feasible when climate-change financing is matched with the city's current desired development plan.

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## CHAPTER FOUR

# HOUSING AND BASIC SERVICES





**H**ousing is an important sector of a country's economy. In India, the construction sector, which includes housing, accounts for 8.2 per cent of its gross domestic product (GDP) and employs approximately 12 per cent of the work force. It is said to be a growth escalator and a sector that contributes directly to the quality of life. Housing, especially urban housing, is also a complex sector. The demand for housing rises in direct proportion to the increase in urban population, and the supply is dependent on a large number of factors including the decisions of individual households. Matching the demand and supply is often difficult, leading to over-supply for some sections of populations and under-supply for others. The role of the public sector is significant; in India, it combines (i) direct provisioning of housing to add to the overall housing stock, and (ii) creating an enabling environment for the private sector to add to the housing supply. This chapter provides an overview of the role of the public sector policies and programmes in the sphere of urban housing. It also gives an account of the approach to "slums," which house roughly 17 per cent of urban households, and to basic urban services such as water, wastewater, and solid waste.

### Importance of Housing Sector in the Indian Economy

In the study “Impact of Investments in the Housing Sector on GDP and Employment of Indian Economy” (2014), conducted by the National Council of Applied Economic Research (NCAER), the construction sector has been disaggregated into residential construction, non-residential construction and other construction sector. The residential construction sector is treated as the housing sector. Key findings of the report state that the residential construction (housing sector) accounts for:

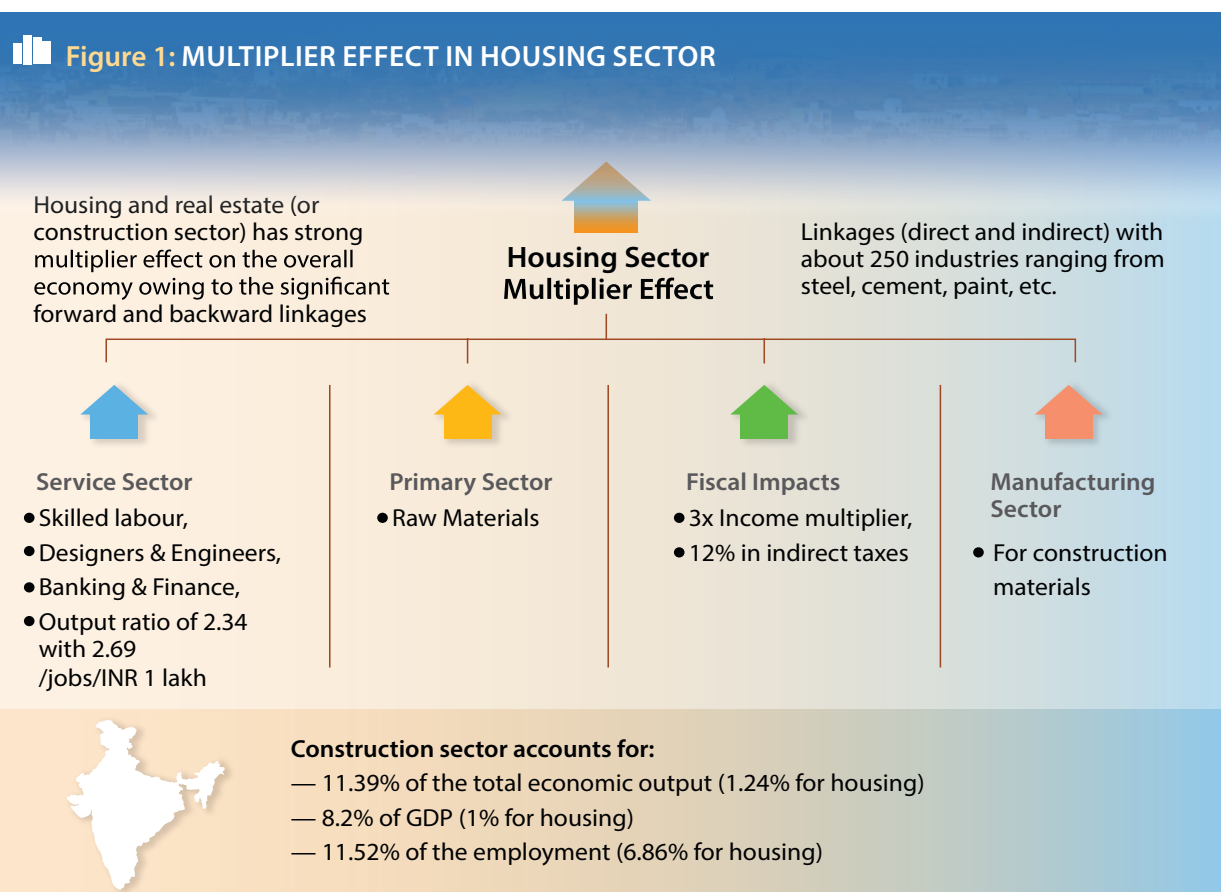
- 1.24 per cent of the total output of the economy (total construction sector is 11.39 per cent),
- One per cent of GDP (total construction

sector is 8.2 per cent), and

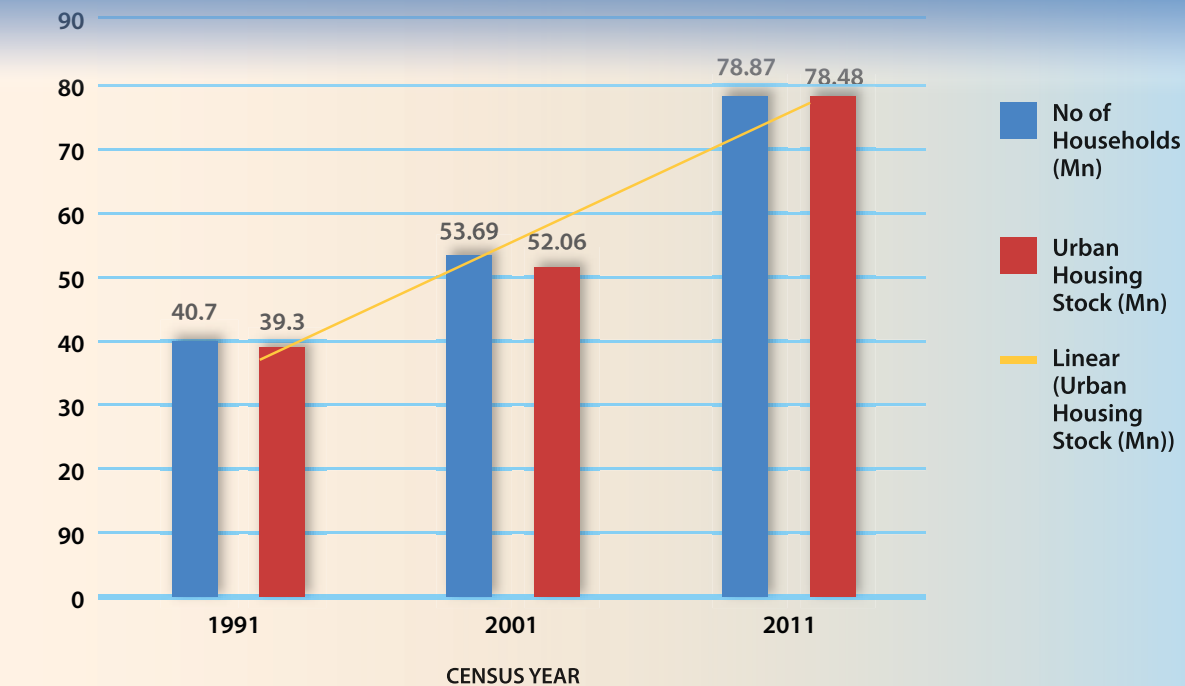
- 6.86 per cent of the employment (total construction sector is 11.52 per cent).

Housing in urban India remains largely an individual enterprise. Government housing supply agencies and private real estate developers play an important role in adding more housing stock in the market. The institutional supply, however, is inadequate compared to the housing demand. Through its various policies and programmes, the national government has been actively engaged in addressing the challenges of improving and increasing the access to adequate housing, particularly for the low income population and slum dwellers.

Investment in housing and real estate sector can be considered as a barometer of growth for the economy (Figure 1).



**Figure 2: GROWTH OF URBAN HOUSEHOLDS AND URBAN HOUSING STOCK IN INDIA (1991- 2011)**



Source: Census of India and Report of the Technical Group on Urban Housing Shortage for the Twelfth Plan period, MoHUPA, Government of India

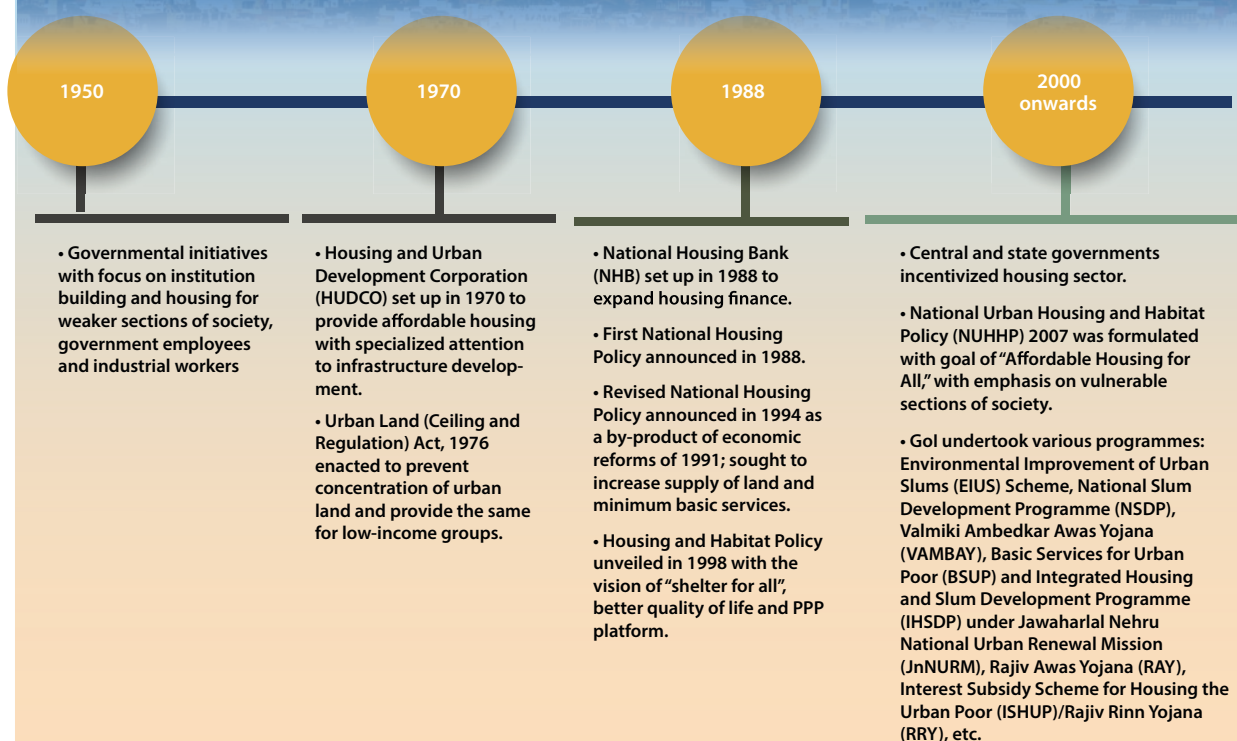
### Dilemma of Growing Housing Stock and Housing Shortage

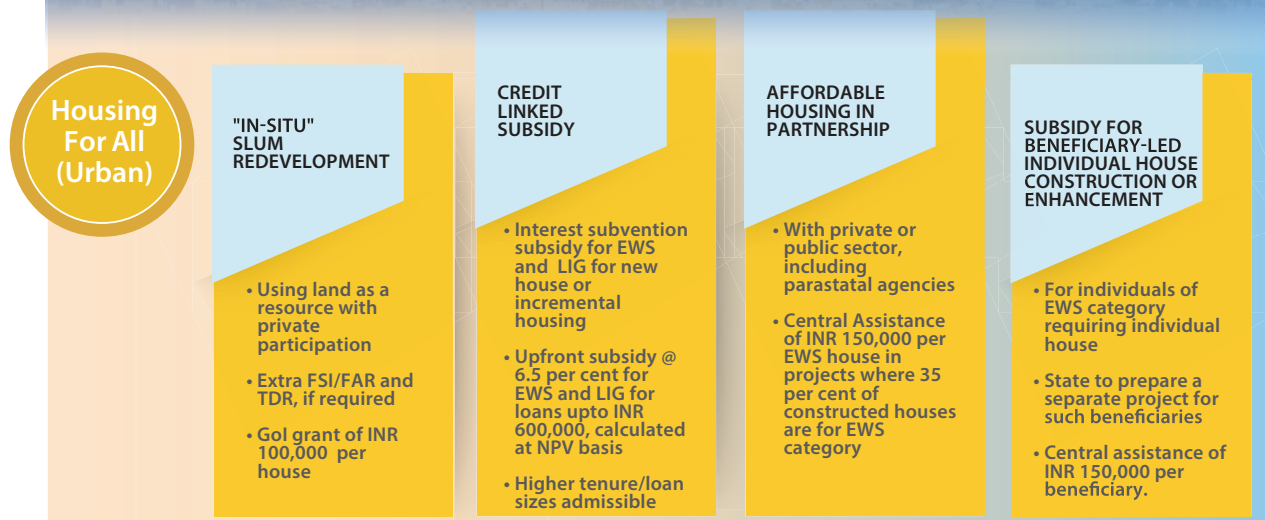
Various policies and programmes formulated by the Government of India and implemented by the state-level public housing agencies such as the Housing Boards, Development Authorities, Improvement Trusts, Slum Clearance/Improvement Boards, etc. have had a positive impact in the overall living conditions of the urban poor.

The urban housing stock has increased from 52.06 million to 78.48 million (51 per cent increase) in the last decade (Figure 2). Absolute housing shortage in terms of the difference between the number of existing households and existing housing stock in urban areas has significantly reduced from 1.63 million in 2001 (3

per cent of the households) to 0.39 million (0.5 per cent of the households) in 2011. Availability of funds for the housing sector has enabled an increase in the housing stock in urban areas. The total disbursement of Housing loans during 2013-14 by Public Sector Banks and Housing Finance Companies was INR 987.87 billion and INR 1040.57 billion respectively.

The dilemma is that while the sustained effort of the government to improve the condition of the housing sector is reflected in the above numbers, a further review reveals that the urban housing shortage has increased considerably due to housing congestion and obsolescence factor, of which 96 per cent pertains to the Economically Weaker Sections (EWS) and the Lower Income Groups (LIG).



## Housing Policies and Programmes in India: Shifting Positions

Since 1950s, the housing and urban development policies in India have transitioned in four phases (Figure 3), keeping in line with India's economic growth.

**Pradhan Mantri Awas Yojana (PMAY)** or the “Housing for All by 2022” scheme addresses the housing requirements of the urban poor, including slum dwellers, and envisages provision of houses for all urban poor over a period of seven years. PMAY focuses on the following aspects.

### Box 1

## SALIENT FEATURES OF NEW HOUSING POLICIES OF STATES OF ODISHA AND RAJASTHAN

## Policy for Housing for all in Urban Areas Odisha, August 2015

Objective is to meet the requirement of construction of 0.1 million dwelling units over the next five years for EWS and LIG households. It offers seven models for development in convergence with PMAY.

1. Mandatory development of EWS housing
2. Incentives for market-based development of EWS and LIG Housing
3. Development of affordable housing projects.
4. In-situ slum redevelopment.
5. Beneficiary-led individual housing construction or enhancement
6. Relocation and rehabilitation
7. Rental housing

### New initiatives under Odisha Policy:

- Single-window clearances by the authority
- Online registration of applicants/ beneficiaries along with biometric details to be followed by social audit of all submitted documents
- Facilitation Centres to be set up by Odisha Housing Mission to aid applicants who do not have access to computer and internet
- Beneficiaries to be members of Slum-level Registered Society

## Chief Minister's Jan Awas Yojana Rajasthan, September 2015

Objective is to implement the government's effort to address 1.05 million housing shortage. Provisions framed in convergence with PMAY:

1. Mandatory provisions for residential schemes of ULBs /UITs /Development Authorities /RHB/Private Developers/ proposed industrial Areas
2. Development of affordable houses by private developer on private land in partnership
3. Construction of EWS/LIG houses on government land on pre-decided ratios on basis of allotment or auction

### New initiatives under Rajasthan Policy:

- Incentives for developers and subsidies for beneficiaries
- Intelligent management of FAR through development control regulations
- A mix of strategies involving non-cash incentives and revenue-forgone incentives to the private sector
- Indicative building plans of EWS and LIG flats included in policy document
- Fast track approval to the projects provided within 60 days

## Housing Policies and Programmes in India: Shifting Positions

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- Eradication of the gap between supply and demand, and improving the living condition of the urban poor including slum population;
- Rise in self-ownership of all-weather, sustainable and disaster resilient dwelling units

- Gradual elimination of obsolescent housing, and improvement and rehabilitation of occupied units; and
- Empowerment and equity for the marginalized sections of the society.

The Housing For All (Urban) Mission offers the following four verticals (Figure 4) to meet the urban housing shortage of the country.

1. Slum rehabilitation with participation of private developers using land as a resource.
2. Promotion of affordable housing by credit-linked subsidy.
3. Affordable housing in partnership with public and private sector.
4. Subsidy for beneficiary-led housing construction or enhancement.

Compared to 1.01 million houses construct-

### Box 2

## INITIATIVES FOR IMPROVING INVESTMENT AND FINANCIAL SUPPORT TO HOUSING

- Fiscal concessions: Tax incentives such as income-tax deductions on repayment of principal and interest of home loans availed, deployment of capital gains, subsidy and concessions for alternate building technologies and materials, resource mobilization through tax-free bonds for affordable housing, service tax exemptions for affordable housing projects, etc.
- Encouragement to banks and financial institutions to lend to housing sector with earmarked allocation for affordable housing segment under Priority Sector Lending Norms, rescheduling/ restructuring of loans to real estate projects, etc.
- Setting up of Mortgage Insurance Companies to provide Title Insurance.
- Foreign Direct Investment (FDI): Removal of minimum area and capitalization requirements and other conditions, simplification of foreign investments in the country through automatic route instead of the government route.
- External Commercial Borrowing (ECB): Enabled for affordable housing and slum improvement projects to enable availability of cheaper funds for developers/builders and NHB/ specified Housing Finance Companies.
- Real Estate Investment Trusts (REIT): Allowed to garner investment in the real estate sector by providing regular income streams, diversification and long-term capital appreciation to investors.
- National Investment and Infrastructure Fund (NIIF): Annual flow of INR 200 billion to enable investment into infrastructure investment companies.

## Box 3

## POLICY FRAMEWORK AND LEGISLATION FOR HOUSING SECTOR

- **National Urban Housing and Habitat Policy (NUHHP):** Released in 2007, while taking into account the challenges of required housing and growth of shelter that emerged from the previous National Urban Housing and Habitat Policy of 1998, has set the tone of independent policy measures that have ensued since then. The Policy emphasizes on affordable housing for all with special emphasis on urban poor. It is currently under revision so as to evolve into NUHHP, 2017.
- **Rental Housing:** MoHUPA has drafted a National Urban Rental Housing Policy, 2016, which would encourage promotion of rental housing for various segments of incomes and create adequate rental housing stock by promoting Social Rental Housing (SRH). The special focus is on affordability of vulnerable groups and urban poor through promoting shelter facilities for the most vulnerable groups and need based rental housing for specific target groups.
- **Draft Model Tenancy Act:** A Model Tenancy Act is being finalized for adoption by states, which will promote rental housing market in India keeping in view the concerns of both the tenants and land owners.
- **Model State Housing Policy:** A template for housing policy in urban areas has been released in June 2016 to enable the States and Union Territories to formulate/review their policies.
- **Housing for Migrant Population:** MoHUPA has set up a working group to study the impact of migration on housing, infrastructure and livelihood in urban areas so that appropriate product mix of housing supply market catering to migrant population of various income segments can be devised along with infrastructure and livelihood support programmes.
- **Real Estate (Regulation and Development) Act, 2016:** In order to provide uniform regulatory environment to protect consumer interests, help speedy adjudication of disputes and ensure orderly growth of real estate sector, the government has enacted the Real Estate (Regulation and Development) Act, 2016.
- **Ease of Doing Business (EoDB) and Streamlining of Building-Plan-Approval Process:** Approval procedures for housing and construction projects have been simplified and streamlined in consultation with other line ministries viz. Environment, Forests and Climate Change, Civil Aviation, Culture, Defence, and Consumer Affairs. PMAY Guidelines also mandate certain steps in this direction such as setting up of single window for construction permits, concept of deemed building permission and layout approval in certain circumstances, etc.
- **Model Building Bye-laws, 2016:** Government of India has brought out Model Building Bye-laws including provisions for environmental safeguards in March 2016 for adoption by states. These building bye-laws have been updated in terms of contemporary urban trends to make them more inclusive and user friendly.

## Box 4

## INNOVATIVE TECHNOLOGIES AND CAPACITY BUILDING IN HOUSING SECTOR

### Technology Sub-Mission

Improved construction technology and methodologies can help execute housing projects more efficiently and in lesser time. Construction techniques such as prefabricated and modular construction and innovative construction materials can further help execute projects in lesser time and with reduced resources. Towards this, a technology sub-mission has been set up under Pradhan Mantri Awas Yojana to facilitate adoption of modern, innovative and green technologies and building materials for faster and quality construction of houses. Space technology tools will be used in PMAY Mission through National Remote Sensing Centre (NRSC), Hyderabad to monitor the progress of individual house construction using geo-tagged photographs.

### Demonstration Projects

Nine states in the country evinced interest in demonstration of new and improved construction technologies keeping in view local micro-climatic conditions. Major ministries/ departments (Railways, Defence, Central Public Works Department and Public Sector Undertakings) are moving forward to adopt new technologies for employee housing and other workers. Standardized Schedule of Rates is being developed for selected technologies.

### Skill Development for Construction Workers

It is estimated that out of 45 million people employed in construction sector, less than 6 per cent have the benefit of structured training and skill building. In view of this, the current focus is to intensify skill development training for construction workers for increased productivity and more contribution of labour force to urban economy.

### Deendayal Antyodaya Yojana—National Urban Livelihoods Mission (DAY—NULM)

Under this mission, urban poor are organized in self-help groups, imparted with skill training for self and wage employment, and assisted to set up self-employment ventures by providing credit at subsidized rate of interest. Also, the Mission provides shelters for urban homeless and infrastructure for street vendors. Government aims at bringing about greater convergence among various skill-development programmes being administered.

ed in last 10 years with the central assistance programme in India, under PMAY, 0.73 million houses have been approved till June 2016 for central assistance within the very first year of the Mission.

The Mission prescribes mandatory reforms for easing up the urban land market for housing, to make adequate urban land available for affordable housing. Houses constructed under the Mission would be allotted in the name of the female head of the household or in the joint name of the male

head of the household and his wife.

States like Punjab, Rajasthan and Odisha have taken advantage of this scheme and ensured convergence with local housing schemes. They have issued new state policies for added social benefits of their citizens. Highlights of housing policies of two states are compiled in Box 1.

### Initiatives towards Catalyzing Market for Affordable Housing

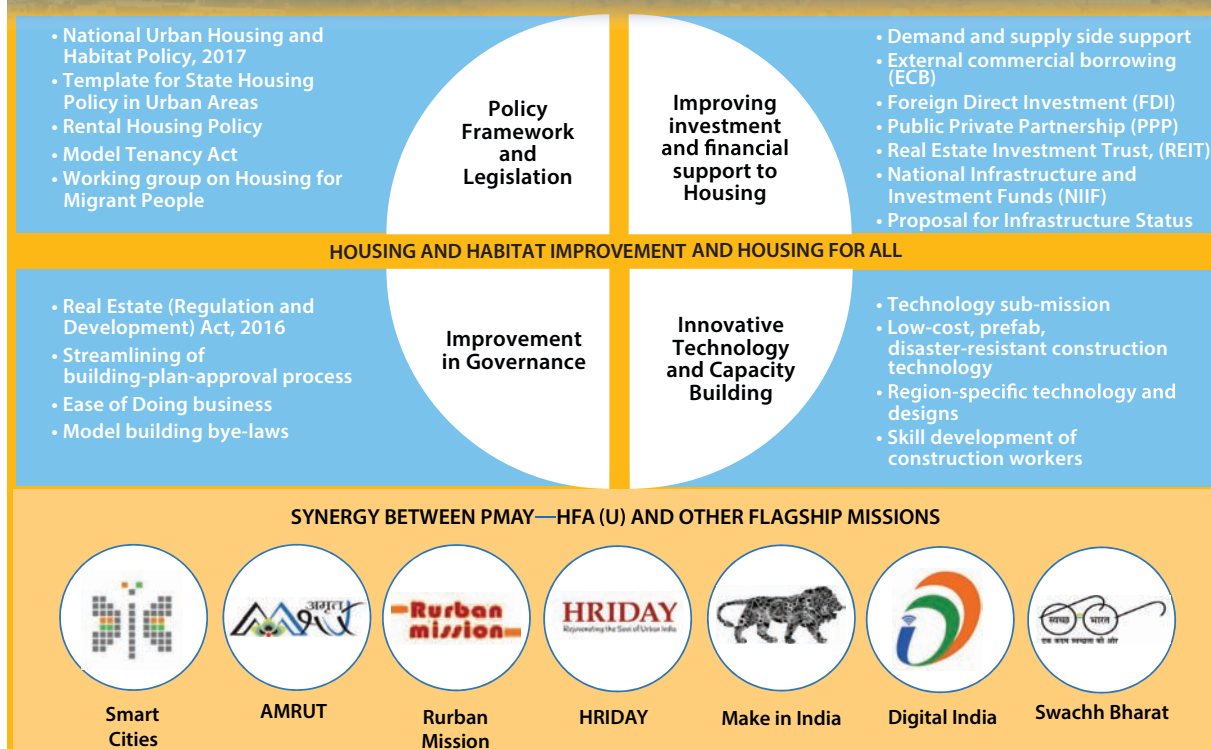
Government of India has taken up a number of

## Box 5

## PRADHAN MANTRI AWAS YOJANA—DEVELOPMENT OPTION OF IN-SITU SLUM REDEVELOPMENT USING LAND AS A RESOURCE

In-situ slum redevelopment using land as a resource with participation of private developers is a component of PMAY wherein a grant of INR 100,000 per eligible slum dweller is provided by the Government of India. Land being a state subject, computation of price of land allocated/ used for “in-situ” rehabilitation so as to use it as a resource is to be decided by states/UTs concerned as per their policy. PMAY Mission Guidelines, however, envisage the following for the States/UTs: (i) The private developers for executing the slum redevelopment project be selected through an open, transparent bidding process. (ii) All financial and non-financial incentives and concessions, if any, are to be integrated in the project and declared “a priori” in the bid document for the prospective developers. (iii) The incentives and concessions also include contribution from beneficiaries/ slum dwellers, if any. (iv) Developers are to conceive and execute the project using its financial and technical resources as mandated by the implementing agency. (v) States and cities may provide additional FAR/FSI or TDR, and relax density and other planning norms for making the projects financially viable. States/UTs may also allow commercial usage for part of the land/FAR as mixed usage of the land. (vi) A viable slum rehabilitation project will have two components, i.e., “slum rehabilitation component,” which will be used for providing housing along with basic civic infrastructure to eligible slum dwellers and a “free sale component,” which is available to developers for selling in the market so as to cross-subsidize the project.

**Figure 5: EFFORTS BEING MADE TO CATALYZE THE HOUSING SECTOR IN INDIA**



## Box 6

**IN-SITU SLUM REDEVELOPMENT PROJECT OF 1,592 DWELLING UNITS ON PPP IN AHMEDABAD**

The “in-situ” slum redevelopment project with private participation provided for 1,592 dwelling units for the eligible slum dwellers by leveraging the locked potential of public land under slums and bringing them into the formal urban settlement. The cutoff date for the slum dwellers was 1 February 2010.

The project was executed in eight packages consisting of eight locations in Ahmedabad city (Gujarat) and provided 1,592 dwelling units of about 27 sq.m. carpet area with basic civic infrastructure like water supply, sewerage system, internal road connectivity with street lights, etc. Eighty-three eligible slum dwellers owning shops/commercial spaces were each allotted a shop of 15 sq.m. carpet area.

Incentives of 224,868 sq.m., in terms of additional Floor Space Index (FSI) and Transferable Development Rights (TDR), were generated and awarded to the private partner, which made the slum redevelopment project financially viable. The eligible slum dwellers were provided transit accommodation on rental basis by the private partner for the entire construction period @ INR 6,000 per month.



governance reforms for catalyzing the market for affordable housing. These include simplification of procedures, single-window approach for construction permits and delegating these to the ULB level and release of Model Building bye-laws in March 2016 for adaptation by states. In order to provide a uniform regulatory environment to protect consumer interests, help speedy adjudication of disputes

and ensure orderly growth of the real estate sector, the Government of India has enacted the Real Estate (Regulation and Development) Act, 2016. The States would be required to play an active role in adopting and taking advantage of the reforms and initiatives undertaken by the Government of India.

In order to supply adequate housing to all the strata of the society, the states have also been tak-

ing proactive steps on their own. These include rationalization/waiving off of stamp duties, rationalization of user charges for the lower income

segments, incentivizing private sector to participate by offering additional FAR/FSI and TDR, etc. States have also been formulating landmark

Table 1 Per centage of Population with Access to Improved Source of Water				Table 2 Status of Water Supply in six Large Cities in India			
Year	Urban	Rural	Total	City	Water Supply		
					Capacity (MLD)	Hours/ day	Consumption (LPCD)
1990	88	63	69	Bangalore	965	4	--
1995	90	70	75	Chennai	198	4	--
2000	93	77	81	Delhi	4,346	4	78
2005	95	83	86	Hyderabad	578	0.5–4	96
2010	97	90	92	Kolkata	1,625	9	116
				Mumbai	3,000	5	90

Source: WHO/UNICEF (2012a)

#### Box 7

### 24X7 WATER IN THREE CITIES OF KARNATAKA

The Government of Karnataka, with assistance from World Bank, launched Karnataka Urban Water Sector Improvement Project (KUWASIP) in 2005 in five selected zones in three cities (Belgaum, Gulbarga, and the twin cities of Hubli-Dharwad) to build and deliver an efficient and commercially viable 24X7 urban water supply system through Public Private Partnership (PPP).

- The project included investments to improve bulk water supply and commissioned a private operator to construct-operate-manage 24X7 urban water-supply systems for two years, after a preparatory phase of 18 months.
- The investment was made by Karnataka Urban Water Supply and Drainage Board (KUWSDB) and the private operator was responsible for installation of meters, tariff collection, etc. The tariff structure was rationalized by introducing variable rates based on consumption. Significant reforms were carried out in public sector institutions such as KUWSDB and Karnataka Urban Infrastructure Development and Finance Corporation.
- Losses were reduced from 50 per cent to 7 per cent due to improvements in the transmission and distribution network, and improved metering. Over 25,000 households now receive 24X7 water supply.
- In 2009, the project was conferred the first prize in the PPP category of the National Urban Water Awards of the Ministry of Urban Development, Government of India.

## Box 8

**24X7 WATER SUPPLY IN NAGPUR**

Nagpur city (Maharashtra) has implemented a number of projects within an overall framework of integrated water management to achieve 24X7 water supply. The pilot project is in the demonstration zone of Dharampeth covering 10 per cent of the city's population. A private company was responsible for the upgradation of the network, installation of meters, and putting in place a monitoring system and a customer service centre. The project initially ran into problems with the steep increase in water tariff, but a compromise solution was found. To scale up the project to cover the entire city of Nagpur, a contract has been awarded to the same private company. For the full city project, the private company is also contributing finances for capital investment.

Table 3: **PER CENT POPULATION WITH ACCESS TO IMPROVED SANITATION  
VIS-À-VIS NO SANITATION**

Year	Improved			No Sanitation		
	Urban	Rural	Total	Urban	Rural	Total
1990	51	7	18	28	91	75
1995	53	10	21	25	86	70
2000	55	14	25	22	79	63
2005	56	19	30	18	73	57
2010	58	23	34	14	67	51

Source: WHO/UNICEF (2012b).

## Box 9

**ALANDUR SEWERAGE PROJECT WITH  
CITIZEN PARTICIPATION**

Alandur, a residential suburb of Chennai in Kanchipuram district, with a population of 150,000 had no underground sewerage until 2000. Almost 80 per cent of households had to depend on septic tanks with soak pits. Alandur has been transformed by a comprehensive underground sewerage network and treatment plant in a period of five years.

- The project financing was arranged from JNNURM, World Bank and the residents.
- Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) facilitated the process of financing and cost recovery. The project involved the construction of a sewer line covering the entire road length of 137 km, covering 23,700 house service connections. The network construction contract was awarded to a private infrastructure company. The major contributing factors to the success of the initiative were the leadership of the mayor of Alandur, the support of the municipal corporation and the state government.

## Box 10

## SWACHH BHARAT MISSION (SBM)

In 2014, the Government of India launched the Swachh Bharat Mission—Clean India Mission, which is being implemented by Ministry of Urban Development (MoUD) and by Ministry of Drinking Water and Sanitation (MoDWS) for urban and rural areas, respectively. This Mission will be in force till 2 October 2019. The objectives of the Mission include the following:

- Elimination of open defecation
- Eradication of manual scavenging
- Modern and scientific municipal solid waste management
- To effect behavioural change regarding sanitation practices
- Generate awareness about sanitation and its linkage with public health
- Capacity augmentation for ULB's
- To create an enabling environment for private sector participation in Capex (capital expenditure) and Opex (operation and maintenance expenditure)

The components of the Mission include: construction of household toilets, including conversion of insanitary latrines into pour-flush latrines; community toilets, private toilets, solid waste management; IEC and public awareness; capacity building; and Administrative and Office Expenses (A&OE). All statutory towns in India will be covered under the Mission. The Mission strategy involves Comprehensive Sanitation Planning which includes (i) City Sanitation Plans, (ii) State Sanitation Concept, and (iii) State Sanitation Strategy and IES. This will enable an environment for private sector participation, capacity building and special-focus groups. In the next three years, over 10 million toilets are proposed to be constructed under the Mission.

legislations having far-reaching impacts on the affordable housing market. For example, the Rajasthan Urban Land (Certification and Titling) Act, 2016, enables formalization of informal properties, eliminates uncertainties with ownership and makes it tradable.

- **Improving investment and financial support to housing:** Towards further catalyzing markets for affordable housing, a number of initiatives have been taken by the Government of India for improving investment and financial support to the sector, which include the key efforts mentioned in Box 2.
- **Policy framework and legislation:** Measures have been undertaken to support the policy framework and legislation in the

housing sector (Box 3).

- **Innovative technologies and capacity building:** In order to adapt processes and resources for undertaking construction activities, innovative technologies and capacity building in the housing sector are being spearheaded (Box 4).

All the above initiatives are summarized in Figure 5. Housing policy in India, which earlier focussed on construction of houses, has shifted towards creation of an enabling framework, improving access to credit and encouraging multi-stakeholder participation in the housing sector. The recent policies focus on sustainability and social inclusion, and they recognize the key role of the private sector.

Table 4: **ANNUAL TARGETS OF SOLID WASTE MANAGEMENT AS PER SBM**

Objective	Number of Statutory Towns to be Covered				Total Number of Towns
	2015–16	2016–17	2017–18	2018–19	
Achievement of 100 per cent collection and transportation	1,000	1,500	1,500	41	4041
Achievement of 100 per cent processing and disposal	100	1,000	1,000	1,941	4041

**Box 11****INNOVATIVE PPP PROJECT FOR SOLID WASTE MANAGEMENT IN GREATER MUMBAI**

An innovative PPP project led by the Municipal Corporation of Greater Mumbai (MCGM) has brought about scientific closure, completed in 24 months, of the Gorai dumpsite where almost 1,200 ton of garbage was being dumped daily in the open grounds. Besides ensuring scientific closure and a green cover for the Gorai dumpsite, the corporation earns carbon credits for the capture and combustion of methane (landfill gas). The transaction is one of the largest carbon advance transactions in the Clean Development Mechanism (CDM). Gorai is the first dumpsite closure project in India to be registered at the United Nations Framework Convention on Climate Change (UNFCCC). The corporation has already received a carbon advance of INR 250 million against future delivery of carbon credits from the Asian Development Bank (ADB), and the total carbon credit earnings are expected to be INR 720 million, higher than the project's total capital cost of INR 500 million. The project is estimated to reduce greenhouse gases by 1.2 million ton of carbon dioxide over a 10-year crediting period.

**Slums and Squatter Settlements**

- Census of India defines a slum as a compact area with a population of at least 300 or 60–70 households of poorly built congested tenements in an unhygienic environment, usually built with inadequate infrastructure and lacking in proper sanitary and drinking water facilities. The definition of a slum is not however universal.
- Every state follows its own legislation for defining a slum. However, the key characteristics in all the definitions are dilapidation, overcrowding, faulty layout, lack of ventilation, and inadequate availability of basic services such as water, sanitation and drainage.
- In 2001, about 23.5 per cent of the urban households were living in slums, which significantly reduced to 17 per cent in 2011. However, the absolute number of households living in slums has increased from 10.15 million in 2001 to 13.75 million in 2011. The mega cities of Greater Mumbai, Delhi NCR and Kolkata have about 42 to 55 per cent of their population in slums, whereas the proportion of slum dwellers and urban poor in the million-plus cities is around 35 per cent.
- The Government of India has formulated various schemes to address the issues of slums. While the earlier Environment Improvement

of Urban Slums (EIUS) scheme had limited success, the government introduced a more comprehensive National Slum Development Programme (NSDP) in 1996 as an additional central assistance scheme with the objective to upgrade urban slums.

- In 2009, Rajiv Awas Yojana (RAY) was launched in pursuance of the vision for “slum free India” wherein financial support was extended for providing housing, improvement of basic civic infrastructure and social amenities, creating rental housing stock and transit housing.
- More recently, in June 2015, the Pradhan Mantri Awas Yojana—Housing for All (Urban) has developed four verticals addressing the housing needs of the urban poor (Boxes 5 and 6).

### Provision of Basic Services

Efforts are being made by the Government through its various urban missions supplemented with various schemes to cater to the need of providing adequate basic services along with housing. This requires synergy among various projects during planning and execution. For example, affordable housing is one of the core infrastructure components in the Smart Cities Mission. Physical infrastructure such as drinking water, sewerage, access for housing projects under PMAY is envisaged to come out of AMRUT and state schemes.

### Access to safe drinking water

Considerable progress has been made over the past few decades to provide access to safe drinking water in urban and rural areas. Table 1 shows the distribution of India’s population with access to an improved drinking water source. As a result of several programmes initiated at the city level, the access to improved sources of water has increased from 88 per cent in 1990 to 97 per cent in 2010 in urban areas. Table 2 shows the status of water-supply infrastructure in the six large cities in India. The availability of water supply ranges

from four hours or less per day in Delhi, Bangalore and Hyderabad to nine hours in Kolkata. A household study conducted in seven cities in India found that the average per capita consumption of water is 92 litres per capita per day (lpcd), which is close to the WHO guideline of 100 lpcd for optimal access. Further analysis of the data by socio-economic quintiles shows that water consumption increases with a rise in socio-economic status, although the inter-quintile differences are not significant.

There are some good practices developed for the provision of 24X7 water supply in major cities in India based on partnership approach (Boxes 7 and 8).

### Access to basic sanitation and drainage

Access to basic sanitation facilities is one of the priority areas of action of the Government of India. Table 3 shows the proportion of the population with access to an improved source of sanitation, and those that lack any source of sanitation and resort to open defecation. The proportion of total population of India with access to improved sanitation has nearly doubled in the last 20 years, from 18 per cent in 1990 to 34 per cent in 2010. In urban areas, the same has increased from 51 per cent in 1990 to 58 per cent in 2010, and the proportion of population with no sanitation facilities has declined from 28 per cent to 14 per cent during the same period.

A considerable portion of urban poor are dependent on community/public toilets. Many of these toilets have inadequate water supply and are not connected to the city sewerage system. Efforts are however being made to address this issue. A silver lining has emerged in recent years with a few successful cases of better service provision in water supply and sewerage network covering the core urban areas and building of sewage treatment plants. Alandur Sewerage Project is one such good example (Box 9).

The Government of India has formulated the

National Urban Sanitation Policy (NUSP), 2008, which emphasizes the need to spread awareness about sanitation through an integrated city-wide approach. The Government of India has embarked upon a major drive to improve sanitation through the Swachh Bharat Mission (SBM) or the Clean India Mission (Box 10). SBM has a target of providing 10.4 million household toilets and 0.51 million community and public toilets in all statutory cities/towns for 306 million population by 2018–19.

### Status of Solid Waste Management

The management and disposal of solid waste generated in Indian cities is the responsibility of the Urban Local Bodies. The Municipal Solid Waste Rules were put in place in the year 2000. The revised rules have been notified in 2016. Besides municipal bodies, Non-Governmental Organizations (NGOs), Community Based Organizations (CBOs) and private companies are usually involved in the collection of solid waste. With a view to implement modern and scientific municipal solid waste management practices in Indian cities, the Swachh Bharat Mission targets to achieve 100 per cent collection, transportation, processing and disposal of solid wastes in all statutory towns in a phased manner up to 2018–19, as given in Table 4.

### Conclusion

Through the various social housing and urban services programme for the economically weaker and low-income segments, Government agencies have been playing a key role in overcoming the demand and supply constraints.

The major challenge however being faced by the Government agencies and policy makers alike is the provision of serviced urban land at affordable costs to the homeless and urban poor in proximity to centres of livelihood so as to cause minimum disruption of daily lives. Therefore, innovative approaches with respect to land

development, shelter provision and the use of space are being devised to meet requirements of planned settlements.

Taking a departure from previous housing initiatives that focussed only on slums, the flagship housing programme of PMAY—Housing for All (Urban) by 2022 focusses on sustainable human settlement development to address unmet housing demand of all urban poor. City governments are acknowledging the fact that informal areas and slums, often in the peri-urban areas, are part of the city. City-wide integrated housing programmes are therefore required to be implemented in association with local communities, community-based organizations, educational institutes and NGOs through a bottom-up approach.

Utilization of unused housing stock created under different government housing programmes is being focussed on so that a seamless transfer of dwelling units on rental or ownership basis can be made to beneficiaries. A slew of measures by the government like tax incentives — direct and indirect — have been introduced in recent past. Individual beneficiaries have also been incentivized by larger interest subvention and tax savings made available in individual home loan sector to complete an effective loop of housing finance.

Additionally, recognizing the role of technology for faster and more effective implementation of construction projects, the Government of India has eased the procurement and regulatory approval process by accepting emerging trends in construction industry for execution of projects. Since public bodies play a large role in social housing projects, steps are being taken for ease of adoption of new technologies and building materials in government contracts.

Partnership between communities, government bodies and private sector is the need of the day as no single organization can meet the multiple needs of a community. Private stakeholders and market-based organizations can play a meaningful

role in the provision of basic services to citizens. NGOs and the community play an important role at the grass root level in terms of ownership and acceptability of the products and services. Therefore, they need to be consulted right from the policy-making stage.

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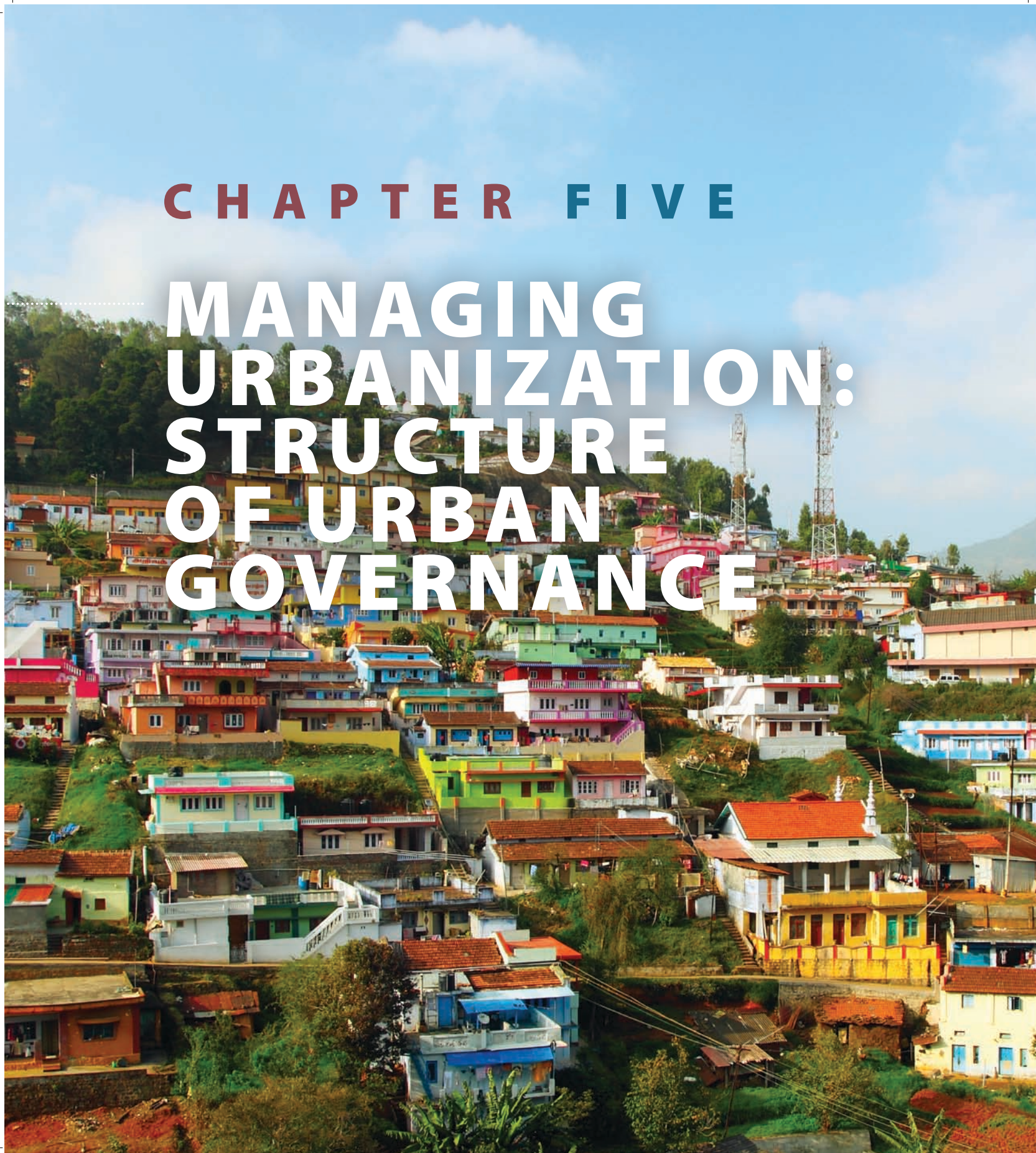
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## CHAPTER FIVE

# MANAGING URBANIZATION: STRUCTURE OF URBAN GOVERNANCE





**M**anaging urbanization and city growth is a complex activity all over the world. Cities change and undergo transformations in size, economic base and composition, land use, physical shape, and patterns of mobility, creating demands on factors of production such as land, labour, capital, knowledge, technology and institutions. Over the years, developing and developed countries have continued to experiment with different models of urban management and governance, India being no exception. In India, while the formal responsibilities for cities rest with the state governments, there exists a very active participation of various stakeholders in the management of cities which include the three tiers of government, the private sector whose interest in the development and management of cities has grown at a phenomenal pace, civil society groups, universities, and research institutions, and lately, the philanthropies. Also, over time, the demand for greater civic participation and transparency in determining urban development strategies is in evidence. This chapter outlines the structures of urban governance as these have evolved, underlining the need for building capacities to be able to better address the growing complexities of the urban sector.

## Urban Governance: An Overview

The Constitution of India, in its Seventh Schedule, lays down the powers of the union and state governments in the Union List (list I), State List (list II), and Concurrent List (list III). In this division of powers, local government, public health and sanitation, and land, which form the core of urban development, are a subject of the state governments. A 1992 amendment to the constitution provides recognition to municipalities to serve as the third tier of government for managing activities listed in schedule 12 of the constitution. The roles of different tiers of the government are described below.

### Central Governments in Urban Development

The role of the central government is mainly “advisory,” complemented with putting out an overall approach to urban development, compatible with macroeconomic frameworks. At the centre, a separate Ministry on Urban Development was created in 1985 for the first time, keeping in view the emerging challenges and opportunities that urbanization offered for a foreseeable future. At present, the Ministry of Urban Development (MoUD) and the Ministry of Housing and Urban Poverty Alleviation (MoHUPA) provide assistance to the state governments in multiple ways: guidance in the formulation of policy frameworks, implementing centrally sponsored schemes in priority areas, processing and monitoring assistance from multilateral/bilateral institutions for state government projects and finally providing technical support and advice for promoting orderly urbanization.

### State Governments in Urban Development

Under the Constitution of India, the state governments are empowered to frame policies and enact the legislations necessary for implementation of policies and projects related to land, housing, urban development and provision of

civic infrastructure. The state governments formulate state-specific urban-development policies, sets up institutional arrangements for advancing the urban policy agenda and designs and implements urban development programmes and projects. The state governments establish “local governments” consistent with the constitutional provisions and empower them with appropriate functions and fiscal powers. The central government, however, plays a significant role through allocation of funds and devolution of resources within the framework of national Five Year Plans for development. The State Urban Development Departments are in charge of the town planning department, urban development authorities, urban water supply, sewerage and sanitation boards, housing departments, etc.

### Decentralization and Local Governments

The 74th Constitutional Amendment Act (CAA) of 1992 is one of the most important initiatives that have paved the way for decentralization by providing for the creation of urban local government as a vibrant democratic unit of self-government. The 74th CAA requires the state governments to amend their municipal laws in order to empower the ULBs “with such powers and authority as may be necessary to enable them to function as institutions of self-governance”. The amendment, often referred as the “Power to the People”, recognizes urban local governments as the third tier for democracy by ensuring representation of people in the house through regular elections and through assigning them with specific civic functions. As a result, the ULBs have acquired political, functional and fiscal empowerment with reference to the following:

- ULBs shall have the continuity of an elected body that cannot be suspended but can only be dissolved subject to fresh elections within a period of six months.
- Representation of women (33 per cent) and

## Box 1

## FUNCTIONS LISTED UNDER THE TWELFTH SCHEDULE

- Urban planning, including town planning.
- Regulation of land-use and construction of buildings.
- Planning for economic and social development.
- Roads and bridges.
- Water supply for domestic, industrial and commercial purposes.
- Public health, sanitation, conservancy and solid waste management.
- Fire services.
- Urban forestry, protection of the environment and promotion of ecological aspects.
- Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded.
- Slum improvement and upgradation.
- Urban poverty alleviation.
- Provision of urban amenities and facilities such as parks, gardens, playgrounds.
- Promotion of cultural, educational and aesthetic aspects.
- Burials and burial grounds; cremations, cremation grounds; and electric crematoriums.
- Cattle ponds; prevention of cruelty to animals.
- Vital statistics, including registration of births and deaths.
- Public amenities, including street lighting, parking lots, bus stops and public conveniences.
- Regulation of slaughterhouses and tanneries.

Source: *Twelfth schedule (Article 243W) CAA, 1992*

other weaker sections of the society.

- The primacy of municipal councils is retained by incorporating eighteen functions in the Twelfth Schedule, in the article 243W of the constitution (Box 1).
- Ward Committees, Metropolitan Planning Committees (MPCs) and District Planning Committees (DPCs) are to be created.
- The 74th CAA introduces two features to strengthen municipal finances:
  - Setting up of State Finance Commissions (SFCs) every five years (article 243Y), and
  - Inserting measures for augmenting a state-consolidated fund for supplementing ULB resources in the Terms of Reference of

the Central Finance Commission (see details in Chapter 6 on Municipal Finance).

### Frameworks of Urban Governance and Management

Three broad levels of institutions are involved in the governance and management of various levels of urban administrative units in India: (i) local government/ the Urban Local Bodies (ULBs) as the principle agency for governance, planning and delivery of local basic services; (ii) metropolitan area-wide planning and development bodies as established under the state Town and Country Planning Acts, and responsible for the region-wide planning and development; and (iii) the parastatal agencies engaged in direct in-

frastructure development and service delivery in the urban areas. These three categories are briefly discussed below:

### Local/ municipal governance in India

The Constitution of India mandates each state for setting up of local level governance structures: Municipal Corporations for larger, Municipalities for medium and Nagar Panchayats for smaller urban settlements.

- **Municipal Corporation for a larger area:**

In the metropolitan cities, councillors are elected in each ward and they voice their concerns regarding safeguarding the interest of the people at large. The mayor gets elected either directly or indirectly by the people, as per the process adopted by each state.

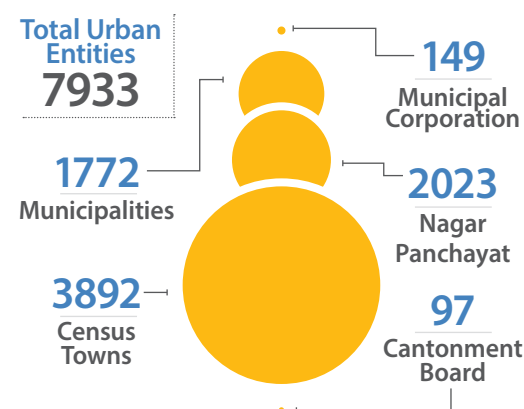
- **Municipality (Nagar Palika):** Cities having a population of 100,000 or more are governed by municipalities. There are, however, some exceptions as the earlier threshold was 20,000, and hence, all those who were classified as Nagar Palikas earlier, continue to use this nomenclature even though their population is below 100,000. The chairperson is elected either directly or indirectly by the people, as per the process adopted by each state.

- **Nagar Panchayat for transitioned areas:** For an area in transition from the rural area to an urban area, these bodies are set-up for towns having population between 11,000 and 100,000. These may be emerging urban areas, census towns or statutory towns.

Municipal bodies in India are vested with a long list of functions as are assigned to or devolved on them by the state governments under the municipal legislation. The Twelfth Schedule of Constitution (Article 243 w) provides an illustrative list of 18 functions that may be entrusted to the municipalities. These functions broadly relate to public health, welfare, regulatory functions, public safety, public infrastructure works, and develop-

ment activities. In addition to the legally assigned functions, the sectoral departments of the state government often assign various functions such as family planning, nutrition and slum improvement, disease and epidemic control, etc. The total numbers of urban entities in India as per 2011 Census is presented in Table 1 below.

**Table 1: NUMBER OF URBAN ENTITIES IN INDIA AS PER 2011 CENSUS**



### Role of a Mayor in Municipal Governance

In most Indian cities, the mayor is endowed with limited executive responsibilities with the exception of mayors in cities of the states of Madhya Pradesh and West Bengal who have entrusted the mayors with executive powers. The Mayor-in-Council or the Chairman-in-Council system in Kolkata (Box 2), which is similar to a cabinet or a standing committee arrangement, involves the sharing of power. The Mayor in Council is elected by the councillors/ corporators in the local body, and is accountable within a framework of collective responsibility. The mayor is elected either directly by the citizens, like in the city of London, or as in very few states in India (in Madhya Pradesh and Tamil Nadu), or indirectly elected by the councillors in most of the states. The Executive Mayor, who is directly elected by the residents of a city for a specified term, acts like the

## Box 2

**MAYOR-IN-COUNCIL SYSTEM IN KOLKATA**

The Mayor-in-Council system in Kolkata consists of the mayor (indirectly elected), deputy mayor, and not more than 10 other elected members of the corporation. The Mayor-in-Council is selected from among the elected councilors. The commissioners are appointed by the mayor in consultation with the state government. The mayor is the chief executive, and the speaker is the chairman of the council and is elected from amongst the elected members of the corporation. The members of the Mayor-in-Council system have been assigned specific portfolios, and are functioning like ministers in a state council of ministers.

**EXECUTIVE MAYOR SYSTEM IN BHOPAL**

The executive mayor in Bhopal is directly elected by the residents of Bhopal city as the “single point accountability” and acts like the CEO of a corporate body. The mayor heads the Deliberative Wing of BMC and the overall functioning of the corporation is governed by the Mayor-in-Council and the Departmental Advisory Committees constituted by the speaker from among the councilors. The Mayor-in-Council consists of the mayor and ten members. The mayor is the ex-officio chairman of the Mayor-in-Council and presides over meetings. The Mayor-in-Council can appoint one or more sub-committees from amongst its members and may refer to it any mails pending before it for inquiry and ask for report or opinion.

CEO of a corporate body. While the term of the corporation itself is five years, the mayor’s tenure varies from one state to another ranging from one year to five years (Table 2).

**Table 2: ELECTION AND TENURE OF MAYORS IN SELECTED STATES**

State	Election	Term
Andhra Pradesh	Indirect	Five years
Karnataka, Assam, Chandigarh, Delhi	Indirect	One year
Tamil Nadu, Madhya Pradesh	Direct	Five years
West Bengal	Indirect	Five years
Maharashtra	Indirect	Two and a half years

**Metropolitan Governance in India**

The Constitution of India by its 74th CAA makes it mandatory for the states to set-up Metropolitan Planning Committees (MPCs) in metropolitan areas (population of 1 million and above) for planned development of the cities and its hinterlands. One of the main tasks of the MPC is to streamline and rationalize planning for the metropolis so that it is able to effectively cater to the demands of a large-growing population (Box 3). The country has been tardy in setting up of MPCs. The state of West Bengal had constituted the Kolkata Metropolitan Region (KMR) and Karnataka in 2014 had set up an MPC for the Bruhat Bangalore Mahanagara Palike (BBMP). National Capital Region Planning Board (NCRPB), was set up in 1995 to promote balanced and harmonized development of the National Capital Region consisting whole of Delhi and parts of Uttar Pradesh, Hary-

Box 3

## FUNCTIONS OF A METROPOLITAN PLANNING COMMITTEE

Every Metropolitan Planning Committee shall, in preparing the draft development plan, have regard to —

- Matters of common interest between the municipalities and the panchayats, including co-ordinated spatial planning of the area, sharing of water and other physical and natural resources, the integrated development of infrastructure and environmental conservation;
- The overall objectives and priorities set by the central government and the state governments; and,
- The extent and nature of investments likely to be made in the metropolitan area by agencies of the Government of India and the Government of the State and other available resources whether financial or otherwise.

ana and Rajasthan states to channelize the flow and direction of the haphazard and unplanned urban socio-economic growth.

### Parastatals in the Development of Urban Lands, Infrastructure, Service Delivery and Slum Rehabilitation

Parastatal agencies, which are state-owned enterprises, are primarily the investment vehicles created as nodal agencies for the purpose of facilitating infrastructure development and service delivery of a metropolitan region by the state. Since 1970 various parastatal agencies have been created in all the metropolitan regions to plan and develop metropolitan region in a multi-municipal jurisdiction. The Urban Development Departments, Metropolitan Development Authorities, Metropolitan Water and Sanitation Authorities, etc. are engaged in direct infrastructure development and service delivery of metropolitan regions. Agencies such as Kolkata Metropolitan Development Authority (KMDA) since 1970, Mumbai Metropolitan Region Development Authority (MMRDA) since 1975, etc. have been actively engaged in transforming land markets and generating new revenues for the state government and creating opportunities for entrepreneurs. The Metropolitan Water and Sanitation Authorities are responsible for undertaking capital works while the respective ULBs have been entrusted with the

responsibility of distribution as well as operation and maintenance of water and sewerage services.

### Participation and Civic Engagement

To strengthen the local governments entailing new governance, benchmarks such as, civic participation, disclosure and accountability etc. have been laid out with the foundation in the form of community participation Law, disclosure of lands, shift from a cash based accounting to accrual-based accounting system, right to public services, Ombudsman Act etc.

### People's Participation in Decision Making

The Constitution of India is the supreme law of India. It lays down the framework for defining the fundamental political principles, establishes the structure, procedures, powers and duties of government institutions, and sets out the fundamental rights, directive principles and the duties of citizens. The constitution declares India as a 'sovereign, socialist, secular, democratic republic' assuring its citizens of 'justice, equality, and liberty' and endeavours to promote fraternity among them.

### Constitutional provision for the formation of Wards Committee

The 74th CAA provided a broad structure for decentralization of urban governance with a view to create



an active link between the citizens and governance. As per the Act, every city with a population of more than 300,000 should constitute wards committees consisting of one or more wards. The wards committees are expected to address local problems by participating in the planning, financial and administrative functions having a direct bearing on the related wards. The act prescribes that the state legislature, by law, make provisions for the composition and territorial area of a ward committee.

Despite the clarity and details that the 74th CAA provides about the constitution of the wards committees, not all the states have the enabling state legislation for constitution of the ward committees. West Bengal and Kerala are two states where ward committees have been established and working since the last decade. The ward committees, wherever established, have the representation ratio between the citizen and their elected representatives almost ten times larger when compared to their rural counterpart. In most of the states in India, often the urban centres lack active citizen participation and there is need of putting in more effort to effectively provide them with a legitimate platform to

engage in the decision-making process.

### Participatory Budgeting

It has been over 24 years since the concept of Participatory Budgeting first originated but its spread in India has been limited. In 2001, Bangalore became the first city in India to implement participatory budgeting with the efforts of a local NGO. The campaign resulted in citizens' budget priorities being approved, but, with time, the concept lost its ground in the city. In 2006, Pune implemented Participatory Budgeting for the first time in the city and attracted a massive response from the citizens as well as the city-based NGOs—National Society for Clean Cities (NSCC), Centre for Environment Education (CEE), and Nagrik Chetna Manch, amongst others.

### Model Nagar Raj Bill

The Model Nagar Raj Bill of 2006 directs state governments and ULBs to form ward committees comprising citizens of the locality, and prepare the ward-level budgets in consultation with them to institutionalize citizens' participation. However, these initiatives have

 Box 4**RESOURCE MOBILIZATION EFFORTS OF INDORE MUNICIPAL CORPORATION (IMC)**

In 1999–00, the Indore Municipal Corporation (IMC) embarked on a modernization plan, developed with extensive citizen participation, to improve urban services and increase revenues. To reform its property taxes, which average almost 50 per cent of the city's own source income, the IMC shifted to a simpler, mass-assessment method and introduced self-assessment of properties by taxpayers in 1997. The IMC contracted with a private firm in 2001–02 to conduct a physical survey of properties in all wards to identify unregistered properties and add them to the property database. The number of properties registered nearly doubled in four years.

not been implemented; as a result, very few channels are available for citizens to participate in local governance. Pune in Maharashtra state has gained its due attention within the administrative and executive circles due to the introduction of this concept.

**Transparency and Accountability in Urban Governance**

Transparency and accountability have assumed primacy in the context of the emerging patterns of relationships between the government and other stakeholders who have begun to play a larger role in managing and financing cities. A number of initiatives have been taken to introduce transparency and accountability in governing cities. These are outlined below.

- **Shift from a cash-based accounting to an accrual-based accounting system**

In terms of the recommendations of the National Municipal Accounts Manual (NMAM) released by the Ministry of Urban Development (MoUD), the Government of India decided to introduce accrual-based double-entry system and improved financial management systems in all ULBs in India. Taking this further and for achieving various objectives, Jawaharlal Nehru National Urban Renewal Mission (JnNURM) reform conditionality called for “improved municipal accounting, with the objective of having a modern accounting system based on

double-entry and accrual principles, leading to better financial management, transparency and self-reliance”, as a mandatory reform for local bodies.

- **Keeping the citizen first—Ombudsman Act**

Subsequent to the 74th CAA, Ombudsman Act (1995) was enacted to appoint an ombudsman with power to investigate the administrative actions taken by or on behalf of the government and other authorities, and for other purposes connected therewith. This initiative was taken by the centre and states to addresses corruption and efficiency issues in order to bring transparency and accountability in urban governance.

- **Right to Public Services legislation**

Right to Public Services legislation in India comprises of statutory laws which guarantee time-bound delivery of services rendered by the government to citizens. The Right to Public Service Acts mandate that covered services be clearly stated and must either be completed or denied (with explanation) within a specific timeframe. They also set a monetary fine to be levied against the responsible officer if they do not complete the service within the timeframe. Madhya Pradesh was the first state to implement a right to public service act, passing its Public Service Guarantee Act in August 2010.



Many of the later acts passed in other states are modelled on Madhya Pradesh's Act which covers 52 services, from applications for ration cards to income certificates.

- **Public Disclosure Law**

The JnNURM envisages the enactment of a Public Disclosure Law (PDL) to ensure release of quarterly performance information to all stakeholders. The goal of public disclosure is to institute transparency and accountability in the functioning of municipalities through publication of information pertaining to various facets of municipal governance, namely, personnel, particulars of administrative structure, finances and operations. The JNNURM reform toolkit clearly states that "JNNURM requires that municipalities and parastatal agencies will have to publish information about the municipality and its functioning on a periodic basis. Such information includes, but is not limited to, statutorily audit quarterly statements of performance covering operating and financial parameters and service levels for various services

being rendered by the municipality."

- **Citizen Report Cards / Social Audit**

The Citizens' Report Card in Bangalore (Southern India) was a civil society initiative undertaken in 1993 to monitor government services in terms of efficiency and accountability. The exercise gathered citizen feedback on performance of public agencies and disseminated the findings to the citizenry, thus exerting public pressure on the agencies to initiate reforms. A seven-point rating scale facilitated quantification of citizen satisfaction levels with regard to service delivery, dimensions of corruption, staff behaviour, and so on.

- **Community participation in urban governance**

Community participation assumes a critical role for making public authorities accountable, effective, transparent and result-oriented in their functioning. Community participation is vital especially for the programmes meant to address the social causes, which require sup-

Box 5

## USING MOBILE PHONES AND GPRS TO IMPROVE GOVERNANCE IN HYDERABAD

The Off-Site Real Time Monitoring (OSRT) system is a unique but simple mobile-based IT initiative by Greater Hyderabad Municipal Corporation (GHMC) to improve the delivery of public services. It uses a combination of Global Positioning System (GPS) and General Packet Radio Services (GPRS) technologies through cell phones. Online building permissions programme, monitoring of solid waste management, and maintaining parks and street lights is being done through OSRT. The technology allows cell phones to capture real-time images of workers at public sites under inspection with the date and time of the picture as well as the stamp of latitude and longitude alongside the image, superimposed on a Google map layer. The images are instantly transmitted to a central server, and are immediately available in the public domain allowing citizen monitoring. Citizens' complaints through SMS go straight to the concerned officer and the ward corporator. On rectifying the fault, the status is uploaded and the report is posted online.

port from the community for its success.

- **The Deendayal Antyodaya Yojana—National Urban Livelihoods Mission (DAY-NULM)**

This mission rests on the foundation of community mobilization and women empowerment. The mobilization of urban-poor households to form their own institutions will be an important investment for sustainable poverty-reduction programme and effective management of public services. The Mission supports universal mobilization of urban-poor households into thrift and

credit-based Self-Help Groups (SHGs) and their federations/collectives. These groups will not only serve as a support system for the poor to meet their financial and social needs but would also partner with local self-governments, public service providers, banks, private sector and other mainstream institutions to facilitate delivery of social and economic services to the poor. It aims to provide an integrating platform for public agencies, and service users and advocates for strengthening of participatory democracy and improved urban governance.

Box 6

## CABLE NETWORK OF VIJAYAWADA MUNICIPAL CORPORATION

The Vijayawada Municipal Corporation has uploaded all information on the website of Vijayawada Municipal Corporation ([www.ourvmc.org](http://www.ourvmc.org)). This information can be accessed through the local cable network. Each and every citizens of Vijayawada can now access database of the Municipal Corporation through local cable network. Since almost each family has cable connection, this way the corporation has been able to provide access to all categories of its citizens in the city.

## Box 7

**COMMUNITY-BASED DEVELOPMENT**

In Tirupur, a small town in south-western Tamil Nadu, effluent discharge from the textile industry has polluted the ground water. Water is now scarce for both industry and local inhabitants. Realizing that the old state-funded water schemes were not enough to meet burgeoning demand, the government of Tamil Nadu looked for private partnerships to help meet the investment, engineering and operational challenges. With the support of experienced financing, engineering, procurement and construction companies, the government formed a special purpose vehicle, the New Tirupur Area Development Corporation Ltd. The new company then signed a 30-year concession agreement with the government, with an expected return on investment of 20 per cent. The case highlights the company's sophisticated multi-stakeholder deal structure and details of its innovative tariff layering, using industrial revenues to cross-subsidize costs for low-income domestic consumers.

**Capacity Building Initiatives**

The biggest challenge for making and transforming cities to align with new paradigm shift requires cities to not only learn new approaches and technologies for doing the work but also learning, engaging and collaborating with innovative ideas so as to enable change on a large scale. Recognizing the need for reforms and capacity building the government have focused capacity building interventions on two strategic areas- Individual Capacity Building and Institutional Capacity Building.

**Model Municipal Law**

The Ministry of Urban Development (MoUD) has evolved a Model Municipal Law (MML) in 2003 to guide states to enact municipal legislations, to enhance the capacities of ULBs to leverage public funds for development of urban sector and help in creating an environment in which ULBs can play their role more effectively and ensure better service delivery. The MML suggested the concept of an Empowered Standing Committee that is like a part-time Mayor-in-Council. Following the line, the Rajasthan Municipalities Ordinance 2008 was introduced.

**Centres of Excellence**

National Training Strategy (NTS) of the Department of Personnel and Training, Government of India (GOI) has placed special emphasis on urban sector training. NTS expects capacity-building expenditure to be 2.5 per cent of budget of the respective departments. It accordingly covered political leaders, ULB staff, and representatives of community and grass-root-level workers. Most recent development in capacity building by MoUD is to create Centres of Excellence (CoE) in a decentralized manner so that intensive and action-oriented research can be taken up in a local context.

There are centres of excellence which are located in the institutions of high repute and specialization such as Indian Institute of Technology (IITs), Indian Institute of Management (IIMs) and Administrative Training Institute (ATI) of state governments. Regional Centre for Urban and Environmental Studies (RCUES) and National Institute of Urban Affairs (NIUA) have been created from non-plan funds to give professional support in a regular manner, whereas Centres of Excellence (CoE) have been created from plan fund

assistance of the government to take up specific projects for technical analysis and feedback to MoUD. This entire network of technical support is used to sensitize the urban sector in the country to promote pilot projects, training, research and advisory services.

### Information Technology Revolution— an Enabler of Smart Governance

With municipal administration becoming increasingly complex, the benefits of IT adoption are becoming more and more visible across several municipalities in India. States that have been progressivity using IT industry for the economic opportunities also leveraged their potential in managing cities. Cities in Andhra Pradesh, for example, provide a number of basic services online including tap connection, status of garbage pick-ups, sanitation tenders, approval of building plan, etc. Most ULBs have made progress on the basic aspects of e-governance like creation of websites, uploading of information, and payment gateways for property tax, water bills, etc. However, states differ substantially in their e-readiness and approach to e-governance.

In the recent years, many cities use tools like Geographical Information System (GIS) to improve urban land management and make it more transparent. Similarly, Supervisory Control and Data Acquisition (SCADA) is being used successfully for better water management in various cities. The Global Positioning System (GPS) is being used to track and monitor bus services in Surat and Indore. More recently, Greater Hyderabad Municipal Corporation has started combining the use of mobile phones with

Global Packet Radio Services (GPRS) for off-site real-time monitoring of delivering services (Box 4). M-governance application has resulted in high participation as users for internet are far less than that of mobile technology. In Rajkot only about 10 per cent of the people use internet, whereas each family owns at least one mobile phone. Therefore, combining mobile technology with Information and Communication Technology (ICT) made it easier to reach out to a large number of people (Boxes 5, 6, 7).

### Conclusion

The governance and management of the urban areas of India is complex with a number of institutions, which often have overlapping responsibilities. State governments, which have the principal constitutional responsibility for urban development, have been deficient in building and maintaining urban infrastructure assets for service delivery, providing access to affordable housing for the poor, and improving conditions in the slums. Urban Local Bodies (ULBs) are not sufficiently empowered to deal with these challenges either, in spite of having a legitimate legislative framework. The situation has not been improved substantially after the 74th Constitutional Amendment Act of 1992, which formally recognized ULBs as the third tier of government, but only “recommended” that state governments assign them a set of 18 functions under the Twelfth Schedule. The Amendment is even less clear on the devolution of finances to meet the revenue needs of ULBs for fulfilling these functions, leaving it to the discretion of state legislatures. The institutional framework needs further strengthening and improved administrative efficiencies to meet the emerging challenges.

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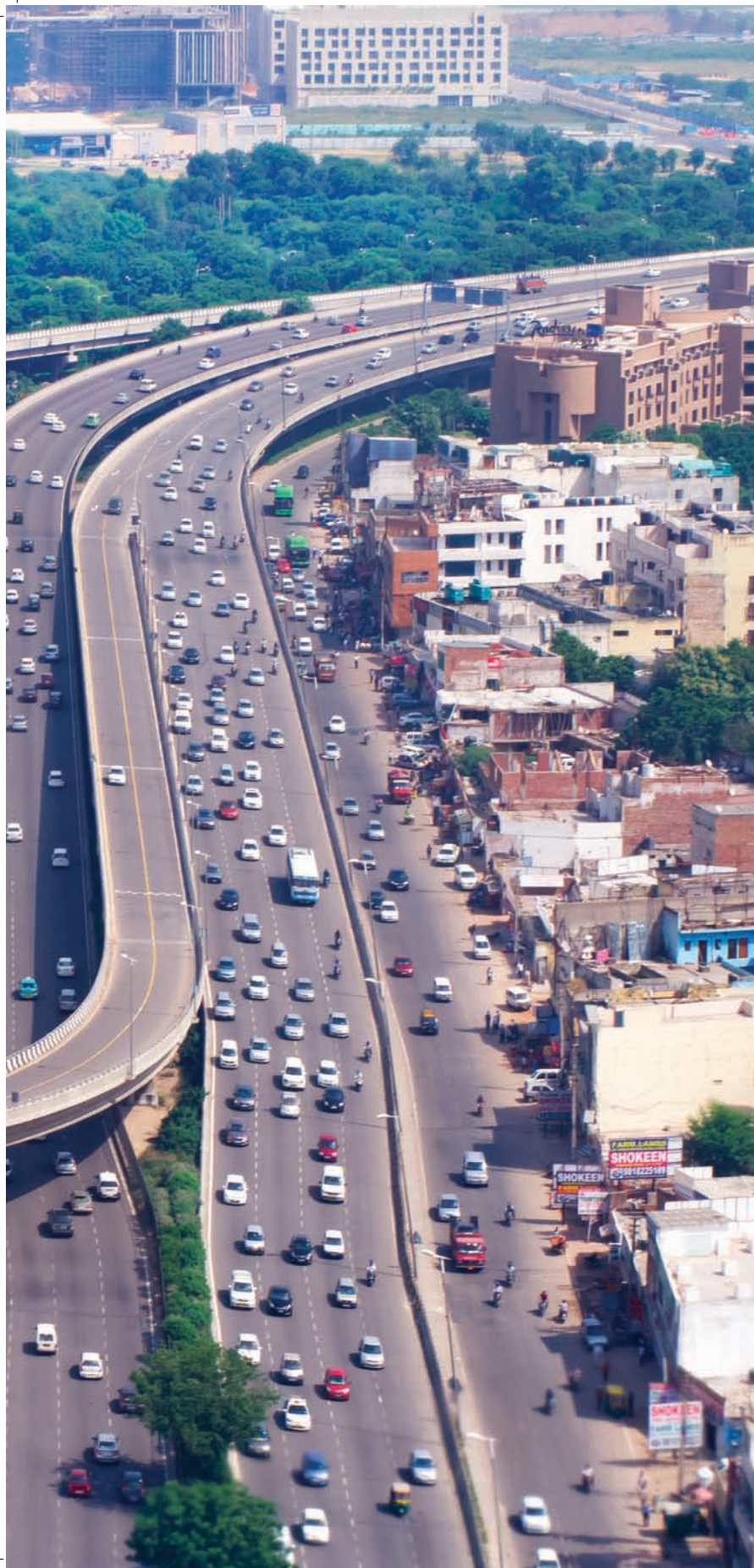




An aerial photograph of a multi-lane highway interchange. A curved overpass bridge spans across the lower half of the image. In the background, a tall, red and white water tower stands out against a dense green forest. The surrounding area includes some industrial or commercial buildings and parking lots. The text 'CHAPTER SIX' is overlaid in the upper middle section.

## CHAPTER SIX

# MUNICIPAL FINANCE AND FINANCIAL INNOVATIONS



**F**inancing urban development is perhaps the most demanding of all the challenges that India faces in managing urbanization. The High-Powered Expert Committee (HPEC) (2011) set up to work out the investment requirements for urban infrastructure services estimated that an investment of INR 39.2 trillion (2009–10 prices) will be needed to both eliminate the deficits and meet the requirements of the incremental population until 2031. The HPEC's estimates covered the requirements for water supply, sewerage, storm-water drain, solid-waste management, street lighting, urban roads, urban transport, traffic-support infrastructure, renewal and redevelopment including slums, and capacity building. The requirements are phenomenally large and increasing in direct proportion to the scale and level of urbanization. Given that financing of urban development is crucial for advancing India's urban agenda, a slew of initiatives have been taken in recent years to reinforce the municipal finance system. This chapter provides a description of the fiscal structures of urban local bodies in India, and the extent to which these structures have been altered in order to enable municipalities meet the challenges of urbanization.

## Functional and Fiscal Powers of Municipalities

Setting appropriate expenditure and tax assignment and other revenue-raising powers for each tier of government is a crucial component in any public finance policy. Both theory and evidence suggest that it is important to specify expenditure responsibilities as clearly as possible in order to enhance accountability, and reduce overlap and duplication of authority. The theory suggests that decision-making should occur according to the principle of subsidiarity.

Urban local governments in India have both a constitutional and statutory basis, but it is the state-level statutes that define their functions, powers and responsibilities. The constitution provides three lists, viz. a Union list, a State list, and a Concurrent list; out of the State list, the legislature of a state endows the municipalities with such powers and authority as it considers necessary to enable them to function as institutions of local self-government. The 74th amendment also consists of a schedule (Twelfth Schedule) of functions, which is illustrative but considered appropriate for municipalities. The Twelfth Schedule envisions municipalities to be performing functions such as planning for economic and social development, urban planning, urban poverty alleviation, urban forestry, protection of the environment and promotion of ecological aspects, and slum improvement and upgradation. The significance of the Twelfth Schedule functions lies as much in the enlargement of scope of municipal operations as in the fact that many of the functions are drawn from the concurrent list of the constitution. It suggests that there is a group of functions wherein there is concurrency of interests of all the three tiers of government. These functions have re-distributional and economy-wide implications. The powers of the state governments in determining the spending responsibilities of municipalities, however, continue to be absolute and inviolable.

The 74th CAA outline the functions to be devolved under the Twelfth Schedule. The state

governments have the prerogative to devolve levy of taxes and charges as outlined in the Seventh Schedule of the State List to the urban local bodies (Box 1). The constitution however provides for setting up of a state finance commission in every state and requires it to make recommendations on (i) taxes, duties, tolls and fees that should be shared between the state and municipalities; (ii) taxes, duties, tolls and fees that may be assigned to municipalities; (iii) grants-in-aid for municipalities; and, (iv) any other measure that would improve the finances of municipalities. It entails a major vertical and horizontal restructuring in the state municipal fiscal relations, providing states with a unique opportunity to redesign the existing fiscal system that is coherent and flexible enough to meet the rapidly changing local needs and responsibilities.

Of the various heads of revenues, taxes, duties, the state governments have most commonly devolved taxes on lands and buildings, entry of goods, advertisements, professions, trades, callings and employments and entertainment. In addition, the ULBs levy a number of other charges/taxes such as tax on congregations (Bihar and Odisha), tax on pilgrims and tourists (Bihar), sanitary cess and lighting tax (Madhya Pradesh), tax on deficit in parking spaces in non-residential buildings (Bihar and Odisha) to name a few.

## State of the Municipal Finance Municipal revenues

Municipal revenues in India can be categorized into own and transfers. The own revenues comprise tax and non-tax revenues such as property tax, tax on advertisements, user fee, water charges, etc. Transfers consist of state governments assignments, devolutions and grants-in-aid, Finance Commission dispensations, and central government grants-in-aid. As per the Fourteenth Finance Commission, in 2012–13, municipal revenue constituted just over one per cent of GDP in India (Table 1), while municipal revenues in other

emerging economies such as Brazil and South Africa are five per cent and six per cent of their GDP, respectively. Thus, there is significant scope for the ULBs in India to grow and contribute. With an aim to strengthen the third tier of governance, the 74th CAA has mandated the devolution of funds, functions and functionaries to the ULBs in 1992, its implementation picked pace only after 2005. Thus, reforms in the municipal finance space are a decade old.

Insights into India's municipal finance system are available from an in-depth examination of municipal finance data collected for the Fourteenth Finance Commission. The data pertains to the years 2007–08 and 2012–13, which, in a summary form, is presented below and the main findings are the following:

It may be noted that while own sources have increased 81 per cent, from INR 275.01 billion in 2007–08 to INR 499.13 billion in 2012–13, the transfers increased 114 per cent during the same period (Table 1). This is primarily due to increased state devolutions/ grants-in-aid and finance commission transfers. This has also meant that the own source of revenues in 2007–08 declined from 55.7 per cent to 51.6 per cent in 2012–13. The overall contribution of municipal finances to GDP, though, remained unchanged. User charges as a per centage of own revenues of ULBs have increased, but the third tier of governments need to be given more autonomy in deciding and fixing the charges, which are currently under the state control. In 2007–08, municipal governments own revenues constitut-

**Table 1: STATE OF THE FINANCES OF MUNICIPALITIES (ALL STATES, 2007–12)**

Structures	Year 2007–08		Year 2012–13	
OWN SOURCES				
	INR (billion)	Per cent	INR (billion)	Per cent
Tax revenue	183.66	37.2	309.12	32
Non-tax revenue	91.34	18.5	190.02	19.7
Sub total	275.01	55.7	499.13	51.6
TRANSFERS				
Government of India	35.15	7.1	53.87	5.6
Finance Commission	9.86	2	37.60	3.9
State devolution and assignments	93.42	18	185.37	19.2
State grant-in-aid	66.53	13.5	148.09	15.3
Others	13.55	2.7	42.32	4.4
Sub total	218.51	44.1	467.27	48.4
Own source revenue as per cent of GDP		0.60		0.48
Total municipal revenue as per cent of GDP	1.08	1.03		

Source: Studies commissioned by the Fourteenth Finance Commission

## Box 1

**SEVENTH SCHEDULE: STATE LIST—REVENUES,  
TAXES AND FEES**

- Land revenue
- Duties
  - in respect of succession to agricultural land
  - of excise
  - on estate in respect of agricultural land
- Taxes on
  - agricultural income
  - lands and buildings
  - mineral rights
  - the entry of goods into a local area
  - consumption or sale of electricity
  - the sale or purchase of goods
  - advertisements
  - goods and passengers carried by road or on inland waterways
  - vehicles
  - professions, trades, callings and employments
  - luxuries, including entertainments, amusements, betting and gambling
- Tolls
- Capitation taxes
- Rates of stamp duty

ed 4.2 per cent of revenues raised by the central government, 4.3 per cent of revenues raised by the states, and 2.07 per cent of revenues raised by the three levels of government (Table 2).

Municipal own-source revenues cover about 52 per cent of the total municipal expenditure. The Thirteenth Finance Commission database indicates that in 2007–08, the own-source component of revenues while covering about 52 per cent of the municipal expenditure showed no noticeable change. It is attributable, in part, to the inferior nature of the municipal taxes compared with the tax portfolios of the central and state governments, and in part, to the absence of autonomy and low capacity. Unlike the reform of central and state-level taxes undertaken in India in the mid-1990s, parallel efforts to reform municipal taxation are few. While studies on municipal finance enumerate close to 25 different kinds of tax

instruments many of them are showing growing irrelevance to the contemporary socio-economic realities and the changing economy of cities. At the same time, taxes which are consistent with the first principle that local governments should have the exclusive use of taxes that have no or little inter-jurisdictional implications have become central to the recommendations of the State Finance Commissions. As municipalities face higher-order responsibilities (i.e., planning for economic and social development, urban poverty alleviation, and the like), the issue of their access to central and state government tax revenues is expected to receive serious consideration.

Transfers, a term used here to include all assigned and devolved revenues and various types of grants-in-aid, have emerged as a crucial component of municipal revenues and an important instrument for financing municipal expenditure

in India. The 74th Amendment has put inter governmental transfers at the centre of the strategy for strengthening municipal governance. On average, transfers accounted for 48 per cent of the total municipal revenues in 2012–13, and financed nearly 50 per cent of the total municipal expenditure. Many of the State Finance Commissions have proposed predictable shares of state revenues for local governments.

### Municipal Expenditure

Municipal expenditure is generally of two kinds: capital expenditure, i.e., amounts spent on capital creation and the principal repayment of loans, and revenue expenditure, which comprises expenditures on establishment, administration,

operations and maintenance, and interest payments of loans. The share of capital expenditure has increased in recent years; however, revenue expenditure continues to account for a substantial portion of municipal expenditure. Simple regressions run between service access (water, waste water and sanitation) as dependent variables and municipal spending and GSDP as explanatory variables show a strong association. The per-capita investment costs for provision of state of the art infrastructure estimated by the High Powered Expert Committee in 2010 was around INR 43,400 at 2009–10 prices. The ULBs' own resources to meet these investments are however, inadequate. The Fourteenth Finance Commission (FFC) has thus recommended an increase in the share for

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**Table 2: TAX REVENUES OF THE CENTRE, STATES, AND MUNICIPALITIES**  
(RS. IN BILLION)

Year	Centre	States	Municipalities	Municipal Share in Total Publicly-raised Resources (in per cent)
2012/13	7418.77	9742.39	309.12	3.07 per cent
Municipal tax revenue as a per centage of	4.2 per cent	3.2 per cent	-	-
2007/08	4395.47	4307.82	183.66	2.07 per cent
Municipal tax revenue as a per centage of	4.2 per cent	4.3 per cent	-	-

Source: India Public Finance Statistics, Ministry of Finance 2009–10, and data collected by the Fourteenth Finance Commission.

**Table 3: RECOMMENDED GRANTS-IN-AID FOR MUNICIPALITIES**

Commission	Basic Grant (INR billion)	Earmarked or Performance Linked (INR billion)	Total (INR billion)
Eleventh FC	20	-	20
Twelfth FC	50	-	50
Thirteenth FC	151.10	80	231.10
Fourteenth FC	697.15	174.28	871.43

Source: Reports of the Finance Commissions

devolution of funds for the ULBs.

In pursuance of this, the Central Government has devolved higher share of central taxes (42 per cent) to states and also increased the share of urban local bodies in central taxes upto 5 per cent. This devolution would help ULBs to address the infrastructure-financing gap and to meet the requirements for SDGs.

### Finance Commission

Insertion of 3(c) into Article 280 mandates the Finance Commission (FC) to make recommendations on “the measures needed to augment the Consolidated Fund of a State to supplement the resources of the municipalities in the State on the basis of the recommendations made by the Finance Commission of the State.” This Article recognizes that own resources of the ULBs combined with the state-level transfers and grants-in-aid that may be recommended by the SFCs, may not be adequate to meet their financial needs, and the Finance Commission may need to step in to supplement the resources of the state for bridging the gap unmet by the SFCs. It is an extremely important provision under the constitution, formally recognizing that (i) ULBs are not just the responsibility of the state governments; the central government has an important stake in financing their activities, and (ii) the ULBs have a claim in the divisible pool of the central government resources with several of their functions drawn from the Concurrent list of the constitution.

Successive Finance Commissions have made recommendations for improving the finances and functioning of the ULBs, i.e., the Eleventh Finance Commission making recommendations for the period 2000–05, the Twelfth Finance Commission recommendations for the period 2005–10, the thirteenth Finance Commission recommendation for the period 2010–15 and the Fourteenth Finance Commission for the period 2015–20. The Finance Commissions have brought in a system of “performance grants” which act as an incentive for municipalities to undertake measures that will

bring about long-run, sustainable improvements. The grants for municipalities as recommended by the four FCs are shown in Table 3.

The Government of India is committed to strengthen the foundations of cooperative federalism. In pursuance, it has accepted the recommendations of Fourteenth Finance Commissions to transfer 42 per cent of divisible pool of the central government resources to the state governments. It is anticipated that the states would further devolve a part of this additionally to the ULBs. The FFC has also substantially increased the dispensations for ULBs and the states have been mandated to have an objective criterion for devolving funds to ULBs. The FFC has recommended both untied and performance grants to improve the service delivery in ULBs. While the untied grants could be used for both capex and opex, performance grants are aimed at ULBs adopting good financial management practices such as timely auditing of accounts, demonstrate improved service delivery, increase in own revenues, etc.

### Capital Market Financing of Urban Services: Emergence of a Bond Market

Municipal government borrowing in India is regulated by the Local Authorities Loans Act, 1914 which specifies (i) the purpose for which local (municipal) government may contract a loan, (ii) the limits on the amount of the loans, (iii) duration of loans, (iv) security or collateral, and (v) repayment procedures. Subject to the limits imposed by this Act, the state governments have the flexibility to determine the framework within which local governments may borrow.

Notwithstanding this provision, investments in municipal and urban infrastructure and services have historically been a public-sector activity in India; government funds are allocated to the different tiers of government and entities responsible for infrastructure provision through the Five Year and Annual Plan processes. These funds are allocated in the form of grants, equity or debts to

Table 4: **FRAMEWORKS FOR PUBLIC PRIVATE PARTNERSHIP (PPP)**

States	Frameworks
Andhra Pradesh	The Andhra Pradesh Infrastructure Development Enabling Act, 2001 is to facilitate private sector participation in infrastructure projects.
Bihar	The Bihar Infrastructure Development Enabling Act, 2006 is for the rapid development of physical and social infrastructure in the state and to attract private sector participation in the designing, financing, construction, operation and maintenance of infrastructure projects in the state, and provide a comprehensive procedure for reducing administrative delays and reducing generic project risks.
Gujarat	Gujarat Infrastructure Development Act, 1999 amended in 2006 is designed to facilitate greater private sector participation in financing, construction, maintenance and operation of infrastructure projects.
Karnataka	The Karnataka Infrastructure Policy, 2007 has been evolved with a view to augment and expedite infrastructure development through active private sector participation.
Odisha	Odisha's PPP Policy, 2007 is to create a conducive environment to utilize the efficiencies, innovativeness, and flexibility of the private sector to provide better infrastructure and services at an optimal cost.
Punjab	The Punjab Infrastructure Development and Regulation Act, 2002 provides for public-private partnership in the development, operation, and maintenance of infrastructure facilities, and development and maintenance of infrastructure facilities through financial resources other than those provided by the state budget.
West Bengal	The West Bengal Policy on Infrastructure Development through "Public-Private Partnership, 2003" was notified to address the need to mobilize private sector investment in infrastructure development and to evolve policy guidelines for this purpose.

Source: Ministry of Finance, <http://toolkit.pppindia>

the different government tiers and public sector corporations. With a total of 22 municipal bonds amounting to INR 12.24 billion, the municipal bond market in India, initiated in 1997, has seen a limited offtake. Complex institutional and fiscal frameworks coupled with a lack of enabling environment has been cited as one of the reasons for the less than optimal performance of municipal bond market in India.

Debt financing plays an important role in creating urban infrastructure. The government is working on creating necessary regulatory frameworks for borrowings by ULBs and creditworthiness of ULBs. The government has enhanced the

funding available under the Pooled Finance Development Fund to catalyze municipal bond market for ULBs. Pooled Municipal Debt Obligation (PMDO) credit facility was also enhanced to INR 500 billion. The recent initiatives like Smart Cities Mission and Atal Mission for Rejuvenation and Urban Transformation (AMRUT) would further incentivize urban local bodies to mobilize resources for urban services and infrastructure requirements. It is anticipated that in addition to multi/bi-lateral agencies, private sector will play an important role in financing infrastructure. A number of financial intermediaries for channelling financing have been created. As a

part of increasing access to affordable housing, the government provides for lump-sum subsidies to developers and state agencies alike to create housing stock. The government provides for a credit-risk-guarantee fund for the low income households to access formal credit for affordable housing. A number of direct and indirect tax rebates have been provided for individuals as well as institutions for promoting Housing for All. Channelling Official Development Assistance via grants and loans for urban infrastructure and affordable housing is being explored.

The government has constituted a dedicated sovereign infrastructure fund, National Investment and Infrastructure Fund (NIIF), to invest in infrastructure, including urban infrastructure. With an initial corpus of INR 200 billion, it is anticipated that NIIF will not only receive funds from domestic investors but also multilateral/bilateral institutors, sovereign wealth funds, pension funds, policy institutions and specialized infrastructure bodies. NIIF will directly invest in infrastructure projects as well as provide equity support into financial institutions and non-banking finance companies.

### Putting the Finances of Municipalities on a Growth Trajectory

The past two decades have been marked by various initiatives aimed at the structural, functional, financial and jurisdictional components of India's municipal system. A common underlying thrust of these initiatives is the effort to strengthen municipal finance and governance by modifying those which are deemed to be the problematic and anachronistic elements of the system and to align them with the contemporary changes. The structural component comprises the overall configuration of the municipal system in terms of the grades of municipalities, differentiated by the size and economic characteristics. The functional component consists of the formal roles of

municipalities and how they can be enabled to play larger roles. The financial component of the municipal system is made up of the revenue sources where attention is devoted to property tax and user charge assessment, coverage, and collection efficiency. The jurisdiction component involves the leverage that municipalities can possibly exercise in the performance of their tasks beyond their municipal limits. Significantly, these initiatives are accompanied by an array of new institutions and proposals for important modifications in the existing statutory and regulatory structures to bring about a transformational change in the finances and functioning of municipalities. These include setting up of State Finance Commissions (SFCs), District Planning Committees (DPCs), Metropolitan Planning Committees (MPCs), Property Tax Boards and Ombudsman on the one hand, and the two new legislations, i.e., a Community Participation law and a Disclosure law. These initiatives also seek changes in the existing procedures concerning rent control, conversion of land from agricultural to non-agricultural uses, registration of land and property, and reduction in stamp-duty rates in order to improve the functioning of the urban land market.

Towards improving municipal finance, wide varieties of land-based instruments for financing urban infrastructure are currently in use in many Indian cities, which can be classified into three groups: monetary exactions (e.g., betterment charges, impact fees), land exactions (e.g., Town Planning Schemes of Gujarat), and monetization of underutilized public land assets. Conversion charges, betterment charges, impact fees, and development charges are the most frequently used levies in India. Various innovative land based value capture tools could be used by the ULBs for generation of virtuous cycle of improved investments and revenues.

Recognizing the enormous financing require-

ments of urban infrastructure, the Government of India has simultaneously launched a few initiatives in recent years for funding and facilitating market engagement in infrastructure. One of them is the Public Private Partnership (PPP) facility, where a number of urban infrastructure projects have been implemented on a PPP basis. A PPP cell has been set up in the Ministry of Finance, which provides access to detailed model documents, guidelines, databases and toolkits for use by states, cities as they undertake PPP projects. Many states have followed up by enacting legislations for promoting PPP in financing and implementing urban infrastructure projects (Table 4).

## Conclusion

Building the finances and financing systems of municipalities is a continuous process. As India urbanizes, pressures on municipalities for providing infrastructure and services, and for assuming larger responsibilities and newer urban challenges such as climate change, disaster management and the like, will mount. The Government of India recognizes that there are limits to tapping property and land-based taxes and user charges for financing capital improvements, and expects to explore the feasibility of levying carbon taxes and congestion charges as also sharing of goods and services taxes (GST) as it comes into force.

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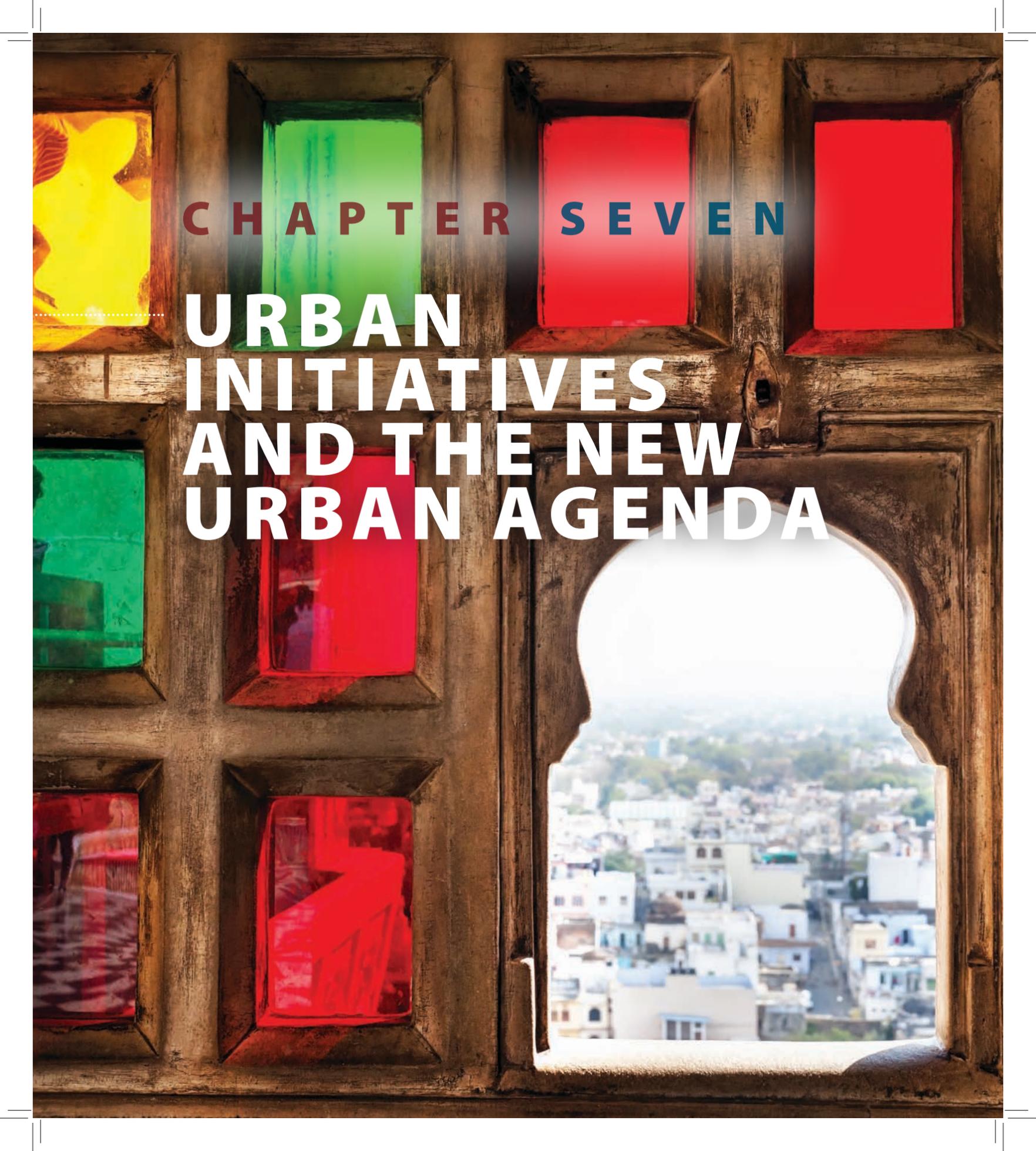
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CHAPTER SEVEN

URBAN  
INITIATIVES  
AND THE NEW  
URBAN AGENDA



**M**anaging urbanization and planning for future urban growth continue to be among the most formidable challenges that confront the developing world. As urbanization and its multiple facets—the proportion, scale, composition and distribution over space—have progressed, so have the responses to the opportunities that urbanization offers and the challenges it creates. India has been long concerned with urbanization and urban population growth. From a rather limited perspective of urbanization which equated urban problems with the provision of basic services, India's contemporary response to urbanization is wide ranging and is aimed at serving larger macroeconomic transformational goals together with meeting local priorities. This chapter outlines the key urban initiatives, and their objectives and spatial reach. The chapter simultaneously recognizes the international benchmarks as laid down in the recently adopted Sustainable Development Goals (SDGs), and the Paris Agreement on climate change, and affirms India's commitment to the adoption of the New Urban Agenda currently under discussion.

### Urban Policy Frameworks: Shifting Paradigms

In the past two decades in India there has been an explicit recognition of the role of urbanization in the country's socio-economic transformation; the fact that cities make significant contributions to economic growth, employment generation and poverty reduction has also been acknowledged. Successive five-year plans beginning with the Eighth Five-Year Plan (1992–97) bear testimony to their increasing importance. In recent years, efforts have been directed towards deepening and enhancing the role of urbanization in the development process, with a slew of wide-ranging initiatives (Box 1) which aim at:

- A broad-based strengthening of the municipal system;
- Eliminating the structural and systemic constraints to the functioning of cities and

smaller human settlements;

- Restructure governance which is said to be a key factor in improving the quality of urbanization; and
- Reaching out to the urban poor via innovative financing and tenurial arrangements.

### Strengthening the Municipal System

The 74th Constitutional Amendment in 1992, enacted in parallel with the economic reforms of 1991–92, is a landmark development that seeks to strengthen the municipal system by mandating the states to:

- Constitute municipal councils in all cities and towns except those that may be specifically exempted, e.g., the industrial townships;
- Hold elections to municipal councils once every five years;

#### Box 1

### URBANIZATION IN THE FIVE-YEAR PLANS

Urbanization helps to contribute to the growth process at large. This is manifest in the increasing contribution of the urban sector to the national income.

#### **Eighth Five-Year Plan, 1992–97**

Development of urban areas is economically efficient, socially equitable and environmentally sustainable.

#### **Ninth Five-Year Plan, 1997–2002**

There is, in fact, evidence to show that urbanization is likely to have been a key determinant of economic growth in the 1980s and 1990s, boosted by the economic liberalization. From this point of view, the moderate pace of urbanization has been a cause of disappointment.

#### **Tenth Five-Year plan, 2002–07**

Indian cities will be the locus and engines of economic growth over the next two decades, and the realization of an ambitious goal of 9–10 per cent growth in GDP depends fundamentally on making cities much more liveable, inclusive, bankable, and competitive.

#### **Eleventh Five-Year Plan, 2007–12**

Urban areas are the engines of economic growth. Urbanization will be central to India's strategy of achieving faster and more inclusive growth because agglomeration and densification of economic activities and urban agglomeration stimulates economic efficiencies.

#### **Twelfth Five-Year Plan, 2012–17**

- Reserve one-third seats for women together with additional reservation for other disadvantaged groups;
- Set up, once in five years, a state finance commission to determine the fiscal base of municipalities; and
- Constitute District Planning Committees (DPCs) and Metropolitan Planning Committees (MPCs) for the purpose of preparing draft development plans.

This Constitutional amendment represents the first attempt to decentralize powers and functions to municipalities to enable them to play a larger role in the Indian economy. The provisions of the amendment have been complemented and buttressed by several other key initiatives which include: (i) amendment to the Income Tax Act, enabling municipalities to issue tax-free bonds to raise resources; (ii) laying down norms for improving property tax and user charge system; (iii) transition from a cash-based, single entry to an accrual-based, double-entry accounting system to better assess the financial health of municipalities; and (iv) establishment of state-level Property Tax Boards to bring about uniformity in property valuation and assessment procedures.

### **Eliminating Structural and Systemic Constraints to the Functioning of the City Economies**

In 2002, the Government of India underlined the need to overcome impediments to urban growth through a set of “reforms,” under the Urban Reforms Incentive Fund (URIF). These were subsequently subsumed and broadened under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2005. The rationale underlying these two missions was that for cities to make meaningful contributions to India’s economic growth and poverty reduction goals, it was essential to incentivize institutional reforms, leading to sustainable socio-economic growth,

better service delivery, and improved governance. The JNNURM also aimed at putting in place and enabling appropriate frameworks to enhance the creditworthiness of municipalities and to integrate the urban poor with the urban service delivery system. The Mission laid down the following as its expected outcomes:

- Financially sustainable cities for improved governance and service delivery;
- Universal access to basic services in urban areas;
- Transparency and accountability in governance; and,
- Adoption of transparent budgeting, accounting and financial management system.

Sustaining momentum of the Mission by continual engagement with the cities and at the same time, ensuring wider ownership has been a major challenge while operationalizing the Mission. The capacity of city-level agencies to absorb the investment support and delivery on reform has been a critical bottleneck.

### **Restructuring Governance for Improving Quality of Urbanization**

Several reform measures were introduced as a part of the JNNURM to restructure the urban governance framework which comprised (i) an e-governance system; (ii) enactment of a Community Participation Law; and (iii) enactment of a Public Disclosure Law.

### **Reaching Out to the Urban Poor via Innovative Financing and Tenorial Arrangements**

Comprehensive efforts have been made as a part of JNNURM, Rajiv Awas Yojana (RAY) and National Urban Livelihoods Mission (NULM) to reach out to the urban poor and improve the condition in the slum settlements. The JNNURM focused on (i) tenorial security; (ii) earmarking of the municipal budget for urban poor settlements; and (iii) reserving lands for economically weaker and low income households. RAY advocated slum-free cities mandating

## Box 2

## URBAN INITIATIVES, 1992-2014

Urban Initiatives	Rationale and Goals
The 74th Constitutional Amendment Act, 1992	Empower municipalities functionally, financially and politically
Urban Reform Incentive Fund (URIF), 2002	Eliminate systemic weaknesses so as to strengthen municipal finance and functioning
Jawaharlal Nehru National Urban Renewal Mission (JNNURM), 2005	Eliminate structural and systemic weaknesses for creating investment climate and improving local governance and finance
Rajiv Awas Yojana (RAY), 2012	Work towards slum-free cities via property titling and tenure security
National Urban Livelihoods Mission (NULM), 2013	Reduce poverty and vulnerability of urban-poor households by enabling them to access employment opportunities

the states to give “property titles” to slum dwellers. It promoted in-situ rehabilitation of slums and provided for measures to improve the flow of institutional credit to the urban poor. The NULM aimed at providing livelihood opportunities to all sections of the society including the urban poor by addressing three inter-related dimensions of urban poverty—residential, social and occupational vulnerabilities.

### Urban Initiatives 1992–2014: An Overview

Urban Missions (Box 2) have led to a significant step up in investment to the urban sector. However, urban sector continues to suffer from “low level of service delivery, structural problems, grossly inadequate availability of resources and lack of capacity at different levels of government” (Twelfth Five-Year Plan, 2012–17).

### Accelerated Impetus to the Urban Sector

Over the past two years, the urban sector in In-

dia has received a major boost via the launch of five new missions (Box 3). These missions aim at enhancing the quality of life and providing a clean environment, creating infrastructure that has a direct link to the income and employment growth, and mainstreaming and promoting India’s heritage. Pradhan Mantri Awas Yojna - Housing For All addresses in specific the housing requirements of the poor and slum households, and creating awareness about sanitation.

### Reforms: An Integral Part of Urban Strategy

Integral to the implementation of Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Housing for All in urban areas under Pradhan Mantri Awas Yojana (PMAY) is a set of accompanying reforms which points to what is necessary to take these missions and initiatives forward. Improving governance, making municipalities fiscally robust, bringing in optimality in land use and land utilization, and building capac-

Box 3

URBAN INITIATIVES IN THE POST-2014 PERIOD		
Impetus to the role of cities via:	Goals	Strategies
Development of 100 smart cities (Smart Cities Mission)	Enhance the quality of urban life and provide a clean and suitable environment	Employ smart solutions for the efficient use of available resources and the available infrastructure
Rejuvenation and transformation of 500 cities (>100,000 population) (AMRUT)	Create infrastructure that has a direct link to the provision of better services to the people	Use reform to improve service delivery, mobilize resources and make municipal functioning transparent and accountable
Housing for All (PMAY)	Address the housing requirements of the urban poor, including slum dwellers	Use verticals comprising Slum rehabilitation with participation of private developers using land as a resource; Promotion of affordable housing by credit-linked subsidy; Affordable housing in partnership with public and private sector. Subsidy for beneficiary-led housing construction or enhancement.
Clean India Mission (Swachh Bharat Mission)	Scientific management of solid waste	Creating awareness about sanitation, behaviour change, and capacity augmentation
Heritage City Development and Augmentation Yojana (HRIDAY)	Support core infrastructure aimed at revitalization of areas close to heritage sites	Focus on water supply, sanitation, landscaping and tourist conveniences.
RURBAN Mission	Accelerate rural development with urban services.	Focus on basic services.

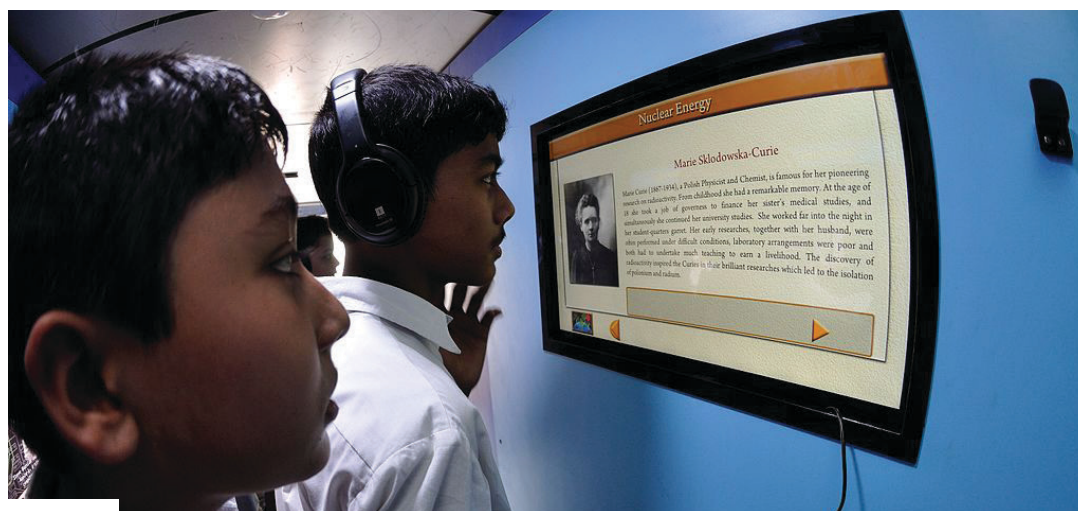
ities are the key directions for making urbanization efficient and inclusive (Box 4).

These initiatives and missions constitute a part of wider development strategies which include facilitating investment including the foreign direct investment (FDI) under the Make-in-India initiative, transforming India into a digitally empowered society and knowledge economy

(Digital India), creating a framework for skill development (National Skill Development Mission), and providing basic facilities to all stakeholders in the rural areas (RURBAN Mission).

**Future of Urbanization:  
The Next 15 Years**

India is at a crucial stage in its urban transition. In



Box 4

## REFORM FOCUS IN THE EXISTING INITIATIVES

Improving Governance	Enabling Municipalities Become Fiscally Empowered	Optimality in Land Use and Land Utilization	Inclusive Urban Development	Capacity Building
E-governance	Devolution of funds and functions	New norms for urban planning and city level plans	Affordable housing and urban services for all	Municipal cadre
Single-window clearance	Financial intermediaries	Review of building bye laws	Earmark lands for affordable housing	
Double-entry accounting	Municipal tax and user-fee reforms	FAR/FSI revisions	Doing away with approvals below certain plot sizes in respect of EWS and LIG	
Energy and water audit	Credit rating	Mixed land-use policy		

2011, it crossed the threshold of 30 per cent level of urbanization, which, observers contend, is the stage from where urban population growth begins to accelerate. According to the UN World Urbanization Prospects (2014), India's urban population will reach 583 million by 2030, adding approximately 163 million to its current urban population base of 420 million persons (Table 1). By any

reckoning, the expected scale of urban population growth is extraordinary. Moreover, if the United Nations figures are any indication, much of the population growth over the 2015–30 period will occur in the urban areas and with the expected interplay of new technologies, knowledge and information, cities will underpin the Indian economy in a far more decisive manner than now.

## AN AGENDA FOR TRANSFORMING INDIA

### Economic Growth and Productivity

- Fully planned and sustainable human settlements
- High travel speed, above 30 kmph peak time
- Well-distributed business district centres
- Intensive use of technology/innovations
- E-governance
- Smart grid
- Normative norms/ self-declaration/ approvals of buildings/ town layouts

### Improving Quality of Life

- 100 per cent sanitation
- Well-developed public facilities
- Easy access to public utilities and services

### Inclusive Development

- Composite living representing socio-economic population dynamics—inclusive development
- Adequate and affordable housing for urban poor and senior citizens

### Sustainability and Issues of Climate Change

- 60–90 per cent population to travel by public transport
- Dominant mode of travel does not emit pollution in immediate environment
- Local travel, E-rickshaw, walking, etc. for last mile connectivity
- Street light LED with dimmer, low consumption, almanac micro-processor controlled
- Rainwater harvesting in all roads, streets and buildings
- Barrier-free pedestrian pathways and bicycle-ways
- Natural drainage pattern, climate change, cloud burst
- Waste-water treatment, on-site and re-use in immediate surroundings for gardening, sprinklers for dust control, etc.
- Reclaiming water bodies
- Bringing water use to half from standard use
- Cut down electricity consumption to 50 per cent level than normal use and 50 per cent generation from non-conventional sources
- Waste (collection 100 per cent) to electricity
- RCC roads, supported by pipes, integrated with future expansion plans, no digging
- Disaster preparedness

### Improving Quality of Life

- High-security streets and buildings by CCTV
- Crime-free society and access to social justice and gender equity

### Improving Quality of Life

- Full of greenery/ plantation, bamboo and other suitable trees
- Green and barrier-free buildings

Table 1: **THE FUTURE OF URBAN  
GROWTH, 2015–30**

Year	Level of Urbanization (per cent)	Urban Population	
		(million)	Increase in Urban Population (million)
2015	32.7	419.9	—
2020	34.8	470.7	50.8
2025	37.0	525.4	54.7
2030	39.5	583.0	57.6

Source: *World Urbanization Prospects (2014)*,  
Department of Economic and Social Affairs, UN, 2014

India recognizes the place of cities in the country's transformation and simultaneously notes its commitment to implementing goal 11 of the recently adopted Sustainable Development Goals (SDG, 2030)—“**Make cities and human settlements inclusive, safe, resilient and sustainable**”—and to actively engage in the finalization and adoption of New Urban Agenda. How we perceive to transform urban India from its current status on several indicators in the next 20 years is given in Box 5.

### Levers of Urban Change

In order to transform urban India, it is planned to reinforce the urbanization process with an agenda that will comprise several levers, which would make cities work towards greater efficiency, inclusion, sustainability and safety. The key levers are:

#### (i) Putting in place integrated urban policies consistent with the principle of co-operative federalism

Urban policies will be driven by considerations of efficiency, inclusion, sustainability and safety, and work towards universality of the urban agenda across different tiers of the government.

#### (ii) Harmonize agglomeration economies

Agglomeration economies hold the key to economic growth. While  $R^2$  between urbanization and per capita GSDP is high, it needs to be reinforced with focus on (a) elimination of barriers to the flow of factors of production, namely, capital, land and labour; (b) promotion of compact and cluster urban development within a regional, rural-urban framework; (c) boosting economic density and providing support to initiatives that favour synergies and innovations linked to the promotion of local economic development; and (d) creating skilled human resources for better employment opportunities.

#### (iii) Harnessing the rural-urban continuum

As India's labour force witnesses a rural to urban shift, it is of critical importance that the rural and urban areas develop in a symbiotic manner by adopting a “regional planning approach.” The new initiative of RURBAN Mission is a step in this direction. The focus would be to have appropriate synergy and convergence of various schemes of different ministries for sustainable and inclusive rural-urban continuum.

#### (iv) Promoting inclusive urban development

A mix of strategies has been planned for promotion of inclusive urban development. It would consist of (a) universalization of basic services, including education and health; (b) governability of cities focussed on social cohesion, especially among classes that stand excluded from the development mainstream and civic engagement; (c) access to housing as a tool for alleviating poverty and as a growth escalator; and (d) putting in place a strategy for reducing “working poverty.”

#### (v) Recognize and actively promote the centrality of sustainability in urban policy

Sustainable development in the urban sphere



has become a necessity for the survival of societies and involves a country-wide approach to urban development—addressing issues of emission levels, atmospheric pollution, pollution of water and soil, and degradation of urban spaces. The new urban agenda will focus on cutting down of waste, savings in energy consumption particularly in buildings, and protection of green spaces. These are not merely technical problems and are proposed to be addressed with education, citizens' participation,

and campaigns for environmental protection.

#### **(vi) Empowering municipalities and other local-level institutions**

Strong municipal institutions are the foundation of a forward-looking urban strategy. Municipalities will be prepared to create local institutions to manage and maintain infrastructure services, implement the right process to increase productivity and deal with exclusion, and build capabilities in public services.

**(vii) Strengthening housing finance system**

The focus would be on strengthening the housing finance system in the country for accessible housing finance for the urban poor by addressing demand-side and supply-side constraints. The strategy would include: (a) providing affordable housing for all the people by a target date; (b) ensuring better living conditions for the slum population; (c) promoting cost-effective innovative building material and technologies, and use of local resources that are environmental-friendly; (d) increasing the range of types and opportunities of housing to maintain city diversity and inclusiveness; (e) bringing vacant houses to use through fiscal incentives and regulatory changes; (f) preventing the phenomenon of homelessness via national policies linked to regional and local policies of housing rehabilitation, involving NGOs and local authorities including law and order authorities ; and (g) linking housing sector with strong economic growth and job creation.

**(viii) Provision and financing of urban infrastructure and basic services**

India recognises that for cities to be safe, productive and sustainable a concerted effort is required to provide for and finance urban infrastructure and basic services. The new urban agenda would focus on providing infrastructure facilities, physical and social, for all. That includes ensuring sustainable access to safe drinking water, basic sanitation, drainage, solid waste management, clean

domestic energy and sustainable mobility.

**(ix) Access to social justice and gender equity**

There is also a need to ensure social justice and gender equity in the development process by providing spaces and services conducive for the young, especially women and children.

**(x) Robust urban information system**

The urban agenda would also focus on developing an authentic, reliable and robust database and urban information system at city, state and national levels. The urban information system would cover, among others, the areas of urban poverty, slums, housing, basic services and urbanization related indicators.

India stands at a juncture in history where ambiguities about what urbanization can do to transform the country's economy have been overcome, and an environment exists where a bolder push to use urbanization for the country's socio-economic development is on the horizon. Globally too, the UN Habitat is striving to reach a consensus on a vision agenda that would commit countries to sustainable urbanization, "which is now more critical than ever as populations, social interactions, economic activities, and environmental impacts are increasingly concentrated in cities" (Zero Draft, 2016). India's new urban agenda has been articulated and envisioned in the context of the priorities that now underpin the Indian economy.

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