



INDIA INFRASTRUCTURE REPORT 2006



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PREFACE

The history of a nation is created by milestone events, which dramatically change the way society is organized, governed, and bequeathed to the next generation. In the times to come the 74th Constitutional Amendment (74th CAA 1992) of the Indian Constitution will probably be documented as one such event. It recognized municipalities as constitutional bodies forming the third tier of the federal polity of India. This decentralization initiative, while offering immense opportunities also poses formidable challenges. First mooted by the Rural–Urban Relationship Committee constituted by the Government of India in 1963, and deliberated over for nearly thirty years, this recommendation finally culminated in the constitutional amendment in 1992. While building blocks such as municipal accounting reforms and e-Governance have gradually emerged, not much else has changed since then. The Fifth Pay Commission award, in fact, postponed reforms in the governance of urban local bodies. The Eleventh and the Twelfth Finance Commissions, bound by the Constitution, initiated transfer of funds from the central government to local bodies—a standard practice followed in all federal forms of governments—to ensure that ULBs are able to finance the provision of minimum physical infrastructure required for basic civic life.

The constitutional amendment has altered the governance structure of the country though the actual devolution of power is at various stages of implementation. The central government has taken a path-breaking step in formulating the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), the fruition of which could witness the development of urban infrastructure at an accelerated pace. This in itself is not sufficient to obliterate the dualism within the urbanization experience of India. Ambitions of the rural population, the youth, the educated, and the skilled workers cannot even begin to be catalysed unless all towns with 50,000-plus population get at least clean drinking water, wastewater networks, and proper solid waste management facilities.

We need to expand physical infrastructure—roads, ports, airports, railways, drinking water and wastewater networks, and above all electrical power—to satisfy the aspirations and rising expectations of our citizens. Much of the existing infrastructure is old, worn and, overworked. It needs to be rebuilt, refurbished, and maintained. The implementation of the JNNURM and the National Urban Transport Policy can usher a silent revolution into the life of even the most marginalized citizen of urban India. What telecommunication has achieved in the last fifteen years could not have been envisioned way back in July 1991. Though the changes unfolding in the physical infrastructure space may not be as dramatic, their impact will be even more far-reaching.

I would like to congratulate all the contributors who, under the aegis of the 3iNetwork, have produced this comprehensive report on urbanization trends, governance of local bodies, and urban planning. The present standards of urban services make bleak reading. However, this report is not about where we are but, more importantly, about how we can do better.

I trust that readers will find this report as interesting and informative as the previous ones in this series. I earnestly hope that this report will enrich the dialogue and debate that help us as a nation make choices and decisions that will improve the living conditions of our citizens and provide greater avenues for employment to the young, educated, skilled, and unskilled workers of our country.

RAJIV B. LALL



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Writings on urban issues are inevitably influenced by the personal experiences of the authors. This report has benefited from first hand impressions and experiences of many citizens of urban India apart from the authors who finally contributed to it. I would like to acknowledge the invaluable inputs from those who helped me in conceptualizing, planning, writing, and preparing this report without holding them responsible for any errors or omissions.

I would like to thank Nasser Munjee who germinated the idea of looking at infrastructure from an urban perspective and participated in some of the deliberations. My former colleagues Piyush Tiwari, Shubhagato Dasgupta, and Partha Mukhopadhyay spent hours preparing the framework for this report. Compared to the earlier issues of the India Infrastructure Report, this report took much longer to plan out but telecommunication made seamless convergence amongst us, possible. Sebastian Morris, Ajay Pandey, Prem Kalra, and Partha Mukhopadhyay helped in drawing up the detailed scheme of the report. I would like to thank Sebastian Morris, especially, for making valuable suggestions on academics, practitioners, and policymakers who could contribute in writing the theme chapters. I would like to thank Urjit Patel, who entrusted the responsibility of putting the report together to me.

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On behalf of 3iNetwork, I would like to thank HUDCO who sponsored the workshop. P.S. Rana and R. Goel of HUDCO continuously extended their support to the report. We are thankful to Asian Development Bank and USAID for extending financial support. Alex K. Jorgensen and Debashish Bhattacharjee of Asian Development Bank took keen interest in the coverage of the report and we are thankful to them for their active support. Rebecca Black of USAID needs special mention here as she extended full support to us and also helped in getting information on the projects being carried out under the aegis of USAID in many urban areas.

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ANUPAM RASTOGI

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ABBREVIATIONS AND ACRONYMS

ADC	Access Deficit Charge
AIILSG	All India Institute of Local Self-Government
APDRP	Accelerated Power Development and Reforms Programme
APIIC	Andhra Pradesh Industrial Infrastructure Development Corporation
ARPU	Average Revenue per User
BMC	Brihanmumbai Municipal Corporation
BMP	Bangalore Mahanagar Palike
BMTPC	Building Material Technology Promotion Council
BMW	Biomedical Waste
BOOT	Build, Own, Operate and Transfer
BWSSB	Bangalore Water Supply and Sewerage Board
CBD	Central Business District
CBO	Community Based Organization
CDP	City Development Plan
CERC	Central Electricity Regulatory Commission
CFL	Compact Fluorescent Lamps
CHC	Community Health Centre
CIDCO	City and Industrial Development Corporation
COE	Certificates of Entitlement
CorDECT	Corrected Digital Enhanced Cordless Telecommunications
CPHEEO	Central Public Health Environment and Engineering Organisation
CRIS	Centre for Railway Information Systems
CRZ	Coastal Regulation Zone
CSS	Centrally Sponsored Schemes
CWC	Central Warehousing Corporation
CWTF	Common Waste Treatment Facilities
DBO	Design, Build and Operate
DMRTS	Delhi Metro Rail Transport System
DOT	Department of Telecom
DPC	District Planning Committee
DPEP	District Primary Education Programme
DUSR	Digital Urban Spatial Repository
EASDP	Environmental Adjusted State Domestic Product
ECGIP	Expert Group on Commercialization of Infrastructure Projects

EMP	Energy Master Plan
ERP	Electronic Road Pricing
ESCO	Energy Services Company
FAR	Floor Area Ratio
FOIR	Forum of Indian Regulators
FSI	Floor Space Index
GAISP	Green Accounting for Indian States Project
GIST	Green Indian States Trust
GSDP	Gross State Domestic Product
GTL	Gas to Liquid
HCW	Healthcare Waste
HSDPA	High Speed Data Packet Access
HWM	Healthcare Waste Management
ICMR	Indian Council of Medical Research
IDBI	Industrial Development Bank of India
IDFC	Infrastructure Development Finance Company
IDSMT	Integrated Development of Small and Medium Towns
IIFC	India Infrastructure Finance Company
IIG	Inter-Institutional Group
IL&FS	Infrastructure Leasing and Financial Services Limited
IMG	Inter-Ministerial Group
IPDF	India Project Development Fund
IRP	Integrated Resource Planning
IT-ITES	Information Technology—Information Technology Enabled Services
JBIC	Japan Bank of International Co-operation
JICA	Japan International Cooperation Agency
JV	Joint Venture
LHV	Lady Health Visitor
LIC	Life Insurance Corporation of India
LPA	Local Planning Area
MBR	Methylene blue reduction
MBTA	Massachusetts Bay Transit Authority
MMD	Model Municipal Law
MMRDA	Mumbai Metropolitan Regional Development Authority
MoF	Ministry of Finance
MoP	Ministry of Power
MOUD	Ministry of Urban Development
MPC	Municipal Planning Committee
MSDI	Metropolitan Spatial Data Infrastructure
MSW	Municipal Solid Waste
MWRRA	Maharashtra Water Resource Regulatory Authority
NCERT	National Council of Educational Research and Training
NHAI	National Highway Authority of India
NHDP	National Highway Development Programme
NLD	National long-distance
NMMC	Navi Mumbai Municipal Corporation
NTP	National Telecom Policy
NURM	National Urban Renewal Mission
NUTP	National Urban Transport Policy
O&M	Operations and Maintenance
PBS	performance-based service
PCB	Pollution Control Board

PHC	Primary Health Centre
PPP	Public-Private Partnership
PRI	Panchayati Raj Institutions
PSP	Private Sector Participation
QoS	Quality of Service
RATP	Régie Autonome des Transports Parisiens—Paris Transport Company
RDF	Refuse Derived Fuel
RFID	Radio Frequency Identification
RITES	Rail India Technical and Economic Service
RLDA	Rail Land Development Authority
RUIDP	Rajasthan Urban Infrastructure Development Project
SBI	State Bank of India
SDU	Social Development Unit
SEB	State Electricity Board
SEZ	Special Economic Zone
SFC	State Finance Commission
SHG	Self Help Group
SMS	Short Message System
SPCB	State Pollution Control Board
SPM	Suspended Particulate Matter
SPV	Special Purpose Vehicle
SSA	Sarva Siksha Abhiyan
SSP	Slum Sanitation Programme
STA	State Transport Authority
STC	State Transport Corporation
STIP	Syndicat des Transports d'Ile-de-France
T&D	Transmission and Distribution
TERI	The Energy and Resources Institute
TIFAC	Technology Information Forecasting and Assessment Council
TPD	Tonnes per day
TPS	Town Planning Scheme
UDPFI	Urban Development Plan Formulation and Implementation
UEM	Urban Energy Management
UFW	Unaccounted for water
UGC	University Grants Commission
ULB	Urban Local Bodies
UMTA	Unified Metropolitan Transport Authority
USO	Universal Service Obligation
UWSS	Urban Water Supply and Sewerage
VAS	Value Added Services
VIWSCo	Visakhapatnam Industrial Water Supply Company Limited
VoIP	voice over internet protocol
WC	water-closet
Wi Max	Worldwide Interoperability of Microwave Access
WMATA	Washington Metropolitan Area Transit Authority
WMC	Waste Minimization Circles
WTE	Waste to Energy