

EXECUTIVE SUMMARY

The preparation of the CDP for Lucknow has been undertaken in the context of the JNNURM. Although Lucknow formally qualifies for JNNURM funding for being a state capital, it also is a million plus city and has a rich heritage. The CDP offers a city assessment, a vision for the future development of the city and a three pronged strategy: infrastructure and service delivery improvement; basic services to the urban poor and institutional and governance reforms. The process of Lucknow's CDP formulation was through a series of stakeholder consultations, one on one interactions with key departments, selected functionaries and stakeholders and analysis of secondary information.

Economy and Demography

Lucknow is the capital of India's most populous state and is surrounded by a number of small towns. The city has seen a steady increase in population arising from natural growth, the incorporation of peri urban areas in the 1980's and migration. The Master Plan 2001 estimates the population at 4.5 million.

The service sector forms the main economic base of the city. Lucknow is also an important education centre, especially for primary and secondary education (relative to higher education), and houses a number of research and development institutions. The state of infrastructure is one of several constraints that prevents the city from achieving its economic potential.

Physical Characteristics

Lucknow has witnessed a radial growth – greater along the Faizabad Road and the Trans Gomti area and in recent years, the city is witnessing a real estate boom with a large number of private developers entering the market. The latter has not been factored into the Master Plan – the formal basis for Government panning. Estimates of infrastructure requirements and population projections are therefore likely to be conservative.

The position of the City as the only large urban centre amidst a number of small towns in the surrounding districts makes it an attractive destination for job seekers and people in need of education and health facilities. One of the features of the city's growth has been an increase in the number of slums but disagreements about the definition of slums and about data hamper efforts to address service delivery challenges in these areas.

Status of Infrastructure

Infrastructure development has not been commensurate with the growth of the city and there are problems confronting the city in terms of access and coverage in key infrastructure sectors – water supply, sewerage, housing, drainage, and transport. Overall service levels are inadequate and the situation is worse for the urban poor.

a) Water Supply

Aside from water resource issues such as pollution of the River Gomti and the declining quality of groundwater, Lucknow carries a burden of old infrastructure and the absence of metering makes it difficult to estimate costs and leakages. Information about assets in physical and functional terms is also inadequate. Overlapping institutional roles make it difficult to hold the institutions clearly accountable.

b) Sewerage and Sanitation

Lucknow has seen no major investment in sewage infrastructure after the proposals in the 1948 Sewage Master Plan. Taking into consideration the service latrines, latrines discharging into nallas,

existing public toilets and open defecation about 40% of the population do not have access to adequate sanitation. Informal sewers connecting a few households and discharging into nearby open drains are also seen. The existing main network therefore is for the most part not able to handle additional load leading to the sullage being discharged directly into the River Gomti. In many places the sewers have been choked by the disposal of solid waste in them as well as encroachment in sections. This does not allow complete cleaning of the network and aggravates the problem of discharge.

The lack of current data and information on assets severely impacts planning. While in the newly developed and developing areas, networks are being provided by developers, coordination with the state planning process is tenuous.

c) Drainage

While in general, the City is well drained, there are local pockets of water logging especially in areas where the carrying capacity of the drains has been reduced either due to encroachment or blockage. Such flooding has been observed in Hazratganj crossing and at Mawaiya Bridge crossing almost each year during rains. In the newly developed areas, while the developer is responsible for the provision of internal surface water drainage, the linking of these drains to the larger local drains and nallahs is neglected, causing waterlogging problems at some places. Maintenance of drains is 'reactive' with the common practice to desilt the drains and dump the sludge near the edge of the drains to dry out before lifting. In practice, sludge either gets blown away or ends up in open drains.

d) Solid Waste Management

The present solid waste management system is not synchronized. There are some pockets where door-to-door collection has been introduced largely on the initiative of the local residents; there is no system of collection, transportation and disposal nullifies efforts at the household level. The numbers of existing waste depots are inadequate for the quantum of waste generated and are also located far from the city, which encourages indiscriminate dumping. Behavioural patterns pose health risks and therefore pose health risks for those working in this sector as well as residents living around waste depots. The indiscriminate dumping results in garbage finding its way back into sewers and contributing to their choking.

e) Transportation

The road network and public transportation system has not kept pace. Additionally, there has been a dramatic rise in vehicles. There is therefore heavy congestion of the existing network, severe parking problems especially in the market areas and along the main thoroughfares. Newly developed outlying areas are not well connected with the other parts of the city. The present system results in huge time delays. The critical areas that need attention are designing an efficient public transport system, enhancing the road network, and enhancing parking systems. The CDP recommends that the city should focus on an efficient bus transport system in the short term. A detailed feasibility study should also be undertaken for a comprehensive multi modal mass rapid transport system such that overall transportation efficiency increases in the long run.

Institutional Arrangements

There are multiple agencies responsible for urban governance and provision and management of infrastructure and services. While, the Lucknow Nagar Nigam (LNN), Lucknow Jal Sansthan (LJS), Lucknow Development Authority (LDA) and UP Jal Nigam (UPJN) are the key urban service providers, other agencies include the Housing Board, Central and State Public Works Departments (CPWD and PWD), Transport Department, Industries Department and the Department of Environment. There is

significant overlap of roles and responsibilities and fragmentation in service provision and management of infrastructure, which makes it difficult to hold institutions accountable and to coordinate.

At the local level, the LNN has been assigned various functional responsibilities but its human and financial resources are inadequate, it remains fiscally dependant on the state and there is a lack of continuity of personnel.

In the water supply and sewerage sphere, there is functional fragmentation between the UPJN and the Lucknow Jal Sansthan. The Jal Sansthan deals with O&M, while the UPJN decides on tariffs with additional responsibility for planning and infrastructure development.

The key challenge in the institutional arrangements is to clarify roles and responsibilities as the basis for the accountability, transparency and greater efficiency required to sustain development and achieve Lucknow's vision for the future.

Financial Status of Key Institutions

Overall the financial status of the key institutions for service delivery is weak with a high dependence on the state government for grants and loans. Revenue generation capacities remain hampered by poor information to support effective user charges, property tax and other potential sources of revenue.

Vision for the Future

Through extensive consultations with a variety of stakeholders, the Vision identified for Lucknow is - *"One of the five most liveable cities in India where every citizen enjoys a high quality of life and access to basic services and amenities, and where local culture, crafts and heritage are preserved and promoted. A city with a dynamic economy driven by service sectors such as knowledge-based education, health, tourism, and information technology that provides opportunities for all and makes it an attractive investment destination"*. The CDP offers a city assessment, a vision for the future development of the city and a three pronged strategy: infrastructure and service delivery improvement; basic services to the urban poor and institutional and governance reforms.

City Investment Plan

The City Investment Plan deals with priorities for infrastructure service improvements and basic services for the poor. The investments and phasing of prioritised interventions is as follows:

| Sector | Total | Phase 1 2006-12 | 2006- 07 | 2007- 08 | 2008- 09 | 2009- 10 | 2010- 11 | 2011- 12 | Phase 2 2012-31 | Institution Responsible |
|---|---------|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|----------------------------|
| <i>Sub Mission 1: Urban Infrastructure & Governance</i> | | | | | | | | | | |
| Water supply | 1277.54 | 675.6 | 52.2 | 123.5 | 167 | 156 | 99.3 | 77.1 | 602 | UP Jal Nigam |
| Sewerage | 2058.63 | 630 | 123 | 103 | 78.3 | 136 | 189 | 0 | 1429 | Lucknow Jal Sansthan |
| Drainage | 1555.01 | 444.3 | 108 | 109.2 | 98 | 94 | 35.1 | | 1111 | Lucknow Nagar Nigam |
| Construction of Roads | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Lohiya Path | 69 | 69 | 69 | 0 | 0 | 0 | 0 | 0 | 0 | PWD |
| Internal Roads | 1474.17 | 421.2 | 128 | 123 | 110 | 60.4 | 0 | 0 | 1053 | Lucknow Nagar Nigam |
| Roadbased urban transport | 562.7 | 160.8 | 161 | 0 | 0 | 0 | 0 | 0 | 401.9 | UPSRTC |
| Parking through PPP | 153.36 | 21.79 | 15 | 6.77 | 0 | 0 | 0 | 0 | 109.6 | Lucknow Nagar Nigam |

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| Sector | Total | Phase 1 2006-12 | 2006- 07 | 2007- 08 | 2008- 09 | 2009- 10 | 2010- 11 | 2011- 12 | Phase 2 2012-31 | Institution Responsible |
|--|----------------|--------------------|-------------|--------------|-------------|-------------|-------------|-------------|--------------------|----------------------------|
| | | | | | | | | | | Nigam |
| Haider Canal Road & Elevated Roadway | 796.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 796.4 | Lucknow Nagar Nigam |
| Solid Waste Mangement | 89.34 | 46.14 | 19.5 | 19.58 | 7.07 | 0 | 0 | 0 | 43.2 | Lucknow Nagar Nigam |
| City Beautification | 38.88 | 11.11 | 4 | 3 | 4.11 | 0 | 0 | 0 | 27.77 | Lucknow Nagar Nigam |
| River Front Development | 16.21 | 16.21 | 4 | 8 | 4.21 | | | | 0 | Lucknow Nagar Nigam |
| Conservation of Ponds | 170 | 5 | 5 | 0 | 0 | 0 | 0 | 0 | 170 | Lucknow Nagar Nigam |
| Street Lighting | 156.64 | 56.64 | 10 | 11 | 11 | 12 | 12.64 | | 100 | Lucknow Nagar Nigam |
| Conservation of Heritage Sites | 160 | 15.97 | 3.54 | 4.29 | 3.16 | 1.66 | 1.66 | 1.66 | 144.03 | LDA, LNN |
| Community Halls | 3.47 | 3.47 | 3.19 | 0.28 | 0 | 0 | 0 | 0 | 0 | Lucknow Nagar Nigam |
| Infrastructure Projects | 1352 | 845 | 110 | 275 | 234 | 133 | 53 | 40 | 507 | Lucknow devp. Authority |
| Water supply, Sewerage, SWM, RWH | 91.1 | 30.6 | 7.7 | 10.2 | 4.35 | 4.35 | 2 | 2 | 60.5 | Lucknow Cantonment Board |
| SUB TOTAL | 10007.4 | 3453 | 823 | 796.8 | 721 | 598 | 294 | 121 | 6555 | |
| <i>Sub Mission 2: Basic Services for Urban Poor</i> | | | | | | | | | | |
| Basic Services for Urban Poor | 1506.5 | 1051 | 201 | 215 | 190 | 145 | 140 | 160 | 456 | SUDA & DUDA |
| Technical Assistance | 342 | 342 | 57 | 62 | 52 | 57 | 57 | 57 | 0 | |
| Grand Total | 11855.9 | 4845 | 1081 | 1363 | 1173 | 943 | 590 | 338 | 7011 | |
| <i>Critical Areas for Intervention highlighted: Phase 1 Expenditure Rs. 4845.21.21crore of which Rs. 1080.82 crore is in 2006-07</i> | | | | | | | | | | |

In addition to the financial outlay, there is a substantial technical assistance/capacity building component that is proposed. This component is fully funded by the JNNURM.

(Rs. in Crore)

| Technical Assistance | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | Total |
|--|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Feasibility studies (MRSST, SWM Traffic, Flyovers, etc.) | 10 | 10 | | | | | 20 |
| Miscellaneous surveys and development of MIS, e-gov. | 15 | 15 | 15 | 15 | 15 | 15 | 90 |
| Training and capacity building | 10 | 10 | 10 | 15 | 15 | 15 | 75 |
| GIS of various utilities and road network | 5 | 10 | 10 | 10 | 10 | 10 | 55 |
| Restructuring of institutions / constitution of SPVs | 5 | 5 | 5 | 5 | 5 | 5 | 30 |
| IEC Campaigns | 12 | 12 | 12 | 12 | 12 | 12 | 72 |
| Total | 57 | 62 | 52 | 57 | 57 | 57 | 342 |

The financing strategy for the above is as per the JNNURM guidelines and is as follows

(Rs. in Crore)

| Institutions | Investment requirements (Rs.Crore) 2006-12 | 50% JNNURM / Govt. of India | 20% Govt. of Uttar Pradesh | 30% Local Body | Investment requirements 2012-31 |
|---------------------------------------|--|-----------------------------|----------------------------|----------------|---------------------------------|
| UP Jal Nigam and Lucknow Jal Sansthan | 1305.53 | 652.76 | 261.11 | 391.66 | 2030.64 |
| Lucknow Nagar Nigam | 1041.81 | 520.91 | 208.36 | 312.54 | 3664.20 |
| Lucknow Development Authority | 845.00 | 423.00 | 169.00 | 254.00 | 507.00 |
| UP State Road Transport Corporation | 160.77 | 80.39 | 32.15 | 48.23 | 401.93 |
| Public Works Department | 69.00 | 34.50 | 34.50 | 0.00 | 0.00 |
| Lucknow Cantonment Board | 30.60 | 30.60 | 0.00 | 0.00 | 60.50 |

For Sub Mission 2, JNNURM will provide 50% of the funds and 50% will be the responsibility of the State Government and the Local Government. Further, in the State/Local government share, beneficiaries will contribute to the tune of 12% for regular beneficiaries and 10% for SC/STs and physically handicapped. The estimates are as follows:

(Rs. in Crore)

| Institutions | Investment Requirements (Rs. Crore 2006-12) | 50% JNNURM | 50% Govt. of Uttar Pradesh, Local Bodies | Investment Requirements 2012-31 |
|--------------|---|------------|--|---------------------------------|
| SUDA / DUDA | 1050.50 | 525.25 | 525.25 | 456.00 |

The financing options available to the institutions of service delivery are shown below.

(Rs. in Crore)

| Options | Lucknow Nagar Nigam | Lucknow Development Authority | Lucknow Cantonment Board | UP State Road Transport Corporation | Public Works Department | UP Jal Nigam & Lucknow Jal Sansthan |
|--|---------------------|-------------------------------|--------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Financial Requirement | 1041.81 | 845.00 | 30.60 | 160.77 | 69.00 | 1305.53 |
| Own Resources | 100.00 | 253.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| State Govt. Grants | 208.36 | 169.00 | 0.00 | 32.15 | 34.50 | 261.11 |
| Financing Institutions & Capital Markets | 0.00 | 0.00 | 0.00 | 48.23 | 0.00 | 0.00 |
| JNNURM | 520.91 | 423.00 | 15.30 | 80.39 | 34.50 | 652.76 |
| Other Central | 0.00 | 0.00 | 15.30 | 0.00 | 0.00 | 0.00 |

| Options | Lucknow Nagar Nigam | Lucknow Development Authority | Lucknow Cantonment Board | UP State Road Transport Corporation | Public Works Department | UP Jal Nigam & Lucknow Jal Sansthan |
|----------------|---------------------|-------------------------------|--------------------------|-------------------------------------|-------------------------|-------------------------------------|
| Grants | | | | | | |
| Private Sector | 34.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gap | 178.54 | 0.00 | 0.00 | 0.00 | 0.00 | 391.66 |

The Way Forward: Institutional and Governance Reforms

The JNNURM requires a far-reaching reform agenda, and the LNN, together with the GoUP and other institutions will continue their discussions and planning till 2006-07 to map out and phase in critical reforms, compliant with JNNURM, but also tailoring these to the specific requirements of the state. The GoUP has taken some legislative steps but consolidation of reforms is a priority for the next few years. The lack of fiscal viability at the local level, and the continued reliance on transfers remain major problems. It is difficult to manage proactively if an institution is so dependent, and it also weakens its accountability to its constituents and consumers. Guided by the JNNURM, a package of reform needs to be phased in the next few years, starting immediately and focuses on:

- Data Improvement and Analysis
- Revenue Enhancement
- Accounting Reforms
- Budget Reforms
- E-Governance
- Enabling environment for development
- Partnership for the future.