

High Level Committee on Financing Infrastructure

**REPORT OF THE
SUB-COMMITTEE
ON FINANCING
URBAN INFRASTRUCTURE
IN THE 12TH PLAN**

Ministry of Urban Development

Government of India

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LIST OF ABBREVIATIONS

ADB	Asian Development bank
BOOT	Built Own Operate Transfer
BOT	Built operate transfer
BRTS	Bus Rapid transit system
CAG	Comptroller and Auditor General of India
CAPEX	Capital Expenditure
CFC	Central Finance Commission
CPCB	Central Pollution Control Board
DEA	Double Entry accounting
FSI	Floor Space index
GDP	Gross Domestic Product
GIS	Geographical Information System
HPEC	High Powered Expert Committee
HUDCO	Housing and Urban Development Corporation Limited
IIFCL	India Infrastructure Finance Company Limited
IIPDF	India Infrastructure Project Development Fund
IL&FS	Infrastructure Leasing and Financial Services Ltd.
JnNURM/ JNNURM	Jawaharlal Nehru National urban Renewal Mission
LBFL	Local Bodies Finance List
LIC	Life Insurance Corporation
MRTS	Mass Rapid Transit System
MT	Million Tonnes
NDC Committee	National Development Council
NSS	National Sample Survey
O&M	Operation and Maintenance
PCIC	Per Capita Investment Cost
PHE	Public Health Engineering
PMDO	Public Municipal Debt Obligations
PPP	Public Private Partnership
R&D	Research and Development
RBI	Reserve Bank of India
RCUES	Regional Centre for Urban and Environmental Studies
SFC	State Finance Commission
SWM	Solid Waste management
UD	Urban Development
ULB	Urban Local Bodies

1. Sub-Committee on Financing Infrastructure

The High Level Committee on Financing Infrastructure has constituted a sub-committee on Financing Urban Infrastructure with the following terms of reference:

- Year-wise investments for the twelfth plan;
- Sources of financing (viz. debt, equity, grants etc.,) anticipated in the 11th Plan and estimated for the twelfth plan;
- Innovative ways of financing in the twelfth plan;
- Practical measures for enhancing capacity/augmenting resources of Municipalities, and;
- Brief note on issues relating to financing urban infrastructure and related issues, which have a bearing on investment in the sector during the twelfth plan.

A copy of the order of constitution and TOR of the Sub-Committee is at **Annexure I**.

2. Introduction

India is undergoing a transition from rural to semi-urban society. A little over 31% of population is now living in urban areas. Details presented in Table 1 and Figure 1 below illustrate the growing trend of urbanization. It is evident from the urbanization pattern that the rate of development is clearly related to the rate of urbanization. States with higher gross domestic product have higher levels of population living in urban areas. Gujarat, Maharashtra, Tamil Nadu, Karnataka are significantly more urbanized than Uttar Pradesh, Bihar and Orissa.

Table 1: Shift of Population from Rural to Urban

Year	Total Population (in million)	Decadal Growth Rate (%)*	Urban Population (in million)	Rural Population (in million)	% of Urban Population to Total Population	% of Rural Population to Total Population
1951	361.1	13.31	62.4	298.7	17.3	82.7
1961	439.2	21.64	78.9	360.3	18.0	82.0
1971	548.2	24.80	109.1	439.1	19.9	80.1
1981	683.3	24.66	159.4	523.9	23.3	76.7
1991	846.3	23.86	217.6	628.7	25.7	74.3
2001	1028.0	21.54	287.6	740.4	28.0	72.0
2011	1210.1	17.6%	377.1	833.0	31.2%	68.8%

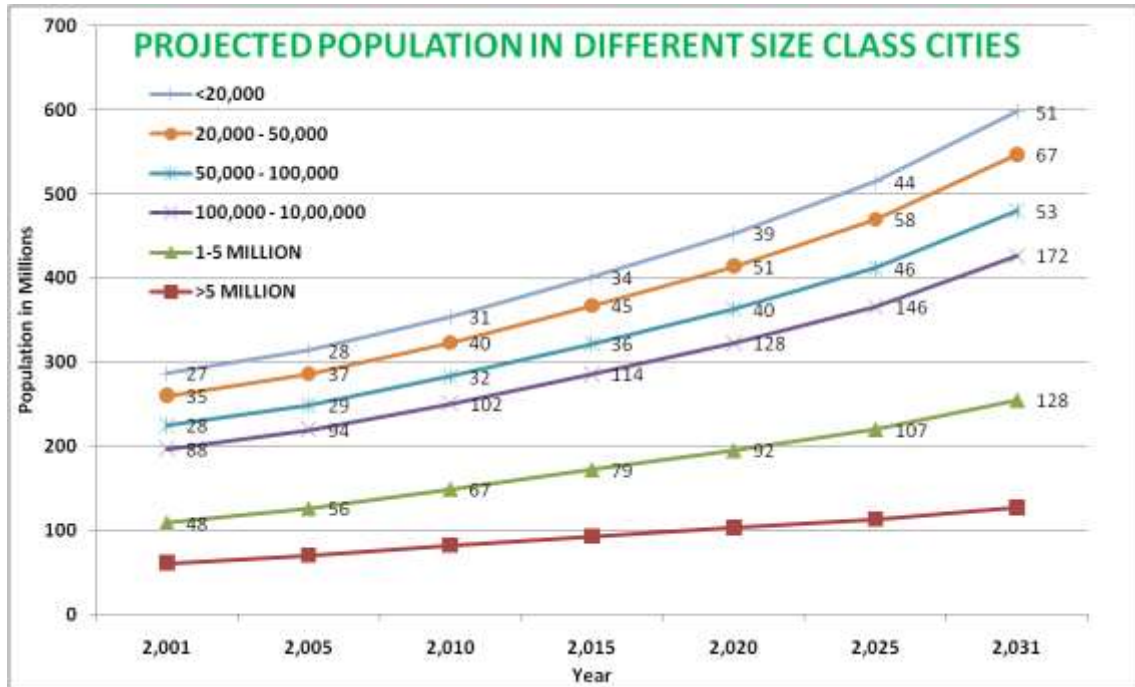
Source: Census of India.

Between Census 2001 and Census 2011, the number of towns has increased from 5161 to 7935. The number of urban local bodies, which was 3,799 in 2001, is likely to be 4,041 in 2011. The number of cities with population higher than 1 million, which was 35 in the year 2001, is now expected to be 53.

According to the Report of the Technical Group on Population Projections, National Commission on Population 2006, the population of India is expected to increase from 1029 million to 1400 million during the period 2001-2026 - an increase of 36¹ percent in twenty-five years at the rate of 1.2 percent annually. As a consequence, the density of population will increase from 313 to 426 persons per square kilometer. The projections indicate that the population increase will be 1.9 times in the cities of lesser population and would increase more than 2.7 and 2.1 times in cities with population of 1-5 million and 5 million and above. Hence, more pressure due to urbanization and infrastructure would be felt in these categories of cities.

Figure 1: Projected population in different size class of Cities

¹ Population projections for India and States, 2001-2026, Report of the Technical Group on Population Projections, National Commission on Population, 2006.



While urbanisation is widely recognized as the carrier of economic growth, public investment in the urban sector has remained neglected in India. In fact, until the advent of the JnNURM in December 2005, there had been no significant intervention from the Central Government in the urban sector. Even after the JnNURM was introduced, the situation only marginally improved. A comparison of expenditure patterns clearly highlights government focus towards the rural sector. In the year 2009-10, Government of India invested about Rs. 75,000 crore for the rural sector, while the central government's disbursement under JnNURM was about Rs. 8000 crore for the same year. This makes it evident that the urban sector continues to suffer neglect over the years, with policy and resources directed mainly towards the rural sector. This neglect has now created a huge infrastructure challenge of having to cater both for the new population and the backlog of the past. Given the current level of ULB finances and the traditional low viability of projects relating to the water supply, sewerage sector and quality public transport, the private sector has stayed away from investment in the urban infrastructure sector.

3. Status of Urban Infrastructure

3.1 Water supply

As per Census 2011, Drinking Water within the premises is available to 71.2% of the urban population vis-à-vis 65.4% as per Census 2001. Similarly, 20.7% of the population has access to Drinking Water near the premises vide Census 2011 vis-à-vis 25.2% vide Census 2001. None of the cities have 24x7 water supply. Non-revenue water, which includes leakages of various kinds, is fairly high, being in the range of 40 to 50 percent.

3.2 Sanitation

The challenge of sanitation in Indian cities is acute. In fact the problem of lack of systematic sanitation facility is much worse in urban areas than in rural areas. A Sanitation rating of 423 class-I cities done in 2009-10 by Ministry of Urban Development, GoI revealed that only 39 cities qualified on 3 basic water quality parameters of turbidity, residual chlorine and Thermo Tolerant Coliform bacteria. According to Census 2011, 32.7% of the urban population has access to a piped sewer system. 12.6% of the urban population still defecates in the open as per Census 2011. Installed sewage treatment capacity is only 30% as per Central Pollution Control Board Report 2009. The capacity utilisation is around 72.2%, which means that only about 20% of sewage generated is treated before disposal in most of the cities and towns.

3.3 Solid Waste Management

The management and disposal of solid waste generated in Indian cities is a major problem. According to the CPCB Report 2005, about 1,15,000 MT of municipal waste is generated daily. Collection performance varies from city to city. Staff deployed to manage SWM is also fairly low as per requirements. In most of the cities, waste is transported and dumped to land fill sites. Scientific treatment and disposal of solid waste is practically non-existent.

3.4 Urban Transport

Public transport accounts for only 22 percent of urban transport in India, compared with 49 percent in lower middle-income countries (e.g. the Philippines, Venezuela, Egypt) and 40 percent in upper middle-income countries (e.g. South Africa, South Korea, Brazil). The share of public transport is declining steadily as neither the quantity is sufficient nor the quality is satisfactory. The overall image of public transport is still quite low. As such generally only the people with no other alternative, move by public transport. Out of 423 class I cities, only 65 have a formal city bus service as of 2012 and that too owing to the intervention of the Central Government intervention through the programme of funding of buses for city transport. Earlier, in 2006, this number was only 20 cities.

4. Shift in GDP towards Urban Centres

With GDP projected to grow by 5 times over the next 20 years, Cities would be the focus of most economic activity contributing to more than 70% of the GDP as well as the net employment. With Urban population expected to increase to 600 million by 2031, the number of metropolitan cities with more than a million populations is also projected to increase from 35 in 2001 to 53 in 2011 and 87, by 2031. The expanding size of Cities will happen in many cases through a process of peripheral expansion, with smaller municipalities and large villages surrounding the core city becoming part of the large metropolitan area. As more and more cities provide economies of agglomeration, urban centres will become the principal engines for stimulating national growth.

With nearly 70 per cent of the GDP contribution from the urban areas, and the recent population projections indicating well over 40 per cent urbanization in the coming decade, there is a clear need to focus attention towards the urban sector and to provide adequate financing for urban infrastructure. This would not only be important to sustain India's economic growth story, but also be critical for inclusive growth, given the strong positive effects that a prosperous urban sector has on the

rural hinterland. However, given the multiplicity of institutions involved and the challenges of capacity availability and governance, it may be difficult to expect immediate results, unless conscious efforts are made to bring about all round improvement in urban infrastructure and services, besides in local governance.

5. Status and Issues in Urban Financing

The investment coming into the urban sector has traditionally bypassed the municipalities. A study conducted by the 13th Finance Commission reveals the poor state of finances of the municipal bodies of the country. On a per capita basis, the total revenue of municipal bodies was a meager Rs. 733 in 2002-03 and it went up to Rs 1430 in 2007-08. The own revenue of Municipalities (0.50 per cent of GDP) are a little over half of their total revenue (0.94 per cent of GDP).

Table 2: Current status of municipal finances of all states: 2002-03 to 2007-08

	2002-03	2007-08	Compounded Annual Growth Rate
	Per capita (Rs.)		Per cent
Total Revenue	733	1430	16.3
Own Tax	311	492	11.6
Own Non -Tax	156	265	13.2
Own Revenue	466	757	12.1
Total Other Revenue	268	673	22.4
Total Expenditure	758	1513	16.8
Revenue Expenditure	550	915	12.6
Capital Expenditure	208	598	25.6
(Per cent of GDP at market rates)			
Total Revenue	0.85	0.94	
Own Revenue	0.54	0.50	
Total Expenditure	0.88	1.00	

Source: Thirteenth Central Finance Commission.

however, also confirms that given a chance i.e. placement of adequate revenue instruments and financial reforms, the municipalities can raise own revenues in a range of 6 to 7 per cent of city income, suggesting the potential of a quantum jump for own sources of municipal finance. The study also confirms that though cities have immense potential to mobilise own sources, the magnitude of the potential will not remain the same and will vary according to the size of city and regional productivity. Therefore, the role of correction though fiscal transfers will remain the critical and deciding factor for financial sustainability at municipal level. The High Powered Expert Committee (HPEC) on Urban Infrastructure (January, 201) has also recognized this situation and has mooted a constitutionally mandated revenue sharing arrangement whereby the states would transfer to the local bodies a certain percentage of own tax revenues in a fixed and predictable manner.

The fiscal gap of serious magnitude that the municipalities are facing can be attributed to a host of internal and external factors. Vertical imbalance in resources and responsibilities, fiscal dependency, borrowing constraints and inefficiency in management of municipal services are affecting the financial viability of the local bodies. While the municipal governments do not have adequate autonomy to fix the rates and base of fiscal instruments available with them, they also do not have adequate institutional capacity to raise resources within the given framework. Instruments such as Geographical Information System (GIS) and asset accounting etc. are not adequately applied by Local Bodies. At the same time, many areas of revenue generation such as land and town planning etc. are still not assigned to municipal governments in most states. Secondly, municipal bodies do not receive adequate amount of fiscal transfers from higher levels of governments, who have better command over the resources and relatively low level of expenditure leading to a mismatch between finances and functions. These factors lead to a horizontal and vertical fiscal imbalance for the local bodies and continue to cause regular addition to the strategic fiscal gap.

Local bodies need to be provided their due place on the public finance map of the country, which is essential to facilitate inclusive economic growth and equitable development. We may recall that the size of the municipal fiscal sector in India is very small compared to that in many developed and developing countries and in relation to the expenditure requirements for public services that the urban local bodies are mandated to deliver.

There is a mismatch between functions and finances of Municipalities, which primarily explains the vertical imbalance. Out of 18 functions to be performed by the municipal bodies in India only a few have a corresponding financing source which is utilized only marginally. The 12th Schedule in the Constitution introduced via the 74th Amendment also envisages that functions like 'safeguarding the interests of weaker sections of society, including the handicapped and the mentally retarded', 'slum improvement and up gradation' and 'urban poverty alleviation' belong to the legitimate functional domain of urban local bodies. However, there are no commensurate resources with these institutions to discharge these functions.

Urban local finance registers only a small presence in the overall public finance in India, which is actually declining. The total municipal revenue in India accounts for about 0.75 per cent of the country's GDP as against a figure of 4.5 percent for Poland, 5 percent for Brazil and 6 percent for South Africa. In terms of both revenue and expenditure the urban local bodies account for little above 2 per cent of the combined revenue and expenditure of Central Government, State Governments and Municipalities². A study of municipal finances by the RBI in 2007 also revealed that the total revenue of Municipalities is growing at a lower rate compared to the growth of combined Central and State Government revenues. **This is in contrast to the situation obtaining in advanced countries, where local bodies normally account for 20-35 per cent of the total government expenditure and the principle of 'subsidiarity' is regarded as a cornerstone of fiscal federalism.**

² Report of the sub-group on Finance, NDC sub-Committee on Urbanisation.

6. Investment for the Core Urban Infrastructure/Municipal Services under the Eleventh Five Year Plan

The total fund requirement projected in the Eleventh Five Year Plan for the water supply, sewerage and sanitation, drainage and solid waste management is given in Table 3.

Table 3: Funds Requirement-Urban Basic Services

Sub-sector	Estimated Amount (in Rs. Crore)
Urban Water Supply	53,666
Urban Sewerage and Sewage Treatment	53,168
Urban Drainage	20,173
Solid Waste Management	2,212
MIS	8
R&D and PHE Training	10
Total	129,237

The Plan proposed stepping up of Central outlay from Rs. 50,000 crore to Rs. 70,000 crore under the ongoing JnNURM so that greater thrust could be given to water supply and sanitation sector in the urban areas. The State sector outlay, which stood at Rs. 18,749 crore during Tenth Plan, was to be stepped up to around Rs. 35,000 crore. The plan targeted mobilization of funds to the extent of Rs. 10,000 crore through national financial institutions such as LIC, HUDCO, IL&FS etc. Further, mobilization of funds from external agencies viz., World Bank, JBIC (now JICA), ADB and other agencies to the tune of about Rs. 10,000 crore was envisaged. In addition, foreign direct investment and private sector funds up to Rs. 4,237 crore were expected to be mobilized to support the sector activities.

In respect to urban transport the total fund requirement envisaged in 11th Five Year Plan is given in Table 4.

Table 4: Funds Requirements – Urban Transport

Cities (population in lakh)	Total no. of towns	% of towns proposed for 11 th Plan	Average requirement	Rs. in Crore
01 – 05	370	50	40	7,400
05 – 10	39	50	400	7,800
10 – 40	28	100	930	26,040
>40	7	100	3000	21,000
MRTS	8	100		32,000
Modern Buses				38,000
Capacity Building & Transport Planning				350
Total				1,32,590

Source: Eleventh Five Year Plan, Planning Commission

The Plan proposed Central Outlay of Rs. 15, 500 crore under the ongoing Central Programme of JnNURM, non - JnNURM budgetary support of Rs. 4,400 crore, viability gap funding of Rs. 6,000 crore, investment by states/Municipalities to the extent of Rs. 19,500 crore mobilization of funds to the extent of Rs. 61,190 crore through financial institutions such as LIC, HUDCO, IL&FS etc. In addition, private sector funds up to Rs. 26,000 crore were expected to be mobilized to support the sector activities.

6.1 Actual outlay

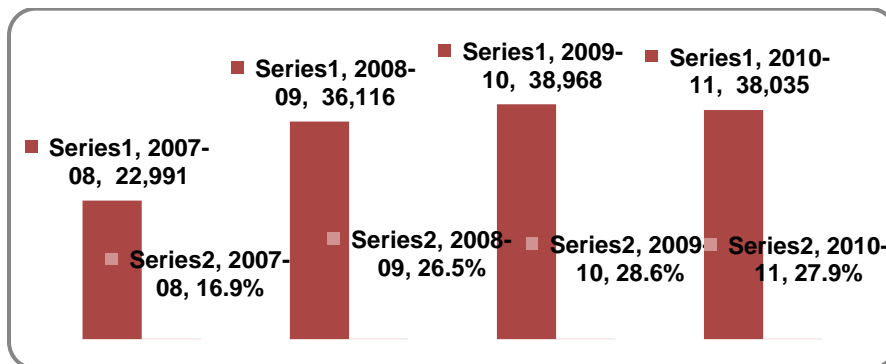
The urban sector outlay for the states over the last four years of the plan period has grown from the initial 16.9 percent in 2007-08 to 28 percent in 2010-11. State-wise

details are at Annexure II. The total Additional Central Assistance committed for 527 projects under the UIG component of JnNURM, which represents the major component of Central government investment is Rs.27,653 crore and of this, an amount of Rs.15,359.18 crore only has been released. Of the total of 49 projects undertaken in PPP model under JnNURM at a project cost of Rs. 5,458 crore, about Rs. 1,066 crore represents the capital investment by the private sector. Among the States, Tamil Nadu led with a private sector investment of Rs. 279 crore, followed by Maharashtra with Rs. 243 crore in 7 projects and Gujarat with Rs.161 crore in 6 projects. The website of the DEA indicates 79 projects in Urban Sector in PPP mode.

One of the challenges in determining the actual nature and quantum of PPP projects is the availability of the up to date information on the PPP activity in the Urban Sector. In addition, an amount of approximately Rs. 20,000 crore was invested in the metro rail projects. The Total Central Government funding for the Urban Transport sector was Rs. 23,552 crore. The amount of Private investment projected in this sector during the eleventh plan period is Rs. 1,741 crore.

It would be difficult to identify the exact breakup of the sources of financing of the sector during 11th plan, since investments are made in a highly decentralized manner and consolidation is difficult at this juncture.

Figure 3: Urban Sector outlay in states in 11th Plan (2007-2011)



The mid-term appraisal of XI Plan done by Government of India recognizes the contribution of XI Plan Programmes to promote renewed focus on cities and implementation of reforms. However, it is widely acknowledged that cities need to

ensure financial sustainability by tapping other sources of funds such as user charges, monetization of land, besides the property taxes. The important points for further attention by government and other stakeholders being mentioned include accelerated pace of reforms, extra focus on capacity building, moving from 'project' to 'holistic' city wide approach, identification of next generation reforms on local government finance, planning, professionalization of service delivery etc.

7. Urban Infrastructure Provision – Norms, Gap and Financial requirements

According to the High Powered Expert Committee (HPEC), the estimates for urban infrastructure in the core 8 services of water supply, sewerage, solid waste management, storm water drains, urban roads, urban transport, street lighting and traffic support infrastructure amount to Rs. 31 lakh crore over a 20-year period. In addition, the HPEC had also estimated capacity building costs of Rs. 1 lakh crore, renewal and redevelopment costs of Rs. 4.1 lakh crore and other sector expenditure of Rs 3.1 lakh crore over the 20-year period. The total expenditure of urban infrastructure is thus estimated to be Rs. 39.2 lakh crore over 20 years. In addition to investment projections on urban infrastructure, HPEC has also estimated Rs. 19.9 lakh crore towards the operation and maintenance under consideration over the 20-year period, of which Rs. 18.1 lakh crore is for the 8 core sectors. While arriving at the total investment requirement needs, the backlog was taken into account in addition to the new investment to meet the demands of the additional population growth and also the investment required for operation and maintenance of the assets created, the most neglected area in urban infrastructure.

7.1 Service backlog in water supply

The service backlog in water supply across various cities was arrived at based on the assumption that 100% piped water supply would be provided for all households with 24X7 continuous supply and a per-capita norm of 135 litres per capita per day.

Further, it was estimated that 80% of the current distribution network in the cities needs to be replaced for delivering continuous water supply. Industrial demand for water for cities above 500,000 population would be 20% and Non Revenue Water would be 20%.

Table 5: Service backlog in Water Supply

City Size Class	Population Size	Water Production	Distribution Extension	Distribution Upgradation
IA	>5 M	46%	37%	63%
IB	1-5 M	31%	25%	75%
IC	100000 - 1000000	18%	25%	75%
II	50000 - 100000	29%	25%	75%
III	20000 - 50000	56%	39%	61%
IV+	<20000	62%	51%	49%

7.2 Service backlog in Sewage Management

Underground sewerage network is considered for all city classes and 100% collection and treatment of wastewater. Sewage generation is assumed to be 80% of water consumption and 5% from infiltration of groundwater into sewage.

Table 6: Service Backlog in Sewage Management

City Size Class	Population Size	Network	Treatment
IA	>5 M	53%	53%
IB	1-5 M	44%	53%
IC	100000 – 1000000	64%	77%
II	50000 – 100000	84%	88%
III	20000 – 50000	90%	96%
IV+	<20000	100%	100%

7.3 Service backlog in Solid Waste Management

The main assumption made in estimating the investment requirement is that 100 percent of solid waste generated is collected, transported and treated as per the Municipal Solid Waste Handling rules, 2000. The backlog for the cities is calculated from the data available for the City Development Plan of the Cities under JnNURM. Average per-capita waste generation for various size/ class of cities was adopted from the India Infrastructure Report, 2006.

Table 7: Service Backlog in Solid Waste Management

City Size Class	Population Size	Collection & Transport	Processing	Scientific Disposal
IA	>5 M	13%	88%	100%
IB	1-5 M	48%	94%	100%
IC	100000 - 1000000	41%	93%	100%
II	50000 - 100000	41%	93%	100%
III	20000 - 50000	65%	100%	100%
IV+	<20000	75%	100%	100%

7.4 Backlog in Urban Roads

Service backlogs for the assumed road density for different categories of cities, Class-I at 12.25 km/sq.km and Class –II, III & IV at 7.00 km/sq.km are calculated using the comprehensive mobility plans of the Cities as sample. For major and collector roads, a service life of 5 years and a 25 percent of the unit cost as replacement cost and an annual O&M of 2 percent of the PCIC for all the roads for estimation of financing requirement.

Table 8: Service Backlog in Urban Roads

City Size Class	Population Size	Major Roads	Collector Roads	Access Road Space
IA	>5 M	31%	85%	32%
IB	1-5 M	80%	66%	63%
IC	100000 – 1000000	37%	85%	80%
II	50000 – 100000	0%	92%	35%
III	20000 – 50000	0%	92%	35%
IV+	<20000	0%	92%	35%

7.5 Service backlog in Urban Transport

HPEC has assumed for the Class-IA and Class-IB Cities the requirement for Rail Based MRTS, with a current backlog of 80% and advocated the implementation and introduction of Road Based MRTS assuming a backlog of 100%. The committee also recommended city bus services for other city size classes. The committee assigned a network length of 0.5 km/sq.km for Class-IA cities and 0.3km/sq.km for Class-IB cities. This reflects a high level of public transport coverage to comply with the National Urban Transport Policy and Urban Transport service level benchmarks of the Ministry of Urban Development.

Table 9: Service Backlog in Urban transport

Service Backlogs In Urban Transport			
City Size Class	Population Size	Rail Based MRTS	Road Based MRTS
IA	>5 M	80%	100%
IB	1-5 M	80%	100%

7.6 Per Capita Investment Costs

Considerations of service level efficiency and operation and maintenance of the structure and utilities built has been taken into consideration while deriving the Per capita investment cost (PCIC) in all the sectors. For, example in water supply the Non Revenue Water figures reported in cities across the country varies from a low of 15% to as high as 80-90%, but HPEC assumptions for Non Revenue Water is only 20%. Higher water losses will necessitate increase in water production capacity. Hence, if the services were not maintained at the optimum level, it would subsequently increase the PCIC cost also.

Table 10: Per Capita Investment Cost (PCIC) arrived at by HPEC for Estimation of Investment Requirement

Urban Sectors	Per Capita Investment Cost by Sector (Rs.)	Per Capita O&M Cost by Sector (Rs.)
Water Supply	5,099	501
Sewerage	4,704	286
Solid Waste	391	155
Urban Roads	22,974	397
Urban Transport	5380	371
Traffic Management Systems	945	34
Storm Water Drains	3526	53
Street Lighting	366	8
Total	43,386	1,806
(Average Cost at 2009-10 prices.)		

7.7 Capital Expenditure Estimates by City Size class

Metropolitan Cities (Class-IA & Class -IB) account for 43 percent of population and 50 percent of the investment requirement over the 20 years of period whereas the next order of Cities (Class-IC) with 29% of the population requires 28.5 percent of

investment followed by other class cities of population accounting for 20 percent requiring 16 percent of investment.

Table 11: Capital Expenditure Estimates by City Size Class

Class-wise estimates	Total (Rs. crore at 2009-10 prices)	Relative Share (Per Cent)	Population (2031 projected) In million	Relative Share (Per Cent)
Class IA (> 5 Million)	860,136	27.8	127	21.2
Class IB (1- 5 Million)	690,463	22.3	128	21.4
Class IC (100,000 -1 Million)	883,346	28.5	172	28.8
Class II (50,000 - 100,000)	174,072	5.6	53	8.9
Class III (20,000 - 50,000)	280,541	9.1	67	11.2
Class IV+ (<20,000)	209,583	6.8	51	8.5
Total	3,098,141	100.0	598	100.0

7.8 Phasing Plan of HPEC Estimates

In phasing out the capital investments over the 20-year period, the HPEC has assumed that all infrastructures will be put in place within 20 years. The assumptions made for the base year 2011-12 and further are as follows:

- A base GDP at Rs 7,268,038 crore with an initial investment for Infrastructure based on the current investment level from various sources like JnNURM, Parastatals and other funding sources amounting to Rs 50,000 crore
- The GDP of the economy was assumed to grow at a constant rate of 8 percent over the 20 year period

- Phasing of Urban Sector investment at the rate of growth of 15 percent per annum over the Twelfth Plan, 12 percent over the Thirteenth Plan and 8 percent over the Fourteenth and Fifteenth Plan(at constant prices of 2009-10)
- HPEC also estimated that with this amount of proposed investment by 2021-22 the urban sector allocation would reach 1.14 percent of GDP amounting to Rs 1.79 lakh crore and Rs 3.86 lakh crore by 2031-32
- The committee also expressed the need for supporting the capacity building activities of the Municipalities under a strong framework to improve governance and service delivery by investing Rs 1 lakh crore over 20 year period.

Table 12: Projected Capital Expenditure during 12th Plan by HPEC
(Rs. in crore)

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	12th Plan Total
Water Supply	5,241	5,881	6,593	7,390	8,285	33,390
Sewerage	3,931	4,411	4,945	5,543	6,213	25,042
Solid Waste	806	905	1,014	1,137	1,275	5,137
Urban Roads	28,120	31,554	35,372	39,652	44,450	179,149
Mass Transit	7,307	8,200	9,192	10,304	11,551	46,553
Traffic Mgmt. Systems	1,613	1,810	2,029	2,274	2,549	10,274
Storm Water Drains	3,124	3,506	3,930	4,406	4,939	19,905
Street Lighting	302	339	380	426	478	1,926
Other Sectors	8,159	10,737	13,928	17,788	22,439	73,050
Total	58,604	67,342	77,383	88,920	102,178	394,428

7.9 Operation and Maintenance cost estimated for XII Plan Period

HPEC has taken the overall ground situation of poor maintenance of assets for urban service delivery leading to obsolescence of the assets early before serving their useful life has strongly recommended that O&M should include the cost of O&M of physical assets, staff and related administrative cost for the respective sectors. The total estimated Operation and Maintenance in all the sector amounts to Rs. 19.93 lakh crore. The O&M expenditure during the 12th plan period would be Rs. 2,13,706 crore.

Table 13: Projected Revenue Expenditure during 12th Plan by HPEC

(Rs. in crore)

Sector	2012-13	2013-14	2014-15	2015-16	2016-17	12th Plan Total
Water Supply	13,392	14,085	14,861	15,732	16,708	74,778
Sewerage	4,299	4,675	5,097	5,569	6,098	25,738
Solid Waste	3,901	4,395	4,947	5,565	6,257	25,065
Urban Roads	6,044	6,677	7,387	8,183	9,075	37,367
Mass Transit	3,721	4,293	4,935	5,655	6,461	25,065
Traffic Management Systems	78	165	264	373	497	1,377
Storm Water Drains	758	807	861	922	990	4,337
Street Lighting	94	101	109	118	128	550
Annual O&M	32,287	35,199	38,461	42,117	46,214	194,278
O&M for all sectors including above 8 sectors.	35,516	38,718	42,307	46,329	50,835	213,706
Establishment Charges	34,812	37,200	39,843	42,765	45,994	200,614
Revenue Expenditure	70,328	75,919	82,150	89,094	96,830	414,320

The HPEC proposed the following financing framework.

Table 14: Financing Framework by HPEC (12th Plan figures in % of GDP at current prices)

Item	2012-13	2013-14	2014-15	2015-16	2016-17
Total Revenue	1.19	1.23	1.26	1.32	1.34
Own Revenue	0.74	0.83	0.89	1.03	1.05
Exclusive Taxes	0.33	0.33	0.34	0.34	0.35
Revenue-shared Taxes	0.23	0.31	0.36	0.49	0.50
Non-Tax Revenue	0.19	0.19	0.20	0.20	0.21
Other Revenue	0.46	0.41	0.37	0.29	0.29
Transfers from SFC	0.10	0.10	0.10	0.10	0.10
Grants-in-aid from State Governments	0.06	0.06	0.06	0.06	0.06
Transfers from CFC	0.08	0.08	0.08	0.08	0.08
Grants-in-aid from GoI	0.05	0.05	0.05	0.05	0.05
Revenues of entities other than Municipalities	0.17	0.12	0.08	0.00	0.00
Total Expenditure	1.64	1.69	1.74	1.80	1.86
Total Revenue Expenditure	0.90	0.90	0.90	0.90	0.91
Operations and Maintenance	0.45	0.46	0.46	0.47	0.48
Establishment Charges	0.44	0.44	0.44	0.43	0.43
Capital Expenditure	0.75	0.79	0.85	0.90	0.96
Of which, for 8 sectors	0.64	0.67	0.69	0.72	0.75
Deficit (-)/ Surplus (+)	-0.45	-0.46	-0.48	-0.48	-0.52

7.10 Investment during the 12th Plan Period- Recommendation of the Sub-Committee

HPEC has recommended a capital investment of Rs.3.95 lakh crore over the next Plan Period, with a proposed funding of 0.25% of GDP under the JnNURM. The report of the Working Group on Urban Finance set up by the Planning Commission has recommended a total capital investment of Rs.4.6 lakh crore over the next plan period considering coverage of service backlog in 15 years and the total investment targets covered in 20-years. The amount to be invested under the JNNURM-2 has been identified as Rs.1.62 lakh crore for the next Plan Period, on an average of Rs. 32,408 crore per annum for the next 5 years. Table 15 below presents a modified phasing plan to that of the HPEC. This projection has been accepted by the Steering committee on Urbanisation set up by the Planning Commission.

Table 15: Investment over the next plan period as projected by HPEC for next 20 years with backlog covered in 15 years

Item	2012-13	2013-14	2014-15	2015-16	2016-17
Total Revenue	1.19	1.23	1.26	1.32	1.34
Own Revenue	0.74	0.83	0.89	1.03	1.05
Exclusive Taxes	0.33	0.33	0.34	0.34	0.35
Revenue-shared Taxes	0.23	0.31	0.36	0.49	0.50
Non-Tax Revenue	0.19	0.19	0.20	0.20	0.21
Other Revenue	0.46	0.41	0.37	0.29	0.29
Transfers from SFC	0.10	0.10	0.10	0.10	0.10
Grants-in-aid from State Governments	0.06	0.06	0.06	0.06	0.06
Transfers from CFC	0.08	0.08	0.08	0.08	0.08
Grants-in-aid from GoI	0.05	0.05	0.05	0.05	0.05
Revenues of entities other than Municipalities	0.17	0.12	0.08	0.00	0.00
Total Revenue Expenditure	0.90	0.90	0.91	0.93	0.96
Annuity Payments	0.00	0.00	0.01	0.02	0.04

Debt Repayment	0.01	0.01	0.02	0.02	0.03
Reduction in Revenues on the account of PPP	0.00	0.00	0.00	0.00	0.01
Investible surplus of Municipalities	0.29	0.32	0.32	0.34	0.31
Capital Expenditure	0.78	0.87	0.97	1.08	1.21
Deficit(-)/Surplus(+)	-0.50	-0.55	-0.66	-0.75	-0.90
PPP	0.02	0.03	0.05	0.07	0.09
Annuity	0.04	0.08	0.12	0.17	0.23
Borrowing	0.03	0.03	0.03	0.03	0.03
Land based Instruments	0.07	0.07	0.12	0.16	0.17
Unfunded Deficit(-)	-0.35	-0.35	-0.34	-0.33	-0.38

8. Financing Framework for the Twelfth Plan

The requirement of investment in the urban infrastructure has been estimated by various sources, including the HPEC, as being of the order of Rs. 40 to 50 thousand crore. While HPEC has recommended this amount to be made available over a 20-year period, in reality, the period needs to be made much shorter, because citizens would not like to, and should not be expected to, wait for as many years to get their basic needs met in respect of core sectors such as urban transport, city roads, water supply and sanitation etc.

Meeting the requirements of funds for XII Plan has to be attempted through a multi pronged strategy covering the following:

- I. **Stimulations of municipal own sources covering** (a) efficient application of revenue instruments and (b) use of fiscal monitoring and control innovations: Both the HPEC and **Working Group** on Financing Urbanisation have emphasised the need for the Municipalities to increase their own sources of revenue.

While JNNURM-1 had insisted on 100% recovery of O&M costs by way of user charge collections, and only few municipalities could reach that level even at the end of the 6th year of the 7-year Mission period, i.e., by 31.3.2011, some municipalities in Tamil Nadu have proved that cost recovery could be as high as 300 to 400%, leading to recovery of the capital expenditure too, besides the O&M charges. Such local bodies include a small municipality of Porur (Town Panchayat), an intermediate size municipality- Tambaram and a large-size one, Madurai. The user charges in these cases range from Rs. 90 to 150 per month for residential users and higher for the commercial and industrial users.

Similar examples are available in respect of solid waste management sector too, wherein the waste is converted into manure and energy (electricity) and in waste water recycling. Such example needs to be analysed further and communicated to the rest of the States and the local bodies, to give everyone the confidence that the user charges could indeed contribute to meeting the capital investment too, at least in part.

Taking Citizens into Confidence: It is also necessary to take the citizens into confidence in the matter of determination of levels of user charges. The cost of the project, be it for water supply or SWM etc., spread over the project period, coupled with the O&M charges and the benefits to the people should be logically juxtaposed with the user charges, to convince the people about the scale of the user charges.

Property taxes: The example of Bangalore City Corporation, which has enhanced the revenue collections from property taxes from the level of Rs. 400 crore in 2007-08 to over Rs. 1,200 crore in 2011-12, needs to be emulated by other cities. In fact many other cities are already on the go, such as Ahmadabad and Hyderabad. More need to follow. There is also a case for increasing property tax in the influence zone or the catchment area of MRTS corridors. The property taxes increase has to be higher for properties given on rent as compared to self occupied properties so as to tap the increased rental value on account of the Govt investment in the MRTS corridor.

Land Monetisation: The example of Delhi Airport Redevelopment Project mentioned above presents a model for land monetisation for development of urban infrastructure in PPP Mode. But there are umpteen variants possible, to prove that urban development can pay for itself, of course, with a proper structure. A water supply project can also include development of appurtenant land, to generate money, to be ploughed into the capex of the water supply project. A project for development of ring road around a city by, say, NHAI, can have partnership of the Local Development Authority, which could acquire lands on either side of the ROW and convert into commercial (and social) projects, which would part fund the ring road itself. If that is not pursued, sundry real estate developers would encash on the enhancement in the value of the properties around the Ring Road, leaving the Government to pay for the development of the road. The revenue sharing model for such land monetisation would take care of any possibility of windfall gains only to the private party.

Additional FAR and FAR/ Development Charges: Any mass transit project, be it BRTS, Metro rail or any similar project, improves connectivity, leading to enhancement in the possibility of more intense use of land for commercial and residential activities. This would then allow for higher FAR, which would enhance the level of economic activities, besides yielding higher revenue collection from FAR charges. The local body could also enhance the rates of FAR in the influence zone and levy development charges, to mop up part of the steep financial and economic benefits that becomes available to the owners and users of the properties in the influence zone of such transit corridors. A suitable mechanism also needs to be evolved for capturing, at the time of sale, the increased property value in the influence zone of MRTS corridor occurring on account of govt investment for the MRTS project.

The framework presented in previous sections indicates that a serious effort is needed from the Municipalities to increase their own tax and non-tax revenue. A real

growth rate of 9 per cent per annum in exclusive taxes and 10 per cent per annum in non-tax revenue of Municipalities would demand systemic changes in the way in which the Municipalities presently operate and function. Failure to achieve will risk the ability of other financing instruments like PPPs or borrowings in financing urban infrastructure. A weak revenue scenario like this, with borrowing or PPPs getting ruled out, will put further strain on the Government of India to support the State Governments and Municipalities in urban infrastructure financing. It is, therefore, recommended that the design of the various policies be such that would create an environment for Municipalities to increase revenues through better service delivery, which will push up user charges and other revenue streams.

II. Devolution of Fiscal Powers and Funds; A significant share of the revenues for the Municipalities would come from a constitutionally mandated revenue sharing arrangement as recommended by the HPEC and adopted by the Working Group on Financing. Such a predictable and timely fiscal transfer will strengthen the revenue base of the Municipalities and increase accountability in the delivery of functions as envisaged in the 74th Constitutional Amendment. It will also serve as an important lever for Municipalities to tap other sources of financing. It is also recommended that Government of India put in place a systematic mechanism to ensure this devolution – by providing incentives to the states and cities through JNNURM-2.

III. Scaling up PPP:

Some interesting examples have come in respect of the sources financing the investment needs for urban infrastructure. One such instance is the re-development of airports. While the Kolkata and Lucknow Airport re-development projects have been undertaken by the Airports Authority of India (AAI), at a cost of the order of Rs. 2,000 crore each, similar project for Delhi has been taken with not only no cost to the Government, but the project even gives sustained revenue returns to the Government in the revenue-sharing arrangement built in the model. The

concessionaire in case of Delhi (M/s DIAL) has been given the authority to make use of the excess lands in the airport area for development of hotels, exhibition centre, convention centre, warehousing etc. In case of Kolkata and Lucknow, the development of such remunerative facilities in the area surrounding the airport has been left to individual developers, who would at best give some property taxes and FAR charges to the local authorities, of which only a small fraction would come, if at all, for the airport project. Had the Lucknow and Kolkata Airport projects followed the Delhi Airport Project model, Government could have saved those few thousand crore rupees.

The Working Group on Financing Urbanisation estimated that about 20 per cent of the total investment requirement over the 12th Plan period can potentially come through PPPs including annuity models. This would roughly translate to about 250-300 PPP projects in the urban sector each year. For this to happen, a pipeline of about 600-800 PPP projects must be in place. The Working Group suggests that even though the target of increasing PPP contribution by 10 times is aggressive, this must be pursued. This would require a number of initiatives to be put in place across all tiers of government. The Working Group recommended a sequenced approach in the use of various types of PPP option could help mainstream PPPs in the urban sector, given that PPPs constitute only a small part of the urban infrastructure investment. The hierarchy of preferences for the various PPP implementation options could be specified as a guide for state governments and Municipalities under JNNURM-2. A model set of output standards for different types of projects across the various urban sub-sectors and for different classes of cities and towns would help state governments and Municipalities in configuring projects and bring in a level of standardization in service levels across Municipalities. This would also help in benchmarking performance across cities over the longer term.

Annuity Model: The infrastructure projects in urban sub-sectors to be implemented in PPP should be encouraged for annuity models too³. This is necessary because some such projects, particularly in smaller cities, may not be financially viable by themselves and would need yearly financial payments from the sponsoring municipality. The Working Group on Financing Urbanisation Funds has rightly recommended that the financial assistance from JNNURM-2 should also be available for the purpose of annuity models, which might need policy changes since such payments may straddle 2-3 Plan periods (or even more) depending on the period of the contract. A transition plan – identifying areas of quick wins from the various PPP types- would need to be prepared as part of JNNURM-2. Incentives in the form of higher levels of VGF or central government funding for PPP projects in Class II and below cities may be needed in the initial years to kick start the process.

IV. Land Monetisation: The Working Group on Financing Urbanisation indicates that value of a plot of land can appreciate by about 10 times by its inclusion in the Master Plan area. It then appreciates only by about 2.5 times after the provision of requisite infrastructure, suggesting the need and value for streamlining the transition process of land development. Some of the initiatives that need to be taken up to facilitate the process of land monetisation, are recommended as follows:

- a. Preparation of Master Plan in a standardized manner on a regular basis.
- b. Ensuring land patterns as per approved Master Plans.
- c. Sequencing of the land development process to generate resources for infrastructure creation.
- d. Delineate the roles and responsibilities of Urban Development Authorities and Municipalities in the land management process.
- e. Land inventory in Municipalities and UDA areas.

³ like in the case of national highways and major ports where PPPs would be the default mode of implementation and conventional construction pursued only if PPP options cannot be pursued for inherent structural reasons or lack of willing investors for the project

The examples of land monetisation described in the preceding paragraphs give ample confidence about the potential strength of land monetisation for augmenting resources for development of urban infrastructure, particularly if these are taken up in PPP Mode.

8.1 Municipal Actions for Stimulation of Own Sources

There is a strong realization regarding the constraints faced by the municipal bodies in the levy and collection of own sources of revenue. However, realizing these weaknesses and their potential to generate more revenue, the Municipalities have to initiate specific actions under various instruments. Individual actions which can be taken up to mobilize own sources from include (i) appropriate placement of revenue instruments and (ii) efficiency in fiscal monitoring and control. Table below elaborates upon the specific action that can be taken in respect of the former.

Table 16: Application of Revenue Instruments

City Resource Pool	Revenue Instrument	Actions
Value Added Role of Municipal Infrastructure	Property Tax Building license fee Trade/Hawker/Vendor Fee	<ul style="list-style-type: none"> • Application of Unit Area Method & Self assessment • Collect Urban Infrastructure Cess, along with Property tax • Apply GIS Data Base for Mutation & Elasticity assessment, • Apply automation, ABC analysis, Innovative Collection through Banks, Doorstep campaigning, Name Display, timely billing and penalties. • Realistic Rates (upward revision) • Data Base/ cross – check • User friendly procedure
	Other land Based tools Betterment levy/ Impact fee	<ul style="list-style-type: none"> • GIS Data • SFC to consider and make state specific recommendations and Municipalities to take action.
	Exactions	<ul style="list-style-type: none"> • State to allow development of land

		parcels
	Transfer of Development Rights	<ul style="list-style-type: none"> • State to make legal provisions • Use for up gradation & expansion of services
	Stamp Duty	<ul style="list-style-type: none"> • Use as de facto local tax • State to assign part proceeds as in Haryana
	VAT/GST	<ul style="list-style-type: none"> • State to assign part of the proceeds
	Motor Vehicle Tax	<ul style="list-style-type: none"> • State to assign part of the proceed, as in Andhra Pradesh
Sale/ Transfer of Assets Services	Water supply	<ul style="list-style-type: none"> • Effective pricing-link with scientific costing, Sewer charges, differential pricing • Apply universal metering, leak detection, regular maintenance • Develop Data Base – GIS • Use of Partnership models to improve delivery
	Roads & Related Services	<ul style="list-style-type: none"> • Cess on Petrol /Diesel in cities • Identification of Advertisement potential/parking fee locations • Apply road cutting charges • Leasing space for communications towers • Leasing of space for Internet Equipment/cables • Use tax on Vehicle, animal, cart etc. • Use to TDR for expansion • Identify typology for partial support (local elasticity) • Street lighting through PPP • Use of annuity models
	SWM, Street lighting, Public Conveniences etc.	<ul style="list-style-type: none"> • Develop PPP & Out Sourcing potential • Develop norms-standards • Application for collection, for collection, transportation & dumping/treatment

Source: K.K. Pandey, Stimulating Revenue Base of Municipalities, IIPA, 2011.

A basic minimum standard of performance for the Urban Local Bodies should be to ensure full cost recovery of O&M through user charges and at least of partial recovery of capital expenditure.

Another set of actions in the form of fiscal monitoring and control innovations in the overall financial management system need to be taken up by Municipalities to utilize revenue instruments more effectively.

- i. States have to push accounting sector reforms through necessary provisions/approvals to apply Double Entry Accounting (DEA) at the ULB level so as to build transparency and borrowing capacity among Municipalities.
- ii. Budgeting needs to be rationalized for normative performance oriented, participatory budget, which is implemented throughout the year in a fixed manner.
- iii. Carry out innovative asset management, which includes listing, classification, valuation and finally assessment of each asset for optimum utilization of its revenue potential.

Table below elaborates upon the specific action that can be taken

Table 17: Action Plan for Fiscal Monitoring and Control Innovations

Area	Actions
Accounting	<ul style="list-style-type: none"> • Introduce Double Entry Accounting • State to Prepare Accounting Standard & Coding • Develop Financial Statements and Ratio Analysis
Budgeting	<ul style="list-style-type: none"> • Introduce Budget cycle • Apply innovative Performance Budgeting • Apply Participatory Funding
Asset Management	<ul style="list-style-type: none"> • Listing & Classification • Assessment of revenue and potential
Procurement	<ul style="list-style-type: none"> • Standardisation of Procurement System • E-procurement of Service and goods

Auditing	<ul style="list-style-type: none"> • Timely Audit • Private/Concurrent Audit • Social Audit • Effective Internal Audit • Energy Audit • Citizens Charter
Information System and Feedback mechanism	<ul style="list-style-type: none"> • Performance Monitoring and Service Level Benchmarking as per GOI/ norms/indicators • Complete Automation • Initiate GIS application
Billing and Collection	<ul style="list-style-type: none"> • Do timely Billing- Use of IT & Advertisements • Prepare DCB Statements • ABC analysis of Arrears • Innovative Collection
Grievance Redress	<ul style="list-style-type: none"> • Decentralised System of grievance redress, • Promote Downward Accountability – Social Audit, Area Sabha, Citizens Charter • Promote E-Sewa Kendra • Initiate One Window Approach
Capacity Building	<ul style="list-style-type: none"> • Three Tier Training- Awareness, Class-rooms, Hand holding/on job training • Documentation & Dissemination of Best Practices • Incentive System for Good Performance • Suitable material (Manual, checklist, guidelines) Exchange/ study visits, • city to city cooperation • Budget allocation for capacity budget • In house capacity building

Source: K.K. Pandey, Stimulating Revenue Base of Municipalities, IIPA, 2011

8.2 Devolution of fiscal powers and funds

There is a critical need for a substantial and meaningful devolution of fiscal powers to the Urban Local Bodies. Some of the suggestions of the HPEC include the following:

- Insert a 'Local Bodies Finance List' (LBFL) along the lines of the Union and State Lists
- Empower Municipalities to exclusively levy property tax, urban infrastructure along with property tax, profession tax, entertainment tax, and advertisement tax and retain the whole of their proceeds (hereinafter referred to as 'exclusive taxes').
- Constitutionally ensure sharing of a pre-specified percentage of revenues from all taxes on goods and services which are levied by states to enable Municipalities to meet their functional responsibilities assigned to them by the 74th Amendment (hereinafter collectively referred to as 'revenue-shared taxes');
- Provide for formula-based sharing of the divisible pool with the municipalities and also grants-in-aid to Municipalities from the divisible pool.
- The Urban Local Body finance list would include exclusive taxes, revenue shared taxes, non tax revenue as given in Box-1

An Indicative Municipal Finance List

- *Exclusive taxes*
 - *Property tax, including vacant land tax*
 - *Profession tax*
 - *Entertainment tax**
 - *Advertisement tax**
- *Revenue-shared taxes*
 - *All taxes on goods and services levied by the state government***
- *Non-tax revenue*
 - *User charges*
 - *Trade licensing fee*
 - *FSI charge/Betterment charge/Impact fee/Development charge*

** if not subsumed under the GST.*

*** including value added tax (VAT)/sales tax, stamp duty, motor vehicle tax, electricity, purchase tax, luxury tax, taxes on lottery, betting and gambling, entry taxes in lieu of octroi, etc.*

Note: FSI stands for floor space index.

Source: HPEC (2011)

The Thirteenth Finance Commission has, for the first time, linked devolution of funds to local bodies to a dedicated share of the divisible pool of central revenue. It has suggested a quantum jump in the revenue allocation, which would be 4 to 5 times higher than the allocation of Rs. 5 crore per annum as per norms laid by the 12th CFC. The revised allocation would be available from the financial year i.e. 2010-11.

A part of the allocation referred to as performance grant has been linked to the implementation of certain reforms such as Implementation of Double Entry Accrual based systems by the local bodies, assignment of technical guidance and supervision of audit to the CAG of India, appointment of Independent Local Body Ombudsman, electronic transfer of grants by the states to the local bodies to ensure transparency and timely disbursement, removal of exceptions in the levy of property tax, notification of current as well as expected levels of improvements in service standards etc. 12 states are likely to qualify for this performance grant during the year 2011-12.

8.3 Public Private Partnership (PPP)

The PPP approach is suitable for the infrastructure sector since it supplements scarce resources, creates a more competitive environment and helps improve efficiencies and reduce costs. In the road sector, PPPs have demonstrated their efficiency. However, attracting private sector through PPP is neither easy nor automatic. A key prerequisite is to lay down a policy framework that assumes a fair return for investors provided they attain reasonable levels of efficiency. But the policy must protect the interests of users, especially the poor. PPPs are useful only if they assume quality supply at reasonable cost. There are certain categories of infrastructure projects where externalities caused by projects can't be captured by project revenues alone. Such projects which are marginally viable or unviable can be made financially attractive through a grant. Urban sector projects fall in this category. As urban sector infrastructure has a significant impact on people's lives, private sector investment needs to be carefully considered to ensure adequate regulation and monitoring, participation of civil society, and realistic expectations from the private sector. International experience shows the need for building good public-private partnerships (PPPs), which allow optimum sharing of risks, roles and responsibilities, based on the suitability and ability of the public and private partners involved.

Today quite a few water supply and sewerage projects are being implemented through PPP mode. Water sector PPP projects are increasingly focusing on distribution improvements and the emphasis is as much on service improvement as

on capital infusion from the private sector. In some of the projects which are in Latur, Chandrapur, Nagpur, Mysore, Madurai, Hubli-Dharwad, Gulbarga and Belgaum, Sonia Vihar and Navi Mumbai the focus is on upgradation and O&M. The operator does not bear any investment risks. Other projects such as the ones at Haldia and Tirupur are on BOOT/BOT basis. Several Municipal bodies have successfully implemented private sector participation in SWM e.g. Alandur, Haldia, Chennai, Coimbatore, Madurai and Faridabad etc. In urban transport, areas where PPP model has been followed or is intended are Metro Projects, running of modern city bus service in Indore, Bhopal, Jabalpur, Kota, Jodhpur, Jalandhar, Patiala etc., development of bus terminal and parking lots, Foot-over-bridges and road signage, modernization of Bus Terminals, BRTS (Bus Rapid Transit System) where infrastructure is being provided by the Government and rolling stock operation and maintenance is through PPP participation. Urban road Projects being developed on PPP basis are Mumbai Trans Harbour Sea Link Project, IT corridor project in Chennai, Chennai outer ring road, Trivandrum city road improvement, Hyderabad outer ring road, Delhi-Noida Toll Bridge, Delhi-Gurgaon Expressway etc. To date, 49 projects are being implemented on PPP basis under JnNURM.

The Government of India-Ministry of Finance has created a viability gap funding arrangement. The India Infrastructure Finance Company (IIFCL) is providing long-term debt to project companies setting up infrastructure projects. Under the India Infrastructure Project Development Fund (IIPDF), funds are provided for Project Development. 53 projects of the urban sector have been provided assistance. In a federal country like ours, building world-class infrastructure is critically dependent on the cooperation and support of State governments on many aspects such as law and order, land acquisition, rehabilitation, shifting of utilities and resettlement and forest and environment clearances. The Finance Ministry and the Planning Commission are actively engaged with State governments to help them in managing the PPP process.

There are barriers for private sector investments in urban infrastructure in India, more so in the critical water supply and sewerage sub-sectors. A quick review of the

relevant literature indicates a number of reasons for reluctance on the part of the private sector to assume commercial risks in majority of the urban subsectors.

1. Most of the urban sector investments involve third tier of governments, which increase the perceived risks for private sector investments.
2. Historically, water supply and sanitation services have been seen as “public goods” that need to be provided at affordable prices (meaning nominal low costs).
3. The low water and sewerage tariffs make water supply and sewerage projects non-bankable which require general revenue support even for operations and maintenance (O&M). An exception, however, is industry which has a long history of paying rational tariffs.
4. Except for a minority of municipalities, the general financial status of most municipalities is precarious.

In the past, the financing of urban infrastructure projects at these levels has been largely through government budgets, which also supported O&M expenditure of assets that were developed. Direct user charges or tariffs are largely unable to meet 100% of O&M costs. Hence, the financing of the urban sector projects also have to address both the “real” cost of operations of urban infrastructure services, as well as the development of financial models that can provide some bankability assurance to prospective financiers of such projects. This makes proper structuring of a project important where the commercial and political risks are appropriately allocated to parties which can bear the identified risks most efficiently.

With the launch of the reform-driven and part-grant financed **JnNURM**, both the macro-environment as well as project-level micro environment has become more and more congenial for public-private partnerships (PPPs) in the urban sector. Many of the JnNURM-supported reforms are expected to create favorable governance and institutional framework for private sector to feel more confident to venture into the urban sector. A combination of part-grant financing by the JnNURM is likely to create demand for private capital as well as greater interest from private sector in the

urban sector. However, to encourage PPPs, it is important to develop 'bankable' or financially-sustainable models at a project level.

The unbundling of services and technological innovations in **urban sector**, particularly in the areas of sanitation and water supply and SWM has opened up these areas to the private sector. Also, global trends show that the private sector has been able to mobilize funds necessary to finance infrastructure projects and that it is willing to accept risks provided the institutional environment meets certain minimum standards and the projects are properly structured.

There is scope for expanding PPP in urban sector especially in water, sanitation and waste to energy. While there are established Models and a sizable number of projects in certain sectors, the number of PPP projects in urban social infrastructure (water supply, sanitation and SWM) are limited. PPP Projects in water sector for loss reduction, introducing 24x7,100% metering and billing are to be encouraged in the form of Management contracts in the States. Two /three states have taken the initiative, which needs to be replicated in the country.

Some of the key issues and challenges faced by Bankers/Lenders while appraising urban infrastructure projects under PPP include the following:

1. Structuring of the PPP projects in urban infrastructure is not up to the expectation of the various stake holders on account of the following reasons :
 - a. The project documents (bid, concession agreement, etc.) are not standardized at the state and central level like in case of Road or Power sector leading to lot of scope for negotiation between Concessioneing Authorities and bidders during development, execution and operations. Hence delay in projects development and execution having residual risks
 - b. Lender's interests are to be adequately and appropriately protected in the Concession Agreements like in the model concession agreement of transportation or power sector.

- c. Urban Infrastructure sector is today at the same stage where the road sector was about 15 years back – the route adopted and learning’s in the privatization process of the road sector should be put to use to an optimum level for successful privatization of urban infra projects.
 - d. User pay principle is not yet established for urban infra services – leaving the private sector to manage the show on behalf of the government w.r.t. user charges collection
 - i. The Urban Infra sector needs to be handled with soft gloves, like in case of the transportation sector after the initial debacle of the toll road projects; the concept of annuity was brought in successfully. Similarly for the Urban Infra sector projects policy should graduate slowly from Government run to Private with the initial route of annuity before embarking on complete user pay principle basis
 - ii. For the payment of annuity appropriate escrow account would have to be created as the Urban Local Bodies (Municipalities) lack financial credibility on account of their weak finances.
2. Proper Quality of Service and upkeep of the existing urban infra assets is not being done, leading to poor service quality which does not enthuse the end user for making service payment charges for the urban facilities being used and leading to the user pay principle not being established.

Figure 3: Unsustainable cycle of events

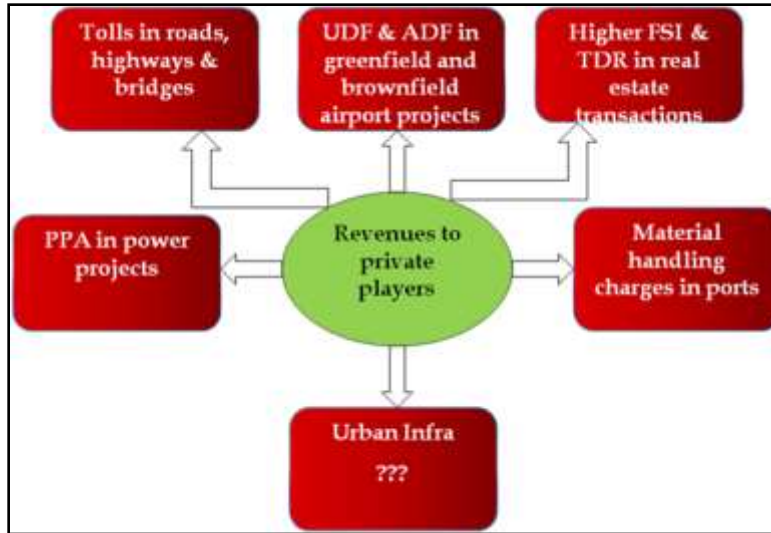


The Un-sustainable cycle depicted above needs to be broken and converted into a seamless cycle of sustainability as depicted below.

Figure 4: Seamless Cycle of Sustainability



3. Finance raising mechanism needs to be thought through for the urban infrastructure sector in lines with that for the other sectors as given below. Infrastructure service CESS could be thought of which could be levied along with the property tax and the funds collected by the same could be pooled separately and utilized towards upgradation of CAPEX and O&M of the urban infrastructure.



4. Various models of PPP in urban infrastructure may be encouraged in a gradual sequence below across the country with a better coordination between Centre and State Government so that the Developers and Users at large can be slowly graduated to the concept of user pay principle rather than attempting the same overnight.



5. The Municipalities urban and rural street lighting CAPEX and O&M costs can be minimized if the LED lighting based PPP based projects are undertaken in consultation with the Ministry of IT& Communications and BEE. The new technology of street lighting saves lot of resources in terms of revenue expenses to the Municipalities
6. The Public Municipal Debt Obligations (PMDO) scheme managed by IL&FS in coordination with IIFCL, IDBI and other banks may enhance the corpus fund from the present Rs. 5000 Cr to Rs. 10,000 Cr to fund more Urban Infra projects

7. The Solid Waste Management may be linked effectively to the Renewable Power Generation by Municipalities with a good PPP model and utilize the Tons of Organic Solid Waste to meet the street lighting and other Municipalities services power requirements and balance to be sold commercially

8.4 Land based financing

Evidence suggests that land especially in and around urban areas can be tapped for generating resources for supporting urbanization. Sales from MMRDA land auctions in just one complex (Bandra-Kurla complex) in January 2006 was a staggering Rs.23.0 billion, which was two times more than the total infrastructure investment made by the Mumbai Municipal Corporation, during 2004-05 (which was only Rs.10.4 billion) and four times more than MMRDA's own infrastructure investment in 2004-05 which was a mere Rs.5.4 billion. The information on the activities of Development Authorities who are primarily responsible for raising revenue through land based instruments has been limited and very few studies have covered the subject of land monetization. The Report on Monetizing Land done for the 13th Finance Commission by Kala Seetharam Sridhar (*Land as a Municipal Financing Option: A Pilot Study from India*) has presented a case for financing urbanization using land based instruments. As per the study, about 15 per cent of ULB revenues have in the 10 years (1998-99 to 2007-08) come from the sale / lease of land by Development Authorities in the cities of Kolkata, Bangalore and Ahmedabad.

The Working group for the Planning Commission has worked out the contribution from land based instruments on a normative basis ascribing a value to fresh serviced land which is added to the urban land pool every year. If a charge of Rs. 10 per sft of built up land is charged over and above the recovery of basic infrastructure costs, it would contribute Rs. 4403 Cr p.a. which is 0.07% of GDP. This works out to be 10% of total ULB expenditure. Accordingly, the revenues from land based instruments are assumed to be 5 per cent of total expenditure in first two years of 12th Plan period and 8 per cent in 3rd year of 12th Plan; and subsequently 10 per cent. This value is determined by the interplay of a number of factors, the timing

and sequence of each of which produces widely different value realizations. It is important to put in place a model process for aggregating land for urbanization. Some features of such a model process could include:

- Preparation of Master Plan in a standardized manner on a regular basis
- Ensuring land patterns as per approved Master Plans
- Sequencing of the land development process to generate resources for infrastructure creation
- Delineate the roles and responsibilities of Urban Development Authorities and Municipalities in the land management process

There is a need to explore the option of Value capture which builds on the principle that the benefits of urban infrastructure investment are capitalized into land values. Because public investment creates the increase in land values, many land economists argue that government should share in the capital gain to help pay for its investment. Public authorities have used a variety of instruments to capture the gains in land value created by infrastructure investment. Charges against additional FSI and betterment levies, which impose a one-time tax on gains in land value, are one such instrument. Planned redensification/ redevelopment of an existing area of low density is a measure of capturing value so created on account of the development of infrastructure and concomitant appreciation of real estate in such areas in an organized manner. A comprehensive registry of urban land at all levels of government is needed as a first step towards putting land based instruments to good use. Standardization of valuation processes would be key to monetizing land in a city/urban area. Vacant land tax could be an important source of financing. While common internationally, especially in Latin America countries which levy about 3 per cent tax on the capital value of properties, vacant land tax is sparingly used in India. This instrument can also contribute to promoting housing if the tax rate on built-up land is lower than on vacant premises.

8.5 Municipal Borrowings

The concept of municipal bonds as an additional mechanism for raising resources for urban infrastructure projects was first discussed in December 1995 at a national seminar. Later, the Rakesh Mohan Committee on the Commercialization of Infrastructure Projects in India also discussed the possibility of using municipal bonds as a tool for raising finances from markets.

Internationally, Municipal Bonds have played a key role in the creation of urban infrastructure assets in United States and Canada. Therefore, it was envisaged that adapting this model to the Indian context would open new vistas for attracting private capital to the urban infrastructure sector.

Since 1994, the Indo-US Financial Institution Reform and Expansion-Debt (FIRE-D) project has worked with national, state and local governments in India to develop a market-based bond market.

The debt market in India for municipal securities has grown considerably since the issuance of Ahmedabad bonds. Since 1998, other cities that have accessed the capital markets through municipal bonds without state government guarantee include Nashik, Nagpur, Ludhiana, and Madurai. In most cases, bond proceeds have been used to fund water and sewerage schemes or road projects. India's city governments have thus mobilised about Rs.4,450 million from the domestic capital market through taxable municipal bonds.

It is significant to note that most of the municipal bonds issued so far have been without a government guarantee. The success of these issues demonstrated that local governments can access the capital market to finance the efficient delivery of civic services.

Municipal Bonds form nearly 10% of the debt market in the US. By contrast, in India, just 1% of the total ULB contribution is funded by municipal bonds. Hence, municipal bonds have played a limited role as a source of finance for funding ULB contribution for urban infrastructure projects. Number of regulatory, supply and demand side

constraints exist which need to be tackled in order to promote municipal borrowing as a significant source of funding local bodies.

However, it is relevant to note that development of Municipal Bond Markets have taken a long time in most countries, it took USA about 100 years to develop a bond market.

Repayment tenure: The tenure of the term loans for urban infrastructure too needs to be reviewed. As most such projects have life of 20 to 30 years, and the user charges would be able to generate only small surplus, if at all, after paying up the O&M expenses, it would be necessary to extend the loan repayment period for the term loans availed by the developer/ concessionaire of such projects.

Dedicated Urban Transport Fund at Central Government level:

In urban transport sector, there are huge investments required to be made, to the tune of Rs. 87,000 cr. in the 12th Five year Plan as per the report of the Working Group on Urban Transport. As such huge investment needs cannot possibly be met from traditional budgetary sources alone, the working group has recommended tapping of innovative financing mechanisms so as to not only catch up with the backlog but also provide for future. Learning from the global examples, a dedicated (non lapsable and non fungible) Urban Transport Fund has been recommended to be set up at National level as envisaged in NUTP-2006. The National Urban Transport Fund (NUTF), apart from meeting capital needs, will have to cater for possible support to certain systems during the operations stage too.

The three principles followed to arrive at the sources of which the accruals will be used for setting up the NUTF are:

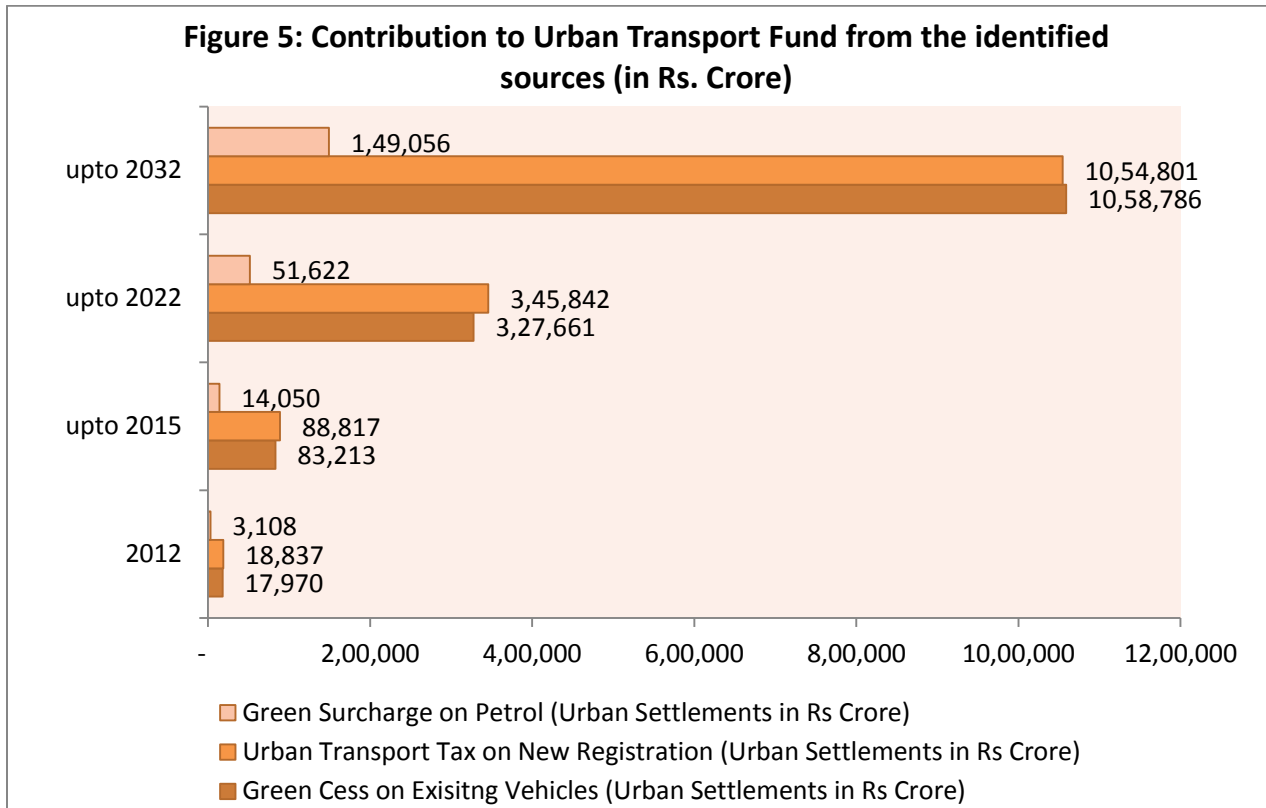
- a) **High Impact-** in terms of actual annual contribution to the NUTF
- b) Uses “**Polluters pay Principle**” and
- c) **Reduce** the use of personal vehicles.

After much deliberation, the three sources which qualify on the above mentioned principles have been identified. The proposals for the same are as below:

- a) **A Green Surcharge of Rs. 2 on petrol sold across the country:** Knowing the fact that petrol (or motor spirit) is exclusively consumed by the personalized vehicles and its other uses are limited, a Green Surcharge on Diesel (or high speed diesel) is not recommended. Diesel in India has its multiple uses and it is difficult to segregate diesels sold to personalized vehicles. Based on the estimates, this green surcharge on sale of petrol in the country will generate about Rs. 3,100 crore in the base year and about Rs. 14,000 crore over the period of first four years.
- b) **A Green Cess on existing personalized vehicles:** All vehicles in India are required to be insured every year. There are several public and private sector enterprises in India which provides insurance to the vehicles at the rate of 3 percent of the annual insured value both for car and two wheelers. It is proposed that an additional 4 percent of the vehicle's insured value shall be collected as Green Cess. It is estimated that during first year the total collection from this source in urban areas would be of about Rs. 18,000 Crore and the amount over first four years will total to about Rs. 83, 200 Crore.
- c) **Urban Transport Tax on Purchase of New Cars and Two Wheelers:** As Urban Transport Tax on purchase of new personalized vehicle, a 7.5% additional tax on petrol vehicles and additional 20% in case personalized diesel vehicles is proposed. This will be help in collecting about Rs. 18,800 crore in the first year and about Rs. 88,800 crore over first four years. In case of diesel cars, the urban transport tax has been recommended at 20% in order take care of the fact that diesel is available at substantially subsidized price and will continue to be so in near future. For arriving at the estimates, diesel cars have been assumed to be about 30% of the total cars as against 35% indicated by the present annual sales figures.

The above levies will not only help in generating dedicated pool of resources for taking up urban transport projects but would also serve as a great disincentive for use of personalized vehicles. This will serve the twin purpose of providing quality public transport infrastructure and services at affordable cost but also reducing congestion and curtailing travel demand on account of use of personalized vehicles. All the above sources have high impact and high feasibility in terms of actual annual accrual to the national urban transport fund.

At a time when the exchequer faces the dilemma of meeting ever growing demand from various sectors amidst constrained government sources of finances and in an environment where PPP can only very partially meet the financing needs of urban transport, the proposed National Urban Transport Fund presents itself as an effective means for funding the urban transport need. In fact the actual potential of this source is much higher than what even the calculations project. **The total annual yield from the select three sources above will be about Rs. 40,000 crore in the first year while the cumulative collection will be about Rs. 186,000 crore in first four years. The estimate also suggests that if these three sources are continued up to next twenty years, the cumulative contribution of the three sources to NUTF would be whopping Rs. 2,262,000 crore.** These details are explained graphically in Figure-5.



9. Capacity Building for the Local Bodies

The lack of adequate human resources at the urban local body level both in quantitative and qualitative terms is well recognized as one of the most critical constraints in the urban sector. The Report of the Working Group on Capacity Building for the 12th plan headed by Dr. M. Ramachandran has made certain recommendations for addressing the issue of capacity building in urban local bodies. Besides suggesting an overall allocation of Rs. 18000 crore approximately for capacity building during the 12th plan, the working group has suggested the following steps:

- Short term measures such as assessment of training and capacity needs, development of Capacity Building framework, formulation of Capacity Development Plan, provision of consultants and lateral hiring of experts, development of templates, support by Centres of Excellence, a web-enabled framework covering all Capacity Building related initiatives, sensitization of political executives and augmenting of man power in the Ministry of Urban Development.
- Medium term measures such as development of a road map for city's Capacity Building need and drawing baseline, setting targets towards achievement of National Capacity Building Benchmarks, strengthening of the schemes of Centres of Excellence by broad basing their activities towards action oriented research, encouragement of exposure trips and experiential learning, development of standardized modules, reorienting of the RCUES and National Institute of Urban Affairs, ramping up the E-Governance Program, evolving of PPP arrangements for Capacity Building, establishment of a dedicated unit for urban management including Capacity Building at the state level, induction and training of ULB personnel, etc.
- Long term measures such as creation of Municipal Cadre, monitoring of performance of Capacity Building Development Plan, taking mid-course correction, evaluation and assessment of effectiveness of the Capacity development Plan.

Most of these suggestions have been endorsed by the Steering Committee on Urbanisation and accepted by this Group too.

10. Issues relating to financing urban infrastructure and related issues which have a bearing on investment in the sector during the Twelfth Plan

The huge backlog in the urban infrastructure assets for delivering essential services would necessitate all tiers of governments to accelerate the creation of physical

assets so that the perception of Cities as an attractive investment avenue and its competitiveness for economic activity is enhanced. Hence, creation of effective climate for provision of efficient delivery of urban services also requires policy and process reforms, which in turn will also affect the cities capabilities to attract private investors to invest in the city's urban infrastructure too.

Fundamental to the framework, is the need for Municipalities to increase their own sources of revenue. Failure to do so will put at risk the ability to use other financing instruments like PPPs or borrowings. A weak revenue scenario, with borrowing or PPPs getting ruled out, will put further strain on the Government of India to support the state governments and Municipalities in urban infrastructure financing. Accordingly, the design of the New and Improved JnNURM should be such that it creates an environment for Municipalities to increase revenues through better service delivery, which will push up user charges and other revenue streams. The Government of India through its contribution under New and Improved JnNURM and the state governments through revenue sharing arrangements and an enabling environment for use of PPPs, land based instruments should address the deficit.

Exploring options for alternative sources of resource mobilization, like revenue shared taxes, increasing the quantum of investment in urban sector under PPPs and monetization of urban land for use of land as an instrument of financing all requires Constitutional, legal and administrative actions to be able to use them in an effective and efficient manner during the 12th Plan. The urgency to deploy more investment through these sources is necessitated because of the precarious position of the resources generation (own revenue) capacity of our cities. The need to utilize the avenues of funding through these sources has to be explored in the 12th plan. Any lag or slippage on these regard would put lot of stress on the cities efficiency to deliver services effectively in turn it may reduce economic activity also.

The urban sector has a bearing on other infrastructure sectors like Transport, Railways, Oil, Telecommunication, Ports, and Airports. It is thus not evident as to why it should be treated as a residual sector. This view needs to be revisited

because urban areas will increasingly accommodate a greater portion of the total population of the country. Financing for Urban Infrastructure needs to be stepped up to the level of 1.5 percent of GDP in the next plan and it should increase to 2.0 percent by 2021-22 and 2.2 percent by 2031-32.

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No. Q-11021/9/2011-PHE II
Government of India
Ministry of Urban Development
Nirman Bhawan, New Delhi

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Dated, the 10th August, 2011

OFFICE MEMORANDUM

Subject: Constitution of Sub-Group on financing urban infrastructure in the Twelfth Plan under the Chairmanship of Secretary (UD), Ministry of Urban Development.

A Sub-Group on financing urban infrastructure in the Twelfth Plan under the Chairmanship of Secretary (UD) is hereby constituted with the following composition:-

Dr. Rajiv Lall, M.D., IDFC, Mumbai	Member
Shri. Sonjoy Chatterjee, Chairman, Goldman Sachs, Mumbai	Member
Shri. Sanjay Sethi, Kotak Mahindra Bank, New Delhi	Member
Shri. S.B. Mainak, Executive Director, LIC, Mumbai	Member
Shri. Rajan Goyal, Director, RBI, Mumbai	Member
Dr. E.S. Rao, xcg, IIFCL, New Delhi	Member
Dr. Rakesh Mohan	Special Invitee
Shri. Gajendra Haldea,	Special Invitee
Ms. Sudha Krishnan, JS & FA, MoUD	Convener

2. The Sub-Group will prepare a brief report indicating the following:-

- i. Year- wise investments for the Twelfth Plan;
- ii. Sources of financing (viz. debt, equity, grants, etc.) anticipated in the Eleventh Plan and estimated for the Twelfth Plan;
- iii. Innovative ways of financing in the Twelfth Plan;
- iv. Practical measures for enhancing capacity/augmenting resources of Municipalities, and;
- v. Brief note on issues relating to financing of infrastructure and related issues which have a bearing on investment in the sector during the Twelfth Plan.

3. The Committee shall submit its report by 31st August, 2011.

(E.P. Nivedita)
Director (LSG)

ANNEXURE II
Outlay for Urban Sector during Eleventh Plan (2007-11) Rs.in crore

S. No	States/ UTs	2007-08	2008-09	2009-10	2010-11	Total Outlay Urban Sector	% Share of Total
States							
1	Andhra Pradesh	2,511.3	3,975.3	2,842.5	3,756.3	13,085.3	9.6
2	Arunachal	27.2	50.9	88.1	124.9	291.0	0.2
3	Assam	147.0	271.1	469.0	691.2	1,578.3	1.2
4	Bihar	434.0	976.4	1,351.3	791.3	3,553.0	2.6
5	Chhattisgarh	587.0	732.2	1,143.1	1,027.1	3,489.4	2.6
6	Goa	133.4	145.0	158.1	166.2	602.8	0.4
7	Gujarat	2,129.2	3,272.5	3,242.0	3,184.3	11,828.0	8.7
8	Haryana	297.5	423.9	1,318.0	785.7	2,825.2	2.1
9	Himachal Pradesh	35.5	22.9	89.7	108.3	256.4	0.2
10	J & K	309.3	236.0	275.1	313.8	1,134.2	0.8
11	Jharkhand	426.1	460.4	425.6	427.6	1,739.7	1.3
12	Karnataka	2,034.4	3,997.9	4,662.3	4,499.8	15,194.4	11.2
13	Kerala	656.1	720.0	911.3	982.8	3,270.1	2.4
14	Madhya Pradesh	907.1	1,158.8	1,081.9	1,074.9	4,222.7	3.1
15	Maharashtra	3,170.4	6,409.6	4,465.4	3,795.9	17,841.3	13.1
16	Manipur	38.5	81.1	117.8	111.7	349.2	0.3
17	Meghalaya	37.3	134.9	92.2	146.0	410.3	0.3
18	Mizoram	68.7	149.3	116.1	106.8	440.8	0.3
19	Nagaland	82.9	88.2	136.7	138.0	445.8	0.3
20	Orissa	403.9	282.3	363.2	337.6	1,386.9	1.0
21	Punjab	264.7	262.9	158.0	137.3	822.9	0.6
22	Rajasthan	1,189.7	1,507.3	2,549.0	2,291.6	7,537.7	5.5
23	Sikkim	36.4	49.2	185.8	207.3	478.7	0.4
24	Tamil Nadu	1,331.3	1,518.8	2,049.9	1,820.2	6,720.1	4.9
25	Tripura	58.4	83.6	125.5	101.1	368.6	0.3
26	Uttar Pradesh	2,548.6	4,335.3	4,616.0	4,655.6	16,155.4	11.9
27	Uttarakhand	412.0	375.6	899.5	495.7	2,182.8	1.6
28	West Bengal	2,078.5	2,739.2	3,069.5	3,371.4	11,258.5	8.3
Total- States (A)		22,356.4	34,460.5	37,002.4	35,650.1	129,469.5	95.1
UTs							
29	Delhi	157.7	1,338.9	1,536.1	1,943.5	4,976.2	3.7
30	Puducherry	331.8	71.7	124.1	133.8	661.4	0.5
31	A&N Islands	28.8	28.6	34.1	30.6	122.1	0.1
32	Chandigarh	107.7	204.6	245.3	223.8	781.4	0.6
33	D&N Haveli	1.8	1.9	12.0	32.2	47.9	0.0
34	Lakshadweep	3.9	4.6	4.5	5.0	18.0	0.0
35	Daman & Diu	2.4	5.6	9.8	15.5	33.2	0.0
Total- UTs (B)		634.1	1,655.8	1,965.9	2,384.4	6,640.3	4.9
Grand Total (A+B)		22,990.5	36,116.3	38,968.3	38,034.6	136,109.7	100.0

Source: Planning Commission