

Urban Development

INTRODUCTION

18.1. About 377 million Indians comprising of about 31 per cent of the country's population, live in urban areas according to Census 2011. This is a smaller proportion compared to other large developing countries, for example, 45 per cent in China, 54 per cent in Indonesia, 78 per cent in Mexico and 87 per cent in Brazil. With the more rapid growth of the Indian economy in recent years, which is expected to continue, the rate of urbanisation will increase. Projections are that by 2031, about 600 million Indians will reside in urban areas, an increase of over 200 million in just 20 years.

18.2. Urban areas are engines of economic growth. Data on the urban share of the gross domestic product (GDP) for the Indian economy is not available on a regular and consistent basis but estimates by the Central Statistical Organisation (CSO), available for a few years, indicate that this share increased from 37.7 per cent in 1970–71 to 52 per cent in 2004–05. The mid term appraisal of the Eleventh Plan projected the urban share of GDP at 62–63 per cent in 2009–10.

18.3. Urbanisation will be central to India's strategy of achieving faster and more inclusive growth because agglomeration and densification of economic activities (and habitations) in urban conglomeration stimulates economic efficiencies and provides more opportunities for earning livelihoods. Thus urbanisation increases avenues for

entrepreneurship and employment compared to what is possible in dispersed rural areas. It, thereby, enables faster inclusion of more people in the process of economic growth.

18.4. Although the theme of a 'rural–urban divide' still colours some policy discourse in India, there is a growing recognition that urbanisation is necessary to realise India's growth potential, and that rural–urban linkages must be strengthened. Indeed this will accelerate growth of the rural sector also.

18.5. The High Powered Expert Committee (HPEC) under the chairpersonship of Dr. Isher Judge Ahluwalia that was constituted by the Ministry of Urban Development for estimating the investment requirements for urban infrastructure services has observed that the fortunes of the agricultural sector are crucially linked to the manner in which growth in the industry and services sectors unfolds. People living in rural areas typically tap the opportunities that cities provide for employment, entrepreneurial avenues, and education. As urbanisation grows, demand for food items other than food-grains, that is, vegetables, lentils, milk, eggs and so on, also grows. This leads to investments in infrastructure, logistics, processing and packaging in rural and peri-urban areas. Such investments and other economic inter-linkages connect and build synergy between rural and urban centres. Thus the rural sector also benefits from good management of neighbouring urban conglomeration.

Urbanisation Trends and Their Implications

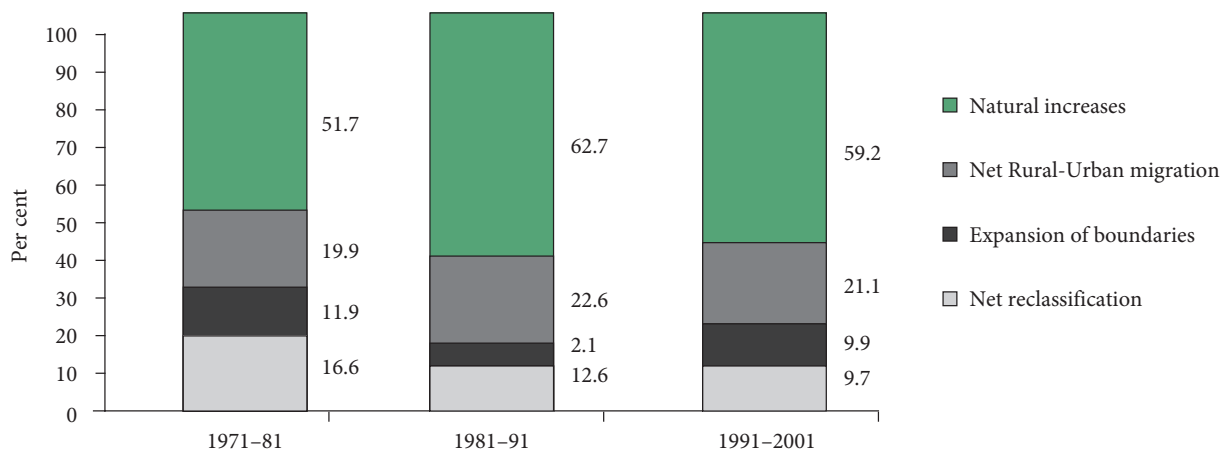
18.6. As mentioned above, the degree of urbanisation at 31 per cent of the population is one of the lowest in the world though it is accelerating. The share of persons living in urban areas rose by 3.35 per cent in the decade 2001 to 2011 while it had risen by only 2.10 per cent in the decade 1991 to 2001. The sources of increase in urban population are shown in Figure 18.1.

18.7. About 60 per cent of the growth in the urban population is due to natural increase. Rural-urban migration has contributed to only about 20 per cent of increase in urban population. In this regard, the Isher Ahluwalia HPEC has observed that notwithstanding three decades of rapid economic growth, rural urban migration has remained relatively low as industrialisation has been capital intensive and the services boom fuelled by the knowledge economy has also been skill intensive. This has prevented Indian cities from realising their full potential of generating employment opportunities and consequently making the development process more inclusive.

18.8. There is a concentration of the urban population in large cities and existing urban agglomerations. As per census 2011, there are 53 million plus cities accounting for about 43 per cent of India’s urban population. Class-I cities with population over 3 lakh

accounted for about 56 per cent of the urban population and with a population ranging from 1 lakh to 3 lakh accounted for another 14 per cent. This pattern of population concentration in large cities reflects spatial polarisation of the employment opportunities. While it is expected that gains from an agglomeration economy would lead to some polarisation of economic activities, there is a need for developing an optimal portfolio of cities by drawing regional development plans and promoting growth centres that are employment intensive and consistent with the economic potential including the natural endowment of cities and regions. The availability of water to provide for the needs of a large urban population must be a critical factor in plans for urban development.

18.9. Though the proportion of urban population concentrated in larger cities continue to remain high, there is some evidence that other urban growth nodes are emerging underscoring the need for adequate policy attention to smaller cities and peri-urban areas as against the narrow focus of concentrating on large ‘Mission Cities’ as was followed in the Eleventh Plan period. Census 2011 notes that the number of towns in India increased from 5,161 in 2001 to as many as 7935 in 2011. It points out that almost all of this increase was in the growth of ‘census’ towns (which increased by 2,532) rather than ‘statutory’ towns (which increased by only 242).



Source: Reproduced from Isher Ahluwalia Hpec Report (2011).

FIGURE 18.1: Sources of Increase in Urban Population

‘Statutory’ towns are towns with municipalities or corporations. Whereas, ‘census’ towns are agglomerations that grow in rural and peri-urban areas, with densification of population that do not have an effective urban governance structure or requisite urban infrastructure, for example, sanitation, roads and so on in place.

18.10. An accelerated pace of urbanisation would imply significant spill over of existing cities into peri-urban areas. As borne out by a recent study by the World Bank—*India Urbanisation Review: Urbanisation beyond Municipalities* (2012) already there are evidences that peri-urban areas in the vicinity of large cities are centres of intense economic activities. A large number of new towns are ‘born’ in the vicinity of existing cities with million plus population. If these trends are any indication of how the future will unfold, much of India’s urbanisation challenge will be to transform land-use and expand infrastructure in its largest cities and neighbouring

suburbs—places that are not pristine or green field, but already support 9 per cent of the country’s population and provide 18 per cent of the employment on 1 per cent of the country’s land area. Jobs and people are flowing from metropolitan cores to nearby settlements—regardless of whether they are classified as urban or rural often giving rise to haphazard urbanisation in the peri-urban areas. The challenge is to ensure that new cities and existing metropolises are connected and land-use change is coordinated with infrastructure development to accommodate urban redevelopment and urban spatial expansion (refer to Box 18.1). Failure to do so would eventually necessitate expensive ‘retrofits’ in future.

The Country’s Urban Conditions and Challenges

18.11. Broadly, the urban sector in India faces two distinct but mutually linked sets of challenges. Based on NSSO Report No. 508 (2004–05) it is estimated that the number of urban poor had increased by

Box 18.1 Vision of Our Cities

The objective of the Twelfth Plan is faster, more inclusive and more sustainable growth. The vision of India’s urban growth must be aligned with the objectives of inclusion and sustainability.

Urbanisation should be guided towards inclusive, equitable and sustainable growth of towns and cities with proper civic amenities. Good urbanisation would ensure that towns and cities are free from slums and provides adequate opportunities for productive employment and a decent quality of life to all their inhabitants including the poor.

The smart cities of our vision would be engines of growth as they would increasingly compete for investments nationally and internationally too. Therefore, cities must provide world class infrastructure and services at affordable costs to give a competitive edge to the economic activities they host. Besides, cities should be able to provide basic services to migrant workers, their families and other vulnerable sections of society including women and children. The future renewal of our cities should facilitate transition from ‘informality’ of large number of workers towards more formal livelihoods in line with their aspirations. They should address various vulnerabilities including residential, occupational and social vulnerabilities, associated with urban poverty. As an overriding principle, ‘people’ should be brought to the heart of the urban agenda, for both, deciding the vision of their city and for choosing the process of reaching that goal. This implies that all citizens have access to basic services of clean water, sanitation, sewage, solid waste management, urban roads, safe and affordable public transport systems, affordable housing, and a clean and healthy environment. Besides creating avenues for gainful employment, Indian cities should also meet the rising aspirations of people for a better quality of life. Citizens should be proud of their towns and cities and take responsibility for their cleanliness, safety and hospitality.

Environmental sustainability of Indian cities is another integral part of the vision. Future growth should be consistent with cities’ natural endowments and the economic potential of the region in which they are situated. All cities should be efficient in using available resources particularly energy, water and land.

Our cities must also preserve and foster their cultural and historical heritage and benefit from the tourism potential of their heritage and natural endowments.

34.4 per cent from 1973 to 2004. The NSSO (66th round) has estimated that during the period 2004–05 and 2009–10, the unemployment rate in terms of the usual status decrease by 1 percentage point for both, urban male and females notwithstanding an impressive growth registered by the economy in this period. Hence, the first challenge is to significantly step up the rate of creation of jobs in the urban sector

18.12. The second set of challenges before the Government is to guide the process of urbanisation and ensure that basic services, for example, sanitation, water supply, and basic housing are provided to urban citizens expected to be around 600 million within 20 years. If these challenges are not tackled expressly, not only would India's cities get increasingly chaotic and choked, rural poverty will be converted to urban poverty with no gains to improvement of livelihoods of India's burgeoning population.

18.13. Already, cities and towns of India are visibly deficient in the quality of services they provide, even to the existing population. A recent compilation of key indicators of the present state of urban service delivery is given in Box 18.2.

18.14. The high coping cost of deficient infrastructure especially to the urban poor has been reported in several studies. For example, due to the intermittent and inadequate supply of water, it has been estimated that the urban poor pays significantly more than the average price for water, often tenfold higher. In a city sanitation study, conducted by the MoUD (2010) none of the 423 cities where the study was conducted were found to be 'healthy and clean'. The Water and Sanitation Programme of the World Bank, using data for 2006, suggested that per capita economic cost of inadequate sanitation in India is ₹2,180. The cost in terms of Disability Adjusted Life Years (DALY) of

Box 18.2 State of Service Delivery—Key Indicators

Water supply: As per 2011 census 70.6 per cent of urban population is covered by individual connections, compared with 91 per cent in China, 86 per cent in South Africa and 80 per cent in Brazil. Duration of water supply in Indian cities ranges from 1 hour to 6 hours, compared with 24 hours in Brazil and China and 22 hours in Vietnam. Per capita supply of water in Indian cities ranges from 37 lpcpd to 298 lpcpd for a limited duration, while Paris supplies 150 lpcpd continuously and Mexico 171 lpcpd for 21 hours a day. Most Indian cities do not have metering for residential water connections. Seventy per cent of water leakages occur from consumer connections and due to malfunctioning of water meters. Non-revenue water (NRW) accounts for 50 per cent of water production compared with 5 per cent in Singapore.

Sanitation: Even a partial sewerage network is absent in 4861 cities and towns in India. Almost 50 per cent of households in cities like Bangalore and Hyderabad do not have sewerage connections. As per 2011 census, about 13 per cent of urban households do not have access to any form of latrine facility and defecate in the open. Census 2011 also revealed that about 37 per cent of urban households are connected with open drainage and another 18 per cent are not connected at all. Less than 20 per cent of the road network is covered by storm water drains. As per the report of the Central Pollution Control Board (CPCB) 2009, only about 20 per cent sewage generated was treated before disposal in Class I cities and Class II towns (as per 2001 census). As per CPCB report brought out in 2005, about 1,15,000 MT of Municipal Solid Waste is generated daily in the country. However, scientific disposal of the waste generated is almost non-existent.

Public transport: Public transport accounts for only 27 per cent of urban transport in India. Share of the public transport fleet has decreased from 11 per cent in 1951 to 1.1 per cent in 2001. In 2009, only 20 out of 85 Indian cities with a population of 0.5 million had bus services.

Source: As compiled in Isher Ahluwalia HPEC report (2011) and Census of India and MoUD

Affordable housing: The Technical Group on the Estimation of Housing Shortage projects the total shortage of dwelling units in urban areas in 2012 to be 18.78 million units. The projected slum population in India is 94.98 million in 2012. As against this, the number of dwelling units sanctioned under JNNURM in 7 year Mission period was 1.6 million units. The supply of decent affordable housing by private sector has remained woefully inadequate.

Source: Ministry of Housing and Urban Poverty Alleviation and Report of the Pronab Sen Committee on Slum Statistics (2010).

diarrhoeal disease for children from poor sanitation is estimated at ₹500 crore (HPEC 2011).

18.15. Many studies have demonstrated that there is considerable positive impact on health status after having adequate access to water and sanitation, both in terms of hygiene related behaviour as well as reduction in water borne diseases and skin diseases. There is a very strong gender dimension to safe water and sanitation. Women bear the maximum brunt in their absence. They are forced to spend time and energy collecting water for the household use and by that are forced to give up on income generating opportunities and leisure time. There are severe health consequences of such work on women. In absence of sanitation they have to go out in dark only for defecation which has adverse health consequences on them besides increasing risks of sexual violence. Higher morbidity rates within the families because of lack of these services forces them to spend time on caring for the sick within the family and thereby increasing their burden. This also leads to poor health status of women and lower incomes in their hands.

18.16. The scenario in urban transport is equally alarming. Current urban transport trends in Indian cities are leading to broader sustainability challenges for people and the environment in terms of lost man-hours due to long commute times, greater reliance on expensive private transport, increasing emissions and road fatalities. A MoUD study in 2010 based on sample of 87 cities estimated that under a business-as-usual scenario, in about 20 years time, the expected average journey speeds on major corridors in many cities would fall from 26–17 kmph to 8–6 kmph.

18.17. Air quality has also deteriorated sharply carrying with it concomitant health costs. For instance, per capita emission levels in India's seven largest cities have been estimated (Palanivel 2002) to be at least three times higher than the WHO standards. Air pollution levels were low in only three cities of the 127 cities monitored by the Central Pollution Control Board under the National Air Quality Monitoring Programme (2009).

18.18. To conclude, urbanisation is increasing at a faster rate than earlier. Since urbanisation is 'efficient' and could be job-creating, it must be planned and properly guided. An accelerated pace of urbanisation would also result in significant spill over in peri-urban areas and therefore, these areas need to be included in urban planning and provided for. While India needs to plan for its urban expansion, the conditions of delivery of services in existing cities and decent housing even for the current level of urban population is highly deficient. There is a pressing requirement to address the problem of urban poverty. The task enumerated above calls for a renewed thrust towards improvement in governance structure especially at the level of urban local bodies and a major improvement in delivery of urban services in cities.

REVIEW OF MAJOR INITIATIVES TAKEN UNDER THE ELEVENTH PLAN

JNNURM

18.19. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched in December 2005 for a period of seven years with an outlay of ₹66,085 crore. The objectives of the scheme included empowerment of Urban Local Bodies (ULBs), planned and holistic development of cities and making them inclusive. The scheme mandated preparation of City Development Plans (CDP) and a set of urban reforms at State and Municipal levels.

18.20. JNNURM renewed the focus on urban renewal and gave impetus to many urban reforms. Central allocation of ₹66,085 crore led to overall commitment of investment of ₹1,23,711 crore under the scheme (refer to Table 18.1).

18.21. Some of the key inadequacies noted during implementation of the programme included failure to mainstream urban planning, incomplete reforms and slow progress in project implementation. Delay in securing land for projects and obtaining approval from various regulatory authorities also led to delay in implementation of some of the projects.

18.22. Despite the stress on urban planning, in many cities the planning process is yet to be strengthened

TABLE 18.1
Physical and Financial Progress under JNNURM (March 2012)

	UIG	UIDSSMT	BSUP	IHSDP	Total
7 year Allocation (in ₹ crore)	31,500	11,400	16,357	6,828	66,085
No. of Projects sanctioned	559	808	528	1,078	2,973
Total cost of project (in ₹ crore)	67,275	14,039	30,416	11,981	1,23,711
Total ACA Committed (in ₹ crore)	30,971	11,372	15,092	7,704	65,139
Total ACA released (in ₹ crore)	18,479	8,469	8,642	4,905	40,495
Per cent of ACA released to ACA sanctioned	60%	74%	57%	64%	62%
No. of DU approved in lakh (BSUP and IHSDP)			10.3	5.7	16.0
No. of projects completed (UIG and UIDSSMT)	127	142			269
No. of Dwelling units completed (in lakh) (BSUP and IHSDP)			4.4	1.8	6.2

and made participatory. Invariably peri-urban areas around cities' limits have grown haphazardly. Lack of participatory planning has resulted in programmes suffering from 'lack of ownership'.

18.23. A significant interstate variation in completion of reform underscores the need for their careful calibration on the basis of city size and capabilities. In many States, incomplete governance and financial reforms prevented emergence of the municipal entities as viable and financially sustainable entities. Lack of capacity has further emerged as a serious constraint. Thus, despite some good examples in some cities, the overall progress in improving service delivery standards has been unsatisfactory. Another major shortcoming was the limited success in leveraging of JNNURM fund by locating non-budgetary financial resources including funds under PPP framework.

Other Initiatives in the Urban Sector in the Eleventh Plan

18.24. Swarna Jayanti Sahari Rozgaar Yojana (SJSRY) is designed to enable urban poor to get gainful employment. Under this scheme 3,941 towns have been covered and an assistance of ₹3,360 crore has been released. Since inception, about 12.3 lakh persons have been imparted training under the scheme. For making India slum free, pilot phase of Rajiv Awas Yojana was launched in 2011. The scheme has

a progressive architecture which includes in-situ rehabilitation of slums and legislation to provide property rights to slum dwellers. Another thrust has been implementation of the Employment of Manual Scavengers and Construction of Dry Latrines (prohibition) Act 1993. Under the Integrated Low Cost Sanitation Scheme (ILCS) 2.5 lakh dry latrines have been converted into sanitary ones and about 1.55 lakh new toilets have been sanctioned.

Urban Transport

18.25. A major achievement leading to transformational change in public transport has been a significant extension of Metro rail network in large cities. Delhi metro phase-II has been successfully completed and phase-III involving an investment of ₹35,242 crore is under implementation. Metro rail projects in Bangalore, Chennai and Kolkata involving an investment of ₹31,084 crore are under implementation. In addition, metro projects in Hyderabad and Mumbai involving investment of more than ₹22,000 crore are being developed on a Public-Private Partnership basis. Under JNNURM, 21 projects including Bus Rapid Transit (BRT) System with an approved cost of ₹5,211 crore were sanctioned. Besides, purchase of 15,260 buses gave a major boost to public transport. Another 123 projects like roads, flyovers, ROBs and parking projects with an approved cost of ₹10,162 crore were sanctioned for traffic improvement and parking (refer Box 18.3).

Box 18.3 Transforming Public Transport in Cities

Under UIG component of JNNURM, 15,260 low-floor and semi-low-floor buses enabled with intelligent transport system were sanctioned to 65 Mission cities with admissible central assistance of ₹2,089 crore. As a result of the scheme, 34 cities across India have organised city bus services for the first time.

Conclusion

18.26. JNNURM has led to a significant step up in investment in urban sector. However, urban sector continues to suffer from low-level of service delivery, structural problems, grossly inadequate availability of resources and lack of capacity at different levels of the government. Successful management of India's urbanisation would not only require a significant step up in investments for urban improvements under the Twelfth Plan period, but also emphasis on measures to address the glaring weaknesses in urban governance and management. In addition, reducing urban poverty has emerged as a major thrust area in managing our cities.

THE STRATEGY FOR URBANISATION

Enablers for effective urbanisation

18.27. The strategy for the Twelfth Five Year Plan will be focused on strengthening the five enablers for urbanisation—governance, planning, financing, capacity building and innovation (Figure 18.2).

Strengthen Urban Governance

18.28. Despite the 74th Constitutional Amendment, which required States to transfer eighteen functions to the ULBs, there is significant variation in devolution of functions, functionaries and funds across the States. City mayors lack the powers and tenure to be truly accountable for delivery of urban services. At the metropolitan level, Metropolitan Planning Committees (MPCs) are yet to evolve and District Planning Committees must function not only in letter but in the intended spirit too. In most States either State agencies or parastatals are in-charge of urban service delivery rather than ULBs. This maze-like structure of management and accountability hampers good urban management.

18.29. To strengthen the urban governance framework, it is proposed to adopt the following strategies during the Twelfth Five Year Plan period:

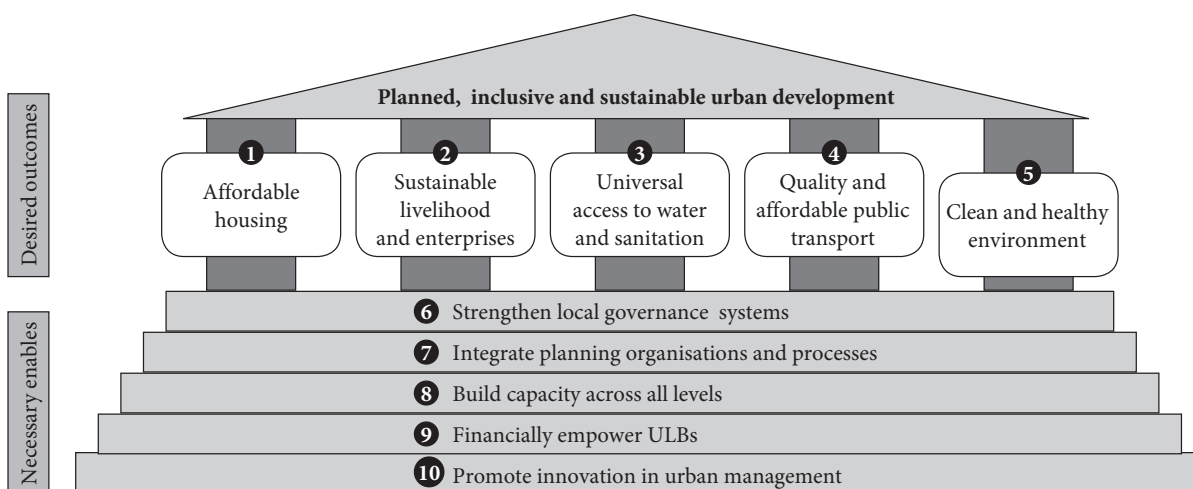


FIGURE 18.2: Key Constituents of India's Urban Future

Achieve Convergence at the Central Government Level

18.30. Urban development, housing and poverty alleviation are inter-related subjects. Various expert bodies including Isher Ahluwalia led HPEC have recommended the merger of the Ministry of Urban Development with that of the Housing and Urban Poverty Alleviation. Their merger would improve the effectiveness and the efficiency of urban management in India. Till this is achieved, a concerted effort must be made for convergence of the programmes and initiatives of both the Ministries and merger of both the Ministries deserves a careful consideration. Ultimately all schemes run by different Ministries of the States and the Central Government must converge on ground at the municipal level. This must be an overarching guiding principle for the Twelfth Plan.

Set Up Municipal Services Regulators

18.31. An independent utility regulator should be set up at the State level to monitor service levels and adjudicate disputes related to delivery and pricing of services. The regulator would facilitate transparency by regular publication of service level benchmarks, and help set the vision for ULBs. Therefore, setting up of a suitable urban regulator at the State level must be a priority.

Empower and Extend the Term of the Mayor

18.32. Eminence of elected bodies in decision making is a prerequisite for participatory development processes. JNNURM pushed for elections to municipal bodies. The stage has come where the heads of such elected bodies should be adequately empowered. With the objective of establishing single point accountability the Mayor should be the executive head of the city. Also the Mayor should be vested with appropriate authority, for example, in a Metropolitan Area the Mayor of the largest ULB should be the Chair of the Metropolitan Planning Committee. While local conditions should determine whether cities should adopt a Mayor-in-Council or an Executive Mayor system, in either scenario, the Mayor's term should be extended to five years. The Isher Ahluwalia HPEC has also recommended that the executive head of the city will

need to be empowered to run an efficient system of delivering urban services in a manner which harnesses agglomeration economies, minimises congestion diseconomies and creates a socio-economic environment that attracts investment and generates livelihoods whilst adhering to the constitutional requirements of a duly elected legislative body, the third-tier of Government. Hence suitable empowerment of mayors should be mandated as a key governance reform under JNNURM.

Strengthen the Unified Metropolitan Transport Authority (UMTA)

18.33. As recommended by the Second Administrative Reforms Commission, all the million plus metropolitan areas should set up an UMTA to develop and implement city level transportation plans. These must be integrated with spatial and land use plans of cities.

Introduce Citizen Charters

18.34. Every municipality should publish a citizen's charter. The charter should contain comprehensive information on service levels for all urban services, including the same for basic services for the urban poor at ward level and specification of time limits for approvals relating to regulatory services such as licenses and permits. The charter should also specify the relief available to the citizens in case of non-adherence as prescribed in the report of the Second Administrative Reforms Commission.

Increase Adoption of Information Technology at the ULB Level

18.35. Information Technology (IT) can play an important role in improving governance. With municipal administration becoming increasingly complex, the benefits of IT adoption are becoming more visible across several municipalities. E-governance must be a mandatory reform under the renewed JNNURM and its implementation should be required in all cities receiving assistance under the capacity building component of the Mission. A major constraint in full fledged transition to e-governance is lack of a suitable national level architecture. This has led to States and ULBs independently developing e-governance platforms which are often mutually incompatible. This has also prevented

States from replicating successful architecture developed in other States leading to avoidable expenditure. To address this problem, the Ministry of Urban Development should finalise a suitable national level architecture with sufficient flexibility for customisation at the State and ULB level within the first year of the Twelfth Plan.

Clarification of Roles of ULBs and Parastatals

18.36. In large metropolitan areas and cities, dedicated Government agencies with operational autonomy should be carved out to provide services like water supply, solid waste management, sewerage, sanitation, primary health services, primary education, roads and urban transport. The elected municipal bodies may procure services from these agencies by entering into suitable MoUs with them with clearly specified and mutually agreed upon output parameters/deliverables. This arrangement would make delivery of services more accountable to people while the expert knowledge available with parastatals will be available in conceptualisation and implementation of projects (refer Box 18.4).

Set Up Area Sabhas and Ward Committees to Decentralise Urban Governance

18.37. Ward Committees and Area Sabhas should be set up for institutionalising participatory development process for effectively carrying out the functions devolved to ULBs under the Twelfth schedule of the Constitution. For this purpose, Area Sabhas would be constituted by comprising all citizens in one or two polling station areas who should elect, once in a five year, a small Committee of representatives. Further, Ward Committees should be set up in every electoral ward of Municipalities and Panchayats by drawing representatives from Area Sabhas. Together, these institutions will ensure that executive power is located at the ULB level, while the deliberative powers are vested with the Ward Committee. These structures will institutionalise participatory and accountability mechanisms. These structures should be further empowered through enactment of Community Participation Act and Public Disclosure Law. Enactment of these laws would be part of the mandatory reforms under the renewed JNNURM.

Box 18.4

Harmonising the Role of Parastatals with Elected Municipal Bodies

A frequently expressed criticism of JNNURM has been that large numbers of projects were executed through parastatals. As a result, ULBs, which are the main institution under the constitutions for participatory governance at ground level, have remained marginalised. Lack of participatory process has reduced ownership of programmes by people. At the same time, planning and execution of urban service delivery like water supply, sanitation, urban transport and so on are highly interdependent and complex in nature and require technical inputs. Thus, a key challenge is harmonising the role of experts dominated parastatals with the elected municipal bodies representing people for whom the Plan is drawn.

The roles and responsibilities of different institutions in such situations should be clarified along five principal dimensions:

- **Unique Purpose:** Each institution should have a clearly defined 'unique' purpose for itself, in line with people's aspirations. Typically it should not overlap with any other institution at the same federal level
- **Measure of Effectiveness:** In line with the unique purpose, relevant measures of effectiveness should be put in place. These will not only help in creating external accountability for the institution as a whole, but will also provide guidance to the individual employees to discharge their duties.
- **Exclusive Decision Rights:** The decisions which the institution is empowered to take and which others are required to follow must be specified. These decisions rights must be reconciled with decision rights granted to other institutions.
- **Expertise and Capabilities:** Empowering any institution with certain decision rights alone is not enough. The critically necessary capabilities/expertise required by the institution to perform its functions and fulfil its purpose must be defined, along with processes for ensuring it will have these capabilities.
- **Inter-linkages within the Ecosystem:** Lastly, it is critical to understand the inter-linkages with other institutions in a complex, multi-institutional environment. A particular institution may have different types of relationships with other institutions. These could range from being a regulator, to having a contractual arrangement or serving as a technical advisor.

Put In Place a Fiscal Responsibility Framework for ULBs

18.38. Adoption and monitoring of prudent financial management in ULBs should be institutionalised through appropriate legislation. ULBs should prepare a medium term (10 years) fiscal Plan, fix a ceiling for revenue expenditures and perform regular audits.

Adopt an Outcome Based Approach and Put Up a Robust Monitoring Mechanism

18.39. A significant change would be to shift to outcome-based monitorable milestones as a measure of performance instead of exclusively relying on expenditure. The implementing ministries should suitably draw their Result Framework Document (RFD) for better implementation of programmes aligned to the needs of people. For instance, Ministry of Housing and Urban Poverty Alleviation may draw a quantitative target of reduction of households staying in slum. Ministry of Urban development may draw target of increase in share of public transport; coverage of access to water and sanitation and so on. This robust system of monitoring of the implementation of the Plan would also require frequent consultations with all stakeholders including elected representatives, citizens groups, civil societies and experts. All the schemes drawn under the Twelfth Plan must contain these provisions for monitoring and for receiving feedback so that plans are owned by the people for whom and progressively by whom, they are made.

Set up Lokayuktas/Ombudsman at State and City Level

18.40. In line with the recommendations of the Thirteenth Finance Commission, it is essential to bring local office bearers, councillors and other office bearers under the purview of an Ombudsman or the Lokayukta. The role of the Ombudsman would be to mediate conflicts between citizens and various urban authorities.

Urban Planning

18.41. A key weakness of India's urbanisation efforts is that the agenda is being implemented through disjointed projects/activities with inadequate or no planning for the urban area as a whole. The 'Master Plan' approach generally focuses on only the core

area of the city, has little linkages to any financial and operating strategy and, in many cases has been used as a regulatory tool instead of being a blue print for development of dynamic and smart cities. A master plan typically freezes the land use pattern and building bye-laws and so on determines the permissible limits of Floor Space Index (FSI) and minimum set-back areas. Often these provisions do not take into account the potential of the city to grow, especially where trunk infrastructure has been laid. This results in sub-optimal use of land as well as the infrastructure. Though JNNURM mandated preparation of City Development Plans (CDP) before taking up any projects, in many cases, the CDPs became hastily put-up documents with limited consideration of socio-economic aspects. Exclusion of peri-urban areas where fast growth is taking place has further limited the adequacy of such planning for guiding the emergent needs of a city.

18.42. Absence of any long-term plan prevents development of 'good cities' in which all the parts of the system—urban services, transportation, housing, commercial activities—fit together harmoniously. Planning must be holistic before it is detailed, for example, urban housing and urban poverty issues cannot be separated from other aspects of urban planning. A whole-city-approach is required and, therefore, there is a need for both Central Ministries which provide assistance under JNNURM for urban renewal to work very closely together. Holistic planning, even if not detailed, is required at the local urban level, at the metropolitan level and at State and national levels too.

18.43. The concept of 'Master Plan' to guide a city's long-term development has evolved in many countries to increase the quality of participation of all sections of citizenry in the preparation and endorsement of the plan. Earlier master plans used to be prepared mostly by experts in urban planning to engineer the physical layout of the city which often excluded the needs of citizens, especially the poorest whose requirements thus became peripheral to the Plan. Best practice master planning today is a core participatory process and addresses the needs of citizens more holistically.

City Development Plan and Financial Plan

18.44. Every city/town should mandatorily draw a *Development Plan (DP)* by taking at least a 10-years perspective. The plan should take into account a city's natural endowment, and its economic potential and should promote clean and green city. It should specifically provide for the following:

1. Strategic densification especially along mass transit corridors with mixed land use
2. City mobility plan with special emphasis of making cities safe for vulnerable groups including women and children, pedestrian and cyclists
3. City sewerage and sanitation plan
4. City water plan
5. Economic and commercial activity plan
6. Infrastructure plan
7. Affordable housing plan
8. Environment conservation plan
9. Urban poverty reduction strategy and inclusionary zoning (old age homes, orphanages, working hostels, night shelters and so on)
10. Plan for peri-urban area

18.45. Financial plans that indicate the sources of funds required for the holistic urban development of a city must also be prepared. Performance against the agreed upon targets indicated in the Financial Plan should not only be used to monitor the efficacy of financial reforms being implemented across the State and city but also form the criteria of release of central assistance to the ULBs.

18.46. Drawing of DP and FP should be a necessary precondition for receiving assistance under the renewed JNNURM.

18.47. To ensure planned development of cities, a series of policy and institutional strategies should be adopted during the Plan period:

Ensuring Citizens' Participation at the Planning Stage

18.48. Success of any Plan depends on the extent it is owned by the people. This in turn would depend on what the Plan does for a common person. Since,

in an emerging economy, every sector makes a claim for available resources, it is necessary that scarce resources made available for the urban sector are utilised efficiently and spent in the manner that is relevant for the people. Therefore, in accordance with the spirit of the 74th CAA, it is necessary that 'people' should be brought to the heart of the urban agenda, both, for deciding the vision of their city and for choosing the process of reaching the goal. Thus, involvement of people through Area Sabha and Ward Committees in the Planning Stage must be a necessary prerequisite for implementation of all schemes for urban development including schemes for slum improvement.

Constitute/Strengthen the Metropolitan Planning Committees (MPC) and District Planning Committees and Restructure the Role of the Metropolitan Development Authority

18.49. As per the 73rd and 74th CAA, a minimum of 2/3rd of the MPC shall be constituted of elected representatives from the metropolitan region, and a minimum of 4/5th of the DPC shall be elected by, and from amongst, the elected members of the District Panchayat and Municipalities in the district in proportion to the ratio between the population of the rural areas and of the urban areas in the district. Currently, DPCs are dysfunctional in most States.

18.50. Once constituted, the MPC/DPC should create the spatial development Plan for the region including any rural areas that may lie within the district boundary but outside the municipal limits of an urban area. Such Plans should take a longer 20+ year perspective with a formal review every 5 years. The broad Spatial Development Plan should then be used by the ULBs as a guiding framework to create the second level detailed plans for the city. The timeline of the Metropolitan Development Plans and the District Development Plans should be synchronised with ULB Spatial Plans.

18.51. The Metropolitan Development Authority under the aegis of the Metropolitan Planning Committee should be vested with the responsibility of enforcing and regulating the metropolitan

development Plan. It should be the appellate authority for conflict resolutions on spatial plans for all Local Planning Authorities in the metro region, in keeping with the letter and spirit of the Constitutional Amendment Act.

18.52. Given the revised mandate of the Development Authority it should be relieved from responsibilities related to project implementation and land development so as to avoid any conflict of interest between the roles of planner/regulator, and that of project implementer or developer. Finally, it is recommended that the Chief Planning Officer and his establishment in the district ought to become part of the technical support system of the DPC.

ULBs must Prepare Municipal Plans while Utilities, Environmental Bodies and Parastatals should Provide Technical Inputs

18.53. Each municipality must mandatorily fulfil its obligation to produce a spatial plan within a specified time period. The Spatial Development Plans prepared by a municipality should be submitted to the MPC/DPC. Any directions given by the MPC/DPC from the point of view of ensuring the fulfilment of requirements and imperatives of the notified Metropolitan/District SDP should be complied with and these should be binding on the municipality. The spatial plan which fully complies with such directions (if any) shall be approved by the concerned municipal corporation/council. This will not only ensure compliance with the requirements of regional planning, but will also safeguard the power of the individual ULBs to approve the SDPs prepared by them without submitting it to the State Government for final approval.

Modify State Town Planning Acts, Municipal Laws, Building Byelaws and Land-Use Conversion Norms

18.54. These legislations need to be reviewed and revised to address the current challenges of urbanisation as well as to reflect recent policy recommendations to allow regional decentralisation and citizen participation. Metropolitan plans should be binding on municipal plans and should integrate top-down and bottom-up plans, reinforcing the concept of

‘urban development regions’ around the municipal boundaries.

Provide Incentives for Strategic Densification of Cities/New Towns on Growth Corridors

18.55. Strategic densification as a planning strategy should be pursued to accommodate future urbanisation needs. In addition, mandating inclusionary zoning and providing higher FSI to make the economics of affordable housing viable should be considered. Similarly, new cities may be planned to nurture emerging growth nodes in the urban landscape. However, as international experience indicates, the success of new cities is dependent on factors like their proximity to, as well as connectivity linkages with an existing metropolitan city. An effective regulatory regime which allows ease in conversion of land use while cities and their peri-urban areas are developing is critical. As a long-term strategy, the Ministry of Urban Development should identify such corridors and nodes with urban growth potential and facilitate their development (refer Box 18.5).

Consider Land Readjustment

18.56. Land readjustment (LR) is gaining acceptance as an alternative to land acquisition as it has many advantages for land assembly. Under this process, a compact area is selected in consultation with the land owners for urban expansion/renewal. The municipal authorities provide infrastructure which is funded by exploiting a part of land. The remaining land, whose value has increased due to provision of infrastructure, is reallocated back to participating private land-owners. In essence a participatory tool, LR avoids public discontent and protests to a great extent. It also reduces the need for raising large amounts of money for acquiring land. However, successful LR is grounded in three main enablers:

- Fairly well-defined property rights
- Streamlined, independent and transparent evaluation processes
- Strong judicial system to address public concerns

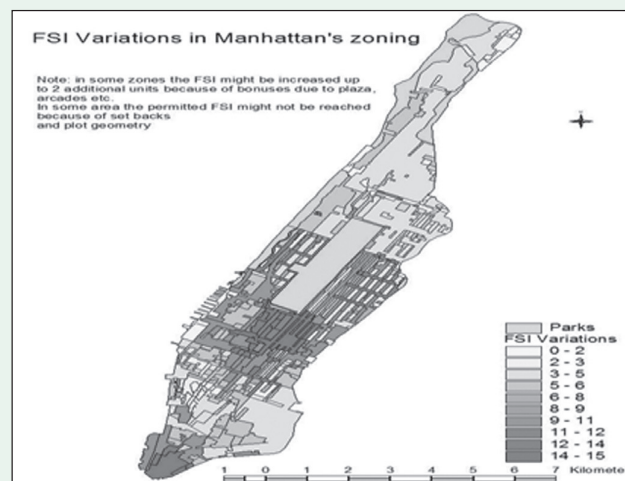
Financing Urban Infrastructure

18.57. The Isher Ahluwalia Committee on Urban Infrastructure and Services (2011) estimated the

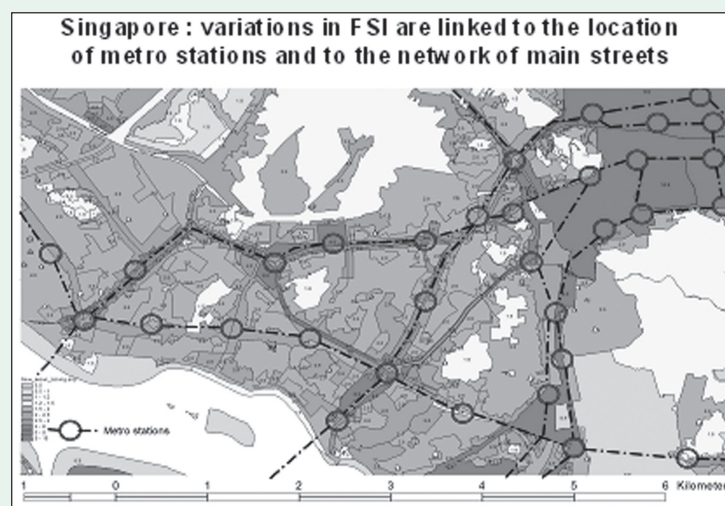
Box 18.5 Strategic Densification—International Examples

Large Indian cities have high population density. However, FSI in these cities are low compared to many smart cities in the world. This results in low per capita availability of urban space. Strategic densification of cities through higher FSI has numerous advantages: it makes the cities compact and efficient and frees space for accommodating more people as well as for providing urban amenities. Pricing of higher FSI also generates resources for funding urban infrastructure projects.

In Manhattan, as well as in other international best practice examples, FSIs vary by location and land use. Density zones are typically small and are determined by street width and capacity as well as land use patterns. Commercial and office districts typically have higher FSIs than residential districts. FSIs are set in conjunction with the formulation of development and strategic plans. Optimising infrastructure and density is a central element of urban planning.



Singapore makes highly effective use of FSI with variations by location and type of use. FAR is higher near metro stations because transport system can accommodate increased density. As higher FSIs will require more infrastructure investments, they can be financed by suitable instruments like development fees or pricing of Tradeable Development Rights (TDRs) and so on.



Source: India Urbanisation Review: Urbanisation beyond Municipalities (2012), World Bank.

total capital investments in urban infrastructure at about ₹39 lakh crores over the next 20 years. To meet this requirement, ULBs will need to identify robust revenue streams. In addition, both central and State Governments will also have to increase their commitment to the urban sector.

18.58. Working on the 20 year estimate provided by the Ahluwalia Committee, three alternative scenarios of covering the backlog of service deficits in 10 year, 15 years and 20 years respectively were developed for projecting investment. The aforesaid 15-years scenario up-fronted investment in water and sanitation sectors as well as investment in capacity building in view of the huge externalities and also moderated its projection on the basis of capacity constraint. Unless stated otherwise, the estimates so derived have been used in the chapter.

18.59. The share of ULBs' own revenues has declined significantly from 63 per cent in 2002–03 to 53 per cent in 2007–08. Property Tax collection is hampered by poor assessment methods, limited coverage, weak collection efficiency, loss on account of exemptions and poor enforcement. User charges also remain low, most often lower than the operational costs for ULBs. Most States have also not fully implemented the recommendations of State Finance Commissions, leaving ULBs with unpredictable funds' transfers from State Governments.

18.60. During the Twelfth Plan period, the finances of ULBs should be strengthened with a three-pronged approach

- create robust tax and non-tax based revenue streams for ULBs;
- attract private capital to the urban sector; and
- systematically monetise land.

18.61. A major strategy under the Twelfth Plan would be to strengthen the municipal finances and make them predictable through suitable reforms under JNNURM. This is necessary for attracting private funds for urban infrastructure. To this end, the following initiatives must be undertaken by the central and State Governments.

Institutionalise the Revenue Streams for ULBs

18.62. The Ministry of Urban Development should facilitate the process of making a Constitutional Amendment that clearly outlines the various tax and non-tax revenue streams for ULBs through the incorporation of a Local Bodies Finance List in the Constitution. In addition to property, entertainment, professional, motor vehicle, advertising tax and stamp duty, the amendment should also entitle the ULBs to collect appropriate user charges, trade license fees and use land-based instruments to augment their revenues. It must ensure that all taxes are regularly revised using scientific principles such that they serve as relevant sources of funds for ULBs.

Ensure Revenue Sharing from States to ULBs

18.63. According to HPEC, States should share 25 per cent of the GST equivalent with urban and rural local bodies, and this should be enforced through an appropriate constitutional mechanism. HPEC's recommendations in this regard are given in the Box 18.6.

Ensure Generation of Non-budgetary Revenues through Innovative Measures Including Monetisation of Land

18.64. Additional FSI that is given beyond what is normally prescribed should be charged for adequately. Such charges should be a part of the balanced strategy for expanding the effective supply of prime land going hand-in-hand with the strategy for creating 'virtual land' in the required location by building tall. The charges for additional FSI and land-use conversions should be determined professionally and should be at least 50 per cent of the actual land value in the concerned area. Apart from FSI, ULBs should also use various other land value-based instruments like betterment fee, land use conversion charges, impact fees and development charges that should be parked in a ring fenced city development fund and used for developing the required urban infrastructure in the city.

18.65. To enable land monetisation, a comprehensive and transparent framework should be put in place with the following features:

Box 18.6**Recommendation of Isher Ahluwalia Committee on Financial Devolution to ULBs**

The Committee recommends more broad-based revenue sharing by States with ULBs through appropriate amendments of the Constitution/other measures so as to:

- Insert a 'Local Bodies Finance List' (LBFL) along the lines of the Union and State Lists
- Empower ULBs to exclusively levy property tax, profession tax, entertainment tax and advertisement tax and retain the whole of their proceeds (hereinafter referred to as 'exclusive taxes'). In case States continue to levy and collect profession tax or entertainment tax, then the entire revenues, net of collection cost, should be passed on to the ULBs
- Constitutionally ensure sharing of a pre-specified percentage of revenues from all taxes on goods and services (including motor vehicle tax and stamp duty) which are levied by States to enable ULBs 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 ULBs and also grants-in-aid to ULBs from the divisible pool for bridging, wherever necessary, horizontal fiscal imbalance;
- Provide that the devolution in (c) above shall be on the basis of a formula designed by the SFC, taking into account the level of economic activity, population levels, extent of poverty, capacity to mobilise resources and other factors as may be necessary over time.

The Committee also recommends that States should strengthen SFCs by improving their capacity, following the recommendations of the thirteenth CFC. They must also ensure that the recommendations of SFCs are given the same level of consideration as the recommendations of the CFC to the Government of India.

Source: HPEC Report (2011).

- Development Plans should be prepared using a standardised approach on a regular basis
- Land-use patterns must be maintained as per approved Master Plans
- The process of land development should be strategically sequenced to generate resources for infrastructure creation
- Roles and responsibilities of Urban Development Authorities and ULBs in the land management process must be clearly delineated

Increase User Charge Collection

18.66. ULBs should levy user charges for all measurable services where beneficiaries are easily identifiable. Appropriate level of user charges should be determined based on actual service use, and regulated by the proposed municipal services regulator. These charges should not only cover the O&M costs, debt servicing costs and depreciation, but also provide a minimal profit to the ULBs to facilitate creation of an equity base for ULBs over time. Also, there should be a tiered structure of user charges, where higher levels of consumption should be charged a higher tariff.

Establish a Comprehensive Approach to Facilitate PPPs

18.67. As much as 13–23 per cent of investments in urban infrastructure in the Twelfth FYP can be raised through public private and people partnerships. This should be done under an extended '4P' framework—*People-Private-Public Partnerships* as experience across the world indicates that in urban renewal and management, the role of 'People' in design of projects and partnerships is crucial, much more so than in large infrastructure projects such as highways, airports, power, power plants and so on, in which 'People' have a relatively limited role in the ongoing governance of the projects and their outcomes. Therefore, best practices and model documents for 'PPPP' must be evolved and deployed for India's urban management agenda to succeed. This would improve the ownership of these projects and would facilitate an effective R&R component of the project. These PPPP projects may become more viable if a subvention from property and other urban taxes is imaginatively used to meet any financial gap in the projects where felt necessary (refer Box 18.7).

Box 18.7 PPP in Urban Sector under JNNURM

It has been estimated that about 13–23 per cent of the total investment requirement in urban sector can potentially come through PPPs including annuity model. This would roughly translate to about 250–300 PPP projects in urban sector each year.

JNNURM-I was the first major initiative which encouraged PPP in urban sector. Forty-nine projects involving total project cost of about ₹5,458 cr were taken up under PPP framework in sectors like solid waste, water supply, sewage and urban transport in which private concessionaire brought in investment of ₹1,066 crore.

A major factor that has prevented mainstreaming of PPP framework in urban sector is that given low user charges, very few projects are financially free standing and sustainable on the basis of user fee alone. PPP projects in urban sector would require relatively higher degree of government support and may be broadly classified as follows:

- Projects which are free standing, usually based on user charges, sometimes combined with Viability Gap Funding (VGF) or revenue streams from real estate
- Revenue linked to a performance based unitary charge (tipping fee for instance) with a minimum throughput assurance
- Revenue linked to a performance based periodical payment (annuity payment)
- Projects having little or no capital investment from private sector but designed to bring in efficiency improvements: for instance management contracts

Experience in other infrastructure sectors especially highways have shown that beside enabling environment, standardisation of bidding documents is key to encourage PPP projects. Such standardisation leads to greater certainty, broad public acceptability, reduction in transaction costs and time besides addressing the issue of capacity constraint.

Under the Twelfth Plan, there is need to develop such model documents for PPP projects in urban sector including:

- Water supply
- Urban waste management including solid waste and sewerage
- Urban transport
- Social sectors like Health care and education
- Affordable housing

Another important aspect in designing a PPP project is to ensure participation of people so that the project has the requisite ownership.

Set up a 'Ring-Fenced' City/State-level Development Fund

18.68. Set up a city/State-level development fund: Proceeds accruing to ULBs from innovative sources like land monetisation and other land based instruments should be pooled into a 'ring fenced' city development fund and then used only for urban infrastructure projects and projects for providing shelters to the urban poor in respective cities and not for any other purpose. In view of the capital intensity of transport projects, it is suggested that the fund may have two parts—(i) Fund marked for urban transport projects and (ii) fund for other infrastructure and shelter related projects. To start with, such funds may be created in metropolitan cities. To meet the demands of smaller ULBs, each State should set up a State Financial Intermediary, on the lines of

Tamil Nadu Urban Development Fund (TNUDF), which can then pool funding requirements of the ULBs in the State and provide economies of scale.

Empower ULBs to Leverage Municipal Bonds Including Pooled Financing

18.69. A handbook should be created based on consultation with key stakeholders that specifies regulations relating to lenders and lending instruments, mixed or shared authority and responsibility between the Central and State Government and the ex ante borrowing activities of municipalities and ex post procedures relating to municipal default and insolvency.

Bolster State Finance Commissions

18.70. The State Finance Commissions (SFCs) need to be further strengthened for financial devolution

and imparting predictability to the municipal finances. For efficient functioning of the SFCs, there is a need for revamping MIS at municipal level. Suitable assistance for strengthening of SFCs and creation of municipal level MIS should be admissible under capacity building component of JNNURM.

Building Capacity for Managing India's Urbanisation

18.71. Lack of sufficient capacity across all levels of Government is a root cause of India's urban development challenges. The Mid-term Appraisal of the Eleventh Plan highlighted that many States have lagged in programme utilisation due to inadequate capabilities of governance and management. Traditionally, capacity building, though critical, has been given low priority, which is evident in the absence of dedicated municipal cadres and robust urban management structures. Substantial skill gaps exist across almost all areas of urban management. This is driven as much by the lack of credible and specialised supply side institutions as it is by poor demand from those responsible for urban management in cities. Addressing the capacity deficit must be a key endeavour during the Twelfth FYP and the following strategies should be adopted to achieve this:

Create a Comprehensive Capacity Building Strategy

18.72. The Central Government should create a comprehensive framework that addresses issues such as staffing, training and skill development and finances. This framework should then be used by the States to evolve a capacity building strategy for all their ULBs detailing staffing norms, cadre rules that reflect service delivery and governance norms to be met by ULBs. This strategy should dynamically meet future needs, incentivise knowledge and skill development and provide an environment for using the acquired skills. State strategies should translate into ULB level implementation plans for capacity building. In view of its centrality to India's urban agenda, a separate sub-mission for capacity building, with 10 per cent of the overall funds should be created under the renewed JNNURM.

18.73. The wide-spread need and extreme urgency for urban management capabilities to catch up with

the relentless process of India's urbanisation, makes a 'Just-in-Time and Task-Aligned' approach imperative to build capabilities. In a 'Just-in-Time and Task-Aligned' approach, functionaries are provided requisite tools and skills as they get to do the tasks, rather than acquiring these only through 'remote' training programmes not synchronised with action requirements. Therefore, the training process must be flexible and accessible. IT-based training systems enable this.

18.74. Key elements of capacity building could be as follows:

Institutionalisation and Professionalisation of Municipal Cadre

18.75. Every State should institutionalise a dedicated municipal cadre with necessary technical skills. The cadre should cover the key areas of urban governance and be equipped for increasing complexities of modern city management. State Governments should suitably frame the recruitment rules including norms for direct recruitment to ensure that the cadre attracts top-quality talent. A career path should also be put in place by allowing functionaries to move to higher levels of local bodies based on their experience and should ensure that employees are continuously motivated and recognised.

Leverage Private Sector Expertise

18.76. To meet the skill deficit in the short to medium term, policies should enable recruitment from the private sector and hiring of external consultants through a fast-track process. States can consider creating a list of 'empanelled urban practice professional institutions' to streamline the procurement process and enable ULBs to access external talent in a timely manner.

Establish a Reforms and Performance Cell at the Central Level

18.77. A dedicated unit to address issues such as implementation of reforms, dissemination of best practices across urban issues should be set up under the Capacity Building Mission structure of JNNURM. This unit should comprise urban planners, municipal finance experts, IT personnel, public

health engineers' and others from required disciplines in addition to programme managers.

Launch Five Indian Institutes of Urban Management (IIUMs)

18.78. The Government of India in partnership with State Governments and the private sector should set up five Indian Institutes of Urban Management (IIUMs) over next two Plan periods and at least two in the Twelfth Plan to help prepare future generation of urban managers/regulators with world-class training in urban issues. It is also of utmost importance that these institutions are professionally managed by a joint board of stakeholders having required autonomy.

Facilitate Information Sharing Between Urban Managers

18.79. Strengthen the Urban Resource Link Project, designed by the Administrative Staff College of India in partnership with the World Bank Institute, to provide timely, relevant and quality information related to urban issues to urban managers across cities. Existing city manager associations should also be strengthened and networking opportunities should be created for urban managers to interact and learn.

Use ICT and e-Governance

18.80. e-governance initiatives including Online Project Management Information System should be implemented across all ULBs. There should be a State level nodal agency for implementation and monitoring of all e-governance initiatives within the State. It should also identify the training needs and coordinate with relevant agencies to conduct trainings.

Strengthen Institutions to Cater to Dynamic Urban Needs

18.81. The Ministry of Urban Development and Ministry of Housing and Urban Poverty Alleviation should bolster existing institutions and set up new ones to assist with policy research, design, and implementation as well as to train municipal officials, and elected representatives. Of these at least one to two institutions should have investments and involvement of the private sector.

Reorient the Activities of Existing Organisations namely IIPA, NIUA, RCUES

18.82. The Indian Institute of Public Administration (IIPA) along with the Administrative Training Institutes (ATIs) should be tasked with the preparation of standardised training modules and testing of training modules before they are circulated across the country to ensure they are in synchronisation with current requirements. The National Institute of Urban Affairs (NIUA) focus should be renewed such that it is capable of assisting the MoUD with policy formulation, providing advisory services to States on a variety of urban governance dimensions, and implementing high end capacity building activities for policymakers. The Regional Centres of Urban and Environment Studies (RCUES) should conduct active research related to policy support to cities and also disseminate various policies and programmes of Government of India and State Governments. These centres should carry out capacity building programmes in respect of new initiatives and priorities identified by the MoUD.

Enter into PPP Arrangements for Capacity Building

18.83. The Government's network of 1,817 Industrial Training Institutes (ITIs) and the 3,338 Industrial Training Centres run by the private sector could be roped in to up-skill and re-skill ULB personnel.

18.84. In conclusion, it must be reiterated that a modern 'Just-in-Time and Task-Aligned' approach is required to ensure that supply-side capability building institutions meet the demand side needs rapidly and effectively. India's urbanisation is unstoppable. Urban managers will have to learn while doing.

Leveraging Innovation to Solve the Challenges of Urbanisation

18.85. Managing India's ongoing urbanisation will place huge requirements on financial as well as human resources in the country. Given the scarcity of resources in the medium term, innovation will have a significant role to play. In the Twelfth Five Year Plan period, it is critical to promote innovation and research in several ways :

Provide Support and Incentives for Innovation

18.86. Given the huge requirement of funds, it is critical to incentivise cost reducing innovations in the fields of materials and processes. The support can be in the form of incubation assistance and low cost funds. Incentives could be in the form of recognition and rewards.

Use Technology Extensively in Urban Management

18.87. Technology can unlock significant potential in building capacity across the ULBs. Innovative uses like, self learning packages which simulate real life situations relating to operations and maintenance can be developed in areas like water supply and sanitation, solid waste management and urban planning.

Recognise and Replicate Innovation

18.88. Creating innovative solutions is not enough. These solutions need to be spread across the country to maximise impact. Various approaches to identify, and spread the use of innovations should be institutionalised. These would include ‘innovation and best practices’ portals. The portals created by the national Innovation Commission can provide a platform. The Peer Experience and Reflective Learning (PEARL), platform created by the Ministry of Urban Development under JNNURM whereby cities can learn from each other, will also propagate solutions and its use and coverage should be dramatically scaled up.

SECTOR SPECIFIC APPROACH**Affordable Housing**

18.89. The Technical Group on the Estimation of Urban Housing Shortage has estimated the current shortage of 18.78 million dwelling units. Further, the Group has also estimated that 73 per cent of the shortage in self occupied housing is in bottom 40 per cent of the urban households. The proportion of slum dwellers in large metropolitan areas is higher.

18.90. As against this huge requirement, during the seven years of implementation of the BSUP and the IHSDP component of JNNURM, only about

1.6 million dwelling units have been sanctioned. Given the huge investment required to bridge the gap between demand for affordable housing and its availability, all the costs cannot be borne by the Government and hence the key would be to attract private investment and to enable the beneficiary to increase his/her contribution. A multi-pronged strategy is required to meet the need for housing of the urban poor. First, a facilitative environment must be created by reviewing the regulatory processes governing land use to augment the supply of affordable housing with private capital. Second, encouraging contributions from beneficiaries of the slum—rehabilitation schemes are required for increasing the ownership of the programme. For this, the flow of institutional credit to the urban poor should be ensured. Third, they should be organised in suitable societies and self-help groups. These measures would improve the capacity of urban poor to afford a decent shelter either through incremental improvement of their existing dwelling units or take up shelter on rental basis or new units on ownership basis. Fourth, the Government should continue to undertake and expand the slum rehabilitation programme under the overall umbrella scheme of Rajiv Awas Yojana. Fifth, innovative approaches to facilitate the creation and maintenance of rental housing stock including dormitories should be expressly undertaken to serve the needs of the floating and migrant urban poor. And lastly innovations aimed at low cost housing must be encouraged.

18.91. Availability of land for affordable housing is perhaps the most crucial issue. Progress in implementation of BSUP and IHSDP and now RAY has been hampered by non-availability of suitable land for in-situ slum rehabilitation. The scarcity of land is the result of sub-optimal land-use patterns largely induced by the regulatory regime in place, lack of long term urban planning and lack of participatory planning process to determine the most efficient use of a parcel of land.

18.92. Several strategies can improve land availability for affordable housing and monetise land values for infrastructure. They are as follows:

1. Instead of relying on public land acquisition using the power of eminent domain under the current 1894 Law, which often give rise to discontent, the use of Land Readjustment methods must be extended for land assembly and infrastructure development to the extent possible. India has already been experimenting with a variant of LR in Gujarat's Town Planning Schemes (TPSs). Another ongoing experiment is the improvement of the C-ward in Mumbai that showcases the promises of participatory processes in urban renewal. There is need for scaling such experiments.
2. Adopting mixed land use and subsequently modifying regulations governing land use and removing deficiencies in the urban land market need to be given high priority. In many parts of the country, urban land planning limits redevelopment, modernisation and the repurposing of older inefficient areas. Weak institutional and information foundations still govern land markets. In many cases, urban plans seek to preserve status quo by limiting land assembly and freezing the density of developments by using very low Floor Space Indexes (FSI), and limited coordination with infrastructure development. Under the Eleventh Plan, JNNURM sought to address these issues by incentivising several urban reforms. Completion of reforms mandated by JNNURM must be given priority.
3. Simplification of procedures for conversion of land use and change in building bye-laws have been mandated under JNNURM. These reforms should be completed.
4. JNNURM mandated earmarking at least 20–25 per cent of developed land for housing projects for EWS/LIG category with a system of cross subsidisation. This reform should be completed on priority.
5. As mentioned in paragraph 18.55 above, there is an urgent need for strategic densification of our cities, especially along trunk transport networks and around zones of intense economic activities. Densification would make space available for affordable housing and generate resources for affordable housing. An argument in favour of keeping the densities low is that the existing

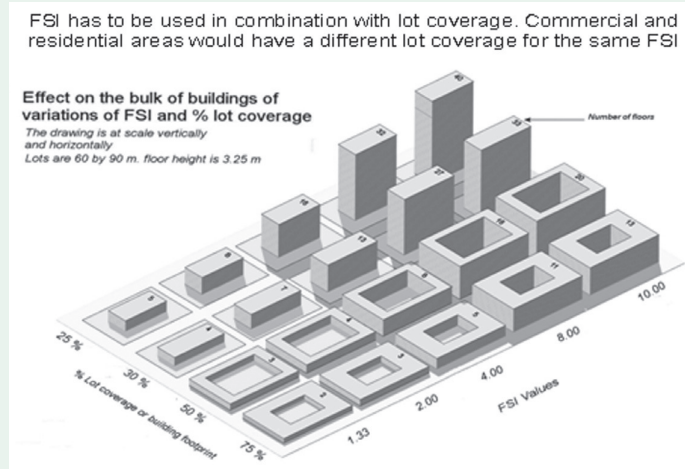
infrastructure systems in cities would collapse if urban densities were increased. While cities do have severe infrastructure limitations, these arguments ignore the opportunities of using increases in land values by strategic densification to finance higher-capacity and higher-quality infrastructure networks and also affordable housing for low-income and moderate-income groups. In addition, compact development fosters increase in agglomeration economies and increased productivity which in turn leads to additional livelihood opportunities. However, care should be taken that the valuation of FARs required for strategic densification is not 'given away'. It has been observed that high FARs are 'given away' in the name of densification, cluster development and redevelopment. These 'give-ways' should be properly valued and put in a dedicated City Development Fund.

18.93. Since land and housing are State subjects, both JNNURM-II and RAY should continue to provide incentives to States to professionalise urban planning and undertake tenuous land-related reforms that reduce distortions in land markets.

Estimation of Budgetary Support for Slum Rehabilitation Programme

18.94. The Isher Ahluwalia HPEC has estimated a requirement of about ₹4.1 lakh crore over the 20 years for the purpose of slum rehabilitation. In addition, noting that about 25 per cent of urban population live in slum, the HPEC recommended that for inclusive growth, out of the estimated CAPEX of 34.1 lakh crore over a period of 20 years, 25 per cent, that is, about ₹8.5 lakh crore should be for slum population, assuming universal standards for all as well as universal provision for access and mobility. However, an objective estimation of the budgetary requirement from Central Government for the Twelfth Plan is difficult because this is crucially linked to the extent of innovation in low cost housing, the flow of private capital for such dwelling units and the extent of contribution from other stakeholders like the State Government, ULBs and the beneficiaries.

Box 18.8 FSI and Coverage Areas Can be Combined to Increase Densities



Source: India Urbanisation Review: Urbanisation beyond Municipalities (2012), World Bank.

18.95. Besides availability of resources, an important element that determines provision of central budget is the capacity available with different level of governments to undertake the activities required. Under the BSUP and IHSDP components of JNNURM, the cumulative expenditure across seven years has been approximately ₹13,000 crore. Despite its superior architecture, RAY has not evoked immediate response from the ULBs or the State Governments.

Schemes for Slum Rehabilitation and Affordable Housing in the Twelfth Plan Period

18.96. The schemes under the Twelfth Plan would be as follows:

1. Rajiv Awas Yojana: Phase-II of the Rajiv Awas Yojana would be launched. Ministry of Housing and Urban Poverty Alleviation should constitute a suitable committee to recommend the design of second phase of RAY by incorporating the learnings from the pilot phase. Phase II of the scheme should retain the principal architectural feature of phase-I of Rajiv Awas Yojana which are as follows:
 - a. It is based on a *holistic approach*: Before seeking assistance under the scheme, all participating cities are required to make a city wide plan for rehabilitation of ‘all’ slums.
 - b. It mandates *in-situ rehabilitation* of slums so that the livelihood opportunities of their dwellers are not disrupted. In case such slums have to be relocated because the sites at which they are situated are ‘untenable’, this should be done through a transparent process and the rehabilitations should be planned in close vicinity of the existing slum.
 - c. It mandates *giving ‘property rights’ to slum dwellers* by suitable enactment within a year of the project being sanctioned. Besides, during this period it also mandates enactment of legislations to earmark 20–25 per cent of developed land for housing projects for EWS/LIG category and earmarking of at least 25 per cent of budget of municipal and other such body which provide basic urban services for urban poor. It also requires the participating States to draw specific time-lines for legislations like modification of the Rent Control Act.
 - d. Central assistance is up to 50 per cent of the project cost.
 - e. The scheme provides for measures to improve the flow of institutional credit to

the beneficiary. These measures are expected to incentivise banks and other lending institutions to provide credit to slum dwellers.

2. Phase-II of RAY would also emphasise following:

- a. *Creation of social/rental housing:* The focus of RAY on provision of rental/social housing stock for the migrant population is a critical element of a long-term preventive strategy. Of the total stock created under RAY, at least 30 per cent should be rental, and 5 per cent should be dormitories. Dormitories can be set up in industrial and commercial areas that see a significant influx of migrant workers.
- b. *Slum-upgradation as the solution of choice and transparent process for determining the tenability of slum rehabilitation:* Resettlement or relocation should be seen as an alternative option only in exceptional situations. A clear policy for in-situ slum upgradation including redevelopment and resettlement/relocation should be evolved by the GoI and implemented in the State as broad guidelines with State-specific amendments as per individual contexts. While evaluating the city wide slum rehabilitation plan, tenability of slums should be clearly identified by the Central Government in consultation with the State Government.
- c. *Building affordable housing stock in peri-urban areas:* RAY should also make provisions for affordable housing for the urban poor in peri-urban areas. The provision of affordable housing in peri-urban areas must be accompanied by the provision of basic services as well as functional transport linkages into the city.
- d. *Encouraging community participation to develop customised approaches for slum rehabilitation related to local needs:* Since a large number of slums are located on prime urban land which has multiple socially productive uses, every effort should be made

to economise on land use through higher FSI. But in doing so it is vital to involve the community in designing slum rehabilitation plans. This should include the involvement of the community in planning, execution, and analysis/feedback of various schemes. Schemes should encourage the creation of Community Based Organisations in slums, federated at a higher level into an association/federation, eventually working to the administrative level of the ULBs with clear-cut, institutionalised frameworks mandating dialogue between ULB level functionaries and the community. The involvement of NGOs in programmes and schemes may be encouraged wherever appropriate to the aims of the scheme. Community-based organisations should be accredited and enabled to play a meaningful role in initiatives such as RAY. This will help such organisations to build on the community mobilisation, participation and social audit, and evaluations guidelines provided for in RAY. Guiding principles for designing slum improvement could include exploring the possibility of channelising community savings, reuse of building materials and other innovative method of reducing the cost of new dwelling units. In those cases where slums are not on prime urban land, incremental improvement in existing dwelling units along with provision of basic services like water supply, sanitation, power connection and so on may be adopted.

For ensuring convergence with other schemes in the urban sector, RAY should be implemented within the overall umbrella of JNNURM-II. However, the funding pattern of RAY may be different. It should be run in project mode as project-wise involvement of centre in slum rehabilitation is desirable.

- e. *Slum rehabilitation scheme for smaller towns under JNNURM-II:* For the cities not covered under RAY, slum rehabilitation would be taken up under JNNURM-II. This scheme should have the flexibility to undertake new

construction while its thrust should be on *incremental slum rehabilitation* though new constructions as in the case of IHSDP of JNNURM-I would also be an admissible component. The budgetary provision for the scheme would come from the overall allocation made under JNNURM-II.

- f. *Affordable Housing in Partnership*: While under the Twelfth Plan, this scheme may continue to remain dovetailed with RAY, it needs to be completely revamped. Its thrust should be to incentivise the private sector to augment supply of affordable housing in line with the strategy envisaged under the National Urban Housing and Habitat Policy (NUHHP) of 2007.
3. In addition to launching of the aforesaid schemes, following activities should also be undertaken to augment provision of affordable housing:
 - a. *Revitalise and reorient the role of State Housing Boards*: Efforts should be made to reorient the role of State Housing Boards (SHBs) and Development Authorities. They should be encouraged to develop multiple partnerships with the private sector for construction of affordable housing. State Governments should provide the necessary impetus by preparing State housing plans that are integrated into the overall metropolitan/city master plan and outline the roles of the SHBs. They should provide a larger quantum of guarantee to social housing programmes to enable SHBs to access a larger quantum of loan assistance from Housing Finance Institutions. SHBs should also work with the State Governments to acquire land at appropriate locations that can be used for the creation of affordable housing stock. The activities of SHBs can be broad based so that cross-subsidisation opportunities may be made available to them.
 - b. *Promote a corporatised agency for delivery of affordable housing under the Metropolitan Development Authority*:

At the metropolitan level there is no specific agency that is responsible for the delivery of affordable housing stock. The State Government may constitute a corporatised agency that functions with an empowered board and steers the development and delivery of such stock in the top 20 to 30 metropolitan areas.
 - c. *Accredit community-based organisations*: Community-based organisations should be accredited and enabled to play a meaningful role in initiatives such as RAY. This will help such organisations to build on the community mobilisation, participation and social audit, and evaluations guidelines provided for in RAY.
 - d. *Promote PPPP for affordable housing*: Further measures to facilitate private sector participation should be introduced. This should include capacity building and legislative arrangement for rolling out PPP projects for providing affordable housing. Additional FAR grant and the provision of using some part of the developed area for commercial purposes could be provided to developers interested in slum redevelopment projects targeted at the EWS and LIG segments. The ISSHUP scheme which provides interest subsidy on housing loans to EWS sections should also be reoriented to facilitate PPP models.
 - e. *Increase the corpus of the Credit Risk Guarantee Fund*: The credit mortgage fund launched under RAY should also be extended to cover any slum rehabilitation schemes undertaken by the Central Government. The corpus should be suitably enhanced and the policy should be fine-tuned such that allocated funds are used to underwrite similar funds created for this purpose by the private sector. This will generate significant additional capital for the sector and stimulate on-the-ground demand for affordable housing stock.
 - f. *Simplification of the process of approval for projects of affordable housing*: Delay in approval process not only acts as a

disincentive for the flow of private capital, it makes assembly of land more difficult besides time and cost overrun.

Urban Transport

18.97. Importance of an efficient urban transport system which is cheap, safe and reliable can hardly be overemphasised. The National Urban Transport

Policy 2006 calls for increasing the share of public transport in our cities from 22 per cent to 60 per cent. The achievements under the Eleventh Plan especially in terms of an extension of metro rail network and provision of projects as well as buses under JNNURM to improve public transport need to be further built up under the Twelfth Plan (refer Box 18.9).

Box 18.9

Metro—A Transformational Approach to Public Transport

High capacity Metro rails are already in use in India and are proving to be successful in addressing the issues of public transport. However, it is a highly capital intensive mode of transport and hence should be first deployed in large metropolitan areas.

When to Deploy a Metro Based System?

Given the high capital costs, high ridership is a must for a metro system to become economically viable. Ridership is a multi-determinant variant that includes population, disposable income per capita, city densification, availability and opportunity cost of land, morphology of the city, and more importantly, the aspirations of people revealed through political demand.

A metro rail project is recommended in cities which ordinarily have:

- Peak hour peak direction traffic (PHPDT) of more than 20,000 for at least 5 kms of continuous length by 2021
- Total population of more than 2 million as per 2011 census
- Average trip length of more than 7–8 kms for motorised trips
- At least 1 million ridership per day on organised public transport

These criteria are in the nature of guidelines and are not to be construed as entitlement for a metro project. As huge public money is involved in construction of these projects, in all such cases, in the first instance, feasibility of relatively cheaper options should be examined.

However, it is recognised that in some cases, especially along busy corridors, difficulty and cost involved in acquisition of land may make metro rail projects a better option. In addition, surface vehicular transport system in general are less energy efficient and cause pollution especially along busy corridors where rail based systems are the best option. Hence, there is a need for a thorough cost-benefit analysis to choose an optimum mode of transport to ensure value-for-money.

Funding the Investments for Metro Systems

Global experiences suggest that metro rail transit systems have largely been developed by the public sector (an analysis of 132 cities worldwide shows that 113 cities (~88 per cent) have metros which are developed and operated in public sector mode). As MRTS alignment usually result in a significant rise in value of the real estate along its zone of influence, Government entities promoting metro rail have used this resource to fund other urban infrastructure. The efficiency gains through PPP have been brought in at the O&M stage. However, given the huge requirement of capital and willingness as well as capability of the private capital to undertake such projects, in high-density corridors, projects which are viable on their own (with admissible Viability Gap Funding and commercial utilisation of land ordinarily required for the project) may be encouraged under PPP mode. However, projects which are financially unviable without providing additional real-estate development rights and so on, should primarily be funded by Government. The central Government may suitably contribute in funding such projects preferably by way of making grants. Appropriate arrangements however need to be placed for densification across such corridors and use of the enhanced value of the real estate for funding other infrastructure projects. Wherever projects are to be developed under public sector, apart from grant, long-tenured debt financing should be facilitated through Government guarantee.

Quality and Affordable Public Transport

18.98. A study (2008) conducted by Ministry of Urban Development estimated that public transport had accounted for only 27 per cent of urban transport in India. The same study also estimated that in cities having population more than 1 million, the share of public transport is even lower. Promoting public transport in a big way with an approach of transporting people rather than vehicles is therefore not an option but is central to any strategy to make cities sustainable and efficient. Hence under the Twelfth Plan, the aim must be to raise the share of public transport to at least 50 per cent of all motorised trips.

18.99. This would require appropriate legislative, institutional and financial arrangements under the plan. Besides incentives for promoting public transport, effective measures are needed to disincentivise the use of private transport, along with creation of an affordable and efficient public transport network.

18.100. The measures recommended for the urban transport sector are:

1. Strengthen UT Wing in MoUD

18.101. Being capital intensive by nature, urban transport will attract the highest share of investment in the urban sector in the coming years. A key challenge is to generate non-budgetary resources to fund these projects, especially through land-based instruments. To manage this scale and complexity, it is recommended that the UT wing of the MoUD is appropriately strengthened with a full time Additional Secretary in-charge to exclusively focus on urban transport issues and drive its implementation across the country. MoUD should suitably initiate a proposal in this regard.

2. Constitution of National Urban Rail Transit Authority

18.102. Currently the Metro Act 1978 provides for formations of a Metro Advisory Board for every Metro project to assist the Government in implementation and running the project. In view of the growing importance of rail-based mass urban transit, there is a requirement of a national level organisation for research, drawing of specifications and

standards, developing appropriate financing model of MRTS projects and so on. The Ministry of Urban Development should initiate a proposal for setting up an apex institution namely the National Urban Rail Transit Authority (NURTA) to promote rail-based mass urban transport in the country. The major functions of the Authority would include:

- a. Advisory services to centre, States and Urban local bodies by emerging as the knowledge and resource centre for rail-based urban transport excluding the sub-urban railways which are under the Ministry of Railways
- b. To draw specification and standards for rail-based mass transport system and determine the service level benchmarks for these systems
- c. To develop alternative financial models for funding the rail-based projects
- d. To develop capacity across different levels of government to roll out rail-based urban transport project on PPP basis. In this regard, to develop model bid documents
- e. To promote research and innovation in rail based urban transport system

3. Setting up of a Research Centre for Rail-based Urban Mass Transport System

18.103. The Ministry of Urban development should initiate a proposal for setting up a Centre of excellence for rail based mass transit system which should promote research in all the major components of such system viz. civil network, rolling stock, tracks and signalling. Fostering innovation in such capital intensive systems would reduce dependence on imports for projects in the country and would help India emerge as an exporter of these equipments. The aforesaid research centre may also become a resource centre for the proposed National Urban Rail Transit Authority.

4. Promote High Speed Urban Rail and the Regional Rapid Transit System

18.104. Linking the core of large cities with their periphery through a fast and efficient transport system has the potential to unlock significant gains and reduce the transport related bottlenecks. As the disposable income rises, citizens value their time and

are likely to be willing to pay higher fare. This also offers the opportunity for transit oriented development and promotes efficient land use. Besides inducing growth in satellite towns and peri-urban areas which are zones of intense economic activities, this also reduces congestion in the core of the city. As the experience of metro rail in India has shown, such transport networks are safe and have enabled the citizenry, especially women to participate more effectively in the economic activities of a city. The Ministry of Urban Development should explore such possibilities of developing rapid transport system and develop financial models for funding these projects through capture of value of the real estate along the alignment with an aim to reduce budgetary requirements.

5. Intelligent Transport System and Seamless Integration of Different Modes through Smart Card

18.105. Use of IT based applications for making public transport more efficient should be an integral part of any urban transport project. Already, in the Eleventh Plan, significant progress has been made in drawing City Mobility Plans and integrating various modes of transport. This initiative should be expanded in the Twelfth Plan to have a Common Mobility Card across all operators and all modes including parking.

6. Policy to Disincentivise Usage of Private Vehicles

18.106. Based on the 'polluter pays principle' it is recommended that an additional urban transport tax may be considered on private vehicles. This tax can be levied on an annual basis and can be collected through insurance companies for existing vehicles and directly on the purchase of new private vehicles. As the coverage of public transport improves in Indian cities, suitable disincentive to private cars may be introduced. Congestion pricing may also be explored as a means to reduce or stagger traffic on busy corridors and generate revenue for further expansion of public transport.

7. Social and Gender Auditing of Transport Projects

18.107. It is necessary that the benefits of urban transport projects are shared by all. Hence, choice of

alignment and timing of running the trains or buses should be carefully done so that poorer sections of the society and workers in the informal sector are given priority as these sections are wholly dependent on public transport unlike the relatively richer sections which have other options. Besides, the safety and security of public transport is of prime importance. The Ministry of Urban development would issue detail guidelines for social and gender auditing of the outcomes of urban transport project.

8. Promote Non-motorised Transport (NMT)

18.108. NMT such as bicycles, pedal rickshaws and pedestrianism are affordable, environment friendly and promote healthy living. They are particularly suitable for short trips, especially for last mile connectivity. Despite these obvious advantages, these modes have suffered from policy neglect. Urban planning in many cities has not made any provision for dedicated tracks for these modes. Consequently, safety concerns have prevented many citizens from switching over to NMT. MoUD should bring out a comprehensive set of guidelines to incentivise NMT under JNNURM-II. For instance, while renovating arterial roads or new road projects, it should be ensured that the project provides for pedestrian path and bicycle lanes, wherever the space permits. Innovations in improving designs of NMT like pedal rickshaw should be suitably incentivised.

9. Create New Departments of UT in State Urban Development Ministries

18.109. States should institute a dedicated department for urban transport within the Municipal Administration and Urban Development ministry. This will help bring focus on the urban transport agenda for the State at large and key cities in particular. Ministry of Urban Development could suitably take up the matter with State Governments.

10. Institute a Safety Commission for Rail/ Guided and Road Transport

18.110. Safety is a critical issue in urban transport. For rail based mass rapid system, the Central Safety Commission should be appropriately strengthened. For road based system, State-level commissions may be set up for performing safety audits.

11. Promote PPP Arrangements, where Appropriate

18.111. Given the huge requirement of capital and willingness as well as capability of the private capital to undertake urban transport project, promoting PPP could be a key priority. All metro projects which are in high density corridors, and are viable on their own (with admissible Viability Gap Funding and real estate development on land ordinarily required for the project) may be encouraged under PPP mode. However, projects which are financially not viable without providing additional real-estate development rights and so on, should primarily be funded by Government. The central Government may suitably contribute in funding such projects preferably by way of grants. Similarly PPP arrangements in bus transport systems based on a gross cost model should be encouraged. The O&M of metro rail projects as well as BRT projects should also be entrusted to the PPP concessionaire to bring in the efficiency gain. For successful implementation of the PPP projects, specification of the service standards, outcomes and its monitoring would be the necessary prerequisite to ensure value for money.

Schemes and Projects for Urban Transport in the Twelfth Plan Period

Requirement of overall Capex Investment

18.112. For 20 years period beginning the first year of the Twelfth Plan, the requirement of Capex (at 2009–10 prices) estimated by the Isher Ahluwalia HPEC for urban transport from all sources are given in the Table 18.2.

18.113. For the Twelfth Plan period, the working group constituted by the Planning Commission on financing urbanisation worked out the requirement of investment for the urban transport sectors (refer to Table 18.3).

Schemes/Projects

18.114. In view of the importance of the urban transport, schemes/projects under the Twelfth Plan would be as follows:

1. *JNNURM-II*: as described in para 18.143 to 18.167, the assistance under JNNURM would be released to the city through concerned State

TABLE 18.2
Estimates of Urban Transport Investments by HPEC

Sector	Investment from all sources (in ₹ Cr) over 20 year period	% share in investment in urban sector
Urban Roads	17,28,941	55.8%
Urban Transport	449,426	14.5%
Traffic support infrastructure	97,985	3.2%
Street lighting	18,580	0.6%
Total	22,94,932	74.1

TABLE 18.3
Requirement of CAPEX

Annual Cap Ex (₹ Crore)	Requirement of CAPEX across different sectors in urban area					
	2012	2013	2014	2015	2016	Total
Urban Roads	29,842	35,214	41,552	49,032	57,858	2,13,498
Mass Transit	7,757	9,154	10,801	12,745	15,040	55,497
Traffic Managements Systems	1,691	1,996	2,355	2,779	3,279	12,100
Street Lighting	321	378	447	527	622	2,294
Capacity Building (urban transport)	1,000	1,000	1,000	1,000	1,000	5,000
Total	40,611	47,742	56,155	66,083	77,799	2,88,389

Governments as long as they adhere to the approved development plans, meet the reform related conditionality as well as mutually agreed financial parameters. Hence all urban transport projects and related activities including provision of buses, which improves public transport are admissible components under JNNURM-II.

2. *Urban road projects:* Of the overall capex estimation for 20 years for the urban sector, HPEC estimated that about 55.8 per cent would be required for urban roads. Since assistance under JNNURM is proposed to be fungible, urban road projects should be admissible under the scheme.
3. *Provision for metro rail projects and RRTS:* Success of the Delhi metro in transforming the public transport system in NCR region has led to demand of metro rail projects from many cities. Considering the long gestation period of conceptualising a metro rail project and arranging funds for it, following is recommended as a guideline for making a city eligible to receive central assistance for metro rail project:
 - Peak hour peak direction traffic (PHPDT) of more than 20,000 for at least 5 kms of continuous length by 2021
 - Total population of more than 2 million as per 2011 census
 - Average trip length of more than 7–8 kms for motorised trips
 - At least 1 million ridership per day on organised public transport

18.115. These criteria are in the nature of guidelines and are not to be construed as entitlement for a metro rail project. As huge public money is involved in construction of these projects, a thorough cost-benefit analysis across available mode of transport is to be ensured in case of every project.

Water Supply, Sewerage, Storm Water Drainage, Solid Waste Management and Environment Sustainability of the Cities

18.116. Safe water and sanitation are public goods as they have very large positive externalities. While access to water supply and sanitation is important for all the urban residents, for the poor, it becomes a

question of basic survival. Lack of safe water and sanitation cause outbreaks of epidemics and Indian cities are every year affected by this. The impact of epidemics on the poor is much larger than on the non-poor for many reasons; firstly epidemics break out in areas where the poor live, their access to safe water and sanitation is far lower than non-poor and their nutritional status being poor they easily succumb to the epidemics than the non-poor. Thus, lack of safe water and sanitation cause health disorders and keep the mortality rates high in general and among the poor in particular. On the other hand, it has been estimated that access to water increases the productive working hours of the urban poor in general and the poor women in particular by 1.5 to 2 hours. Access to water and sanitation has positive impact on overall health and decline in disease burden reduces household expenditure on health and that itself has positive impact on household income. It is well known that higher incidence of morbidity pushes low income households below the poverty line.

18.117. The central assistance to States and ULBs for improving these services would be within the overall umbrella scheme of JNNURM-II. Besides, the focus of the Plan should be to bring about structural and governance change at ULB levels and to build capacity so that these services are provided on a sustained basis. This would be incentivised through a set of reforms related to water and sanitation and providing assistance to the cities conditional to progress in achieving reforms.

Water Supply

18.118. Following should be the target for the Twelfth Plan period:

1. *Universalisation of water and sanitation to urban areas:* This involves the universal coverage of all urban population for the minimum levels of safe drinking and household-use water along with a clean toilet, sewerage, storm water drainage and solid waste management. The provisioning of basic water and sanitation should be de-linked from issues of land tenure and legal status. These services should be provided on the clear understanding that this provision does not

automatically translate into legal entitlements in other spheres, especially as regards legal rights to the land and/or dwelling space. Further any decisions as to whether the slums are to be legalised or not should be made irrespective of the provision of basic services.

2. *Reduction in unaccounted for water:* A systematic approach for identification and reduction of leakage and preventive maintenance would be promoted as an integral part of the operation and maintenance of the water supply system on a regular basis. This would help save precious quantities of treated water and increase revenues to make systems self-sustaining. Such measures can often obviate the need for immediate augmentation of capacities of the existing schemes, which are very often quite capital intensive, while triggering significant improvements in service delivery.
3. *Hundred per cent metering of water supply:* Metering is essential for recovery of reasonable user charges and conservation. It acts as an incentive for those who wish to conserve water and a disincentive to those who waste water. Metering helps increasing the total quantum of water available and consequently increases the quantum of water available for supply and increases the overall revenue. Metering also leads to reduction of wasteful use of water and increases efficiency and sustainability of the water supply system that is an important O&M function.
4. *Ensure 24 × 7 water supply:* Yet another priority is to move towards continuous water supply. Intermittent supply leads to sucking of external pollution into the system during non-supply hours due to inadequate pressure, causing health hazards.
5. *Address structural dysfunctions through reforms mentioned in Box 18.10:* For meeting the aforesaid target, it is necessary that structural issues facing the sectors are addressed through completion of reforms mandated under JNNURM. These issues include high levels of non-revenue water, low level of metering, intermittent supply, inadequate quality, low sustainability and so on. The poor, particularly those living in slums and squatter settlements, are

generally deprived of potable water. The implementing Ministry would work with States and ULBs to introduce operational, financial and institutional reforms related to water sector and these reforms under JNNURM-II.

18.119. Water is an extremely valuable but scarce resource and should be treated as such. In this connection following are recommended:

1. *The issue of allocation of water resource between rural and urban India needs to be addressed in ways that reduce intra-national tension:* In many instances, growth of urban and industrial sectors increases consumption of water which may give rise to conflicting claims on allocation of water across different sectors. It is imperative that while all efforts are made to conserve water for augmenting its availability, Indian cities and industries reinvent their water strategy with an aim to grow with minimal water and minimal waste generation.
2. *To cut the costs of water supply and distribution losses, focus on building, renewing and replenishing local water sources, including groundwater:* As cities expand their water footprint which implies sourcing water from distance sources, the cost of water supply as well as transportation losses and leakages rise. Committing a larger capital investment in creating such infrastructure also leaves utilities with very little money to maintain these networks which further compounds the problem. It is necessary therefore that all efforts should be made to develop a source of water close to where people need supply. The city sources are its water bodies, which capture rain or floodwaters from rivers as well as its underground water aquifers. There is an urgent need to protect and nurture these sources. Such measures may include bringing specific legislations apart from taking up specific projects under JNNURM-II.
3. *Include ground water in water supply calculations:* While preservation and recharging of ground water are increasingly receiving attention of city planners, there is a tendency to exclude this source from urban water planning.

In absence of universal access to piped water supply, people are forced to rely on ground water extraction. Another problem is perverse incentivisation for substitution of piped water supply by ground water extraction in case the water tariff is perceived to be high. There is therefore an urgent need to map groundwater and include this resource in water planning of a city for its sustainable utilisation.

4. *Take an integrated view of water supply and sanitation:* Investment in sewage should be a function of investment in water supply as any augmentation of water supply also leads to increase in sewage generation. It is, therefore, necessary that planning of a water supply project should also include provision for treatment of sewage. Discharge of untreated sewage, besides making cities and our water bodies unhygienic also significantly raises the cost of treatment of water. The guiding principle should be to incentivise cost saving innovations in building sewage network, reducing the length of sewage network and treating waste water as resource by turning it into water for irrigation or use in the industry.
5. *Set real and hard targets for affordable recycling and reuse of treated waste water:* Recycling and reuse of waste water is already in practice. This is required to be scaled up in a planned way. Reuse of waste water after its treatment in agriculture and other sectors should be properly planned for optimal utilisation of this scarce resource (refer Box 18.10).

Sewerage, Drainage and Solid Waste Management

18.120. The Ministry of Urban Development should work towards the implementation of the National Urban Sanitation Policy. Cities should be encouraged to formulate city-wide sanitation plans and all the States shall be encouraged to adopt State Sanitation Strategies. These activities should be supported under JNNURM-II.

Reuse Treated Sewage for Industrial Applications

18.121. Cities should be encouraged to meet part of their water supply, at least for industrial use, by reusing/recycling waste water. Incentives may be

provided to users (through water tariff, property tax and so on) to recycle and reuse treated wastewater. These should also be incorporated in building by-laws for new constructions.

18.122. Ministry of Urban Development should support these activities through financial and policy support through various schemes. While the major intervention would be under the JNNURM-II for preventing manual handling of human excreta, a separate sub-scheme for achieving the goals of the National Urban Sanitation Policy (NUSP) shall be formulated in the Twelfth Plan.

Solid Waste Management

18.123. Some of the major issues concerning solid waste management are:

1. Absence of segregation of waste at source
2. Lack of funds for waste management at ULBs
3. Lack of technical expertise and appropriate institutional arrangement
4. Unwillingness of ULBs to introduce proper collection, segregation, transportation and treatment/disposal systems
5. Indifference of citizens towards waste management due to lack of awareness
6. Lack of community participation towards waste management and hygienic conditions

18.124. As a general approach, Ministry of Urban Development should work with the States to explore the following strategies:

- The recovery of recyclables is presently being done in an unorganised manner. This needs to be replaced with informal arrangements of rag pickers and NGOs/CBOs who could also be involved for facilitating effective door-to-door collection.
- Acquisition/earmarking of land required for the project should be facilitated by proactive guidelines/direction from the State. A Master Plan process should actively address this requirement.
- The concept of regional solid waste management solutions needs to be encouraged. This has been taken up in Gujarat with a view to achieving economies of scale.

Box 18.10
Reforms and Desired Outcomes Related to Water Supply and Sanitation

Reforms (water and sanitation sector)

- Enact bylaws for reuse of recycled water
- ULBs to ensure accountability of the water supply utility by drawing service level agreements with them
- Have road map for bringing down wastage
- Prepare a detailed database for the city relating to water supply and regularly update it
- Draw up a roadmap, that is, city sanitation plan in accordance with the Urban Sanitation Policy
- Prepare a sewage master plan for the city
- Draw-up a roadmap for achieving Service Level Benchmark
- Set tariffs on a scientific basis with cross subsidised* tariffs for the economically weaker sections
- Have an effective grievance redressal mechanism
- Draw-up demand management measures
- Formulate ground water use by laws and enforce effectively energy conservation measures especially in pumping

* In general, since the charge can be only for water and one time sanitation connection charge, the charge for water must therefore cover O&M + Capex for water and sanitation for all categories. For both water and sewerage, subsidy can be in terms of low charges for the first x litres of water and higher than normal for the rest.

State level reforms

- Set up a regulator for the sector
- Introduce policies to augment bulk water and resource allocation plans in alignment with the basic requirements of the city
- Transfer the water supply function fully to the cities
- Follow the three 'Rs'—*Reuse, Reduce, Recycle* policy for waste management based on the quantum generated
- Provide incentives for waste water recycling policy incentives
- Increase resource provision for augmentation of sewage system/toilets for weaker sections
- Prepare a regional solid waste management arrangements (to have larger aggregation and economies of scale)
- Prepare implementable PPP policy for cities

Desired outcome

- Universal Access to Water and Sanitation
 - Hundred per cent Metering of water supply
 - Opt for 24 × 7 water supply wherever possible and feasible
 - Provide for step by step improvement in the operations of the water utility
 - Steadily bring down distribution inefficiencies by bring down wastage of water closer to international best practice. Successful examples of utilities such as Phnom Penh, Manila (East Zone) demonstrate that reduction in NRW levels to below 20 per cent is possible even in developing country contexts
 - Commit to given hours of supply and be accountable for it through citizen charters
 - Commit to quality of water to be supplied
 - Ensure that the cities are free from open defecation and measures for providing toilets
 - Community toilets especially in areas that are home to the economically weaker section
 - Provide sufficient no of public toilets/urinals in city
 - Hundred per cent collection of garbage from houses/establishments and straight transportation for disposal
 - Conversion of waste to energy/other forms
- Waste characterisation has to be done properly taking representative samples from the city for various types of wastes and the treatment process should be selected accordingly.
 - Appropriate technology options for treatment of the organic content of the wastes should be chosen based on the physical and chemical characteristics of the wastes and local conditions and so on.

- IEC (Information, Education and Communication) in order to educate households, municipal staff as well as personnel engaged in collection and management of waste about need for segregation at source and improved sanitation is the most important element in success of a SWM project. This must be accorded due and adequate priority.
- Polluter Pay Principle should be implemented in a calibrated manner in order to instil a sense of discipline with respect to throwing of litter by people without any concern for cleanliness.
- In the area of solid waste management, a general approach should be to pursue the concept of 'waste to wealth'. PPP may also be explored/introduced for functions such as door-to-door collection, street sweeping, transportation, treatment and so on.

Storm Water Drainage

18.125. Lack of storm water drainage often exacerbates the sanitation problem in many Indian cities especially during the monsoon months. The problem has its genesis in illegal, unplanned development and encroachment often on natural areas and drainage systems/ways. As the cities develop and grow, benefits from important environmental functions (natural water ways/areas) are often ignored and overlooked as a result of which natural areas are degraded and damaged. This along with the increase in built-up area results in increased incidences of flooding and accompanied ill effects. The densification of cities is leading to construction of roads, buildings which has resulted in increase in impermeable areas. As a result often permanent changes to the catchment are caused, leading to changes in

runoff patterns, which affect the magnitude, frequency and occurrence of flooding.

18.126. Lack of storm water drains lead to water logging every monsoon and outbreak of vector diseases such as malaria, dengue and so on, that afflict the poor the most as the poor live in settlements that are in low-lying and un-serviced areas. However, such epidemics rarely remain confined and easily spread throughout the city.

18.127. The core of sustainable storm water management is to consider storm water as a potential resource rather than as a liability or a waste product. This shift can only be initiated by a visionary storm water management approach which combines the preventive measures with the traditional curative and reactive measures in appropriate sum so as to minimise negative impacts on human, property and environmental health. In this respect, environmental health would include preserving and maintaining the natural hydrological cycle, groundwater recharge, natural drainage system and so on.

18.128. Urban water supply, sanitation and storm water drainage were accorded priority under the Eleventh Plan. Number of projects sanctioned and level of investment in these services under JNNURM are given in Table 18.4.

18.129. At present, a large number of these projects are under various sages of implementation hence their full benefit are yet to be felt. However, given the level of deficit in these essential services and their importance in making a city liveable, they would

TABLE 18.4
Investments under JNNURM

Particulars	UIG		UIDSSMT		Total	
	No. of projects	Cost (in ₹ cr)	No. of projects	Cost (in ₹ cr)	No. of projects	Cost (in ₹ cr)
Water supply	158	20,562	453	8,901	611	29,463
Sewerage	112	14,992	89	2,833	201	17,826
Drainage	73	8,404	67	790	140	9,193
Solid waste management	45	2,091	56	342	101	2,433
Total	388	46,050	665	12,865	1,053	58,915

continue to receive top most priority under the Twelfth Plan.

National Urban Sanitation Policy

18.130. This policy aims at creating cities free from open defecation practices. Under the policy, annual ratings of cities on select sanitation-related parameters shall be carried out and the best performing cities will be recognised. The policy seeks to improve the status of sanitation in the country through formulation of State sanitation strategies, city sanitation plans, and a national awareness generation campaign. The Ministry of Urban Development and the Ministries of Housing and Urban Poverty Alleviation should continue to operationalise the policy under the Twelfth Plan period.

Projected Requirement of Investment

18.131. The Isher Ahluwalia Committee estimated the 20 years investment requirement from different sources as given in Table 18.5.

18.132. The requirement of Capex from all sources for these sectors under the Twelfth Plan as estimated by the Working Group on financing urbanisation is as given in Table 18.6.

18.133. Adopting mixed land use and subsequently modifying regulations governing land use and removing deficiencies in the urban land market need to be given high priority. In many parts of the country, urban land planning limits redevelopment, modernisation and the repurposing of older inefficient areas. Weak institutional and information foundations still govern land markets. In many cases,

TABLE 18.5
Investment Requirement Estimates by HPEC

Sector	Requirement of investment from all sources (in ₹ cr)	per cent share in required investment in urban sector
Water supply	3,20,908	10.4%
Sewerage	2,42,688	7.8%
Solid waste management	48,582	1.6%
Storm water drains	1,91,031	6.2%

urban plans seek to preserve status quo by limiting land assembly and freezing the density of developments by using very low Floor Space Indexes (FSI), and limited coordination with infrastructure development. Under the Eleventh Plan, JNNURM sought to address these issues by incentivising several urban reforms. Completion of reforms mandated by JNNURM must be given priority.

Schemes

18.134. Following schemes should be launched under the Twelfth Plan for assisting the States and ULBs to improve service delivery:

1. *JNNURM-II*: The broad principle on which the scheme is to be launched is given in paragraph 18.143 to 18.167.
2. *National Mission on Sustainable Habitat (NMSH)*: The National Mission on Sustainable Habitat (2010) is one of the eight missions under the National Climate Change Action Plan. The Mission should be implemented in the Twelfth

TABLE 18.6
Requirement of CAPEX as per Working Group

Annual CAPEX (₹ Crores)	Requirement of CAPEX					Total
	2012	2013	2014	2015	2016	
Water Supply	5,539	6,536	7,713	9,101	10,739	39,628
Sewerage	4,189	4,943	5,833	6,883	8,121	29,969
Solid Waste	839	989	1,168	1,378	1,626	6,000
Storm Water Drains	3,297	3,891	4,591	5,418	6,393	23,590
Total	13,864	16,359	19,305	22,780	26,879	99,187

Plan period with the aim to make cities sustainable through improvements in energy efficiency of buildings, management of solid waste, and shift to public transport.

The Mission should broadly cover:

- a. Extension of the energy conservation building code, which addresses the design of new and large commercial buildings to optimise their energy demands
 - b. Better urban planning and modal shift to public transport, that is, making long-term transport plans to facilitate the growth of medium and small cities in such a way that ensures efficient and convenient public transport. These plans should be in sync with the city's overall development plan and be a part of it
 - c. Recycling of material and urban waste management, a special area of focus being the development of technology for producing power from waste
 - d. The National Mission will include a major R&D programme, focusing on biochemical conversion, waste-water use, sewage utilisation, and recycling options, wherever possible
 - e. As JNNURM-II would be launched as an umbrella scheme for urban renewal and as environment sustainability is an important feature, many of the activities envisaged under the NMSH should be taken under JNNURM-II to ensure convergence. Hence, NMSH should essentially be a scheme for taking up pilot and demonstrational projects in cities to promote environmental sustainability. Close involvement of the Central Ministry in such projects is desirable. Hence, the scheme would be run on project mode
3. *Scheme for mechanical cleaning of septic tanks and so on:*
Implementation of Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act 1993 is required to be attached priority as this addresses the age old abominable practice of manually handling the human

excreta. The Ministry of Urban Development should take up this activity within the overall framework of JNNURM in which one-time procurement of the equipments for the purpose is supported.

Alleviating Urban Poverty: Creating Sustainable Livelihoods and Enterprises

18.135. Based on NSSO Report No. 508 (2004–05), it is estimated that the number of urban poor had increased by 34.4 per cent from 1973 to 2004. Approximately 81 million, that is, 26 per cent of the estimated 310 million urban dwellers were below the monthly consumption of ₹539 in 2004–05.

18.136. An important feature of urbanisation in India during the period 1981–2001 was the relatively small contribution of migration to the increase in urban population in India. The HPEC has noted that the evidence in India suggests that the rural–urban differentials in productivity have widened since 1993–94, indicating that there is considerable scope for migrants to take advantage of the higher-productivity non-agricultural sectors if they can be equipped with the skills and education relevant for employment in urban areas.

18.137. At the same time, the poor who are already living in cities are largely employed in the informal sector. Even though they contribute significantly to the economy of the cities, they suffer from multiple deprivations and vulnerabilities that include lack of access to basic amenities such as water supply, sanitation, health care, education, social security and decent housing.

18.138. If cities have to emerge as engines of inclusive growth, the country is required to address the basic needs of the urban poor by equipping them with necessary skills to take advantage of the growth process and at the same time reducing institutional dysfunctions which have been pointed to earlier that hamper inclusive and sustainable development of our urban conglomerations. A multi-pronged strategy is required to meet the following objectives:

1. Accelerate the rate of job creation in urban areas

2. Impart relevant skills to urban poor
3. Facilitate self-employment for urban poor wherever this viable
4. Proactive and mandatory creation/allocation of spaces within city boundaries to ensure livelihood opportunities to the urban poor.
5. Provide basic services to the urban poor, especially through rehabilitation of slums
6. Ensure financial inclusion of urban poor
7. Ensure legislative inclusion of urban poor
8. Facilitate the transition of the urban poor from the informal sector to the formal one and extend the provisions of social security

18.139. For making our cities engines of inclusive growth, in addition to launching of an improved JNNURM-II and RAY, the following schemes would be taken up under the Twelfth Plan:

18.140. The National Urban Livelihood Mission (NULM). This entails revamping the guidelines of SJSRY and enhancing its scope. Its basic thrust would be to build capacities and skills in sectors that have growing employment opportunities and are relevant to local socio-economic conditions. In its design NULM should deal with important issues like financial exclusion, policy and legal exclusion, and lack of access to information and technology, raw materials and markets. It should also develop linkages with the organisations like the National Skills Development Corporation and other private sector organisations including vocational training institutions that can actually train and hire the urban poor to meet their growing capacity needs.

18.141. In addition, within the umbrella of NULM, following two sub-components would be launched.

1. Sub-component for National scheme for support to street vendors
2. Sub-component for assistance to the States for provision of shelters

18.142. To make the scheme more effective, the Ministry of Housing and Urban Poverty Alleviation should initiate proposals to undertake following policy changes:

- a. *Enactment and implementation of a suitable Act on livelihood promotion of street vendors and adoption of a no-eviction strategy by State Governments:* This will enable the creation of physical legal spaces for the informal economy and recognise and support natural markets of street vendors with a non-eviction guarantee. For this, a no-eviction policy should be put in place in combination with a land policy aiming at the provision of developed lands for the urban poor. This strategy should be implemented with the caveat that evictions for the purpose of the common social good may occur, but with provisions for resettlement and rehabilitation of project affected persons. The strategy should also cover Central Government and private lands.
 1. *Formalisation of participation of informal workers in the economy:* Informal sector workers should be organised as associations or federations such as trade unions, cooperatives, and must be formally recognised. Similarly workers guilds and self-help groups should be recognised as fee paying organisations and must have the capacity to negotiate with utilities like DISCOMs and water supply boards to provide services at specified locations by paying user charges.
 2. *Design of new financial strategies and products to meet the needs of the urban poor:* Typically poor cash flow hinders the success of micro-enterprises, women, children and also those belonging to minorities or SC/ST caste groups. Thus, innovative products and services that help meet the needs of the informal economy, for example, branch-less banking, business correspondents and micro-finance should be created. Workers guilds and self help groups should be provided with a package of financial services including micro-credit for working capital and assets, micro-insurance for life, health and livelihoods.
 3. *Convergence of schemes for social protection of the urban poor:* A large number of programmes are being implemented by the Government to help uplift poor in the

country. At present, multiple ministries (for example, health and education) are driving separate initiatives aimed at the poor across rural and urban areas. To increase their effectiveness, convergence across these efforts is essential. In addition, ULBs have the potential to emerge as an interface between the citizenry on one hand and the State and national Government on the other for ensuring better outcomes of these initiatives.

JNNURM UNDER THE TWELFTH FIVE YEAR PLAN

18.143. JNNURM which was launched in December 2005 is co-terminus with the Eleventh Plan. Under the Twelfth Plan period, JNNURM-II would be launched as a State sector ACA scheme. The scheme will have a focused approach on urban reforms, capacity building and helping achieve fiscal prudence across ULBs. The salient feature of the scheme and budgetary provisions under the Twelfth Plan period would be as follows:

Objective

18.144. The objectives of JNNURM-II would be as follows:

- Alleviating urban poverty
- Improving service delivery standards in urban areas including basic services for urban poor
- Empowering urban local bodies
- Facilitating participatory governance
- Effectively managing land resources
- Fostering sustainable, inclusive and faster growth

Strategies of JNNURM-II

18.145. To realise these objectives, the key strategies of the programme would be as follows:

- Build adequate capacity including dedicated municipal cadre
- Planned urbanisation by preparing a Development Plan through a participatory process
- Remove distortions in land market
- Establish efficient governance structures
- Promote financial sustainability and accountability of ULBs

- Attract more private investment, in particular, through PPP
- Adoption of service level benchmarks and social and gender audit of the outcomes of programme
- Slum rehabilitation and creation of affordable housing
- Planned development of smaller towns and peri-urban areas
- Incentivising innovation and rapid learnings across urban systems

Components of JNNURM

18.146. The programme should have following components:

1. Urban Infrastructure and Governance (UIG)
2. Rajiv Awas Yojana (RAY)
3. Slum rehabilitation in cities not covered under RAY
4. Capacity building

18.147. The scheme for Urban Infrastructure Development in Satellite Towns should be merged with the sub-mission on UIG under JNNURM-II. Further, while BSUP and IHSDP should be discontinued, RAY should be a sub-mission under JNNURM-II for the purposes of achieving convergence.

Coverage of JNNURM-II

18.148. Under JNNURM-I, a 'Mission city' approach was followed. About 70 per cent of the central assistance was provided to 65 Mission cities. In the Twelfth Plan, adequate attention should also be paid to encourage the medium and small town to realise their full economic potential. Hence under JNNURM-II, the limiting concept of 'Mission cities' should be dispensed with and while all cities should be eligible to participate, a fair system of selection of cities to be covered under the programme should be put in place.

Outlay for JNNURM-II and its Division

18.149. The five year budgetary outlay for JNNURM-II is given in paragraph 18.184. This outlay should be divided between the following:

- Base Fund (80 per cent of the total outlay of JNNURM-II)

- Capacity Building Fund (10 per cent of the total outlay of JNNURM-II)
- Incentive Fund (10 per cent of the total outlay of JNNURM-II)

Capacity Building under JNNURM-II

18.150. Capacity building at different levels of government would be a key focus area under the programme. For this purpose:

- A separate Mission Directorate for Capacity Building and Reform Management should be established.
- Ten per cent of the overall JNNURM fund should be earmarked for capacity building.
- MoUD and MoHUPA should prepare a road map for operationalising the recommendations made by HPEC and the Working Group on capacity building.
- All capacity building efforts currently undertaken by the MoUD and MoHUPA in urban sector may be brought under the umbrella of JNNURM-II. However, capacity building efforts for highly specialised sectors like urban transport (Metro Rail) or for proposed National Urban Livelihood Mission could be run independently though the Ministries should ensure their convergence with the efforts taken under JNNURM-II.

18.151. The main thrust of capacity-building activities would be:

- Creation and professionalisation of the Municipal Cadre
- Identifying the gap in capacity at different levels to establish the demand
- Strengthening the supply side of capacity building
- Opening of suitable institutions in case the existing ones are unable to meet current requirements
- Support to opening of a apex level institutions that have involvement from the private sector and centres of excellence in specific sectors like water supply and sanitation, housing and so on
- Creation of a dedicated PPP cell for developing model bid documents
- Creation of cell on municipal finance and framework for land monetisation and other innovative method of generating finances and so on

- Dissemination of national and international best practices in urban governance
- Conducting annual reform audits to monitor the progress of reforms across participating States and cities

Planned and Holistic Development of Cities under JNNURM-II

18.152. Every town and city participating in the programme would prepare a Development and Financial Plan as provided in paragraph 18.44 and 18.45.

Reforms under JNNURM-II

18.153. Since the engagement of Government of India in the urban sector is largely to incentivise the State Governments and ULBs to bring about structural transformation in cities, reforms must remain at the heart of the JNNURM. In addition a robust system of evaluation of reforms should be put in place.

18.154. JNNURM-I has set the stage for attempting second generation reforms. Secondly, since JNNURM-II takes a relatively longer time horizon of 10 years, it provides sufficient opportunity to achieve reforms to even those States which have struggled to make any significant progress.

18.155. All pending reforms under JNNURM-I should become base reforms for JNNURM-II. A few second generation reforms including reforms in water and sanitation sector should be introduced and made mandatory. In view of different level of preparedness for achieving the reforms across cities of different sizes, the required milestones to be achieved in a particular reform should be calibrated according to the size of cities. Besides, since some of the reforms mentioned in the comprehensive list are difficult ones but are transformational in nature, it is desirable to introduce additional incentives for fast tracking such difficult reforms. Their completion should entitle States/ULBs to get additional allocation from the Incentive Fund which is proposed to be 10 per cent of the outlay of JNNURM-II (refer to Box 18.11).

Box 18.11**Reforms under JNNURM Comprehensive List of Reforms in Urban Sector***ULB Level Reforms (cities having population more than 5 lakh)*

1. Introduce and enhance e-governance system
2. Adoption of accrual based double entry system of accounting
3. Collection of property tax
4. Rationalisation of user charges collection
5. Create a ring-fenced development fund
6. Put in place transparent FAR policies and market value based FAR charges
7. Earmarking of 20–25 per cent of developed land for housing projects for EWS/LIG category with a system of cross subsidisation
8. Internal earmarking within local body budgets for basic service to the urban poor
9. Sector specific reforms of water and sanitation that includes:
 - Enact bylaws for reuse of recycled water
 - Ensure accountability of the water supply utility through service level agreements with ULBs
 - Draw road map for bringing down wastage
 - Prepare a detailed database for the city relating to water supply and regularly update it
 - Draw up a roadmap, that is, City sanitation plan in accordance with the Urban Sanitation Policy
 - Prepare a sewage master plan for the city
 - Draw-up a roadmap for achieving Service Level Benchmark
 - Have an effective grievance redressal mechanism
 - Draw-up demand management measures

Reforms for Metropolitan Areas

1. Institute the Metropolitan Planning Committee (MPC)
2. All metropolitan areas (UAs) with population above 4 million, should set up an UMTA to facilitate integration of multi-modal transport systems and ensure it works with the MPC and has the MDA as the secretariat

State Level Reforms

1. Create and establish the Municipal Cadre
2. Set up a Municipal Regulator at the State/city level to
 - advise and monitor the service delivery levels;
 - regulate the pricing of services; and
 - ensure equitable access to all urban citizens, including urban poor.
3. Revise town planning act, development control regulations, municipal laws and building bye-laws with a view to promote strategic densification, single window clearance process, to promote conservation of environment and so on
4. Simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes within a time bound period
5. Repeal of Urban land Ceiling and Regulation Act
6. Amendment of Rent Control Laws
7. Rationalisation of Stamp Duty to bring it down to 5 per cent or lower
8. Introduction of computerised process of registration of land and property
9. Provide security of tenure at affordable prices to urban poor
10. To facilitate public-private partnerships, and market borrowing (through provisions in the Municipal Act)
11. Transfer 18 functions to ULB as per 74th CAA
12. Strengthen the State Finance Commissions and act on the existing recommendations of previous SFCs
13. Set up a State Property Tax Board
14. Extending the term of Mayor to five years and adopt a Mayor-in-Council or Executive Mayor system
15. Enactment of community participation law
16. Enactment of Public Disclosure Law

17. State-level reforms pertaining to water and sanitation sector which includes:
- Prepare a regional water supply, sanitation and solid waste management plan. (to have larger aggregation, development of watershed and economies of scale)
 - Transfer the water supply function (distribution within the city) fully to the cities
 - Introduce policies to augment bulk water and resource allocation plans in alignment with the basic requirements of the city
 - Follow the three 'Rs'—*Reuse, Reduce, Recycle* policy for waste management based on the quantum generated
 - Provide incentives for waste water recycling policy incentives.
 - Increase resource provision for augmentation of sewage system/toilets for weaker sections
 - Prepare implementable PPP policy for cities
 - Formulate ground-water use by laws and enforce effectively energy conservation measures especially in pumping

Incentive Reforms and Conditionalities

- Create and establish the Municipal Cadre
- Set up a Municipal Regulator at the State/city level
- Extending the term of Mayor to 5 years and adopt a Mayor-in-Council or Executive Mayor system
- Revise Town Planning Act and so on
- Simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes
- Amendment of Rent Control Laws
- Provide Security of Tenure at affordable prices to urban poor
- Amend Municipal Laws to include Fiscal Responsibility and Budget Management principles for ULBs
- Release the land under ULCRA for development of affordable housing
- Introduction of Property Title Certification System in ULBs
- Transfer 18 functions to ULB as per 74th CAA
- Any substantial innovation in the area of urban governance or financing
- Take up projects under PPPP
- Leverage fund through non-budgetary resources

Incentive Reforms for Metropolitan areas

- Adoption of an agency model, for example, BEST model of service
- Exceptional performance in the area of service delivery, collection of user charges and property tax.

Addressing Operational and Organisational Issues through JNNURM-II

18.156. The need to adopt a unified approach to achieve planned, inclusive and sustainable urban development has long been recognised. Hence one of the objectives of JNNURM-II which has been envisaged as the umbrella programme should be to facilitate convergence of the initiatives at central and State-level for guided urbanisation.

18.157. To this end, at the central level it is proposed that the reform agenda for the Urban Infrastructure and Governance (UIG) sub-mission and Ray Awas Yojana (RAY) and the programme on slum rehabilitation for others cities outside of RAY is strengthened. Similarly to effectively assist States with reform management and implementation, and

capacity building initiatives it is proposed that a separate sub-mission, that is, Capacity Building and Reform Management (CBRM) is launched under JNNURM-II. This approach would facilitate convergence across the two ministries at the centre, and enable the Central Government to collectively provide State and city Governments with adequate support to implement reforms and projects. In addition, it would also systematically monitor the progress on reform implementation across States and assist them with strategic capacity-building initiatives, for example, revitalising existing institutions, setting up a municipal cadre and so on.

18.158. To facilitate convergence at the State-level, a single State-level nodal agency (SLNA) should be set up for implementing all centrally sponsored

urban programmes in the State. This agency would have project management and implementation units for UIG, RAY, National Urban Livelihoods Mission (NULM), other housing programmes and capacity building, and the would be led by either the Secretary Urban Development or Housing depending on their seniority.

18.159. The SLNA could be the nodal contact for all participating ULBs. It would also help strengthen the District Urban Development Authorities to assist smaller cities with project development and finance and reform implementation. In addition, it would technically appraise projects submitted by ULBs, and forward them onto the competent authority for sanction, transfer money to ULBs as per the project implementation phase and provide ULBs with the requisite technical support, and enable pooled finance development through the setting up of State-level financial intermediaries, in order to provide financial assistance to smaller ULBs.

Providing Operational Flexibility

18.160. In keeping with the recommendations of the Second Administrative Reforms Commission, JNNURM-II should encourage agencification to provide operational flexibility, essential for the missions to discharge their duties effectively.

18.161. In line with this, all the four sub-missions envisaged under JNNURM-II could be set up as agencies, that is, organisation with a board, and the board could be chaired by the Secretary of the respective ministries at the central level. Other board members could include senior representatives from the Department of Expenditure, Urban Transport, Mission Director—RAY, Planning Commission, Mission Director—Capacity Building and Mission Director of the programme for slum rehabilitation in smaller cities. In addition, to further the spirit of participatory governance, a few eminent individuals should also be co-opted as board members. The board of the sub-mission, CBRM could be chaired by eminent individual as it seeks to facilitate convergence across the two ministries.

18.162. It is important to note that all decisions with regard to capacity building should ultimately be approved by the CBRM board after gathering muster with the Council on Capacity Building, that is, a three-member council chaired by the Additional Secretary heading this unit with Mission Director, JNNURM-I and Mission Director—RAY as members. Similarly, the SLNA should also be set up as an agency whose board should chaired by the nominee of the Chief Secretary of the State and include senior representatives from the State Government's department on finance, housing, parastatals, for example, housing Boards, transport and local self-government, depending on the governance structure of the State. In addition it should have also co-opt a few eminent civil society representatives.

Preparing for JNNURM-II

18.163. Significant preparatory work is required to be undertaken by the centre and States in the areas of planning, capacity building and preparation of model legislations, and policies. During the initial two years of JNNURM-II the following should be accomplished:

- The projects sanctioned under JNNURM-I and pending reforms should be completed
- The implementing ministries through CSMC may sanction projects based on the allocation provided for basic services
- The Centre, State and the ULBs should undertake extensive capacity building programme and formulate State-level strategies for a 10-year horizon
- Municipal cadres should be established and professionalised in States in which they have been established. This would include clear guidelines on roles, career progression, and recruitment rules to ensure these cadres fructify into high quality capacity on the ground.
- DP and FP should be prepared based on the guidelines proposed by the MOUD

Fund Flow Mechanism

18.164. The cities receiving assistance under the programme would be selected as per the mechanism designed for the programme.

- Once the DP and the FP are approved, the annual allocation of the city are recommended to be released in two instalments by the Ministry of Finance, that is, in April and October of the year. The release should be made to the ULBs by Ministry of Finance through the State Government.
- In the second year, the Mission Directorate should examine the financial and reform related parameters made in the DP, FP and RFD. In the initial year of Plans, while releasing funds, progress in approved project would be taken into account. As projects would start maturing, by the Thirteenth Plan the release should be linked to the outcome of the projects in terms of service delivery. As long as these parameters are met, the annual allocation for the second year should be released in two instalments. In the subsequent years, the Mission Directorate will follow the same procedure for release of funds.
- Under this arrangement, JNNURM funds should be fungible across various approved projects in a city.
- The fund flow mechanism of Rajiv Awas Yojana should continue to be governed by the current approved mechanism and may be reviewed at the time of review of RAY.

Leveraging Funds under JNNURM-II

18.165. As brought out by the HPEC Report and the Report of the Working Group on Financing Urbanisation, there is a huge gap between the funds required for successful urbanisation and the funds available with ULBs. In view of the severe budgetary constraint, this gap can only be partly filled by contribution from the Centre and States. Therefore, the ULBs must leverage such contributions from the Centre and States to attract private investment besides generating their own revenues through comprehensive reforms. One of the key focus areas of the scheme would be to leverage central assistance under JNNURM so that investment in urban sector is augmented.

Share of the State Government

18.166. JNNURM-II would incentivise the State Governments for financial devolution to ULBs for improving their financial sustainability. Till this is

done, the State should contribute 50 per cent of the amount of grant provided to a ULB by the Centre under JNNURM-II or the amount recommended by the State Finance Commission, whichever is higher.

Incentive Fund

18.167. For incentivising completion of second generation urban reforms 10 per cent of JNNURM funds would be earmarked as Incentive Funds. These funds are envisaged to be disbursed to States and metropolitan cities once the CRBM certifies that the reforms have been implemented in letter and spirit (refer to Box 18.12).

MISCELLANEOUS SCHEMES

18.168. In accordance with the recommendations of the Chaturvedi Committee, a guiding principle in the Twelfth plan is to run umbrella schemes having different components. In the preceding sections, major scheme for urban renewal for the Twelfth Plan period have been described. In addition, following schemes/projects would also continue in the Twelfth Plan period.

General Pool Accommodation (Residential and Non-residential)

18.169. This scheme provides for office and residential accommodation for Central Government

Box 18.12

Major Schemes for Urban Renewal at a Glance

State sector ACA scheme: Jawaharlal Nehru National Urban Renewal Mission (JNNURM) having following components:

- Urban Infrastructure and Governance (UIG)
- Rajiv Awas Yojana (RAY)
- Slum rehabilitation in cities not covered under RAY
- Capacity building

Centrally Sponsored Schemes

National Urban Livelihood Mission having two additional components:

- Scheme for support to street vendors
- Scheme for assistance to the States for provision of shelters.

1) National Mission on sustainable Habitat

departments and employees through CPWD. As land parcels available with the Ministry are mostly in prime locations they have significant potential to generate resources, embarking on PPPs towards this end would be an effective route to pursue, given the thrust of the Twelfth Plan on such arrangements.

North Eastern Region Urban Development Programme (NERUDP)

18.170. Launched with the assistance of the Asian Development Bank (ADB) to encourage development in the North Eastern Region as well as increase support through multilateral agencies, the programme provides support for priority urban services viz. (i) Water Supply, (ii) Sewerage and Sanitation and (iii) Solid Waste Management in the capital cities of five North-Eastern States viz. Agartala (Tripura), Aizawl (Mizoram), Gangtok (Sikkim), Kohima (Nagaland) and Shillong (Meghalaya). Under the Twelfth Plan, this programme would be recast and taken under the overall framework of JNNURM.

National Capital Region Planning Board

18.171. The NCR Planning Board is providing financial assistance to create civic amenities in the National Capital Region (NCR). The assistance is in the form of soft long-term loans to the participating State Governments and other parastatals for infrastructure development projects in the constituent NCR States and identified Counter Magnet Area (CMA) towns. The activities of the NCRPB would be expanded in the Twelfth Plan period.

Other Schemes/Projects

Ministry of Urban Development

Urban Transport Planning and Capacity Building in Urban Sector

18.172. The scheme provides assistance upto 80 per cent of cost of city specific comprehensive traffic and transportation studies and builds capability to undertake comprehensive urban transport planning. The scheme should be subsumed under the renewed JNNURM in the Twelfth Plan period.

Research and Capacity Building in Urban and Regional Planning

18.173. The scheme was launched to build capacity building for urban regional planning at the ULB level. While capacity building for regional planning is a prerequisite for sound urban development, the scheme should be subsumed under the renewed JNNURM.

Capacity Building Scheme for Urban Local Bodies

18.174. A scheme for capacity building for ULBs was initiated for supporting implementation of various reforms. This was supported by the creation of nine Centres of Excellence in reputed institutes like IIT Chennai, IIT Guwahati, IIM Bangalore, ASCI Hyderabad, Centre for Science and Environment, Lal Bahadur Shastri National Academy of Administration, Mussoorie and so on. Under the Twelfth Plan, the scheme should be subsumed under the Capacity Building sub-component of JNNURM.

National Mission Mode Project for E-Governance in Municipalities

18.175. This scheme was launched under the UIG component of JNNURM for providing 'single window' services to the citizens. Since e-governance is not only a reform in itself, it is an enabler for other reforms, a major emphasis has been recommended under the improved JNNURM. Hence, the scheme would be subsumed under the capacity building submission of JNNURM under the Twelfth Plan.

Scheme for Urban Infrastructure Development in Satellite Towns/Counter Magnets of Million Plus Cities

18.176. Under the renewed JNNURM, special emphasis has been laid on development of satellite towns, especially by developing their transport and communication linkages with the mega city. Hence the scheme would be subsumed under the JNNURM.

Pooled Finance Development Fund

18.177. The Pooled Finance Development Fund was approved in 2006 to help ULBs to raise funds from capital markets for urban infrastructure projects. An amount of ₹2,500 crore was provided for the

Eleventh Plan. However, the scheme could not pick up during the Eleventh Plan period. Since raising finances at municipal level is one of the main thrust under JNNURM, for which several interconnected recommendations have been made to boost investors' confidence, the scheme would be subsumed under the new JNNURM.

Ministry of Housing and Urban Poverty Alleviation

Interest Subsidy Scheme for Housing the Urban Poor (ISSHUP)

18.178. The scheme was launched to provide interest subsidy of 5 per cent per annum for housing purpose for lending to the EWS and LIG segments of urban areas. Since slum rehabilitation requires a holistic approach the scheme has been subsumed under the Rajiv Awas Yojana.

Grant to Building Material and Technology Promotion Council (BMPTC)

18.179. Under the Eleventh Plan, grant has been provided to the BMPTC to meet multiple objectives of promoting innovation in building material, mainstreaming disaster management and to work as a resource centre for capacity building and skill development. As these objectives are critical to success of any housing related scheme, there is a need for their continuation as well as convergence with the other programmes being implemented by the Government in housing sector. Encouragement to the innovative practices should be funded under the overall umbrella scheme of the Rajiv Awas Yojana rather than taking up these activities on stand alone basis. Hence, the assistance to BMPTC should be done under the capacity building component of the Rajiv Awas Yojana.

Urban Statistics for HR and Assessment (USHA) Scheme

18.180. The scheme has been launched to develop and maintain a data base, MIS and knowledge repository relating to urban poverty, slums housing, construction and other urbanisation related statistics. Creation of a Municipal level MIS system has been recommended under the new JNNURM. Hence the

scheme should be subsumed under the renewed JNNURM.

Externally Aided Capacity Building Schemes

MOUD

1. Capacity building for urban development (JNNURM)—assistance from the World Bank:
2. Capacity building for Urban Transport—Assistance from the World Bank

MOHUPA

1. World Bank Capacity Building Project for urban development
2. Technical assistance from DFID for support to National Policies for urban poor

18.181. It is recommended that all Capacity Building activities should be taken under the overall framework of JNNURM.

EXPECTED OUTCOMES IN IMPROVEMENT IN SERVICE DELIVERY

18.182. The urban sector is predominantly a State subject. The nature of engagement by the Central Government would be to primarily incentivise urban reforms and assist the States/ULBs in improving the delivery of urban services at affordable costs. Such measures would not only improve the financial health of ULBs, but also dismantle structural barriers and in turn make cities more inclusive. These would constitute broad outcomes of the schemes under the Twelfth Plan period.

18.183. As regard specific outcomes in terms of improvement in service delivery, the Ministry of Urban Development has developed detailed service level benchmarks for a number of urban services. Such benchmarks include 24 × 7 water supply, water consumption norms of 135 lpcd for all cities, 100 per cent individual piped water supply, 100 per cent collection and treatment of solid and liquid waste, underground sewerage system for all cities. Similarly, benchmarks have also been developed for storm water drainage, urban transport, urban roads, traffic support infrastructure, urban transport and

street lighting. As observed by the Isher Ahluwalia Committee, these benchmark norms are consistent with the economic and social aspirations arising from India's GDP growth target of 8 to 9 per cent per annum. Since different States and cities are at different stage of development, it will be essential for the Central Government to undertake an audit during the preparatory phase of JNNURM-II to determine the service levels across States and set outcome-based targets for services admissible under JNNURM-II for individual states. In the longer term, all state and cities should aspire to achieve the aforesaid service-level norms.

OVERALL BUDGETARY OUTLAYS FOR URBAN SECTOR

18.184. An indicative outlay of ₹1,20,557 crore for Ministry of Urban Development (MoUD) and ₹43,521 crore for Ministry of Housing and Urban Poverty Alleviation (MoHUPA) has been made. This includes provision of ₹1,01,917 crore for the Flagship Scheme of JNNURM which is a State sector ACA scheme and is implemented jointly by both the aforesaid Ministries. The share of MoUD in JNNURM is ₹66,246 crore and of MoHUPA is ₹35,671 crore.