

FINAL REPORT

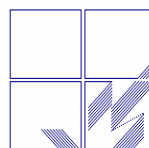
**KANPUR CITY
DEVELOPMENT
PLAN**



**JAWAHARLAL NEHRU
NATIONAL URBAN
RENEWAL MISSION
(JNNURM)**



August 2006



**JPS ASSOCIATES (P) LTD.
CONSULTANTS**

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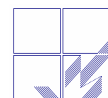
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TABLE OF CONTENTS

Sl. No.	Contents	Page No.
	Executive Summary	i-xiv
1.	Approach to Development of ‘City Development Plan’ for Kanpur	1-6
2	City Profile	7-12
3	Demography	13-16
4	Economy	17-22
5.	Land Use	23-26
6.	Housing	27-36
7.	Basic Services for the Poor in Kanpur	37-51
8.	Road and Transportation Planning	52-62
9.	Municipal Services	63-83
10.	Heritage and Tourism	84-90
11.	Environmental Management Plan for Kanpur City	91-100
12.	Stakeholder Consultations	101-107
13.	Institutional Frame Work and Institutional Reforms for Kanpur	108-132
14.	Kanpur Cantonment	133-137
15.	Vision and Strategies	138-149
16.	Finances of Urban Local Bodies (ULBs) in Kanpur	150-169
17.	Financing of Investment Plan And Project Phasing	170-186
18.	Status of Urban Reforms	187-189



List of Tables

Table No.	Contents	Page No.
2.1	Importance of Kanpur	2-10
3.1	Population Change	3-13
3.2	Spatial Distribution of Population (2006)	3-15
3.3	Literacy Rate	3-15
3.4	Population under reserved categories	3-16
3.5	Population Projection by Different Methods	3-16
4.1	Workforce Participation in Kanpur	4-18
4.2	Industrial status of Kanpur	4-20
4.3	Growths in NSDP and Per Capita Income in Kanpur City	4-22
5.1	Land Use of Kanpur City (1961 – 1998)	5-24
5.2	Land Use as per Master Plan 2021	5-25
6.1	Type of Houses	6-28
6.2	Housing Provided by KDA till 1997	6-29
6.3	Houses Provided by KDA in Post 1997 period	6-29
6.4	Houses Developed by KDA in last 3 years	6-30
6.5	Houses Developed by U.P. Housing Board (Upto 31st March 2006)	6-31
6.6	Access to Basic Services	6-32
6.7	Housing Demand Projections (2001 to 2013)	6-33
7.1	Slum Population Details of Kanpur	7-38
7.2	Comparison of Educational Level in Slum Basties	7-39
7.3	Level of employment in Slum Basties	7-39
7.4	Level of Income in Slum Basties	7-39
7.5	Housing at Slum Basties	7-40
7.6	Houses Developed by KDA for Poorer Section of Society	7-43
8.1	Vehicle Registration Data for Kanpur City	8-54
8.2	Growth of Registered Vehicles in Kanpur	8.54

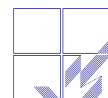
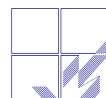


Table No.	Contents	Page No.
9.1	Present status of water supply capabilities of Kanpur Jal Sansthan	9-65
9.2	Installed capacity of treatment of raw water	9-66
9.3	Water Supply Indicators	9-66
9.4	Discharge and length of different drains	9-72
9.5	Projected Waste Generation	9-74
9.6	Waste Composition in Kanpur (in %)	9-76
9.7	Type of Waste Storage Depots	9-78
9.8	Investment Required for Improvement of Waste Depots in Inner Core Area	9-79
9.9	Trend of Water Borne Diseases in Kanpur	9-82
9.10	Trend Analysis of Malaria Cases	9-82
10.1	Tourist Arrivals	10-85
11.1	Water Quality at Various Sampling Points	11-93
11.2	Emission Loads from Domestic Source	11-95
11.3	Air Pollution	11-95
11.4	Point Source Emissions (in kg/hr)	11-95
11.5	Noise Level at Selected Locations	11-96
11.6	Sound Pollution	11-97
12.1	Institutional Responsibility Matrix	12-101
12.2	NGOs consulted	12-102
12.3	Details of consultation held with CDS	12-103
12.4	Details of Consultations held with Industries Associations	12-103
12.5	Details of Consultations held with Trade Associations	12-104
12.6	Details of Consultations with Property Dealers & Builders Associations	12-105
12.7	Details of Consultations with Hotel Associations	12-105
13.1	Institutional Responsibility Matrix	13-128
16.1	Revenue Composition of Kanpur Municipal Corporation	16-151



Table No.	Contents	Page No.
16.2	Expenditure Pattern of Kanpur Municipal Corporation	16-153
16.3	Resource Gap of KNN (1998-2005)	16-156
16.4	Finances of Kanpur Jal Sansthan	16-159
16.5	Demand and Collection of Water Charges	16-160
16.6	Tariff Rates of Water Consumption	16-160
16.7	Financial Status of Kanpur Development Authority	16-163
16.8	Assumptions for Revenue Mobilization of KNN	16-166
16.9	Impact of reforms on KNN-(Ph-I)	16-167
16.10	Assumptions for Resource Mobilization of KJS	16-168
16.11	Impact of Reforms on KJS Finances	16-168
17.1	Project-wise of Investment Plan (2006-31)	17-172
17.2	Sector-wise Tentative Investments (2006-31)	17-174
17.3a.	Project-wise Summary of Investment Plan: Phase-I (2006- 2011)	17-176
17.3b.	Sector-wise Cost of Project Allocation- City Share	17-177
17.4	Jawaharlal Nehru Urban Renewable Mission (JNURM)	
17.4a	Source and Use of funds for the JNNUM (under submission I &II)	
17.4b	Department & Institution wise Cost of Project Allocation	
17.5	Assumptions for the generation of funds by KNN, KJS and KDA	
17.6	Source of Funds for 30% contribution of city	
17.7	KNN-surplus for contribution to JNNURM	
17.8	KJS-Surplus for contribution to JNNURM	
17.9	Generation of resources for meeting O&M cost for the new assets to be created under JNNURM	17-185
17.10	Source of funds for funding of the JNNURM programme	17-186

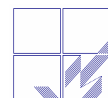


List of Maps

Map	Description	Page No.
1	Zonal Map of Kanpur City	2-7
2	Location of Inner and Outer City Area	3-15

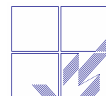
List of Annexure s

Annexure	Description	Page No.
1	Stakeholder Consultations	190-234
2	List of Officials who attended the meeting held on 19 th April 2006	235
2	Introducing E-Governance in Kanpur	236-239
3	JNNURM and Methodology for Developing 'City Development Plan'	240- 252



List of Abbreviations

JNNURM	:	Jawaharlal Nehru Urban Renewal Mission
CDP	:	City Development Plan
UIDSSMT	:	Urban Infrastructure Development Scheme for Small and Medium Towns
IHSDP	:	Integrated Housing and Slum Development Programme
KNN	:	Kanpur Nagar Nigam
KDA	:	Kanpur Development Authority
74 th CAA	:	74 th Constitutional Amendment Act



EXECUTIVE SUMMARY

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1. JNNURM: BACKGROUND AND OBJECTIVES

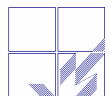
The central government has come out with the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), which is a city-based programme, to build the capacity of cities for better urban management. It will cover 63 cities over a period of seven years starting from 2005-06. The JNNURM aims to provide an incentive to large urban areas to undertake institutional, structural and fiscal changes necessary for developing improved service delivery systems that are sustainable, address poverty and enhance local economic performance. The overall objective of the scheme is to improve the economic and physical infrastructure for the rapidly increasing urban population and also to provide essential facilities and services across the fast growing cities using public private partnership. Cities are expected to articulate their vision, their plans and their commitment through a City Development Plan. The City Development Plan jointly provides the starting point for this process.

2. KANPUR CITY DEVELOPMENT PLAN

City Development Plan for Kanpur city is both a perspective and vision for the future development. Kanpur City Development Plan (CDP) is the culmination of a study which was commenced about three months ago by JPS Associates. This report is based on invaluable inputs the consultants received from the various stakeholders and the officers associated with the development of the city. This CDP, therefore, truly reflects the vision of the citizens, the poor and the slum dwellers and the officers who are determined to make Kanpur a futuristic city in the next few years.

It involves studying the current stage of city's development, setting out the direction for change, identifying the thrust areas and suggesting the alternative strategies and interventions for bringing in the required change. The CDP has identified the infrastructure projects to be implemented during mission duration across various urban sectors along with the proposed implementation mechanism including the Private Sector Participation (PSP) strategy.

This report is divided into eighteen chapters, each dealing with a separate facet of the city and services of the city. The final chapters deal with the vision and strategy, financing plan and institutional reforms which are at the heart of sustainable development. The data collected from secondary sources and through interactive sessions/ interviews was analysed to make a realistic assessment of where the city is and the direction in which it has been moving. An analysis of the Kanpur City's existing situation with respect to demography, economic activities, land use, poverty, urban infrastructure, environment, institutional and financial aspects was carried out to see its implications for service delivery and urban management.



3. KANPUR – AN INTRODUCTION

Kanpur is a metropolitan city, sprawling over an area of 260 sq km. Kanpur is the biggest city of the State of Uttar Pradesh and is main centre of commercial and industrial and educational activities. According to the census 2001, Kanpur has a population of 25.51 lakhs. It is administratively divided into 6 zones and 110 wards with an average ward population range of 19000 to 26000.

4. DEMOGRAPHIC CHARACTERISTICS

The average annual growth of population is 3.5 percent during the period 1991-2001 from the average annual growth rate of 2.6 percent in the previous decade (1981-91). One of the factors for this kind of growth can be higher number of in-migration to Kanpur City from other areas. As per the simple graph method, proposed population is 48 lakhs in 2031 which means that another Kanpur will be added in next 25 years. The average population density in Kanpur is 97.56 persons per hectare. The density in core area is six times higher than the outer area. Therefore, need is felt to decongest the inner core area to improve the quality of life.

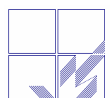
5. ECONOMIC GROWTH

As far as economy is concerned, most of the yesterday's industries are sick. Mostly small and medium sector industries are flourishing. Tanneries appear to be thriving. There are not much of new age industries such as I.I.T. Kanpur is growing as a trade and commerce centre. Kanpur has an image of dying city. Power shortage and electricity cut for 10-12 hours per day on average being observed. There is no air connectivity between major stations. All this create hindrance in the economic growth of the city. For the economic growth of the city, image building exercise is required. We have to make efforts so that ex IITians will commit to Kanpur. The infrastructure and means of communication needs to be improved so that trading activities can be boost. The need is also felt to facilitate marketing linkages for small scale industries.

6. URBAN PLANNING AND HOUSING DEVELOPMENT

Kanpur Development Authority is planning to develop additional 33700 ha for growth of city. In the master plan 2021, provision for inner and outer ring road, new terminals, vegetable and grain markets and development of new colonies in close proximity to commercial hub has been proposed. The preparation as well as approval of master plan has taken more than 7 years. Master plan should be speedily approved and implemented in the city. Steps should also be taken to move industry to conforming area and to ensure good connectivity to new markets and terminals.

Most of the residents stay in one to two room tenements indicating large EWS/LIG population. Large number of residents uses their premises for work cum residence purpose. No new colony has been developed by private



colonizers. An estimated 1.8 lakh additional houses are required by 2013. Huge requirement for additional housing is felt besides meeting existing shortage. Housing industry itself can stimulate economy of Kanpur.

The strategy for planned development will be speedy development of planned townships, stimulating housing development through public-private partnership, improvement in quality of KDA/UPHB housing, reservation of 25 percent area for EWS housing to avoid formation of new slums, location and demand led construction of EWS housing, differential pricing in mixed land use areas and outsourcing approval of building plans and granting completion certificates.

KDA has proposed to develop 10,000 acres to accommodate 16 lakh by 2021. The new development will be in Gangotri Township which will be developed across Ganges and close to civil lines, Hi tech city over 5000 acre including 1800 acres by Sahara, 2500 acre for New Kanpur city towards Bithoor road and two housing projects of UPHB of 1350 acres and 1500 acres towards western side of Kanpur

The strategy is to green the parks with the involvement of RWAs, development of water bodies, green belts e.g. Kidwai Nagar, rain water harvesting (1.5 lakh liters already saved), introduction of CNG buses, developing the locations for weekly markets and shifting of cattle colonies.

7. BASIC SERVICES FOR THE URBAN POOR

According to census 2001, the slum population was 3.68 lakh i.e. 14.5 percent of total population in 390 slums. As per the survey conducted by D.U.D.A in 1997-98, the population was 4,19,859 and total households were 98,208 whereas slum population is about 5.0 lakh in 2006 as per K.N.N. estimate, which is twenty percent of total population. A large number of below poverty line (BPL) population (about 60%) also live-in slums. 66 percent population is below 35 years old. This section has rising aspirations which need to be addressed. Out of total slum population, 64% (2,69,427) are illiterate whereas only 35.8% (1,50,432) are literates, More than 40 percent are self employed.

Majority of households i.e. more than 51 percent live in Kutcha Houses made of grass, mud etc. and jhuggi jhopri's. Majority of house holds (55%) get water from public stand posts and only 19 percent have individual taps. Presently, access to sanitation services is markedly less than access to other basic services. Majority of households use public toilets followed by households using individual flush. Even then open defecation is still at a large scale i.e. 25 percentage of the slum households openly defecate.

Slums are classified into two categories for planning purposes: slums which are requiring relocation and those which can be improved in-situ There should be separate government policy for dealing with the slums located at different type of land i.e. private land (hata land), public land (KDA, KNN, Railway,



Gram Samaj, Irrigation, Nazul land), combined land of 2-3 authorities (KDA, KNN and railway land) and those slums required or not required for development project. Funds will be provided for improving basic services to slums not to be relocated (water, sewers, public toilets, roads and improving houses) and in-situ development by constructing multi-storey housing on Pune style and undertaking a massive EWS housing initiative successful by demand led EWS housing with proper connectivity. The Community Development Societies (CDS) will be actively involved through various P-P-P initiatives.

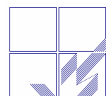
The Strategy to empower slum dwellers will be relocation of slums dwellers by adopting consultative process, encouraging the formation of micro credit organisations, construction of community toilets as per their need and with due consultation, allowing CDS to bid for O&M of community toilets, IEC activities for sensitizing on hygiene, SWM and sanitation, involvement of CDS in planning, implementation and monitoring of infrastructure projects to improve ownership, proper maintenance of community centres and further construction as per demand and motivating slum dwellers to use services like piped water, toilets and electricity and pay for their use.

8. URBAN TRANSPORT

The city is predominantly dependent upon private buses and tempos for the intra-city passenger travel. There are approximately 80 private buses and 980 auto rickshaws and tempos plying in the city. U.P.S.R.T.C has ordered for 108 new CNG buses to replace old fleet of buses. 1000 new CNG taxi permit has been given. The maximum numbers of vehicles registration are of two wheelers from 1999 to 2006 followed by cars. The overall traffic situation in Kanpur is chaotic, roads are overloaded. The railway line between Kanpur and Farrukhabad divides the city into north and south city and rail level crossing falls between main Kanpur city and south city due to which frequent traffic jam is seen all along the G.T. road and traffic movement is restricted. Mixed traffic results in low corridor speed. There are poor intersection geometrics and signaling system, inadequate parking facilities. There is no proper alighting and boarding facility.

The strategy required is segregation of traffic to improve speed, enforcement of discipline in tempos regarding boarding and alighting points, strict checking of polluting vehicles to reduce pollution, building consensus for removal of encroachments and undertaking a drive on inculcating traffic sense.

The works proposed for integrated development of transport are integrated development of 116 Kms of roads including 53 Kms of PWD roads, flyovers at Bada Chauraha, Vijay Nagar Chauraha and Guthaia Crossing, ROBs at Jarib Chauki, kalyanpur, shyamnagar and Dadanagar, Bridge over Ganges to connect Gangotri township, Bus terminals at Jhakarkatti, Chunniganj and Azad Nagar and development of multi-storey parking for Birhana road, Naveen market, Murray company bridge and motijheel-swaroopnagar area.



9. MUNICIPAL SERVICES

a. Water supply

The main source of surface water in the city is from the catchments of Ganga River and Pandu River. The total water supply requirement is 600 mld but only 385 mld of potable water is being supplied. The total supply from treatment plants is about 255 mld water (210 mld raw water from Bhaironghat pumping station and 45 mld from Lower Ganga Canal) and approximately 130 mld water is drawn from groundwater comprising of 80 mld from tube wells (about 135) and 50 mld from hand pumps (about 9830). The availability of water is adequate but distribution system needs improvement. Main issues are that numbers of connection is not increasing due to excess use of ground water, low pressure and unreliable service, low utilization due to old and leaky system, Inadequate funds for O&M. The need is felt to expand distribution as demand of 464 mld will rise to 860 mld by 2031.

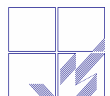
The emphasis will be on improving water supply distribution for the inner core in phase 1 (Rs 319 cr). This will comprise of replacing old and leaky pipes in inner core area, renovation of the zonal pumping stations and improving capacity, providing for inter-connection of various water treatment plants to balance shortfall in capacities. Additional WTPs and feeder mains to connect to outer colonies will be considered in phase 2 (Rs 694 cr).

b. Sewerage

The source of sewer is mostly from domestic households but the waste generated from industries also flow into sewers. The present arrangements segregate industrial effluents from domestic sewerage for sewerage treatment plants. The industrial units in Panki and Dada Nagar industrial area also discharge industrial effluents, which finally flows in River Pandu through three Nalas, flowing north to South in South of Kanpur city. Current coverage of sewer system is around 60 percent and load is 360 mld. In 1997, total amount of waste water measured in drains and at the STPs was about 370 mld of which 160 mld was intercepted under GAP-1. At present inflow of treatment plants is 63 mld and only 17 percent of the total waste water generated.

Main issues related to sewerage are mixing of storm water drains with sewage increases load on STPs, old sewers in inner core area unable to carry current load, damaged and leaky and unsatisfactory arrangements for treating tanneries and industrial effluents.

The renovation of inner core sewers using trench less technologies, segregation of storm water and sewers to avoid choking of sewers,



completion of works under GAP-II, construction of decentralized STP in new colonies by UPHB will be undertaken in phase-I (Rs 297 crore). In phase-II (Rs 3799 crore), main and branch trunks will be covered outlying areas and construction of additional STP for increased population.

c. Storm Water Drains

Kanpur city is habituated between two rivers Ganges on north and Pandu River on south. There are 17 nalas discharging wastewater in Ganga over a stretch of 20 KM from Bithoor downstream to Jajmau. Out of all Nala, Sisamau Nala has the biggest catchments area of 1985 hectares. All the Nalas, discharging in Ganga River have been tapped except Sisamau. Under the GAP (Ganga Action Plan) Phase-II, Sisamau nala, the largest nala in Kanpur City, presently carrying a flow of around 138 mld will be diverted for treatment.

d. Solid Waste Management

At present waste generation in the city is around 1500 MT presently. Apart from solid waste generated by households, commercial establishments and institutions, Kanpur also has a number of industries and other businesses that generate different type of waste such as bio-medical waste, sludge, buffing and other waste produced by tanneries in Jajmau area, industrial waste produced by textile, rubber and other industries operating in the city etc. The main issues are outdated equipment causing unreliable service, inadequate bins, no segregation of waste and proper composting/SWM disposal arrangement, non-operative treatment facilities of tannery waste. The strategy would be introducing house to house collection and user charge, improving reliability by replacing old equipment, improving efficiency by transfer stations and providing tricycles, provide for a Treatment/composting plant, outsource an integrated SWM and conservancy service on PPP basis.

10. CITY VISION

After intensive consultation with various stakeholders the vision identified for city is:

To make Kanpur a clean and healthy city with high quality infrastructure such as better roads, airport, and basic services so that it is recognized as a premier city of U.P. and an environment which attracts people and develops business. The government machinery should be efficient, effective, accountable and transparent by adopting customer oriented approach to improve confidence of entrepreneurs and encourage them to come forward for P-P-P schemes.



11. INSTITUTIONAL FRAMEWORK

In Kanpur, the main institutions are Kanpur Nagar Nigam, Kanpur Jal Sansthan, U.P.Jal Nigam and Kanpur Development Authority.

a. Kanpur Nagar Nigam (KNN)

Kanpur Nagar Nigam is administered under the Uttar Pradesh Municipal Corporation Adhiniyam, 1959. The strength of the council is 110 in addition to the Mayor. The corporation is divided into six zones and each zone is headed by an Assistant Commissioner. The inner core area of Kanpur comprises of 67 wards out of total of 110 wards. The corporation is divided into two wings, viz. elected wing and the administrative wing. The administrative wing of the corporation is headed by a Municipal Commissioner appointed by state government and supported by two Add. Commissioners also appointed by the state government. The main sources of revenue of KNN are taxes (mainly property), license fees, rent of the municipal properties, interest, etc. The total receipt on revenue account including grants-in-aid has been estimated by KNN at Rs.193.25 crores and capital receipts are expected to be Rs.6.90 crores for the year 2006-07.

Kanpur Nagar Nigam's financial health needs urgent improvement. Though the balance sheet shows a small surplus, it is not true representation as accounts are maintained on cash basis. The institution is unable to pay even pension, PF etc. and has outstanding liabilities of nearly Rs 90 crores.

Hence there is need to improve both revenues and cut down on costs. Some of the measures which are proposed are given below.

Bringing Institutional Efficiency in Kanpur Nagar Nigam (KNN)

To bring the efficiency in the functioning of different institutions (KNN, KJS and KDA) and to generate the resource for contributing their share (30%), KNN will generate surpluses through the following:

- Reforms in property tax which will include bringing all the properties under Unit Area Method from annual rental value (ARV), surveying all properties to verify the area etc.
- Introduction of door to door collection of solid waste and introduction of user charge
- cost savings by way of reduction in fuel cost of solid waste collection vehicles by introducing new fuel efficient fleet and introducing transfer stations to reduce kms to be run
- savings in electricity cost by P-P-P of streetlights, and
- reducing administrative and general administration costs by abolishing some posts
- By reducing strength of white collar workers by introduction of e-governance and by out sourcing bill collection

The impact of the various improvement measures at the end of five years is given below:



Impact of Proposed Improvements on the Financial Health of KNN by 5th Year (Rs Crore)

S. No.	Item	Improvement	2010-11
1	Improvement in property tax	various	26.24
2	User charges for SWM	Rs 30	14.40
3	Reduction of SWM costs	20%	02.81
4	PPP in streetlights	15%	0.45
5	Savings by e-governance	10%	1.20
6	Abolition of surplus posts	340 no	1.22
7	P-P-P in bill collection	25%	1.01
	Total annual improvement by 5th yr		47.33

b. Kanpur Jal Sansthan (KJS)

The delivery of water and sewerage services in the city is the responsibility of Kanpur Jal Sansthan. This is a specialized institution. It earns revenues by way of water and sewerage tax and also by charging for water supplied. Currently there are no meters in the city and charges are on flat rate basis.

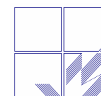
Kanpur Jal Sansthan is also making a loss of about Rs 5 crores per annum and is also unable to pay its electricity bills of about Rs 11 cr p.a. (which are paid by GoUP from its grants to KNN). Because of poor pressure and unreliability of timings of water supply caused by frequent power failures, the numbers of connections are not increasing at the desired rate, though KJS has surplus capacity.

Some of the measures like replacing old leaky pipes and improving storage etc. at the regional pumping stations, the performance of KJS will improve and it will be able to provide more connections.

Bringing Institutional Efficiency in Kanpur Jal Sansthan (KJS)

The KJS will improve its financial performance and generate surpluses by:

- introducing the improvement in its population coverage (connections) and introducing metering,
- Increased income by way of reduced leakages and hence giving additional connections in inner core
- Introduction of a user charge for treatment of waste water
- Savings in power and work force because of renovation of sewers etc.
- Improvement in water and sewerage tax because better coverage of



properties by KNN

The impact of the various proposed measures on the health of KJS at the end of five year period (2010-11) is shown below:

**Impact of Proposed Improvements on the Financial Health of KJS by 5th Year
(Rs Crore)**

S.No	Item	2010-11
1	Increased income by reduced leakages in inner core area	06.38
2	Introduction of user charge for treating waste water	10.80
3	Additional revenue by increasing connections	06.00
4	Improvement in water & sewer tax	04.35
	Total improvement	27.43

12. INFRASTRUCTURE RELATED PROJECTS PROPOSED TO BE UNDERTAKEN

Based on the analysis of infrastructure needs and the stakeholder analysis, several projects were identified. All projects can obviously not be taken up simultaneously. Hence a prioritization of projects has been done based on discussions with the stakeholders and with the various officials involved with the management of the city.

The entire work to be carried out has been divided into two phases. The Phase-I comprises of projects planned in first five years i.e. 2006-2011. While phase-II covers the projects proposed to be undertaken in the next twenty five years. The prioritization of works to be carried out in Phase-I is given below:

a. Prioritisation of Projects

The following projects have been identified after holding intensive consultation with stakeholders:

1. Improving transport infrastructure including improving trunk Roads, so as to have an immediate impact of improvements on the citizens of Kanpur at large
2. Improving solid waste management both in the inner core and outer city
3. Redevelopment of inner core city including shifting of industries to conforming areas
4. Renovating old/broken water pipelines resulting in contaminated water
5. Repair / rehabilitation of broken sewerage / sewerage connected to drains
6. Redevelopment of slums according to Bombay Model
7. Improving basic services in Slums



8. Housing for the EWS

13. CAPITAL INVESTMENT PLAN

The entire work is divided into two sub-missions. Sub –mission-I comprising of Improvement of infrastructure and sub-mission-Ii comprising of ‘Improving Basic Services to the Poor’

Sub-mission-I: Infrastructure Projects

1. Under the project on improving traffic management, improving the transport system and its infrastructure, the following activities will be taken up:
 - Widening of roads including construction of footpaths, road furniture, deep drains, proper signalling, improving intersection design etc. with a view to improve circulation speed in the city corridor,
 - Construction of Central Bus Station at Jhakarkati and Chunniganj and a bus terminal at Ajad Nagar in Phase-I.
 - construction of flyovers at Bada Chouraha, Vijay Nagar Chouraha and Guthaia crossing as also construction of 5 Rail Over Bridges (ROBs) etc.,
 - construction of over bridge on river Ganges to connect the proposed Gangotri township to be located across Ganges, with the central Kanpur area.
 - Development of Parking Areas, parking lot/space on PPP basis, development of Heritage Area and preservation of Water Bodies.

2. Under the solid waste management, purchase of cleaning equipment like dumpers, placer, special waste container van, tri-cycle and auto rickshaws and construction of modern dustbins has been taken in phase-1. It is proposed to introduce door to door collection and levy a user charge. In Phase-II the new areas of the city will also be covered with improved Solid Waste System.

3. In the inner core area, following tasks will be undertaken
 - Widening of congested roads in the inner core area, including construction of footpaths, road furniture, deep drains etc.
 - shifting of industries from non-conforming areas to conforming area i.e. in industrial estates to be set up at Chakeri-1 and Chakeri-2, in Phase-I and develop an Industrial Estate at Bhouti Mandhana by pass in Phase-II.
 - conversion of old and leaky pipelines covering 530 km of distribution system in the inner area with new high capacity pipelines. Renovation of the raw water pump house, rising mains, water treatment plant, renewal of CWMR reservoir, , renovation of Benajavar water works and Bhairav Ghat intake well.
 - Modernisation of sewers line by restoration/renovation of sewerage pumping station and sewer line using trench less technologies and



- construction of new sewage pumping station at Bhagwat Das Ghat.
 - Modernization of open drains
 - Construction of modern dustbins in place of 152 old and open dustbins and purchasing special container, dumper etc. for solid waste management.
4. Under the water supply component, emphasis is given for bringing improvement in water supply distribution for the inner core as described above. In Ph-II, additional WTPs and feeder mains to connect to outer colonies will be considered.
5. As far as improving the sewers are concerned, in addition to the tasks described above for the inner core area, the following additional tasks will be also be undertaken in first phase:
- segregation of storm water and sewers to avoid choking of sewers,
 - completion of works under GAP-II,
 - construction of decentralized STP in new colonies by UPHB
- The connecting main and branch trunks to cover outlying areas and construction of additional STP for increased population is proposed in phase-II.
6. Work will also be undertaken on improvement of Ghats and places of heritage. The social infrastructure such as improving parks, ladies hostel, improvement of community halls, developing green belts etc. will also be undertaken.
7. In the area of Kanpur Cantonment Board, several infrastructure improvement projects similar to the KNN area will be undertaken such as renovation of old sewers, improving roads, construction of one RoB etc.

Sub-mission-II: Improving Basic Services for the poor

Under the submission – 2 of JNNURM, the following activities will be undertaken:

- In-situ development of 390 slums by bringing improvement of roads and drains, hand pump, water supply, sewerage, street lighting and construction of 7461 houses
- EWS housing is proposed to be built for relocation of those slums which are on untenable sites such as falling near the river/footpath/ or site which is required for development works
- 5 slums to be developed on Bombay/Pune model with multi- storey housing and improved infrastructure.

14. FINANCIAL INVESTMENT

In order to meet the above plan for infrastructure improvement, the following investment plan is proposed; which comprises of investment proposed in the first phase of five years and the total plan over the next 30 years.



Financial investment plan		(Rs Crore)	
S. No	Description	Investment in Ph-I (2006-11)	Total Plan (2006-31)
	Sub-Mission-I		
1	Re-Development of inner city	1332	1957
2	Augmenting water supply	0.00	469
3	Extending sewerage	31	3624
4	Improving solid waste management	43.25	605
5	Construction/improvement of drains	172	172
6	Improving roads, RoBs, Flyovers, terminal, addl. bridge	1179	1671
7	Development of parking lots	17	17
8	Water bodies/Ganga river front	15	15
9	Improving social infrastructure & environment/greening	22	22
10	Improvements in Kanpur Cantonment Board Area	35	35
	Total of sub-mission-I	2828	8573
	Sub-mission-II		
11	Basic Services for Urban Poor	960	4218
	Grand Total (Sub-mission-I & Sub-mission II)	3789	12791

It can be seen that an investment of Rs 3789 crores is planned in Phase-I during the next five years, followed by an investment of Rs 8998 crores in Phase-II comprising of the next five years, thus bringing the total investment in Kanpur City of Rs 12791 crores over the next thirty years.

15. FINANCING PLAN

Under the provisions of JNNURM, for cities of the size of Kanpur 50% contribution will be made by GoI, provided the balance 50 percent is made up of contributions from GoUP to the extent of 20 percent and the City's contribution to the extent of 30 percent.

Hence the plan in phase-I is based on the city's capacity to raise its share of 30 percent.

a. Mobilization of city's share

The city's share comprises of

- Revenues to be mobilized by KNN in next five years, including



savings from improved efficiencies enumerated earlier in the chapter on institutional efficiency

- Revenues to be mobilized by KJS in the next five years from improvement in its efficiencies and contribution from the GAP-II project
- Revenues by way of a betterment tax to be levied at the rate of 5% of the property tax (provided under law)
- Contribution by way of departmental budgets and revenues earned by the UPSIDC while developing and selling plots/sheds for relocation of non-conforming industries etc.
- Contribution by way of departmental budgets of PWD for roads improvement

Details of mobilization of city's share

S. No.	Item	Amount
1	By savings and mobilization of funds by KNN	373.77
2	By increased revenues by KJS	142.36
3	By introduction of betterment tax	11.93
6	From budget of UPSIDC-shifting non-conforming industries	426.18
7	Budget for PWD for improving trunk roads	190.00
8	From budgets of UPSRTC & tourism	14.00
	Total	1168.81

b. Use and source of funds

Based on the infrastructure investment plan presented above and the funds that the city is able to mobilize, the source and use of funds is as given below:

Use and source of funds for Phase-I (2006-2011)

S. No.	Use of funds	Rs Cr
1	Sub-mission-I	2828
2	Sub-mission-II	960
	Total	3789
	Source of funds	
1	GoI thru JNNURM	1948
2	GoUP contribution	779
3	City contribution	1169
	Total	3896

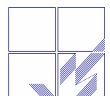
It can be seen that the capacity of the city to raise resources is slightly higher than the plan and to that extent some additional projects for about Rs 280 crores can be undertaken (difference between source and use of funds).



16. REFORMS

Reforms are being carried out at two levels, one at the level of the Nagar Nigam and the other at the level of the State. In this chapter we focus mainly on the reforms to be carried out by the Nagar Nigam or which impact the working of the Nigam.

- a) *Adoption of accrual based accounting*: Although KNN has computerized its accounts and is using the Tally software, its accounts are on 'cash basis'. KNN is awaiting directions from the state Govt. to change. It is estimated that it will switch to accrual accounting by next year.
- b) *Budgeting for the poor*: KNN has agreed in principal to introduce budgeting for the poor. Its budgets formulation from next year will include such an exercise and these will be widely published and discussed with the stakeholders.
- c) *Introduction of e-governance*: KNN is already in the process of commissioning an IT company for introduction of e-governance in KNN. The work is expected to start in second half of this year, and may take three years to be completed fully.
- d) *Reforms of property tax*: GIS mapping to a certain extent is already done. KNN is currently carrying out a house to house survey and also updating its GIS maps so that it has up to date information, including the data on built area and other details. This is likely to increase the income to KNN substantially.
- e) *Levy of reasonable user charge for services rendered*: User charge is to be introduced for parking, solid waste collection, green belt use, community toilets etc. KJS is to introduce a user charge for treatment of waste water.
- f) *Provision of basic services to the poor*: Thrust on housing and in-situ development of slums is being planned. The Community Development Societies are to be empowered and encouraged to take up PPP jobs.
- g) *Earmarking of land for EWS housing in all housing projects*: It is proposed to increase the reservation of land for EWS housing to 20-25% in all future housing projects with a view to provide basic services to the poor and to avoid formation of slums.
- h) *Increased PPP and outsourcing to improve efficiency*: Several areas are under consideration for PPP, these include (i) Outsourcing of solid waste collection (ii) O&M of parking lots (iii) PPP for plants for conversion of plastics to hydrocarbons (iv) Outsourcing of bill collection (v) O&M of parks thru RWAs etc.
- i) *Reforms by state on rent by-laws*: Although some improvements have been made in the rent bye-laws, they are still not conducive for the landlords to evict tenants or to revise old low rents to market rents. These amendments need to be made both for housing development and also for KNN to increase its rental income.



CHAPTER 1:
APPROACH TO DEVELOPMENT OF 'CITY
DEVELOPMENT PLAN' FOR KANPUR

1. APPROACH TO DEVELOPMENT OF ‘CITY DEVELOPMENT PLAN’ FOR KANPUR

1.1 INTRODUCTION

The city development plan (CDP) for Kanpur is the culmination of a study which was commenced about three months ago by JPS Associates. This report is based on invaluable inputs the consultants received from the various stakeholders and the officers associated with the development of the city. This CDP, therefore, truly reflects the vision of the citizens, the poor and the slum dwellers and the officers who are determined to make Kanpur a futuristic city in the next few years.

This report is divided into eighteen chapters, each dealing with a separate facet of the city and services of the city. The final chapters deal with the vision and strategy, the financing plan and the institutional reforms which are at the heart of sustainable development.

Each chapter of the report summarizes the issues that have emerged as a result of a study of the secondary data that the consultants collected and the discussions held by the consultants with various stakeholders. It then examines the issues that have arisen and examines the various strategies that are needed to address the issues identified.

This rapid assessment report formed the basis on which further discussions were held with the various departments involved as also to hold widespread consultations with the various officers, associations, industry associations, NGOs, RWA and the representatives of the poor and economically weaker section of the society.

The feedback received from them has formed the basis of prioritizing the infrastructure needs of the city as also the status of various reforms initiated by the Kanpur Nagar Nigam and how they are affecting the common man.

This forms the basis of the development of the city vision and strategies to achieve the vision.

It may be pointed out that in assessment of the needs of infrastructure in the city during the next 20 years, a good projection of population growth and population densities is very important. In this report efforts have been made to project the population and a mean of various methods of calculations is recommended, so that we err on the higher side and do not fall short of the infrastructure requirements in a short time.

As will be seen from the chapters that follow, the problems of Kanpur are many, not the least amongst them is the problem of stagnating economic activity, the large number of families belonging to the Economically Weaker Section and the problem of overcrowding in the inner city.

On the other hand, we found the city to have many areas of strengths which can be exploited, not the least of them being the good work done by DUDA in organizing the inhabitants of the slum dwellers and the confidence and the positive attitude that we witnessed in our interactions with the various societies.

Considering the desirability of introducing P-P-P in many of the services in the city, it is highly desirable that the corpus and capacity built by DUDA by way of community development societies be leveraged to the maximum as they can provide many of the services such as ‘Solid Waste Collection’ efficiently. Involving them in such P-P-P efforts will also make the societies sustainable, and the surplus so generated could be used for starting other small businesses.

The methodology followed for the development of the City Development Plan is described below:

1.2 ANALYSIS OF SECONDARY DATA

The data collected from secondary sources and through interactive sessions/ interviews was analysed to make a realistic assessment of where the city is and the direction in which it has been moving and its strengths and weaknesses. An analysis of the Kanpur City’s existing situation with respect to the followings was carried out to see its implications for service delivery and urban management.

- Demography
- economic activities i.e. identification of existing nature of commercial and industrial establishments
- urban land use
- urban poverty
- characteristics of the slums
- urban infrastructure and services (like transportation, water supply and sanitation, sewerage and solid wastes management, drains etc.)
- physical and environmental aspects and
- institutional aspects

A critical assessment as well as projections of population growth, infrastructure needs and resource requirements in the short term and long term perspective was also carried out.

1.3 IDENTIFICATION OF KEY STAKE HOLDER’S

The list of key stakeholders, who are involved in the urban service delivery, was collected from various government departments i.e. Kanpur Nagar Nigam (K.N.N.), Kanpur Development Authority (KDA), District Urban Development Authority (D.U.D.A), District Industrial Centre (D.I.C) and Directorate of Industries etc. and compiled to prepare a final list. The key stakeholders identified were as follows:

- community development societies (CDS),

- ex- appointed elected representatives,
- trade associations,
- industries associations,
- builders associations,
- social organizations,
- non-governmental organizations.

A list of officials from different departments such as Housing Board, District Urban Development Authority, Kanpur Development Authority, Kanpur Jal Nigam, Kanpur Jal Sansthan, Department of Industries, U.P. State Industrial Development Corporation, U.P. Financial Corporation, Pollution Control Board, Traffic cell, Kanpur Police etc. involved in the preparation of urban development plan was also drawn up. The final list of stakeholders is annexed with a brief report on the consultations (Annexure I).

1.4 DISCUSSIONS/ CONSULTATIONS WITH KEY STAKEHOLDERS

The objective of the stakeholder's consultation was to ensure that the CDP reflects ground realities and the needs of the people, as articulated by them, are incorporated in the CDP.

For this purpose the methodology is: After identification of stakeholder, consultation with various stakeholders i.e. officials from departments such as Kanpur Nagar Nigam, Kanpur Development Authority, Kanpur Jal Nigam, Kanpur Jal Sansthan, Housing Board, PWD, KESCO, District Urban Development Authority (DUDA), U.P. State Industrial Development Corporation etc. has been carried out to make them aware of city development plan and to know their view about city's vision and strategy.

Besides carrying out discussions with the officials, discussions with key stakeholders such as Community Organisations, trade associations, industry associations, hoteliers etc have also been carried out to find out their roles in city development, know their perception about the city vision and develop a set of mission statements during different stages of project. The consultative process through stakeholder consultations forms an integral part of the preparation of City Development Plan.

Both group discussions and individual discussions were held. It was found that best discussions were held in small groups of 8-10. In large groups, a few persons would dominate the discussions and it was difficult to get in-depth views. Hence instead of conducting large workshops, several small group meetings were held.

Some key points which were expressed repeatedly by the citizens were (a) general dissatisfaction with the response of KNN to grievances of the citizens (b) grave concern about the quality of water and its contamination with sewage water (c) Poor state of environmental sanitation and Solid Waste Collection, particularly in the inner core area (d) lack of transparency and harassment at the hands of clerks and petty officers (e) poor state of transport

in the city and (f) poor connectivity of the city to the new colonies that are coming up in the outskirts.

Many of these points have been addressed in the strategies proposed. In particular attention has been paid to introduction of e-governance, use of GIS to modernize city management and revamp of the grievance handling.

1.5 SELECTION AND PRIORITIZATION OF INFRASTRUCTURE PROJECTS

Having identified the infrastructure needs of the city, it was realized that the requirements of revamping the infrastructure were gigantic and it would not be possible both financially and physically to handle all of them at the same time. Hence a scoping exercise was carried out under the guidance of the Divisional Commissioner, under which the overall infrastructure needs were identified and projects formulated.

Next, the financial requirements for the projects and their phasing was discussed and decided. It was realized that in view of the limitation in the money that the city could raise as its own share (30%) under JNNURM, not every thing could be taken up immediately.

Hence priorities had to be fixed and certain projects had to be scaled down. The priorities are discussed in the financial chapter, but in general priority was given to (a) those projects which will have an immediate visible impact e.g. improving the city roads (b) projects for urban renewal and improvement of the inner old city, specially repair of water and sewer lines in view of the health hazard they were causing and (c) modernization of the solid waste management system.

1.6 IMPROVING BASIC SERVICES TO THE POOR

Realizing that no improvement of a city is possible unless a minimum standard of living and equity can be provided to the urban poor, considerable time was spent in understanding the problems of the poor, including visits and group discussions with slum dwellers.

The consultants tried to understand the reasons why some of the earlier efforts had not been very successful. The new methodology suggested will try and avoid the mistakes of the past, chief being that resettlement of slums is a vexed issue and hence design of resettlement process should be demand driven and should involve extensive stakeholder consultations. As a result of the discussion, this chapter emphasizes the plan to re-develop about five slums in situ with high rise buildings and improved EWS housing in others.

Further, security of tenure is to be guaranteed by allotting the house in the name of the slum dweller, but full ownership rights will pass on to the inhabitants after ten years or so i.e. after he has paid fully for the tenement. This is to avoid the slum dweller re-selling the tenement and returning to the old situation.

1.7 INSTITUTIONAL CAPACITY BUILDING AND REFORMS

This section of the study tried to understand the institutional issues concerned with the Kanpur Nagar Nigam and the Kanpur Jal Sanasthan. The reasons for the institutions being in financial difficulty were studied and the reforms which will help the institutions to become financially viable and effective service providers were identified.

The institutions need an improvement in management and implementing the reforms, already started by them, in a more vigorous and faithful manner. For this purpose, role of e-governance, improved tools of management such as GIS etc. have been suggested.

There is no doubt that financial health and efficient provision of services go hand in hand. Hence, by modernizing old and dilapidated fleet of Solid Waste Collection or by introducing Public Private Partnership in O&M of street lights or by outsourcing of bill collection, considerable savings and improved service levels can be achieved simultaneously. However, the real challenge is not going to be deciding which areas to outsource or even finding suitable parties. The challenge will be in successful change management and in hand holding the private parties during the crucial period of stabilization.

1.8 FINANCING PLAN

This is the most important chapter of the CDP, as it outlines the various infrastructure projects in financial terms, together with the proposed phasing and priorities.

The infrastructure development plan also looks at the sources of funds and how the city will raise its own share of funds. As per the JNNURM norms, for a city of size of Kanpur (With a population between 1 million and 4 million) the GoI's contribution will be 50%, while the balance 50% would comprise of the state (20%) and the city (30%).

This means that the size of the infrastructure plan is limited by the city's ability to raise its share of 30%. The city's share comprises of the savings which KNN and KJS can contribute and also the budgetary grants available to the city from GoUP in the normal course.

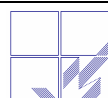
While there is a provision of raising loans by way of market borrowings or bonds, we have not considered these options for Kanpur as in our opinion; the finances of the KNN and KJS are not robust enough to be able to get a good credit rating and to service the debt.

1.9 REFORM AGENDA

The last chapter of the 'City Development Plan' reviews the status of various mandatory and optional reforms mandated by JNNURM and the actions on initiated / to be initiated on them.

1.10 NEXT STEPS

The CDP will be followed by DPRs of each of the projects, signing of the 'Memorandum of Agreement' (MoA) with the GoI and release of funds to commence the projects.



CHAPTER 2: CITY PROFILE

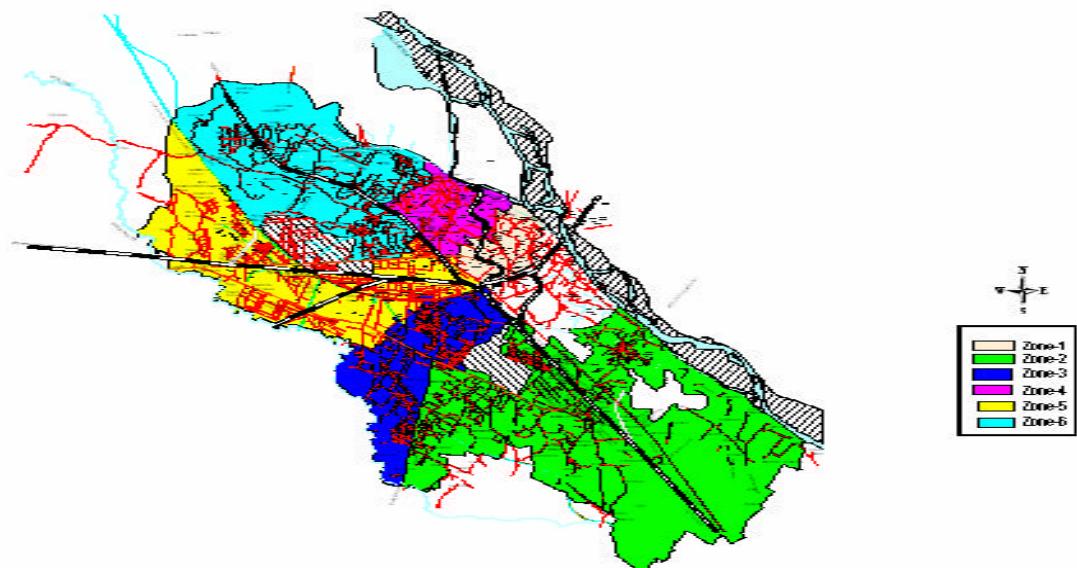
2. CITY PROFILE

Kanpur is a metropolitan city, sprawling over an area of 260 sq km. According to the census 2001, Kanpur has a population of 25.51 lakhs. It is administratively divided into 6 zones and 110 wards with an average ward population range of 19000 to 26000 (refer Map no. 2.1).

It is situated on the southern bank of Ganga River and has been an important place in the history of modern India. Kanpur is the biggest city of the State of Uttar Pradesh and is main centre of commercial and industrial activities. The City formerly known as Manchester of the country is now also called the commercial capital of the state. It is known for its cotton and woolen textile and leather industries. Kanpur is one of the biggest producers of Textile and Leather products. Apart from leather and textile industry, the fertilizer, chemicals, two wheelers, soaps, Pan Masala, hosiery and engineering industries are also operating prominently in the city.

Kanpur is situated on the most important national highways no. 2 & 25 and on the main Delhi-Howrah railway trunk line. Kanpur is divided into two districts namely Kanpur-Nagar and Kanpur-Dehat. Kanpur comprises of 3 tehsil, 2 Municipal Board, 2 Nagar Panchayats and 10 statutory Towns. Kanpur is also divisional headquarters of Kanpur commissionerary consisting of Kanpur-Nagar, Kanpur-Dehat, Etawah, Auraiya, Farrukhabad and Kannauj districts. The town's population is nearly 2.5 million with an average annual growth rate of 2.6 per cent.

Map 1: Zonal Map of Kanpur City



It was believed by some scholars that Kanpur has derived its name from Kanhiyapur. In the course of time, Kanhiyapur probably was abbreviated as Kanhapur and subsequently as Kanpur. The Kanhapur owes its origin to Hindu Singh, raja of Saehendi who came here in 1750 to bathe in holy river, the Ganga and established a village, which he named Kanhapur, the name which became Kanpur in the course of time. During British rule, it was spelled as Cawnpore. Others believe that the name is derived from Karnapur and is associated with Karna, one of the heroes of Mahabharata. Duryodhana made Karna a king, seeing him as a fitting match to Arjuna, and gifted him this area; hence the name Karnapur, which later became Kanpur.

2.1 EVOLUTION OF KANPUR

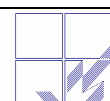
Kanpur has traditionally been an industrial city. Prior to Independence, it was the second most industrialized city in India after Calcutta. It was called the 'Manchester of India' due to the existence of large number of cotton textile units.

During British era, Kanpur was of strategic importance due to the important role which it has played during the great revolt of 1857. This led to the development of a large cantonment base at Kanpur. After independence, Kanpur continued to be an important city and large public sector companies made their existence in the city.



2.2 ABOUT THE PAST: HISTORICAL DEVELOPMENT

Kanpur origin until the thirteenth century was shrouded in the mist. Though no reference to Kanpur is found in history, two of its suburbs, Jajmau, which dates back to the Vedic age and Bithoor, where Lord Brahma performed the Ashvamedh Yajna and where the famous sage Valmiki has written the Sanskrit epic Ramayana, can be traced back to legendary times. The region covered by the present district of Kanpur was once included in the ancient kingdom of Panchala which extended from the Himalayan mountains in the north to the Chambal river in the south. Kanpur's first mention was found in 1207 AD when Raja Kanti Deo of Prayag was attached to the throne of Kannauj and established the village Kohna, which later came to be known as Kanpur. Kanpur continued its association with Kannauj during the reigns of Harsha Vardhan, Bhoj, Mihir, Jai Chand and early Muslim rulers. Later it came under the Jaunpur rulers and the Sur Dynasty. The first mention of Kanpur was made in 1579 during Sher Shah's regime. From 1773 to 1801, it was part of the Oudh kingdom.



In 1801, it came under the control of the British. In 1803 Kanpur became a district and also an important military station of the country. At that time British infantry lines and the parade grounds were established in the south of Parmat. Indian infantry too occupied the space in Kanpur. The Company Bagh was laid in 1847 and the construction of the Ganga canal was commenced in 1854.

Kanpur has become an important centre during the great revolt of 1857. It was the time when Nana Saheb Peshwa succeeded in liberating the city from the British for a short period. Sati-Chauraha Ghat (Cantonment) from where the British were to leave Kanpur was a scene of a terrible conflict and consequently came to be known as Massacre Ghat; so was Bibi Ghar where some British families were taking shelter.

Besides military importance, Kanpur has also made significant contribution in the literature and fine arts. The legendary Birbal, a minister in the court of Akbar and known for his wit and wisdom was born in a village, Takuapur, of Kanpur District. Various acclaimed writers and poets of Hindi literature belonged to this area. Kanpur had been the centre of patriotic Hindi magazines and newspapers such as Brahman, Saraswati, Vishwamitra, Veer Arjun and Pratap.

2.2.1 Industrialization Starts

The waves of industrialization reached the city in 1858. The first major industry, the Harness and Saddlery, was established in 1860. Other mills such as The Elgin Mills, The Cawnpore Woolen Mills (Lal Imla at present) and the Victoria Mills were set up in 1864, 1870 and 1885 respectively. After the First World War, several mills, the Swadeshi, the JK and the Lakshmi Ratan Cotton Mills were established. The first re-rolling mill of India was established in 1928 by the Singh Engineering Work. The Second World War gave fresh impetus to industrial complex. In the post independence years, Kanpur has changed from a town of mill owners and mill workers to that of a city consisting of large middle class population of entrepreneurs and artisans. To cope with the industrial growth a second thermal power station was built at Panki in 1966 for augmenting the older riverside power station. Panki now produces a total of 284 MW of power.

2.2.2 An Educational Centre

The city has gradually emerged as a dynamic city of academic importance. Kanpur's beginning as a knowledge centre was in the mid 19th century when Christ Church College, the oldest educational institution in the city, was started as a high school and became a degree college in 1919. Modern day Kanpur is host of several institutes of repute such as Indian Institute of Technology Kanpur, two universities, viz. Kanpur University and Chandra Sekhar Azad University of Agriculture and Technology, a Medical College and technical institutions such as the National Sugar Institute, the Central Textile Institute and the Leather Institute etc.

Table 2.1 Importance of Kanpur

<ul style="list-style-type: none"> ▪ Locational Advantage ▪ Raw Material Availability ▪ Strong Industrial Base ▪ Skilled Labour ▪ entrepreneurial spirit of large number of population ▪ Access to big local market of U.P. ▪ Enough Sub Soil Water ▪ Educational Base – I.I.T, AU, Dental Colleges, Leather Institute, Sugar Institute ▪ Potential to attract new industries viz. Information Technology Enabled Services (ITES) such as call centers that are very cost sensitive 	<ul style="list-style-type: none"> ▪ Major textile and hosiery manufacturing and distribution centre ▪ Famous for its leather industry ▪ Contributes 13.5 % of countries leather exports ▪ Strong Trade and Commerce ▪ Huge Upper and Middle Class population providing strong demand base ▪ Strong base of Ordinance factories ▪ Air force base ▪ Setting up of Special Economic Zone ▪ 2500 sq. feet Software Technology Park established by UPSIDC ▪ potential to grow existing food processing industry
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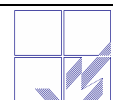
2.3 LINKAGE AND CONNECTIVITY

Kanpur City is situated between the parallels of 25°26’ and 26°58’ north latitude and 79°31’ and 80°34’ east longitude. It is situated on the most important national highways no. 2 and 25 and state highway. It is also situated on the main Delhi-Howrah railway trunk line. It is situated on bank of holy river Ganga and is about 126 meters above the sea level. Within the city only one Civil Aerodrome is located at Kanpur Cantonment. Though presently there is no civilian air-service available for the city but a 9,000 feet air strip is available at civilian air terminal Chakeri (Ahirwan) which is approximately 11 km. away and one at I.I.T (Kalyanpur) which is 23 Km away. The nearest civilian air port Amausi (Lucknow) is 65Km. away from Kanpur.

Kanpur is connected by road with all the major cities of the country. It is situated on National Highway No. 2 on the Delhi-Agra-Allahabad-Calcutta route and on National Highway No. 25 on the Lucknow-Jhansi-Shivpuri route. It is located at the distance of 79 km from Lucknow, 193 km from Allahabad, 329 km from Varanasi, 398 km. Khajuraho, 269 km Agra and 222 kms from Jhansi.

2.4 CLIMATE AND GEOLOGY

Kanpur’s climate is characterized by hot summer and dryness except in the south west monsoon season. The climate in Kanpur can be divided broadly into four seasons. The period from March to the mid of June is the summer season which is followed by the south-west monsoon, which lasts till the end of September, October and first half of November from the post-monsoon or transition period. The cold season spreads from about the middle of November to February.



The climate is of a tropical nature and shade temperature varies from 2°C to 48°C. Rainy season extends from June to September, with the period of maximum rainfall normally occurring during the months of July and August. About 89 percent of the annual rainfall is received during the monsoon months (June to September). The total rainfall in the district varies from between 450 mm to 750 mm. The annual rainfall in Kanpur Nagar was recorded 441 mm in actual in 2004 and 783 mm in general (Statistics Diary 2005). On an average there are 40 rainy days i.e. days with rainfall of 2.5 mm or more in a year in the district. This number varies from 35 mm at Narwal to 45 mm at Kanpur. The relative humidity varies from 15% to 85%. The relative humidity in Kanpur ranges from less than 30 percent in the summer season to 70 percent in monsoon season.

The district lies in the Ganga basin which is formed of alluvium of the early quaternary period. In the district, no hard or consolidated rock exposures are encountered. The main constituents (sand, silt and clay) of alluvium occur in variable proportions in different sections. The mineral products of the district of saline earth from which salt petre and salt are derived and limestone conglomerates (U.P. District Gazetteers Kanpur).

2.5 KANPUR MUNICIPAL CORPORATION

Kanpur municipality came into existence on 22nd November 1861, which was recognized first under the Act XX of 1856 and later under Act VI of 1868, then under Act XV of 1873 and again acts I of 1900. It became a municipal corporation in 1959. The corporation is administered under the Uttar Pradesh Municipal Corporation Adhiniyam, 1959. This has been amended in 1994 by UP Act 12 of 1994 (w.e.f. 30 May, 1994), UP Act 26 of 1995 (w.e.f. 30 May 1995) and takes care of amendments made in 74th CAA, 1992 including the functions given in 12th schedule of the constitution. The duties and powers of the Corporation and Corporation authorities are detailed in Sections 114 of the said Act. The Municipal Act lists the functions under two categories namely obligatory functions and discretionary functions. The major functions being performed by Kanpur Nagar Nigam are:

- Public health, sanitation, conservancy and solid waste management
- Urban poverty alleviation
- Provision and maintenance of urban amenities and facilities such as parks, gardens, playgrounds.
- Provide and maintain the lighting of the public streets, corporation markets, and public buildings and other places vested in the corporation
- Maintenance of ambulance services
- Registration of vital statistics including births and deaths.
- Regulation of slaughter houses and tanneries
- Burial grounds, cremation grounds, etc.

Though Water Supply and sewerage are also obligatory functions of Municipal Corporation as per the 12th schedule of 74th Constitutional Amendment Act (CAA), in the case of Kanpur they are looked after by Kanpur Jal Nigam and Jal Sansthan.

The corporation is headed by a Municipal Commissioner appointed by state government and supported by two Addl. Commissioners also appointed by the state government.

The previous Municipal Council headed by an elected mayor completed its full term and as per provisions of the Act, the process of election has to be completed within six months. According to municipal act, strength of the council is 110 in addition to Mayor. The inner core area of Kanpur has 67 wards out of total of 110 wards.

The total sanctioned strength of employees of Kanpur Nagar Nigam is about 9605 whereas current employment strength is only 5579. This shows that still 42 percent seats are left vacant.

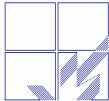
The main sources of revenue of KNN are taxes (mainly property), License fees, rent of the municipal properties, interest, etc. The total receipt on revenue account including grants-in-aid has been estimated by KNN at Rs.193.25 crores and capital receipts are expected to be Rs.6.90 crores for the year 2006-07. Against this the expenditure on revenue a/c are estimated at Rs.189.78 crores and outgo on capital accounts is estimated at Rs.958 crores. The opening cash balance as on 1.04.06 has been estimated Rs.5.68 crores which is expected to go up and close at Rs.6.47 crores at the end of the year i.e., as on 31.3.2007.



C.S.A.U Agriculture College



H.B.T.I Eng. College





I.I.T Kanpur



ITI, G.T. Road

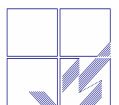




Chattrapati Shahuji Maharaj University, Kanpur



International Centre



CHAPTER 3:

DEMOGRAPHY

3. DEMOGRAPHY

Kanpur is the most important metropolis and biggest city of Uttar Pradesh. According to the 2001 census, the city had a population of 25,51,337 which made it the fifth most highly-populated city in India. Among the big towns of Uttar Pradesh, the growth of Kanpur has been phenomenal. It ranked third after Lucknow and Varanasi in 1901, but by 1961 it assumed a position on top of the list. It has registered an increase of over five times from 1,97,170 in 1901 to 8,83,815 in 1961 in the course of six decades. This is mainly due to its most central location in the state. Kanpur has benefited from its fertile agricultural hinterland of the Upper Ganga Valley and Bundelkhand plateau, the available developed links of transportation and the stimulant of World War-2 with its industrial demand. In spite of a low percentage of irrigated area, the density is quite high which is mainly due to industrial concentration.

3.1 POPULATION GROWTH TRENDS

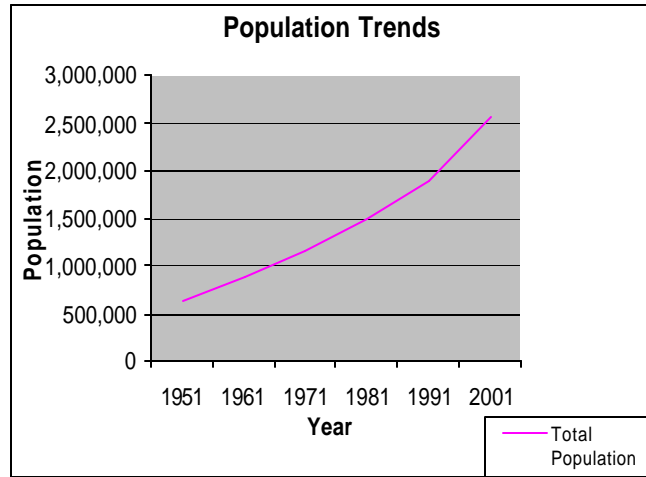
As per census of 2001, Kanpur total population is 2,551,337 as compared to the 1,874,409 people registered in 1991. It may be observed that the average annual growth in population has increased to 3.5 percent during the period 1991-2001 from the average annual growth rate of 2.6 percent in the previous decade (1981-91) (Table 3.1). One of the factors for this kind of growth can be higher number of in-migration to Kanpur City from other areas. This growth rate is expected to continue in future. Out of total population, male population is 1,374,121 which is 53.8 percent and female population is 1177216 i.e. 46.2 percent. The household size is 6.71 persons per household which is very high (Census of India 2001).

Table 3.1 Population Change

Year	Total Population	Decadal Change	Decadal Growth Rate (%)
1951	638,734		
1961	883,815	245,081	38.36
1971	1,158,321	274,506	31.05
1981	1,481,789	323,468	27.92
1991	1,874,409	392,620	26.49
2001	2,551,337	657,729	35.08

Source: Primary Census Abstract, Part II B, Census of India 1991, Primary Census Abstract, Series 10, Volume 1, Census of India 2001

In the discussions, we have considered the area under the jurisdiction of Kanpur Nagar Nigam only. However, Kanpur Cantonment Board has been dealt separately in chapter 14. The Kanpur Urban Agglomeration as defined by the census of 2001, population is 26,90,486 and area is comprised of Kanpur Municipal area and outgrowth, Kanpur cantonment board, Armapur estate, northern railway colony and chakeri.



3.2 MUNICIPAL AREA

According to 2001 census, municipal area is about 261.50 square kilometer. In 1961, municipal area was 114.55 sq. miles which has increased to 265.81 square kilometer. It has increased to 29,683 in hectares in 1997-98.

3.3 METROPOLITAN REGION AREA

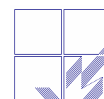
The metropolitan region defined under JNNURM by Kanpur Nagar Nigam, includes the Kanpur Nagar Nigam area, 8 kilometer around KNN boundary and newly included 47 villages of Unnao district on the north-eastern side, it spreads till murtaza nagar, in the west its limit is upto Akbarpur nagar panchayat limit, in the eastern side the limit has been expanded on the road leading to Fatehpur and in extended upto. The metropolitan region area includes the area of shukla ganj nagar palika, unnao nagar palika, akbarpur nagar panchayat, bithur nagar panchayat area.

3.4 POPULATION DENSITY

Kanpur has a population density of 9756 per square kilometer. It is less as compared to the density of other major towns such as Ahmedabad (18424 sq. km.), Banglore (19027 sq. km.), Chennai (24,231 sq. km.) and Hyderabad (21,207 sq. k.m.) as per the 2001 census. The population density also varies from area to area. For example, old city area, which is identified as core area by KNN and is comprised of 67 wards, is very densely populated. The population density in core area is 30401 persons per sq. km. whereas it is 5617 persons per sq. km. in outer city area.

3.5 SPATIAL DISTRIBUTION OF POPULATION

For the spatial distribution of population, the city division into inner city area and outer area has been taken into consideration (refer Map No. 3.1). The average ward population in Kanpur is 23,193 varying from 19717 in Khalasi Line to 26588 in Nawabganj. As per 2001 census, the total population of inner



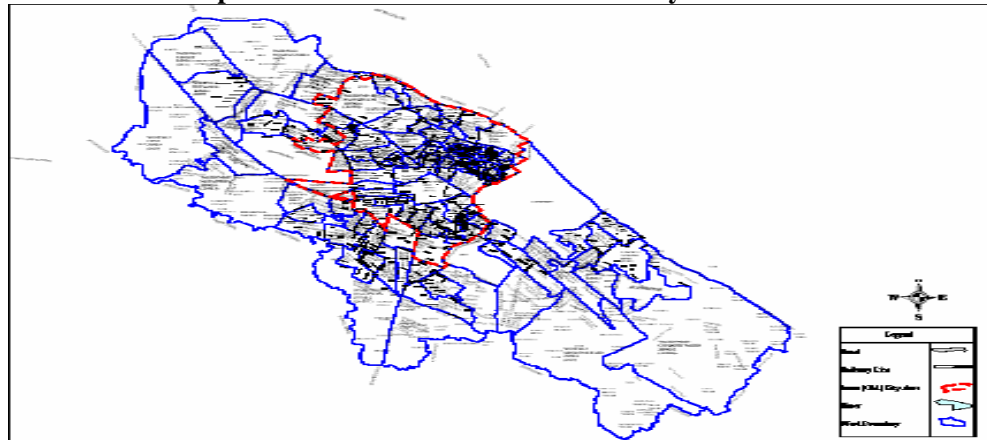
old city area is 15, 31, 331 (Table 3.2). The population in inner old city area ranges from 19, 717 in Khalasi Line to 26,532 in Nirala Nagar. In the rest of the city, which is comprised of 43 wards, the population ranges from 19757 in Safipur to 26,629 in Daheli Sujanpur. The city is growing more towards North east direction.

Table 3.2 Spatial Distribution of Population (2006)

Ward Name	Total Wards	Area (sq. km.)	Population	Density / sq. km.
Inner Old City Area	67	50.37	1531331	30401
Outer City Area	43	181.57	1020004	5617

Source: Data provided by Kanpur Nagar Nigam 2006

Map 3.1: Location of Inner and Outer City Area



3.6 AGE-WISE DISTRIBUTION OF POPULATION

An analysis of the age-wise population reveals that percentage of people up to 19 years of age was high at 46 percentage and marriageable age group from 20 to 34 years was 26 percentage of the total population in urban area of Kanpur District (Census of India 2001). The 35 to 59 years group represented 23 percent and 5 percent were people with age more than 60 years.

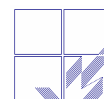
3.7 OTHER DEMOGRAPHIC INDICATORS

Kanpur city has literacy rate of 69 percent as per 2001 census. It has increase more than 7 percent from 61.8 percent in 1991 to 69 percent in 2001. The literacy rate has also increased among male and female population. As shown in table 3.3., male literacy rate is higher at 72.5 percent as compared to female literacy rate which is 64.7 percent.

Table 3.3. Literacy Rate

	1991 Census				2001 Census			
	Total	%	Literates	%	Total	%	Literates	%
Population	1874409		1157994	61.8	2551337		1758807	69.0
Male	1027431	54.8	705813	68.7	1374121	53.86	997001	72.5
Female	846978	45.2	452181	53.4	1177216	46.14	761806	64.7

Source: Primary Census Abstract, Part II B, Census of India 1991 and Primary Census Abstract, Series 10, Volume 1, Census of India 2001



Out of total S.C. Population, which is 282368, 60 percent stay in inner city area and total male population is 53.7 percentage. Out of total 1417 S.T. population, 51.9 percent are male and 68 percent of them stay in inner old city area (Table 3.4).

Table 3.4 Population under reserved categories

Ward Name	Total Wards	S.C. Population	B.C. Population	S.T. Population
Inner Old City Area	67	169374	227653	969
Outer City Area	43	112994	226404	448
		282368	454047	1417

Source: Data provided by Kanpur Nagar Nigam 2006

3.8 POPULATION PROJECTION

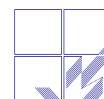
The population of Kanpur City as per census of 2001 is 25,32,138 and population estimated as per the simple graph method comes close to the actual population. They are proximate to each other. For the present study, we are taking the projected figure of 48 lakh for 2031.

Table 3.5 Population Projection by Different Methods

S. No.	Methods	Population Assessed			
		2001	2011	2021	2031
1	Arithmetic Method	23.53	25.94	28.35	30.78
2	Simple Graph Method	25.75	31.9	40.58	48.00
3	Geometric Increase Method	29.16	31.5	63.07	76.79
4	Semi Log Growth Method	29.00	40.57	56.77	70.00

3.9 KEY ISSUES

- The population during last two decades has increased at the rate of 3.5 percent against the national average of 2.1 percent.
- Though there was a decrease in the population growth rate from 1961 to 1991 but from 191 to 2001, it has increased steeply from 26.5 percent to 35 percent.
- The increase in population is likely to increase the demand of housing.
- The population density in core area is 6 times that of outer core area. We have to locate the congest pockets and try to decongest the areas.



CHAPTER 4:
ECONOMY

4. ECONOMY

4.1 INTRODUCTION

Kanpur has traditionally been an industrial city and an economic center. At one point in time it was the second most industrialized city in India being second only to Calcutta. Due to large number of cotton textile units and a vibrant trade center for cotton it was also called the 'Manchester of India'.

Kanpur has several locational advantages i.e. location at a vantage point on two national highways i.e. NH2 and NH25; raw material availability for many industries viz. leather, food processing, plastics etc., proximity to large markets, availability of skilled manpower due to various institutes located within Kanpur (viz. Institute of Technology, Chander Shekhar Azad Agricultural University, Central Pulse Research Institute, Leather Institute etc.) and existing traditional industrial base attracting skilled workers to the city.

During the British times, it was mainly the industries related to tanneries, cotton and woolen clothes production, sugar mills, flour mills, refineries which were established in Kanpur. Kanpur during that time was of strategic importance for movement of troops from one region of the country to another. This led to development of a large cantonment base at Kanpur and contributed to development of leather industry in the form of various saddle units catering to the requirement of British troupes.

After independence, Kanpur continued to be an important city and large public sector companies such as British India Corporation, National Textile Corporation, ordnance factories, etc were set up here. Private sector also set up large units such as many factories of JK Industries group, Lohia machines, Duncans, etc.

At present, Kanpur has mostly industries relating to leather shoe making and cotton textiles. Other factories include manufacture silk, woolen and jute textiles, food products, fire-bricks, fertilizers, railway wagons, textile machinery, television sets, metal ware, leather goods, soap, tents, durries, fountain pens, hosiery, cutlery, television picture tubes, etc. In Kanpur (MC), the banking services were availed by only 61 percent of the households (Census 2001). About 8 percent of the households did not possess basic assets such as vehicles (bicycles, scooter, moped, car, jeep, etc.), televisions and radios.

Kanpur City is surviving because of the following:

- Defence Establishments like OEF, SAF and Ordnance Factory etc.
- Tanneries, which have swelled from 170 nos in 1995 to 300 in 2006
- Coaching industry for I.I.T, JEE, IAS/IPS etc.
- Trading Activities

4.2 WORKFORCE PARTICIPATION

According to 2001 census, out of total main workers i.e. 1040278, the proportion of cultivators are 18.5 percent, agricultural labourers are 7.6 percent, household industries are 3.6 percent and other workers are 70.3 percent. The workforce participation rate as per 2001 census (main and marginal workers) is about 29.9 percent. Table 3.1 presents the category wise break up of workforce as per the 1991 and 2001 census.

Table 4.1 Workforce Participation in Kanpur

Sl. No.	Category	1991		2001	
		No. of Persons	Percentage	No. of Persons	Percentage
1	Main Workers				
i	Cultivators	66731	2.75	192414	17.8
ii	Agricultural Laborers	39330	1.62	78742	12.4
iii	Livestock, Forestry, Fishing etc.	4614	0.19		
iv	Mining and Quarrying	117	0.00		
v (a)	Manufacturing & Processing in HH Industry	3885	0.16	37319	3.9
v (b)	Manufacturing & Processing other than HH industries	151314	6.25		
vi	Construction Workers	11631	0.48		
Vii	Trade & Commerce	149224	6.17		
viii	Transport, Storage & Comm.	41549	1.71		
ix	Other Services	172432	7.12	731803	17.55
	Sub Total – Main Workers	640827	26.49	1040278	24.96
2	Marginal Workers	212	00.02	207555	4.97
3	Non – Workers	1777448	73.49	2920166	70.06

Source: Primary Census Abstract General Population Series 25, Part II-B, Census of India 1991; Total Population: Table A -5 Primary Census Abstract of Total Population - 2001, Series 10, Uttar Pradesh, Census of India 2001

It is also seen from the table that the percentage of workers has increased sharply from 7 percent to seventeen percent in 2001. Out of total workers, over 17.55 percent are employed in other services which indicate that the major employment is provided in service sector. The percentage of people who are employed in non- workers has also decreased from 73.49 percent to 70.06 percent in the 1991 to 2001 census which shows that employment opportunities has been generated over a decade.

4.3 INDUSTRIAL AND COMMERCIAL ACTIVITIES IN AND AROUND KANPUR

4.3.1 Industrial Areas in Kanpur:-

As per the discussions with various officials from industry department, in Kanpur mainly 10 industrial areas exist. They are as follows:

1. Panki Industrial Area Site No. 1 to 5 Panki, Kanpur.
2. Dada Nagar Co-operative Industrial Estate, Dada Nagar Area-235 acres
3. Govt. industrial Estate, Fazalganj
4. Shikshit Berojgar Industrial Asthan Panki
5. Uptron industrial Estate, Panki
6. Industrial Area, Rooma
7. Kanpur Mahayojna
8. Jajmau
9. Saresh Bagh
10. Fazalganj

4.3.2 Type of Industries

4.3.2.1 Heavy / Medium Scale Industries

There are many heavy and medium scale industries which are engaged in the production of defence items, industrial machines, LMS (Two Wheelers), leather, cloth industries. It has been observed that out of total 83 heavy/medium industries, 38 are currently working whereas 45 industries have been closed. As far as their ownership is concerned, 3 are of central government, 6 are of defence, one is of state government and twenty eight are private industries. Up to March 2005, total heavy scale industrial units are 83 and investment made is 873.88 crores. These industries provide the employment to total 65563 people. Table No. 3.2 presents the number of heavy and small scale registered units, its investment and people employed.

4.3.2.2 Small Scale Industries

A large number of small-scale industries have been established recently. Out of total small scale industries, number of registered units are 12,241 as against 7033 in March 1998. It has been observed that almost same amount of unregistered units exist. Out of total registered units, existing operative units are 10,967 whereas 5186 i.e. 47 percent are either sick or closed. The investment made in small-scale industries is 354.82 crores. Upto March 2005, total people employed in small scale industries were 54807 whereas it was 33676 up to March 1998 which shows that there is an increase of 61 percent in last seven years. The turn over of small scale units for 2005-06 is 20 crore. Currently in Kanpur, a variety of industries exists. The details are stated below in table 3.2.

Table 4.2 Industrial status of Kanpur

(Upto March 2005)

S. No.	Industries	No. of Units			Investment In (In Cr)			Employment		
		H.I	SSI	Total	H.I	SSI	Total	H.I	SSI	Total
1	Food Products	7	933	940	37.77	25.41	63.18	1355	3997	5352
2	Beverages, Toba	0	20	20	0.00	0.86	0.86	0	137	137
3	Cotton Textiles	9	400	409	279.42	14.79	294.21	37037	2154	39191
4	Wool, Silk & Synthetic	4	98	102	99.47	7.1	106.57	4214	601	4815
5	Jute, Hemp& Mesta	2	52	54	22.13	2.86	24.99	5290	310	5600
6	Hosiery & Garments	1	1250	1251	5.65	21.15	26.8	110	3965	4075
7	Wood Products	0	348	348	0.00	7.16	7.16	0	1538	1538
8	Paper Products &	5	525	530	5.85	14.18	20.03	702	2143	2845
9	Leather Products	12	1826	1838	19.06	44.7	63.76	3864	8522	12386
10	Rubber& Plastic	4	684	688	14.16	46.49	60.65	750	4210	4960
11	Chemical & Chemical	12	532	544	230.12	36.57	266.69	4103	3691	7794
12	Non-Metallic Miner	1	159	160	1.37	12.24	13.61	41	1178	1219
13	Basic Metal Industry	8	180	188	8.42	13.54	21.96	1129	1347	2476
14	Metal Products	0	1128	1128	0.00	24.68	24.68	0	5326	5326
15	Machinery & Part	8	531	539	14.04	15.51	29.55	1632	3007	4639
16	Electrical Machine	2	301	303	1.75	18.44	20.19	185	1517	1702
17	Transport Equipment	3	120	123	87.4	10.74	98.14	4510	1085	5595
18	Miscellaneous Mfg	5	1439	1444	47.27	20.60	67.87	641	4560	5201
19	Repairing& Servicing	0	1715	1715	0.00	17.8	17.8	0	5519	5519
	TOTAL	83	12241	12324	873.88	354.82	1228.7	65563	54807	120370

Source: Directorate of Industries Uttar Pradesh Kanpur

4.3.3 Recent Industrial Shift

Over a period of time, the industrial profile of Kanpur has undergone a drastic change. On one hand, total number of industries such as textile, rayon, metal, select chemicals industries has declined. Textile and Jute industries have been closed long time back. National Textile Corporation and U.P. Spinning Mills are also closed recently. Recently, some of the important industries were closed down which include Elgin mills, JK Industrial plants (Cotton & Spinning mills, Rayon, Tube Works), Kanpur Chemical Works, Kanpur Jute Udyog, Tannery Corporation, Kanpur Textiles, Swadeshi Cotton Mills. Some of the major industries which closed in recent past are:

- Duncans industry employing 1200 staff and works and disbursing Rs. 1.25 crores as monthly wages were closed almost three years back.
- LML Ltd., which was manufacturing and marketing two wheelers under the name of LML Vespa, has also gone for lock out. It was employing 5000 workers and their ancillary units (almost 50 nos.) were giving employment of almost 5000 workers and LML with the ancillary units together used to disburse Rs. 5 to 10 crores as monthly wages.

With the disclosure of LML Ltd. and Duncons, there is a setback to industry in Kanpur.

The reasons for close down of industries were mainly

- Usage of outdated techniques
- Inability to accept newer and more efficient technologies
- Change in policies of the Government which lead to uncompetitiveness of certain existing units i.e. recent closure of fertilizers unit of Duncan's industries
- Inefficiency especially in public sector companies
- Labour unrest and
- Technological obsolescence

On the other hand, industries such as leather, light engineering and food processing etc. have grown. Small scale and cottage industry (hosiery etc.) have also mushroomed. As per the discussions, mainly following industries are flourishing: Rice, Dal, Oil, Spices, Flour Mills, Pan Masala, Cattle Feed, Hosiery, Ready made Garments, Finished Leather, Shoes & Chappals, Purses and Belts, Steel Elmira's and Boxes, Agricultural implements, Engineering Workshops, Auto parts, Plastic Goods, Polyethylene Bags, Grease, Refining of lubricants, Surgical Bandage & Tapes, Medicines – Allopathic, Ayurvedic, Homeopathic, Soaps and detergents, Packaging, Defence items, Rubber chappals, Packaging Amul, Canaspati, Oil, Sugar (Ghatampur), Industrial Machines, Ball point pens, Newspapers (Printing Press), Rolling Mills, Woolen Mills; H.A.L., Artificial Limb Factory; Water and Industrial Pumps, Cold drinks, Paints and thinners, Tanneries.

4.3.4 Decline in New Industrial Investments

In Kanpur, recent investments in industries have gone down as compared to its hinterland towns i.e. Agra, Allahabad, Chitrakoot Dham, Lucknow, Barrelly, Jhansi etc. The main reason for the decline in industrial growth is the change in the basic factors that lead to urban growth. In Kanpur, before the economic reform starts, the growth was determined mainly by its proximity to raw material, market, availability of manpower etc. In current scenario, growth is determined by investment made in the city. The need is felt to attract the investments for fuelling economic growth.

There has been no significant change in the employment in defence establishments. However, the tanneries provide employment to 30,000 to 50,000 workers in Jajmau and generated further employment in purchase and marketing and business in suppliers of chemicals used in tanning.

4.4 ECONOMIC PROFILE AND PER CAPITA INCOME OF KANPUR

It is observed that the economy in terms of NSDP of the Kanpur City has increased from Rs 2937.58 in 1998-99 to Rs 3166.61 crores in 2002-03 resulting in a growth of economy of about 1.98 percent per annum during the period. The per- capita income of the Kanpur City showed negative growth over the same period. The table no. 3.3 gives the growth rates of NSDP and PCI by years.

Table 4.3 Growths in NSDP and Per Capita Income in Kanpur City

Year	At current Prices			At constant (1993-94) prices				
	Total NSDP (Rs. Crores)	Growth in NSDP over previous year(%)	Per capita NSDP (in Rs.)	Growth in NSDP over previous year(%)	Total NSDP (Rs Crores)	Growth in NSDP over previous year(%)	Per capita NSDP (in Rs.)	Growth in Per Capita NSDP over previous year(%)
1998-99	4489.36		11502.3		2937.58		7526.93	
1999-00	4550.26	1.36%	11378.5	-1.08%	2952.92	0.52%	7384.15	-1.90%
2000-01	4721.53	3.76%	11527.2	1.31%	2988.72	1.21%	7296.67	-1.18%
2001-02	5411.71	14.62%	12897.3	11.89%	3249.28	8.72%	7743.77	6.13%
2002-03	6290.15	16.23%	14679.5	13.82%	3166.61	-2.54%	7389.99	-4.57%
Average		8.99%		6.48%		1.98%		-0.38%

Source: Department of Economics and Statistics, Govt. of Uttar Pradesh

4.5 KEY ISSUES

For development of Industries, the following issues need to be addressed:

- Power shortage and roistering being observed for 10-12 hours per day on average
- Poor law and order situation in the city
- Poor infrastructure in the state as well as city
- No air connectivity between major stations
- Government Schemes for providing incentives to entrepreneurs are not implemented sincerely and seriously
- Ethical and transparent functioning of financial institutions
- The state government has to come out with aggressive and promotional industrial policy and ensure its implementation.
- Non-confirming industries (approx. 1000) should be shifted to confirming areas on priority basis.



Mega Mall



CHAPTER 5:
LAND USE

5 LAND USE

The process of planned development for Kanpur city was started way back in 1943 when Kanpur Development Board has prepared the first development plan. With the change in socio-economic situation over a period of time, the need was felt to make changes in the old master plan. In 1962, responsibility of preparation of new master plan has been assigned to Town and Country Planning Department, Uttar Pradesh for Kanpur development area falling under Kanpur Development board and Kanpur Development Parishad area which was declared planned area as per the government order of U.P. (Regulations of Building Operation) Act 1958 (U.P. Act No. 34 of 1958). This Master Plan of Kanpur recognized the functional characteristic of Kanpur as an industrial and commercial town of Uttar Pradesh.

Kanpur city has grown from an area of 8236 hectare in 1946 to 29670 hectare in 1962 which includes the cantonment area too. In 1962, it was spread from Beri Akbarpur in west to Ruma in east and from Ganga River in north to Pandu River in south. As per Master plan 1991, in 1962 out of total 29,670 hectare, 8863.5 hectare (29.9%) was developed land and rest 18235.7 hectare (61.5%) was agricultural land, 2570.8 hectare (8.6%) was open land. In 1997-98, total metropolitan region area has increased to 89131.15 hectare out of which 4,743.9 hectare (5.31 %) was non-defined (prohibited area) and rest 29,683 hectare and 54,704 hectare (61.39%) was urban and rural area respectively.

Over a period of time, Kanpur has developed linearly from east to west along Ganga River and G.T road. The Central Business District (inner city) is located in the north central part. It is heavily built up and characterized by mixed commercial and transport related activities. The public, semi-public, residential and other land use activities have been mostly concentrated in the west. Due to physical constraints of river in the north and cantonment in the east, industrial concentration followed western/ southern expansion.

5.1 LAND USE STRUCTURE

The land use structure has been explained on the basis of Master Plan. From 1961 to 1998, area covered under residential and commercial land use has almost doubled from 31.77 to 62.93 and 1.86 to 3.28 respectively. The area under industries has increased marginally (6.42% to 6.93%). This is due to closure of many large scale industries in recent times. The area under public utilities has increased marginally from 6.59% to 6.90% (Table 5.1). It has been observed that there has been enormous increase in the mixed-landuse and marginal increase in the industrial and public utility land-use. This is only indicative and to know the actual extent detailed field survey is required. The spatial growth pattern reveals that high growth has taken place in the core area and steps to decongest the inner core are required.

Table 5.1: Land Use of Kanpur City (1961– 1998)

Sl. No.	Land Use	1961		1998	
		Area (hectare)	%	Area (Hectare)	%
1	Residential	2815.9	31.77	8813.38	62.93
2	Commercial	164.6	1.86	460.35	3.28
3	Industrial	569.4	6.42	970.42	6.93
4	Parks and Playground/ Recreational	105.1	1.19	959.08	6.84
5	Public Utilities and Services	584.0	6.59	966.55	6.90
6	Government	148.4	1.67	298.62	2.13
7	Traffic and Transportation	771.7	8.71	1452.85	10.37
8	Railway Land	817.4	9.22	-	
9	Defence Establishments	2689.2	30.34	-	
10	Water bodies/ River & Drains	197.8	2.23	82.60	0.60
	Total	8863.5	100%	14003.85	100%
11	Open Area	2570.8	-		
12	Agriculture Green belt	18235.7		15679.15	
				29683.00	
13	Rural Area		-	54704.25	
14	Non-defined area			4743.90	5.31
	Grand Total	29670.0		89131.00	

Source: Kanpur Master Plan 1970, Draft Master Plan 2021

5.2 DEVELOPMENT/ MASTER PLAN INITIATIVES FOR KANPUR CITY

5.2.1 Development Plan of 1943

Development Plan has been prepared by Kanpur Development Board in 1943. Due to change in socio-economic condition, the need is felt to revise this master plan.

5.2.2 Kanpur Master Plan 1991

Kanpur Master Plan (1968-91) has been prepared by Town and Country Planning Department, Uttar Pradesh for 21 lakh population and has been passed in 1970. After the establishment of Kanpur Development Authority in 1974, planning as per master plan has started taking place. The Master Plan was prepared for 29670 hectare to cater the population of 10 lakhs. The plan has proposed the strengthening of existing commercial centre, shifting of non-confirming industries towards the eastern and western parts of the city, higher education facilities in the western side, provision for big recreational centres near the Pandu River and on open spaces near Ganga River, dairy farming on green belt and rural areas, construction of new roads as well as widening of existing road network, construction of bypass to ease traffic movement in the city, construction of bridges across the river Ganga and planned development of identified few ring towns, higher density of residential development within

the municipal boundary and arrangements of services like water supply, sewerage, drainage, etc.

5.2.3 Draft Master Plan of 2021

Due to lack of desire to implement the proposed land use, changes in land use, unauthorised construction and encroachment of land, lack of importance to commercial places, offices and recreation places, master plan of 1991 could not be fully implemented. The planned development has not taken place as per Master Plan of 1991 and targets kept under the plan have not been met. Due to growth in economic and industrial activities and physical spread, problems such as residence, transport, lack of community facilities, environment pollution, number of slum basties etc has increased manifolds. In order to correct the imbalances of the past development and to promote systematic and planned development of the city, it becomes imperative to revise the Master plan and the work was assigned to Town and Country Planning Department (TCPD). TCPD has prepared a revised Master Plan for 2021 taking into consideration the requirements of revised population of 45.0 Lac projected for 2021.

The master plan added 33700 hectare land for future growth of the city. It proposed to reserve 14043 hectares of land, which is 41.67 percentage of proposed area, for accommodating about 45.0 lakh population projected for 2021. A gross residential density of 300 persons per hectares is prescribed in the master plan. The entire city was divided into Planning Districts in order to provide all types of facilities to the proposed population assigned to each District. The Master Plan proposed integration of all the schemes under the housing board with the schemes already under the KDA, provision for inner and outer ring road for improved circulation, provision for new truck and bus terminals, grain and vegetable markets, new colonies proposed in close proximity to commercial hub to decongest the inner core city. The proposed landuse for Kanpur is given in table 5.2.

Table 5.2: Land Use as per Master Plan 2021

Sl. No.	Use	Area in Hectares	%	UDPFI
1	Residential	14043.00	41.67	45-50
2	Commercial	879.99	2.61	4-5
3	Public and semi-public	2074.00	6.14	12-15
4	Utilities	461.00	1.37	-
5	Industrial	1871.00	5.55	5-7
6.	Government and Semi-government	4668.00	13.85	-
7.	Recreational	3221.00	9.56	16-20
8.	Traffic and Transportation	3362.00	9.98	6-8
9.	Others	3124.00	9.27	8-10
	Total	33703.99	100.00	

Source: Proposed Land Use under Draft Master Plan 2021, table-8, Revised Master Plan (Draft) of 2021

In comparison to UDPFI guidelines for million plus cities proposed by the Ministry of Urban Development, G.O.I., the land use proposed is not adequate for many activities. For example, it should be 45-50% for residential, 4 to 5% for commercial, 12-15% for public & semi-public and 16-20% for recreational activities whereas it is 41.6, 2.6, 6 and 9.56 percentage for residential, commercial, public-semi public and recreational activities respectively. Thus in all these sectors the land use component has been less than the required norms.

5.3 EMERGING CONCERNS

- Increase in population has induced a great pressure on existing services and facilities like schools, colleges, health centre, etc.
- There is a shortage of opens spaces, parking areas, loading and unloading platforms in most of the commercial and industrial areas.
- There is an acute shortage of open spaces in high density built up areas, especially inner city.
- Small-scale industries, nursing homes, commercial offices are functioning in the area allocated for residential land use.
- Encroachments on road lead to chaos and reduce the effective road area.
- Reduction in area under traffic and transportation in proposed master plan will further increase the traffic load on the existing over strained transport network.
- Need is felt to proportionately increase the area covered under road vis -à-vis traffic volume so that it will be commensurate with the increased traffic Volume.
- Steps should be taken to speed up the shifting of industries from non-confirming area to confirming area.
- Need is to speedily approve the master plan which has gone for state government approval and implement it.
- The time taken in the preparation of master plans should be reduced. In the present case, the master plan preparation has taken more than 7 years and still it has not been notified.
- There should be good connectivity to new markets and terminals to ensure its success.
- Making affordable houses available for urban poor.
- The road connectivity to south city is currently in bad state and it need to be four lane.
- Steps should be taken to identify the existing cattle rearing areas and in the outskirts land should be identified and developed for shifting of cattle colonies.
- Sites in different wards/zones, where organised weekly markets can be put up, needs to be identified and provisions for different facilities such as parking, community toilets etc. should be made.

CHAPTER 6:

HOUSING

6 HOUSING

6.1 INTRODUCTION

The total number of households is 377, 150 as per the census of 2001. Out of total households, 45 percent belong to BPL and EWS categories; 21 percent and 18 percent belongs to LIG and MIG households respectively and HIG households were 16 percentage (Census 2001). In 2004, a study has been conducted by RITES in which they have taken sample of 2.5 percent household's i.e. 9429 to study the housing stock over a period of time. The sample was a representative sample in terms of representing the different Income Groups (BPL, EWS, LIG, MIG and HIG), housing type (plotted and flats) and location of house stock and supply, different Income Groups i.e. 30 percent from MIG and LIG followed by HIG (16.27%), EWS (15.42%) and BPL (7.96%).

6.2 HOUSING STATUS

As per the proposed Environment Management Plan (2000), existing housing localities has been broadly categorized into seven zones:

- **City core area** - It comprises old interior areas in 24 densely populated wards. It has maximum housing density and many dilapidated houses. It is characterized by limited civic amenities, which are already exploited beyond their capacity.
- **Intermediate North-West Areas**- It comprises primarily of houses which were constructed for accommodating various government officers. It includes posh Civil Lines, Tilak Nagar, Arya Nagar and Swaroop Nagar. It has comparatively better housing quality than other areas.
- **Intermediate South-West Areas**- It comprises areas which are dominated by middle-income group. These areas are still developing in terms of population as well as housing construction. There is sharp contrast in quality of housing blocks in these areas as most of them are individual private dwellings and owned by households with uneven economic status. It has moderately developed civic amenities with few well-maintained residential blocks.
- **Intermediate Eastern Areas** - These areas are characterized by abundance of slum 'Hatas' which affects the overall scenario of housing quality. These areas are quite similar to city core area as it also has high housing density, dilapidated houses and limited civic amenities.
- **Eastern Housing Areas** - These areas are close to defense establishments and situated far away from main city. Housing development along GT Road after Chakeri is very slow.
- **Western Housing Areas**- This area comprises of housing schemes i.e. Panki, Kalyanpur, Indra Nagar which falls in western part of the city. This area has high growth rate of housing development but is lagging behind in terms of provision of corresponding civic amenities.

6.3 INSTITUTIONAL FRAMEWORK

The key institutions involved in planning and development of housing include:

- **Town and Country Planning Department-** It play the advisory role to GoUP on matters pertaining to urban planning. It prepares Development Plans under provision of U.P. Regulation of Building Operations Act, 1958, and U.P. Urban Planning Development Act, 1973.
- **Kanpur Development Authority-** It has been established under Development Authority Act 1974. It works with an objective of area development according to its development plan. KDA has powers to acquire, develop and dispose off land and other property. From 1974 till 2000, KDA built MIG, HIG, LIG houses at various places. In 1974, Ratanlal Nagar and Indira Nagar colonies and Barra Scheme were built. Since 2004, KDA has stopped constructing houses (HIG/MIG/LIG) and at present it is just developing land and disposing it off by way of plotting.
- **U.P. Housing and Development Board (UP Avas Vikas Parishad)-** U.P. Housing Board is mandated to build houses under U.P. Housing Act, 1965. The board is responsible for development of area and construction of special housing and development schemes. At present U.P. Housing Board is not constructing houses for MIG and HIG and rather selling the plots to them so that they can build their own houses
- **Kanpur Nagar Nigam-** It is responsible for provision of civic amenities such as drainage, sanitation, street lighting, roads etc. KNN is also involved in development of housing stock for EWS in various parts of the city.
- **District Urban Development Agency (DUDA) -** They give the demand of EWS/LIG housing to U.P. Housing Board and KDA, they acquire the land, build the houses. DUDA/ District Administration prepared the list of allottees under VAMBAY scheme for EWS/LIG houses and give it to respective agencies for house allotment.
- **UP Cooperative Housing Federation -** It also facilitate housing activity by constructing housing stock and providing loan facility.

6.4 HOUSING STOCK

Kanpur has a housing stock of about 5 lakh dwelling units as shown in the Table No. 6.1. Out of total houses, about 85 percent of the houses are in urban area and remaining 15 percentages falls in the rural areas of Kanpur (Kanpur Vision Document 2004). The pucca houses are 75 percent whereas remaining 25 percent are either semi pucca or kutcha. As far as type of material is concerned, 82 percent are houses made of RBC/RCC whereas 18 percent are made of grass, leaves, mud etc.

Table 6.1 Type of Houses

Distribution of census houses by predominate wall material	No.	Percentage
RBC / RCC & Burn Brick Houses	415,370	82.01
Houses of grass, leaves, mud, unburnt bricks, etc	91,105	17.99
Total	506,475	100

Source: Kanpur Vision Document 2020

6.4.1 KDA Housing Stock

KDA has implemented more than 90 housing schemes since 1974 in Kanpur and developed more than a lakh dwelling units (Vision Document 2004). Administratively, Kanpur is divided into four zones for this purpose and in addition, there is a zone for World Bank funded scheme. KDA works on no profit no loss basis. The profit margin, which they get in acquiring the land from farmers and disposing it off, is spent in development of infrastructures by way of building approach roads, internal water supply, sewerage, storm water drains. KDA also receives Infrastructure fund from state government to construct roads and carrying out development work etc. KDA also provide subsidized houses to EWS/LIG category under various schemes such as Vambay, Ashray etc. Under VAMBAY scheme, it constructs houses on specific demand from district administration and receives the funding too.

Table 6.2 and 6.3 gives the detail of houses provided by KDA till 1997 and in post 1997 period. Till 1997, about 7 percent of total properties developed by KDA were unsold. This percentage has increased to 23 percent in the post 1997 period (1997-2005).

Table 6.2 Housing Provided by KDA till 1997

Zone	Total	Allotted	% of allotted houses	Remaining	% of remaining houses
Zone 1	9637	9286	96.36	351	3.64
Zone 2	16756	15161	90.48	1595	9.52
Zone 3	32551	30426	93.47	2125	6.53
Zone 4	18130	15541	85.71	2589	14.29
World Bank	19662	19515	99.25	147	0.75
Total	96736	89929	92.96	6807	7.04

Source: Kanpur Development Authority 2005

Table 6.3 Houses Provided by KDA in Post 1997 period

Zone	Total	Allotted	% of allotted houses	Remaining	% of remaining houses
Zone 1	642	296	46.10	346	53.89
Zone 2	1297	908	70.01	689	29.99
Zone 3	6145	5548	90.28	597	9.72
Zone 4	2902	1686	58.09	1216	41.90
World Bank	600	410	68.33	190	31.67
Total	11586	8848	76.37	2738	23.63

Source: Kanpur Development Authority 2005

The break up of unsold properties as shown in figure 6.1 depicts that 87 percent of unsold properties are meant for EWS/LIG category (Vision Document 2004). The main reason due to which EWS/LIG houses remain unsold are firstly, their remote location, secondly, lack of infrastructure i.e. not well connected to the main city by approach roads and street lighting etc., thirdly increase in cost of these houses every year due to which they become unaffordable for poor people, fourthly EWS houses which are built under VAMBAY scheme remain unsold due to time taken by district administration in providing the list of allotted to KDA for disposal of houses. Mainly houses are vacant in Sani village, Daheli Sujanpur, Gangapur Macharia, Gunjan Vihar, Arra Bingava and Vajidpur (Table 6.4).

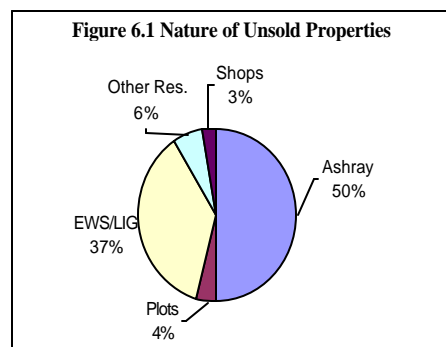


Table 6.4 Houses Developed by KDA in last 3 years

S. No.	Type of Houses	Houses built / Land Developed up to 31 st March 2003	Houses built / Land Developed in 2003 - 04	Houses built / Land Developed in 2004- 05	Houses built / Land Developed in 2005- 06	Houses built/ land develop ed up to 31-3-06	Houses/ land which is not allotted up to 31-3-06
1	Residential Houses						
1.1	Economically Weaker Section						
A	VAMBAY	350	115	256	1015	1736	799
B	ASHRAY	3871	164	265	352	4652	1291
C	Very low income category houses/land	39452	127	326	331	40516	23
	Sub total	43673	406	847	1698	46904	2113
1.2	Low Income Group	19417	123	237	0	19777	7
1.3	Middle Income Group	5500	0	0	0	5500	14
1.4	High Income Group	1044	0	0	0	1044	3
	Sub total	25961	123	237	0	26321	24
	Total of Residential Houses Developed	69634	529	1084	1698	73225	2137
2	Residential Land						
2.1	Low Income Group	N.A.	651	1072	790		382
2.2	Middle Income Group	N.A.	192	551	385		293
2.3	High Income Group	N.A.	24	118	275		181
	Sub total	27559	867	1741	1450	31901	856
	Total	97193	1396	2825	3148	105126	2990

Source: Data collected from Kanpur Development Authority 2006

6.4.2 Housing provided by U.P. Housing Board

U.P. Housing board develops the land and allot plot for construction of HIG, MIG and LIG houses. The housing schemes by U.P. Housing Board are Deendayal Puram, Hanspuram and Pani-Kaluanpuri Yojana. As per the latest data available UPHDB has 1126.32 hectare area in possession and out of which only 688.54 hectare (61 %) has been developed (RITES 2004). About 5 to 10 percent residents carry out tiny/petty activities like grocery shops, barber shops etc. at their residences. The primary survey conducted by the RITES revealed that majority of the existing houses in Kanpur town are plotted type as compared to flats/ apartments and also people have a high preference for this type of houses.

Upto 31st March 2006, U.P. Housing Board has developed 26,690 houses (Table 6.5). Out of total developed houses, 91 percent have been allotted but only 68.8 percent houses have been occupied so far. The vacant houses are mostly in Yojana no. 2 which is lying vacant mainly due to their location at a remote place and poor connectivity with the main city.

Table 6.5 Houses Developed by U.P. Housing Board (Upto 31st March 2006)

S. No.	Yojana	Year of starting the scheme (under section 32)	Acquired land (in acre)	Developed Houses	Allotted Houses	Acquired Houses	% of Acquired Houses
1	Yojana No. 1	20.9.1980	519.74	7617	7195	5498	72.2
2	Yojana No. 2 Phase 1 & 2	20.9.1980	818.34	11818	10279	8341	70.6
3	Yojana No. 3	28.8.1982	470.30	7255	6936	4535	62.5
	Total		1808.30	26690	24410	18374	68.8

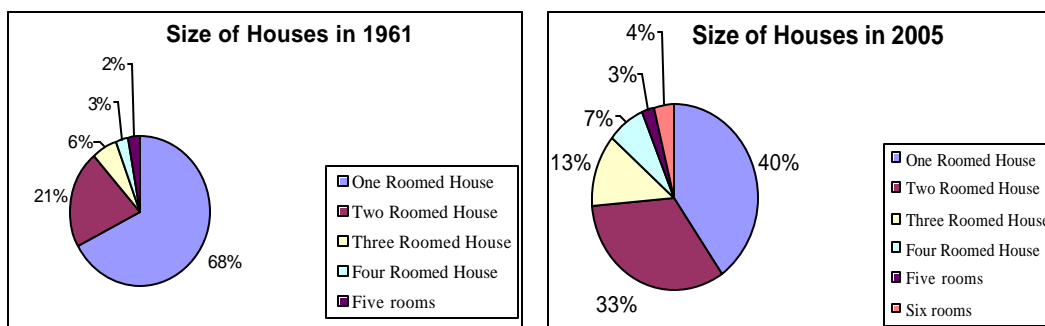
Source: Data collected from U.P. Housing Board 2006

U.P. Housing Board constructs the houses for economically weaker section and allots them directly. The houses constructed under VAMBAY scheme are allotted against list of allottees received from DUDA or district administration. This leads to further delay in allotment as after construction of houses by U.P.H.B, they wait for further instructions from district administration for allotment.

Under VAMBAY the subsidy is 50 percent (Rs. 25,000 is paid by central government) and land is provided free. The cost of houses constructed under VAMBAY scheme is Rs. 50,000 whereas they are sold at Rs. 25,000/- only.

6.5 HOUSING SIZE

In 2004, almost two-third of houses is one or two room units, which reflects high proportion of EWS and LIG category in the city. In last four decades (1961 to 2005), population occupying one room tenements has decreased from 67.2 to 40.1 percent but still that percentage is on higher side. The break-up in terms of size of house is presented in the Table No. 6.6.



Source: Master Plan of Kanpur 1961 and Vision Document for 2020 of Kanpur 2004

6.6 HOUSING USAGE

It has been observed that most of the respondents preferred to use the houses for residential-cum-work purpose. The people belonging to LIG and MIG have higher preference for residential-cum-work purpose as reflected in the response of 49 percent respondents of LIG and MIG categories. It has been observed that mainly cottage industries such as leather goods, soap making, tents, durries, cotton & silk clothes, hosiery are carried out in the residential area. Most of the households preferred plotted housing and felt requirement for additional area to carry out the economic activity within their residential complex.

6.7 PHYSICAL CONDITION OF HOUSES

As per 2001 census, 20720 houses were in dilapidated state which needs reconstruction and therefore add to the housing needs. They are mainly located in the inner part of the city. Through qualitative assessment of the condition of houses by primary survey, it has been brought out that 67.32 percent of houses are in fair condition where as 28.08 percent are in good condition and 4.60 percent are in bad condition.

6.8 ACCESS TO BASIC SERVICES

Out of total houses, still 33 percentage houses are not covered by electricity, 17 percentage by safe drinking water and 36.5 percentage by toilet. Table 6.6 reveals that still 10 percent houses are not covered by any of basic services. The access to basic utility services for the existing housing stock is presented in the table 6.7:

Table 6.6 Access to Basic Services

Proportion of houses having Electricity, safe drinking water & toilet	% age to total
Electricity	66.38%
Safe Drinking Water	82.39%
Toilet	63.61%
Electricity & Safe Drinking Water	59.63%
Toilet & Safe Drinking Water	57.82%
Electricity & Toilet	58.40%

All three facilities	53.32%
None of the 3 facilities	10.15%

Source: Kanpur Development Authority Vision Document, Draft Final Report, November 2003

6.9 HOUSING DEMAND AND SHORTAGE

The housing need and demand has been assessed on the basis of housing shortage, reconstruction of houses, population projections, household size and expansion of existing houses. The estimated housing demand for different income category has been reflected in Table 6.8

Table 6.7: Housing Demand Projections (2001 to 2013)

Income Group	Number of Dwelling Units	
	2006 - 10	2011 - 13
BPL	12829	11715
EWS	18456	16853
LIG	25178	22991
MIG	19268	17594
HIG	14932	13635
Total	90663	82788

Majority of the respondents (67.94%) prefer the housing supply done by UPHDB followed by KDA (13.34%), private builders (12.44%) and co-operative society (6.28%). MIG and HIG (12.44%) income group prefers more the private builders/ contractors. It has been felt that the private builders will play a major role in housing activity. Total future land requirement is 3216 hectares. The preferred locations, where the land could be acquired for future housing colonies and the availability of land in these locations, have been identified at Panki, Kalyanpur, Lakhanpur and Rama Devi.

6.10 PROPOSED HOUSING SCHEMES

Gangotri scheme by KDA is around 3 kms. from the existing town center on the other side of river Ganga. The area falls under Unnao District but has been brought under KDA jurisdiction for development purposes through a Government notification. The scheme is proposed on a parcel of land that is 5.7 kms long and 1.5 kms. wide between river Ganga on one side, new barrage on the left side and Shuklaganj highway on the right side. This area receives major traffic from Lucknow and Unnao industrial belt. This is in immediate proximity to the Kanpur city centre (Civil Lines) and if a new bridge is planned through Civil Lines, the site of Gangotri will be just 2.5 kms. from Parade, Bada Chowraha.

KDA has also planned to develop 5000 acre through Hi-tech city out of which 1800 acre has already been allotted to Sahara, 2500 acre as land bank in New Kanpur City which is located at Kalyanpur-Bithoor road and Jawaharpuram on Shivali road and 2500 acres will be given to private sector to develop. Till 2021, KDA is planning to develop 10,000 acres additional land for housing which will accommodate 16 lakh population.

U.P. Housing Board is planning to develop 2 schemes of 1350 acre and 1500 acre each. This is mainly for the planned development of western part of Kanpur City. The 1350 acre scheme is will be located adjacent to I.I.T. on southern part of G.T. road till Mandna. The plan is to settle the population staying in 10 villages, which falls under this scheme, in a planned manner. The second scheme of 1500 acre will be located from the boundary of National Sugar Institute till Mandna on northern part of G.T. Road. This will help to develop the population of 8 villages falling within this scheme in a planned manner. The plan is to integrate these colonies with the old city and also to provide all the infrastructure and services such as schools, hospitals, transport, park, commercial centre, post office, bank etc. This scheme will provide permanent and temporary employment.

6.11 ISSUES

- There is no clear cut demarcation between residential area and other land uses.
- Considerable number of residents use the residential areas for commercial purposes
- The need is for a special policy for providing mixed land use in a few selected areas.
- There is a complete mismatch between the increase in the demand for good quality housing and the growth of housing near the city centre.
- Though there exists a huge demand for EWS/ LIG housing still many of the existing houses built for EWS/LIG remains unsold.
- Majority of the city population falls under EWS or LIG category. This gives additional challenge to provide affordable housing for EWS or LIG with adequate civic services.
- The person's belonging to low income group face various problems in availing loan facilities such as lengthy procedures, unwillingness shown by banks to give the loan to EWS group etc.
- It has been observed that provision for basic urban services is not satisfactory enough to bring homogenous development within the new developed area. Most of the new developed areas fall under poor to average state of housing quality.
- Though KDA and UPHB are self-sufficient for financing the land acquisition and development, but they require funds for providing houses for low income group houses and for connectivity of new developed areas to main city.
- The general direction of development of the city in future will be towards South, West and to a lesser extent on the east. However, these areas suffer from infrastructure bottlenecks such as lack of better connectivity, street lighting etc.

6.12 STRATEGIES

- There is an urgent need for speedy development of new planned housing schemes and providing better linkage between inner core city and new planned schemes so that the inner core city can be decongested. This problem can be solved by adopting two ways:
 - ⇒ KDA is considering development of a new township across river Ganges called Gangotri which is in close proximity to inner core city and Housing Board is also planning to develop two residential schemes i.e. one is of 1350 acre and another is of 1500 acre.
 - ⇒ Increase in housing stock by the disposal of surplus land and properties of sick industrial units such as British India Corporation and National Textile Corporation.
- NGOs and other voluntary organisations should motivate residents of inner core city to shift to newly developed colonies.
- The development of new housing colonies should be such that it takes care of the additional demand of housing by different income group, affordable prices, preference of people for location of colony and housing as per the study conducted by U.P. Housing Board.
- The construction of houses should be at preferred location taking into consideration its location, connectivity, travel time taken etc.
- Steps should be taken to improve the level of urban services provided in existing housing colonies by additional funding and accountability of personnel providing the facility for satisfactory completion of task.
- The ways and means of additional funding through private developers, financial institutions should be sought to meet the additional funding requirement for outside development cost for new planned colonies (U.P. Housing Board's two schemes, Gangotri scheme, New Kanpur city, Jawahar puram and hi-tech city) better connectivity through roads, provision of street lighting, connection of trunk lines with main lines of water supply, sewerage and solid waste management etc.
- The methods such as single window clearance, online facility i.e. status of building plans sanctioning and other requests of applicants should be adopted to minimise the hassles faced by households in acquiring houses.
- The mixed land use should be identified and provided in certain areas keeping in mind the type of colony, width of road, availability of water, light etc. as there exists the great demand for certain economic activities (especially cottage industries) that can be performed in the residential areas.
- There should be differential pricing policy for plots/ plotted houses used by H.I.G. /M.I.G. /L.I.G. for residential-cum-work purpose. The plots/houses for residential-cum-work purposes should be higher than those meant for residential or commercial purpose only.
- The following steps should be taken to dispose off unsold housing stock

meant for EWS/ LIG households built up by KDA and U.P. Housing Board properties:

- ⇒ The study should be carried out within a timeline to find out the reasons behind unsold properties in each scheme.
 - ⇒ Analysing the options available to expedite selling of unsold properties
 - ⇒ The steps should be taken to decide what action needs to be taken for expediting the sale of unsold properties and preparing a phase-wise action plan to do the same.
 - ⇒ Proper implementation and monitoring of the action plan prepared for speedy disposal of unsold houses.
- There exists a huge demand for EWS, LIG houses but they are governed by different considerations. The steps such as preferable location; usage of good quality building materials, preparation of building plans and decision on price of housing with due consultation with EWS/LIG households or allottees and laws to avoid re-sale of houses allotted to EWS/LIG should be adopted to ensure that the housing scheme meant for economically weaker section should become a success.
 - The city is predominantly inhabited by the lower strata of society. Therefore development authority should ensure that minimum 25 to 30 percent of houses should be earmarked for EWS/ LIG households in all housing projects i.e. both public and private sector housing schemes.
 - The areas marked for EWS/ LIG should have better connectivity with main city, basic infrastructure and means of employment etc. so that the people will be willing to move there. The prices should be within reach of EWS/LIG category and easy loan facility should be provided to them to increase their affordability.
 - Liberal loan facility should be made available to the different income groups (H.I.G/M.I.G./L.I.G) of society as per their requirement. The process from applying to clearance of loans should be simple so that even illiterates, people belonging to low income group and below poverty level can also avail such facility.

CHAPTER 7:
BASIC SERVICES FOR THE POOR IN KANPUR

7. BASIC SERVICES FOR THE POOR IN KANPUR

7.1 INTRODUCTION

This section deals with the basic condition of urban poor and slums in Kanpur. The data sources are both secondary i.e. collection of data/information/reports from DUDA, KNN, Census as also intensive consultations with the stakeholders and interactions with officials of DUDA, slum dwellers and community development society members. The objective of the discussions were to identify the issues concerning urban poor, their access to basic services, problems which they are facing, prioritisation of problems, likely solutions and making strategically etc.

The population of Kanpur has increased at a faster pace in last decade. The decadal growth rate of population has increased from 26.5 percent in 1981-91 to 35 percent in 1991-2001 (refer chapter 2 for detailed analysis). With the increase in population during last two decades, the need and demand for employment has also increased. There exists a demand and supply gap between the people searching job and availability of suitable job. Along with growth in population, demand for housing has also increased as has been explained in detail in Chapter 6. Due to lack of availability of suitable houses and poor paying capacity, many poor people are forced to occupy the vacant land both private and public or have to stay in the older, densely populated area. This has led to the increase in areas where urban poor are staying in Kanpur.

7.2 STATUS OF POVERTY IN KANPUR

Though no recent study is available to accurately assess the extent of poverty levels in Kanpur but from the discussions with various stakeholders we understand that poverty levels are quite high in Kanpur. Kanpur was an industrial town having a dozen textile mills, shoe manufacturing units, tanneries, a scooter unit, spice packaging units and various other small and medium scale industries. Many of the industries have closed down in recent past (refer chapter 3). This along with many other sick units has led to large unemployment and increase in urban poverty.

In addition to this, more than twenty percent of the population in Kanpur stays in areas marred with unhygienic living conditions and lack of civic amenities. The urban infrastructure is not satisfactory enough to bring homogenous development in new areas. The growth of housing stock is not able to keep pace with the population growth. This has increased the housing stock deficit which has given rise to slum dwellings.

7.3 SLUMS IN KANPUR

As per the survey conducted by DUDA and documents from KNN, total slums in Kanpur are 390. According to census 2001, the slum population was 3.68 lakh i.e. 14.5 percent of total Population. As per the survey conducted by

D.U.D.A in 1997-98, the population was 4,19,859 and total households were 98,208. As per K.N.N estimate, slum population is about 5.0 lakh in 2006 which is twenty percent of total population. A large number of below poverty line (BPL) population (about 60%) also live-in slums.

Table 7.1: Slum Population Details of Kanpur

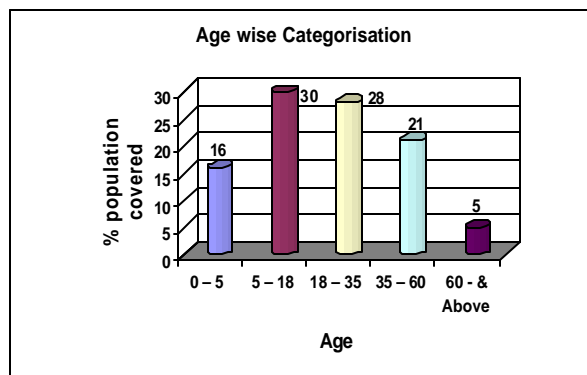
Category	Population	Percentage
Male	1,38,113	32.89
Female	1,14,648	27.32
Children	1,67,098	39.79
<i>i). Boys</i>	89,520	53.57
<i>ii). Girls</i>	77,578	46.43
Total	4,19,859	100

Source: DUDA Survey Report 1997 -98

7.4 URBAN POOR'S PERSPECTIVES OF SERVICE LEVELS

7.4.1 Age-wise Categorisation

As per the DUDA Survey Report of 1997-98 the slum children of age 0-5 years were 16 percentage where as the boys and girls of age between 5-18 years were 30 percentage which shows that maximum number of people in slum belongs to this category. The youth of age 18 to 35 were 28% whereas the people of age 36 to 60 and 60 & above were estimated 21% and 5 %.



Source: DUDA Survey Report 1997-98

7.4.2 Caste Composition

Out of the total population i.e. 4,19,859 (as per survey carried out by D.U.D.A), 19,172 (19.53 %) belonged to general category, 35,646 belonged to scheduled caste (39.29%), 27,930 (28.44%) belonged to backward class and 15,460 (15.74%) belonged to minority group.

7.4.3 Literacy Level

Out of total slum population, 2,69,427 (64%) are illiterate whereas only 1,50,432 (35.8%) are literates. Out of total literates, 35 percent are educated upto primary level whereas only 3.5 percent are graduated and 1 percent is post-graduated (Table 7.2). It has been observed during field visit that 50 percent of the youth are educated upto 10th whereas only 10-15 % adults are educated till 10th standard, only 3-4 percent people are graduates and 5 percent has received vocational education.

Table 7.2: Comparison of Educational Level in Slum Basties

Sl. No.	Education	Total Literates		Male		Female	
		No.	%	No.	%	No.	%
1	Primary	53438	35.53	29,851	33.98	23,587	37.75
2	Junior High School	29016	19.29	17,741	20.19	11,275	18.36
3	High School	22441	14.92	15,136	17.24	7,305	11.26
4	Inter	38709	25.73	20,642	23.51	18,067	28.85
5	Graduation	5312	3.53	3,419	3.89	1,893	3.02
6	Post-Graduation	1516	1.00	1,038	1.19	478	0.76
	Total	1,50,432		87,827		62,605	

Source: DUDA Survey Report 1997-98

7.4.4 Employment

In slum areas, more than 24 percent (1,02,763) are unemployed out of total eligible people for employment. Out of total employed persons (15%), 39 percent people are self employed. 25 percent are working in private offices whereas about 20% have government jobs. The maximum percentage of slum dwellers (about 39 %) is self employed which shows that either they have their own small establishments or work as casual labourers. It has also been observed that a large number of women's are also employed. They are working mainly as maid in nearby colonies. The child labour is also in existence as one can see children's working in the collection of solid waste and its segregation etc. The detail employment pattern is given in table 7.3.

Table 7.3: Level of employment in Slum Basties

Sr. No.	Employed Person	Total Employee	Percentage
1	Government Jobs	13,113	19.61
2	Semi Govt. Jobs	10,134	15.16
3	Private Jobs	17,361	25.98
4	Self Employed	26,227	39.25
	Total	66,835	

Source: DUDA Survey Report 1997-98

7.4.5 Income Group

The income of the slum household is also low. The detail of Households is different income group is given in table no. 7.4.

Table 7.4: Level of Income in Slum Basties

Sl. No.	Income in Rs.	Number of Households	% of households
1	Less than Rs.500 /-	20,507	20.88
2	Rs.501/- to 800/-	24,904	25.36
3	Rs. 801/- to 1000/-	23,123	23.54

4	Rs. 1001/- to 1500/-	14,772	15.04
5	Rs. 1501/- to 2000/-	7,892	8.04
6	Rs. 2001/- to 3000/-	4,882	4.97
7	More than Rs. 3000/-	2,128	2.17
Total		98,208	

Source: DUDA Survey Report 1997-98

It may be seen that majority of the Households 48,027 (about 49%) have income ranging from Rs. 501/- to 1000/- whereas more than 20 percent households have income less than 500/-. Only 14 percent households earn more than Rs. 1501/-.

7.4.6 Housing

Majority of households i.e. more than 51 percent live in Kutcha Houses made of grass, mud etc. and jhuggi jhopri's. Only 21 percent stay in Pucca Houses (Table 7.5). In slums, about 47 percent have their own houses whereas 41% lives in as tenant whereas rest are living as unauthorised occupants as informed by DUDA, Kanpur.

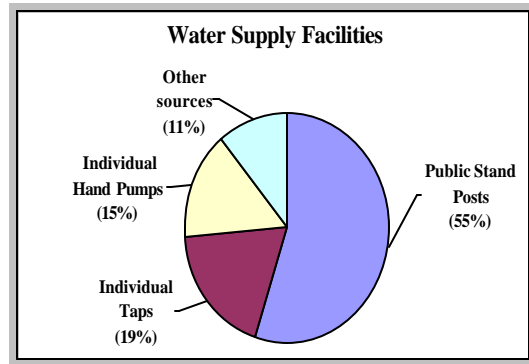
Table 7.5: Housing at Slum Basties

Sl. No.	Type of House	Number	Percentage
1	Pucca	21010	21.39
2	Semi – Pucca	22803	23.21
3	Kutcha	37969	38.65
4	Jhuggi-Jhopri's	12446	12.68
5	Others	3990	4.07

Source: DUDA Survey Report 1997-98

7.4.7 Water Supply and Electricity

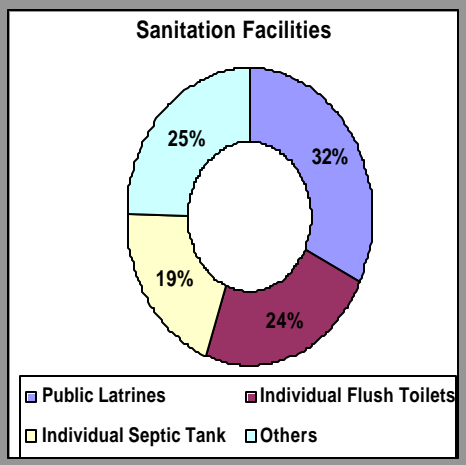
It may be seen that in slums access to individual water connections is low and people generally use public stand posts, hand pumps, or wells in a few cases. Majority of house holds (55%) get water from public stand posts and only 19 percent have individual taps. It has been observed that main source of water supply in slum areas is hand pumps and wherever piped water supply is there, either supply is inadequate or it's not regular or it's very dirty. They are only able to use the water after carrying out the sedimentation and filtering.



Out of total households in slum, about 40 percent have electricity whereas others use either kerosene, wood etc.

7.4.8 Sanitation Facilities

Presently, access to sanitation services is markedly less than access to other basic services. While, it may be worthwhile to note that the proportion of people having access to sanitation in urban areas is considerably greater when compared to their rural counterparts, the problems are more exacerbated in slums. Urban sanitation is perceived as being important because of the health factor. In case of slums, it has been observed that sanitation facilities are worst and in alarming condition.



Source: DUDA Survey Report 1997-98

Majority of households use public toilets followed by households using individual flush. Even then open defecation is still at a large scale i.e. 25 percentage of the slum households openly defecate.

During the visit in slums (May 2006) located at different part of the Kanpur city, it has been observed that sanitation condition is still very poor in most of the slum areas considering only 20 percent people have individual toilets and the others i.e. approx. 45 percent use community toilets and 35 percent still go for open defecation.

To minimize open defecation and to bring improvement in overall sanitation, two schemes have been introduced: a) Low Cost Sanitation Scheme b) Construction of Community toilets.

Centrally sponsored low cost sanitation schemes continue to remain a key component of urban sanitation not only for urban poor or slum populations, but it is also an appropriate intervention wherever the costly option of underground drainage is not feasible. Under Low Cost Sanitation Scheme of KNN, 2430 off-site toilets and 2366 on-site toilets were provided benefiting 12490 and 12161 population respectively. In totality, 105138 slum dwellers have been benefited under this scheme. However, during visits to slum areas it has been observed that low cost sanitation scheme for building individual toilets was not widely accepted by the individuals due to lack of space in their houses and not in a position to pay their share.

Under construction of community toilets scheme, 12 community toilets having 140 seats were built for 7000 beneficiaries and 14287 sewerage connections have been provided to 73487 beneficiaries. At present 49 community toilet complexes are under construction for 33000 beneficiaries.

During visit to different slums following observations were made:

- Poor construction i.e. bad designing, usage of poor quality material etc. and maintenance
- Lack of proper management of community toilets
- Inadequate water supply and lighting in the toilets
- Cleaning service is not administered properly.
- Unhygienic condition of the public toilets
- Distance
- Lack of willingness to pay and use the community toilet facility

7.4.9 Sewerage System and Solid Waste Management

In most of the slums, sewerage system is either non-existent or it is found choked. The problem of blocked sewerage also exists in the slums where people stay in pucca houses. The open drains in the slums are of very small size and are mostly blocked due to lack of cleaning and solid waste finding its way into drains.

There is no proper way of solid waste disposal which exists at the slum level. In 40% of the slums solid waste is collected by govt. or private persons but disposal sites are either non-existent or are poorly managed. In many slums solid waste can be seen flowing in the drains leading to choked drains and health hazardous situation.

7.5 HOUSING PROVIDED FOR ECONOMICALLY WEAKER SECTION

Under central government sponsored scheme, VAMBY, housing for slum development with 20 per cent fund component for sanitation, is being provided. In Kanpur, KDA is building houses for poorer sections under EWS, BPL and VAMBY scheme on specific demand from district administration and allotment is done by district administration. Under VAMBY scheme, 50 percent subsidy in land development is provided and land is provided free. VAMBY is costed at Rs. 50,000 and sold at Rs. 25,000. Rest of the amount is paid by central government. Under VAMBY scheme 1736 houses and under ASHRAY 4652 houses have been constructed by KDA whereas under very low income houses 40,516 houses and 19,777 houses for low income group has been built up. Out of total built up houses (66681) by KDA, only 2120 houses (3.2 %) have remained unsold. The main reason due to which EWS/LIG houses remain unsold are one, their remote location, secondly, lack of infrastructure i.e. not well connected to the main city by approach roads and street lighting etc., thirdly increase in cost of these houses every year due to which they become unaffordable for poor people, fourthly EWS houses which are build under VAMBAY scheme remain unsold due to time taken by district administration in providing the list of allotted to KDA for disposal of houses.

Table 7.6 Houses Developed by KDA for Poorer Section of Society

S. No.	Type of Houses	Houses built Developed up to 31 st March 2003	Houses built Developed in 2003 - 04	Houses built Developed in 2004- 05	Houses built Developed in 2005- 06	Houses built developed up to 31-3-06	Houses/1 and which is not allotted up to 31-3-06
1	Economically Weaker Section						
A	VAMBAY	350	115	256	1015	1736	799
B	ASHRAY	3871	164	265	352	4652	1291
C	Very low income category houses	39452	127	326	331	40516	23
	Sub total	43673	406	847	1698	46904	2113
2	Low Income Group	19417	123	237	0	19777	7
	Total	63090	529	1084	1698	66681	2120

Source Data collected from Kanpur Development Authority 2006

U.P. Housing board too constructs houses for EWS and BPL under VAMBAY and ASHRAY scheme. EWS and LIG houses are subsidized to the extent of 20 percent which they include in the cost of land development. The houses developed in Yojana no.2 has left vacant due to its remote location and poor connectivity with main city.

7.5.1 Future Housing to be provided for Economically Weaker Section

Presently, the population of slum is approximately 5 lakhs which require 1 lakh EWS houses. There have been schemes earlier for developing the infrastructure in slums but construction of houses was not an integral part of it. Under JNNURM, houses for urban poor will be built. So far, two agencies i.e. KDA and UPHDB have been engaged for building the houses for poor. Current demand is to provide 1, 50,000 EWS houses out of which 50,000 houses are required immediately and one lakh houses would be required for additional population in next 25 years.

Presently few families are living in pucca houses and rest live in kutchha houses. It is estimated that almost half live in kutchha houses and rest half in pucca houses. Thus there is immediate demand for 50,000 houses, which will be met by construction of 50,000 in situ houses. This construction is proposed to be undertaken by DUDA itself on the land of Malin Basti. The total cost of house for beneficiary is Rs.80,000 only out of which Rs.64,000 is subsidy under IHSDP (Integrated Housing and Slum Development Programme).

The short-fall (1 lakh houses) needs to be met by involving private sector and housing society. It should be made mandatory for them to build certain percentage of houses for EWS/LIG out of total housing.

The finances are required for development of infrastructure such as roads, water supply, sewerage and street lighting etc. within slums and connecting them to the main city. This has been taken care in finance chapter.

7.6 REVIEW OF URBAN POVERTY ALLEVIATION SCHEMES

Many efforts have been undertaken at national and state level for poverty alleviation though their success varies from place to place. It has been observed that to increase the reach of different programmes and for their intended benefits to target groups, the involvement of community is very necessary. In Kanpur, since 1992 District Urban Development Authority (DUDA) has implemented many schemes for poverty alleviation and bringing overall improvement of slums with the active involvement of slum dwellers. The details of schemes are as follows:

7.6.1 Urban Basic Services Programme (UBSP) Scheme

The UBSP scheme was launched in 110 slums with the objective of bringing in improvement in the standard of living of the Urban poor specially women and children of the lower strata of the society and other weaker sections and to fulfil the basic needs of urban poor through designing their own programmes with the help of government and non-government organisations. The main target groups were people living below the poverty level and special emphasis has been laid on women, children and other backward classes such as schedule caste, schedule tribe, handicapped, old etc. The basic principle of UBSP scheme was community participation and to utilise the money provided under plans and schemes of different government departments. Under this scheme, Raja Purwa, which is located in south Kanpur with a population of 5213, was undertaken for community financed operation and maintenance of water supply and sanitation programmes. A complex of 50 public latrines with a biogas plant and a pump for lifting water was built to provide 24 hour piped water for the latrines and bathing units in the complex as well as to eleven stand posts in different parts of the slum. Similar projects have been carried out in twenty one other slum areas.

7.6.2 DUDA -SIFSA Scheme

SIFSA scheme has been started by DUDA in 1995. Under the above scheme, in 78 slums, through 5 Satellite Centres, with the help of one doctor, 5 ANM and 80 community based distribution worker they have tried to distribute door to door distribution of family planning tools and implementation of mother and child development scheme. Due to these efforts child productivity ratio (CPR) has increased from 3 to 35 percent.

7.6.3 Nehru Rojgar Yojana

Under this scheme, two sub-schemes were implemented. They are small industry scheme i.e. giving loan of Rs. 20,000 to SC people and Rs. 16,000 for general people out of which Rs. 5000 and 4000 was subsidy given by DUDA and rest of the amount was loan provided by bank and provision of training to men and women for different industrial activities. Under the housing development scheme, loan has been provided for bringing improvement of

their shelter and training to both men and women to bring improvement in their own houses.

7.6.4 Community Structure Scheme

Under this component, help in the form of blankets, sticks, glasses for old persons and clutches, hearing machine, artificial limbs etc. to disabled persons were provided. Programmes/ camps were organised to provide necessary advice for leaving the habit of drinking, drugs etc. in 10 slums and distribution of stitching machines to widows.

7.6.5 National Slum Development Programme (NSDP)

The National Slum Development Programme (NSDP) was started in 1996-97 to provide the basic services in 390 slums covering 4 lakh 67 thousand population. It includes the entire component covered under UBSP Schemes with special emphasis on community participation. Under UBSP scheme, the emphasis has been laid on following aspects:

- education programmes such as opening of anganwadi centres (220) for children belonging to 3-6 years and non-formal education centre for 8-15 years old children which has benefited 8800 children of 3-6 age group and 2100 of 8-15 age group;
- Special health improvement programme were launched to improve the health of the children & women i.e. provision of nutritious food to 8800 children and health check up of 0-3 age group children and vaccination to 7000 kids and 2400 pregnant ladies for keeping them free from different diseases.
- Community Structure Scheme i.e. providing tricycle (400) to handicapped ladies and men and eye check-up camps for old people;
- economic activities such as formation of self-help groups (300) and training to women for different small scale industries i.e. tie & dye, bookbinding, repair of fridge & T.V, food preservation, computer, short hand and typing training and marketing
- environment and cleanliness through tree plantation and their maintenance
- development of park i.e. planting trees and its maintenance, installation of lights using solar energy by slum dwellers

7.6.6 Swarna Jayanti Shahri Rojgar Yojana

The main aim of SJSRY is to provide self-employment to poor unemployed and partially employed people and to provide beneficial employment available under urban wage employment. As in the case of U.B.S.P. scheme, this programme too depend on appropriate community structure and all the facilities under this scheme is made available through community structures etc. Under this scheme, 100 DWCUA (development of women and child in urban area) groups have been formed, skill development for 2000 self employment beneficiaries, 12 production centre for 100 DWCUA groups; loan for micro enterprise for 5000 self-employment beneficiaries and implementation of Urban Wage Employment Programme in Bithoor, Shivrajpur, Bilhour, Ghatampur areas.

It has been observed during the visits to different slums in Kanpur that though many efforts, as explained above, have been taken under different schemes to bring improvement in slums and to improve the standard of living of people below poverty line (BPL) which has benefited poor community, but a lot has yet to be done. Some of the issues such as poor quality of water, clogging of drains, non-availability of primary schools and dispensary, poor quality of house construction, stoppage of physical infrastructure schemes leading to poor quality of life in certain slums exists which need to be tackled.

7.7 STAKEHOLDER'S CONSULTATIONS

During our interactions with the slum dwellers, their CDS (Community development Societies) and with NGOs and DUDA officials we gathered that while considerable work has been done in Kanpur for improving basic services to the poor and for rehabilitation of people living in slums, the efforts haven't always been successful because:

- Many a time's schemes have been formulated without taking their convenience of feasibility of shifting to distant locations into consideration. This is apparent from the number of EWS houses lying vacant.
- There is a lack of faith of the slum dwellers in the motives of authorities in shifting the slum dwellers. This combined with their insecurity about the lack of tenure of their housing makes them reluctant to move to new places or for in situ development.
- Many of the slum dwellers are unable to pay the down payment and instalments for the houses.
- The quality of houses offered are often below standard and slum dwellers feel that they are not getting value for money.
- Most importantly, most EWS schemes so far have been at far away places and hence not suitable for them to shift to, given the poor transport facilities and the additional time and cost of commuting.

The stakeholders report that the CDS's have been well organized and they have done good work in developing alternate employment for slum dwellers, in building capacity in terms of taking up small businesses and services, in forming 'Self Help Groups' to encourage thrift and to take care of cash needs etc. However, the CDS's need to have a business model and five year plan to grow and to provide employment and wages to their members.

One of the weaknesses of organizing the poor and inhabitants of slums has been the lack of good and viable NGOs in Kanpur. Hence activities carry on till such time they are supported by the government programs but loose steam when the programs are withdrawn.

The living conditions in the slums continue to be poor as has been described earlier. Due to this the incidence of gastro related diseases is high and many inhabitants loose wages due to frequent illness.

As a result of the foregoing and earlier analysis, the main issues that emerge for the urban poor are summarized in the section below.

7.8 KEY ISSUES

- Lack of proper shelter, poor access to basic needs and lack of awareness make the slum dwellers life style very poor. About 20 percent of the Kanpur's population is living in slums; hence all housing programmes should target provision of better shelter for them on priority basis.
- The resettlement of the slum dwellers should be done taking into consideration their requirement, distance between their place of work and stay.
- In many of the slums water through public stand posts and hand pumps have been provided but it has been observed that lots of water is wasted.
- The quality of piped water supply, which slum dwellers receive, is very poor and suspected to be contaminated. Without filtration it is impossible for them to use it for drinking purpose.
- Only in a few slums sewerage lines have been provided and they were often choked.
- No proper mechanism of solid waste disposal exists. Either the disposal sites are non-existent or even if they exist, they are located at far away place which the slum dwellers find inconvenient to use. The few waste disposal sites that exist are in a sad state of affairs as they are not cleaned on a daily basis and the waste gets scattered all over the place creating a health hazard.
- In most of the slums, no provision has been made to provide storm water drains. Due to which water logging takes place adding to the unhygienic condition within the slums.
- While the city has made provision for public sanitation facilities in a few slums, still about 30-40% slums go for open defecation, causing both a health hazard and a problem of safety.
- At present the number of notified slum is 390 and strategies for rehabilitation and implementation of central and state government schemes can only be carried out in the notified slums. There is a need to carry out a fresh survey to cover all slums and poor communities so that the actual demand for housing and basic services for urban poor can be ascertained and overall city environment can be improved.

7.9 CITY'S VISION FOR THE POOR

The city should be free of slums and the poor should be provided basic services and minimum facilities for dignified living. These should include:

- Improving access to drinking water, preferably piped water in the house. Most modern cities are now moving from standposts and hand pumps to supply of safe piped water
- Improving access to either low cost sanitation or public sanitation facilities to bring down open defecation.
- Organizing solid waste services and their efficient disposal so that the environmental sanitation in the slums improves

- Improving the drainage and roads in the slums so as to reduce water logging, mosquitoes and other health hazards
- Rehabilitation of slums either by shifting them to new (but convenient) locations or by in-situ development. This should be done through active community involvement only and should be demand led.
- Education and orientation of slum dwellers to pay a reasonable user charge for the services provided

7.10 STRATEGIES

7.10.1 Rehabilitation of Slums

The objective of rehabilitation should be to improve the living conditions of the poor and to reduce the environmental pollution caused by the poor living conditions and poor basic services in the slums. The slum dwellers living in Kutcha or makeshift houses should be resettled in properly designed houses with minimum amenities. The facilities provided should use the subsidy available under JNNURM to provide houses at affordable cost and in easy instalments.

- The slums should be divided into two categories for planning purposes: slums which are required for undertaking development project and slums which are not required for any such project.
- There should be separate government policy for dealing with the
 - a) slums located at different type of land i.e. private land (hata land), public land (KDA, KNN, Railway, Gram Samaj, Irrigation, Nazul land), combined land of 2-3 authorities (KDA, KNN and railway land) and
 - b) slums required or not required for development project.
- The two scenario arises for the physical and social development of the slums on the basis of observation and discussion with the stakeholders:
 - I. If the land which they are occupying is required for the development project, it becomes necessary to remove the slum and provide housing on alternate sites. In this case, the following steps should be taken:
 - a) Slum dwellers should be appraised of the future development work and need to shift them out
 - b) Convincing them to shift to a new place
 - c) Consultation with them for alternate site selection for their relocation
 - d) Site selection should be such that slum dwellers should be ready to be rehabilitated in a regular colony. For that purpose, the location should be in nearest available area as per the Master Plan so that the distance between their work place and stay should become less. It should have good quality of housing as per their requirement and all the basic facilities should be provided.
 - e) If shifted and rehabilitated at longer distance from their earlier locations, special arrangement for public transport/ buses should be made for to and fro travel for their work place.

The slums cleared for development purpose should be properly protected by fencing etc. till the time project starts and in any circumstance, slum people should not be allowed to come back on the same land.

- II. If the land they are occupying is not required urgently for public purpose, they may be allowed to stay and improvement can be brought in at the same place. In that case, two way development can be adopted:
 - a) In-situ development for ensuring the planned development of slums and other low income areas, in terms of bringing improvement in roads, water supply, sanitation and street lighting etc. and advancement of liberal loans to improve their shelters, should be provided to improve quality of life.
 - b) Five slums such as Vijay Nagar, Kalwa Mandi, Dabouli West, Juhi Ambedkar Nagar and Ravidas Vihar at Jajmau will be taken up for model development on Pune Model i.e. the slums should be temporarily vacated and on their place multi-storey housing should be made. In this case, the following steps should be taken:
 - i. In case, DUDA will get the houses constructed through UPHB/KDA, land should be transferred to them by title holders.
 - ii. In case, some other agency (title holders) will develop the land and construct the houses, some portion of the land will be given back to the agency (title holders) on whose land slum is located so that they can meet the cost of land development and construction of houses.
 - iii. The houses should be given on hire and purchase basis with a condition that houses can't be resold in first ten years. This will avoid the re-sale of houses.
 - iv. For the slum dwellers, liberal loans should be advanced so that they can give their share without any difficulty.

The financial aspects of rehabilitation of the slums, subsidizing of the EWS housing, self financing, strategies for in-situ development in areas where land cost is high and policies to be pursued to ensure security of tenure and avoiding the misuse or resale of subsidized housing provided are outlined in the chapter on 'Financial Operating Plan'.

7.10.2 Community Development and Employment:

- The Community Development Societies should be actively involved in the infrastructure projects such as construction of brick roads, community toilet blocks, collection of solid waste etc. The involvement can be of two ways:
 - a) selection of projects which they want for their area
 - b) identifying space and other requirements for the identified project
 - c) providing labour for the project work. This will reduce the cost of infrastructure provision and slum dwellers will get employment.

- The time, duration and amount of water to be supplied in those slums where people have taken piped supply should be fixed first to have a reliable/steady water supply. This should be propagated in other slums and people should be motivated to take new connection for piped water supply. For the new applicants, water supply lines should be laid and household connections should be given at subsidized rates.
- For those who have received training under SJSRY scheme, venues for employment generation should be opened up so that they can get immediate employment and contribute the overall economy. Those who have not received training and are unemployed should be motivated to join nearest training centre for skill development training so that trainees can get skilled and semi-skilled jobs by either self-employed or by exploring job prospects somewhere else. Incentives such as scholarships, certificate etc. should be provided to encourage them to join these courses.
- For the new migrants coming to the city for jobs, camping sites at appropriate locations should be built up to provide them temporary shelter.
- Mixed land use may be permitted in their rehabilitated colonies to help them get self employed by opening small establishments. This will also serve the local population residing in the colony.
- In rehabilitated colonies, facilities such as primary schools, health centres, community halls, parks and play grounds must be provided before shifting the population.
- Public-Private participation should be encouraged to provide housing for EWS.
- For increasing the education level in slums,
 - Balwadi's and Anganwadi's should be promoted to inculcate the desire for education from childhood.
 - Non-formal education centres should be opened for providing education to school drop outs and aged people.
- The steps should be taken to reduce transmission and distribution losses by keeping a check on illegal electricity connections.
- Community toilets should be built to stop open defecation.

7.11 STEPS TO BE TAKEN

- More community toilets as per community need, proper design should be built in those areas where land size is too small or people can't afford to build individual toilets.
- The Operation and maintenance facility of the community toilets should be laid in the hands of the Community Development societies so as to ensure effective cleaning and functioning of the toilet.
- For using community toilets, subsidized monthly rate of Rs25-30 should be fixed.
- Water facility should be positively provided round the clock within the Community toilet complex so as to enable the proper cleanliness of the premises.
- IEC activities to

- generate awareness and ensure that no solid waste is thrown in the drains which will enable us to solve the problem of blocked drains.
- education campaigns on water conservation so that water loss from public stand-posts or hand pumps can be minimised

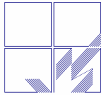
- Relocation of slums dwellers in a planned manner keeping in mind their holistic development and by adopting consultative process.
- Though the slum dwellers are ready for in-situ development it is suggested that development in the existing areas can be taken up only in the context of provision of Urban Basic services.
- Special focus on providing Public Health Centres (PHCs) in each slum and organising health education and various health service camps.
- Involving Community Development Societies in planning, implementation and monitoring of infrastructure project and in the form of labour and sharing the cost of development for infrastructure projects viz. construction of drains, brick road, community toilets etc.
- Encouraging the formation of micro credit organisations and enhancing their financial capacity by linking them with financial institutions.
- Proper maintenance of community centres and further construction of community centres for community development activities.
- Organising awareness camps about cleanliness, usefulness of using piped water supply and community toilets, need for better education and health facilities, about women empowerment and child development.
- A few slums will be adopted for building EWS housing and pilot project as per Ahmedabad model with a strategy designed to bring about holistic development ranging from basic urban services provision to social development i.e. education, health and employment generation activities.

SLUM DEVELOPMENT





Community Toilet



CHAPTER 8:
ROAD AND TRANSPORTATION PLANNING

8 ROAD AND TRANSPORTATION PLANNING

With the high population growth and changing travel & traffic characteristics, transportation problems are aggravating in the city of Kanpur. The yawning gap between demand and supply of transport infrastructure is steadily increasing. The capital intensive transport infrastructure development is imperative for medium and long-term solutions. Kanpur is facing the problem of regulating inter-city traffic together with the city traffic. The railway network passing through the city has resulted in a large number (16) of rail level crossings. The congestion is evident all along the G.T. Road and at all those places where the railway network cuts the road network. In the past, some remedial measures were exercised by constructing six Roads Over Bridges (Murray Crossing, Jhakkarkati, Narender Mohan Setu, Govind Puri, Dada Nagar and Panki) and a by-pass on the southern end of the city to ease the traffic congestion. The spurt in city population and motorized vehicles (3.3 lakh to 5.4 lakh) has compounded the problem further. The problem of pollution and air quality deteriorating, when the rail level crossings are closed, beside generating long queues of traffic leading to congestion and traffic jams are some of the major problems.

Moreover the focus of this section is to review the current status of transportation system, road network in Kanpur. The elements reviewed and assessed include:

- Existing Transport System
- Road Network Characteristics
- Traffic Characteristics

8.1 EXISTING TRANSPORT SYSTEM IN KANPUR

8.1.1 Public and Goods Transport System

- **Public Transport System**

The city is predominantly dependent upon private buses and tempos for the intra-city passenger travel. There are approximately 80 private buses and 980 auto rickshaws and tempos plying in the city. Earlier, there were city buses operated by U.P.S.R.T.C. to cater to the need of commuters which have been withdrawn subsequently. Recently U.P.S.R.T.C has ordered 108 new CNG buses to replace old fleet of buses. One mother station and 7 daughter stations are under construction and 1000 new CNG taxi permit has been given.

There are approximately 5,000 cycle-rickshaws in the city, commonly used for making short trips. In the absence of adequate public transport system, the people are forced to depend upon their personalized modes to sustain in the growing economic activities. The growth of

scooter/motorcycles has been phenomenal during the last decade. Motorized two wheelers grew from 2.7 Lakhs in 1999 to 4.5 Lakhs in 2006.

- **Goods Transport System:**

Although intra-city goods transportation by light commercial vehicles is allowed within inner CBD circle, their operations and movements augments the congestion in main market area and slow down the traffic movement. The critical road stretches are Ambedkar Road, Mall Road, Meston Road, Latouche Road, P-Road, Nayaganj Road, Halsey Road, Canal Road, Cooperganj Road, Suterkhana Road, and section from Bakerganj to Ghantaghar.

Loading, unloading and goods transport operation by handcarts, cycle carts, buffalo carts and by other slow vehicles are normally used during day time in the area encircling Ambedkar Road, Mall Road, Canal Road, Kidwai Nagar Road, Baradevi Road, Chawla Market Road, Fazalganj Road and Eye Hospital Road. At present, 500 Kharkharas, 200 bullock cart, 350 hand cart and 400 trolleys are plying within the city for transportation of goods. Light goods vehicles such as mini-trucks goods tempos and goods autos create the traffic congestion at intra-city goods operation within the above circle.

8.1.2 Vehicle Population in Kanpur

The vehicle registration data for Kanpur city was collected from R.T.O. department at Kanpur are tabulated in table 8.1. The maximum numbers of vehicles registration are of two wheelers from 1999 to 2006 followed by cars. The numbers of total vehicles registered were 32,932 in 1999-2000 whereas it was 49,468 in year 2005-06, indicating demand and need of these vehicles in Kanpur. The demand is moreover for two wheelers as the ratio of buying two wheeler vehicles with in these years shows rapid increase of registration.

In Kanpur city, major share and maximum growth is observed in two wheelers. Out of total vehicles, in 2006 83 percentage two-wheelers, 13 % Cars, 4 % of trucks were registered whereas it was 79% two-wheelers, 18% cars and 1% each for Auto, Bus and Trucks in 1995.

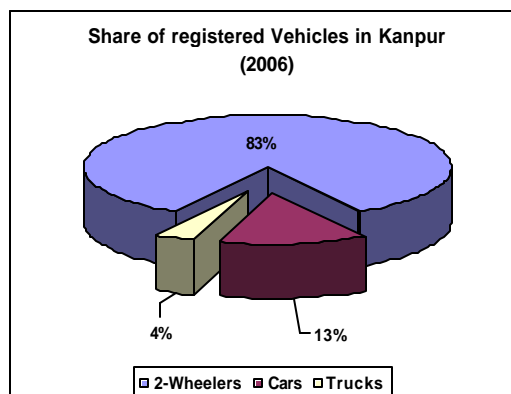


Table 8.1 Vehicle Registration Data for Kanpur City

YEAR	2-Wheelers	Cars	Bus	Auto	Trucks	Total
1999-00	21494	5831	47		1351	28723
2000-01	25112	4464	95	102	582	30355
2001-02	26470	4604	47	98	480	31699
2002-03	35510	5637	66	277	1299	42789
2003-04	39192	5962	63	336	1391	46944
2004-05	39512	6737	65	46	2014	48374
2005-06	39352	6415	84	119	1727	47697

Source: Regional Transport Office, 2006

- **Growth of Motor Vehicles**

There is a huge gap between the demand and supply of public transport in Kanpur. This has resulted in manifold increase in personalized vehicles, both slow and fast modes and intermediate public transport modes such as tempos, cycle-rickshaws etc. Growth of motor vehicles in Kanpur City for the period between 1999 and 2006 is presented in Table 8.2. The average growth rate of fast vehicles in the city has been to the tune of 9% between years 1999 and 2006. Motorized two wheelers constitute 84% of the total registered vehicles in 2006.

Table 8.2 Growth of Registered Vehicles in Kanpur

Type of vehicles	YEAR							% growth
	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Multi-axle/articulated vehicles	47	47	51	57	57	57	58	23.40
Medium & heavy trucks	13700	7271	7477	8196	7989	8986	10551	-22.99
LCV (4-wheelers)	1166	1209	1846	2183	2354	2469	2487	113.29
LCV (3-wheelers)	2678	605	557	894	1382	1872	2210	-17.48
Buses	218	301	376	288	317	85	80	-63.30
Mini Buses	69	153	267	45	56	232	235	240.58
Taxis	734	253	314	445	480	464	413	-43.73
Auto-rickshaws and Tempos	111	153	252	529	850	876	980	782.88
2-wheelers	273208	321215	298170	352698	381675	420465	455807	66.84
Car Jeeps	35812	43428	39453	48491	54194	60199	65994	84.28
Tractors	2566	3543	3409	4238	4645	5967	1327	-48.29
Trailers	406	422	434	425	425	425	1232	203.45
Others	2084	1181	1441	1192	1200	1216	1216	-41.65
TOTAL	332799	379781	354047	419681	455624	503313	542590	63.04

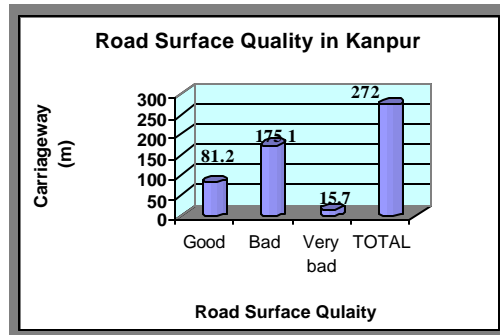
Source: Regional Transport Office 2006

8.2 ROAD NETWORK CHARACTERISTICS

Kanpur has a radial pattern of network, which include two National Highways namely, NH-25 (Kanpur-Lucknow Road) and NH-2 connecting Kanpur to Kolkata in East and Kanpur to Delhi in the North. G.T. road, Hamirpur road and bye pass roads are other major arterial roads in the city. Parwathy Bangla Road, Mall Road, Dad Nagger Road, Jawahar Road, Eye Hospital Road, Prithviraj Chauhan Road and Panki Road are some of the major sub-arterials roads within the city. The road infrastructure such as signage, signals etc. has not been expanded in accordance with the increase of population and vehicles. It has been observed that 71 percent of roads are already saturated or nearing saturation. Although 27 percent of road network has a width of over 30m, 50 percent capacity utilization has been deteriorated due to encroached roads. Out of total road network, 70 percent surface quality is poor.

8.2.1 Road Surface Quality

Most of the roads in Kanpur have poor surface quality. Out of total 272 meter road observed only 81.2 m (30%) of road length has a good surface quality whereas approximately 175.1 m was in bad condition and needed the repairs and 15.7 m (6%) have the very poor conditions. This coupled with inadequate carriageway width signifies lower road capacity which means reduced level of service on roads.



8.2.2 Speed and Delays on Road Systems

The road system in the study area offers a very poor level of service. Out of total road length, 65 percent offers traffic stream journey speed of only upto 20 km/h during peak periods whereas average journey and running speeds is 17.4km/h. There is not much significant variation between two speeds which indicates saturation-flow conditions on the road systems.

8.2.3 Level of Service of Road System

Level of service offered by roads depends upon volume of traffic and capacity of the road sections. Based on the capacities as recommended by IRC, Volume-Capacity ratios (V/C ratio) have been worked out. In Kanpur more than 26% of road lengths have V/C ratios of more than 0.8 which denotes forced traffic flow conditions and is worst level of services. Most of the city core roads (Meston road, Canal Road, Halsey road, Latouchey road, Birhana road (near Nayaganj), Canal road (near Naron), Nayaganj road and Kidwai Nagar road near Ghantaghar) have more than one V/C ratios. These roads are under utilized due to encroachments and poor surface quality. The journey speeds on these roads were found very low due to so much congestion and needs some remedial measures.



8.3 TRAFFIC CHARACTERISTICS

An unprecedented growth of motor vehicles has resulted in a host of traffic problems in the city. There were 5.4 lakh motorized vehicles registered in Kanpur till March 2006. Two wheelers share constituted 84 percent of the total registered vehicles. As against a fleet of 80 buses and 235 mini buses meant for intercity bus operation, a large proportion of public transport demand is catered by 980 tempos plying in different routes in the city.

8.3.1 Average Daily Traffic (ADT) at Outer Cordon

On an average day a total of 89468 vehicles in Kanpur enter and exit at the outer corridors. Amongst the various roads, Unnao Road carries the maximum volume of traffic with average daily traffic of 24472 vehicles while G.T. Road at Mandhana accounts for the least traffic of 8459 vehicles per day at outer cordon.

8.3.2 Average Daily Traffic (ADT) at Inner City Locations

Average daily traffic (16 hour duration) in terms of vehicles and PCUs at various inner-city locations reveals that Kalpi Road, M.G. Road, G.T. Road, Baker Road, Guru Gobind Singh Marg. Hamir Road are the heavily trafficked roads with ADT (16 hours) in excess of 30,000 vehicles.

8.3.3 Tempo Movement

In absence of adequate public transport system by bus, the large intracity passenger demand is catered by 980 auto-rickshaws and tempos registered with RTA. The tempo movement is very high especially on Ambedkar and Mall Road stretches and at Parade and Bara Chauraha. This leads to congestion on busy city roads.

8.3.4 Parking Demand and Supply

Due to a high demand of parking spaces, an effort was made to assess the current parking demand and supply on important roads in the inner CBD in Kanpur City. It has been observed that in absence of adequate off street parking the resultant demand is met primarily by on street parking which is prevalent on important road corridors. Unless some measures to create more off street parking spaces in the inner CBD are made, the traffic conditions will not improve. Scarcity of open spaces in the CBD may be substituted by construction of multi-storey and underground parking facility. Already four multi-storey parking spaces have been identified and will be developed on PPP basis.

8.4 ISSUES CONCERNING MOBILITY

Some basic issues are as follows:

- **Traffic Movement**

- The railway line between Kanpur and Farrukhabad divides the city into north and south city and total 11 level crossing falls between main

Kanpur city and south city i.e. on other side of G.T. road. The traffic movement is restricted on railway crossings from Jarib Chawki to Kalyanpur on G.T. road and frequent traffic jam is seen all along the G.T. road due to passing of trains.

- Kanpur city is connected to industrial estate at Dada Nagar and Panki through Dada Nagar tri-junction and Vijay crossing. High traffic movement on this corridor cause frequent traffic jams.
- There is regular slow moving traffic by vehicles i.e. hand cart, buffalo cart, between transport nagar and trading centres like Gurmandi, Bansmandi, Hatia, Mani Ram Bagia located within inner city. The goods, which reach transport nagar first, are carted to wholesalers in inner city and after its re-packaging again transported back to transport nagar for further distribution to other cities in eastern U.P. and part of Bihar. This resulted in lots of traffic jams and immediate steps should be taken to avoid the movement of goods.
- There is a railway godown in city between Jhakarkati ROB and Kanpur Central. Items like cement, fertilizers etc. are off loaded in the godown and then sent further to Panki, FazalGanj and Dada Nagar industrial estate. The need is felt to shift the railway godown.

- **Low corridor speed due to high composition of slow traffic**

Due to heterogeneous composition of Autos, Tempos, Rickshaws, Cycles, two-wheelers, cars and other small good vehicle traffic movement is very slow. There is no division of routes for fast and slow vehicles which cause congestion and increase the traffic problems. Another reason is that road surface quality is poor which also affects the steady movement of vehicles. Road like Ramadevi Chauraha, Vijay Nagar Road, Fajal gang and Station Road, etc. are facing bad surface quality and during rainy season the case becomes worst and alarming.

- **Poor intersection geometrics and non-functional signal**

The intersections are very poorly designed. There is a need to improve the intersections of roads at many places of Kanpur City. The traffic signal, wherever installed, does not function properly which leads to slow traffic movement and reduce road safety. Steps shall be taken to install traffic signals on all the major intersections and traffic police shall be posted to follow the signal phasing. Presently traffic lights are controlled manually.

- **Poor Road Surface Quality**

Transportation and movement of vehicles depends a lot on the road surface quality. In Kanpur city the road surface quality is poor on average due to lack of maintenance. The main problems related to road surface quality are in intra-city area. The areas such as Gumti, Shastri Nagar market area, Rawatpur, Azadpur, Nawabganj road, Kanpur Railway station to Fajal ganj to Vijay Nagar road have poor road conditions due to lack of maintenance. Similarly, Ramadevi chauraha, Mall Road etc. needs improvement. The poor road surface quality leads to congestion and traffic slow down.

- **Inadequate parking space**

The basic parking issues can be summarized as under:

- i) The parking supply and demand presents a very grim picture in Kanpur. With an unprecedented growth of motor vehicles the demand of parking is growing day by day. The commercial establishments are found all along the arterial roads need high parking space for owners, employees and visitors. Majority of commercial establishments doesn't account for parking space within their premises. Due to inadequate supply of off-street parking lots, supply is predominantly met on street with excessive use of inexpensive road space meant for traffic movement leading to haphazard parking and slow traffic movement.
- ii) Buses and trucks parked at G.T. Road between Jarib Chowki and Gol Chouraha creates chaos.
- iii) Absence of stringent measures for regulation
- iv) Absence of a parking policy

- **No tempo terminal facilities**

Most of the local passengers depend upon the tempo and mini buses for their intra-city movement and transportation. Furthermost there are no terminals provided for tempo operation, the only space provided near Sirsaya Ghat is practically ignored by the operators. All operations originate and end at roadside. The worst being that tempo terminal exists on either side of Mall Road at Bara Chauraha which has resulted in chaotic traffic conditions at the intersections.

- **No tempo stops earmarked for boarding and alighting**

In city, tempos and vikrams are plying unabated. These are backbone of public transport. But these vehicles cause big traffic nuisance and there is no proper place earmarked for boarding and alighting the commuters and they stop at any place and even if it is earmarked, no enforcement is there to check and control that tempos stop at earmarked place. It resulted in slow traffic movement.

- **Traffic Congestion and Ambient Air Quality**

According to the study conducted by Central Pollution Control Board (CPCB), maximum numbers of vehicles (60%) held during the closure of level crossings are petrol driven two-wheelers. The number of diesel driven vehicles account for only 22 percent but they are enough to create a very thick smoke adding to visual obstruction and resulting in increased particulate mater in the air. Traffic congestion takes place on all significant crossings from Kalyanpur to Jarib Chowki on G.T. Road. The results of

Ambient Air Quality indicate that the suspended particulate matter (SPM) ranged between 780-788 ug/m³ when the crossings are open and shoots up to maximum of 4415 ug/m³ when the crossings are closed for train movement. The highest value was observed at Gumti Mo. 5.

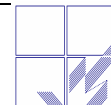
- **Lack of Public Transport**
The public transport system is non-existent in Kanpur. The only mode of travel for commuters is tempos and mini buses which contribute to air and noise pollution and traffic disorder.
- **Inadequate traffic staff**
Present requirement of constables in traffic cell is 600 whereas only 400 constables (66.6 %) are sanctioned. Out of sanctioned staff only 50 percent is available for controlling the traffic.
- **Inadequate traffic signs and road markings**
It has been observed that traffic Signs and road marking have not been marked on almost all the major arterial roads which leads to irregular traffic movement and reduced safety.
- **Encroachment on roads**
Majority of the roads are encroached by vendors selling fruits and other items due to which public mobilization is also occurring. In main market areas such as Birhana Road etc. there are many encroachments on the road side. This leads to traffic jam, congestion on roads and slow down of traffic movement.
- **Inadequate pedestrian facilities**
Other than a few roads, all other roads lack footpath availability and marking of zebra crossing for the pedestrian movements.

8.5 STRATEGIES FOR TRAFFIC MANAGEMENT

P-Road, Meston Road, Halsary Road, Latouche Road Nayaganj Road, Sutarkhana Road, Cooperganj Road, Birhana Road fall in the inner CBD circle and being major market centre as well as shortest connection routes, these road have very high volume of slow and fast traffic. Chaotic traffic conditions persist during peak hours on busy roads. Although restricting movement of trucks and slow goods vehicles will ease the traffic situation to a great extent, it is also desirable to impose parking and other movement restrictions and segregate fast and slow vehicles in sections by providing separate tracks for slow vehicles wherever feasible.

8.5.1 Regulation /Segregation of Traffic

Assessment of traffic characteristics in Kanpur has revealed the presence of large proportion of slow traffic in the total traffic mix. To manage traffic in efficient and economic manner, one of the methods is to adopt traffic segregation principle i.e. guide slow and fast moving vehicles in separate lanes



in the corridor with proper traffic signs and markings. In case segregation is not possible for want of sufficient space, certain roads should be identified for exclusive use of fast or slow vehicles or alternatively one-way system should be introduced.

8.5.2 Regulation of Slow Traffic in Kanpur

Apart from segregation of slow and fast traffic, there is a need to regulate slow moving traffic in the city, specially in inner city. The composition of slow moving traffic (hand cart, bullock cart, trolleys and rickshaw) varies between 40-48 percent on Mall Road between Lal Imli and Bara Chauraha out of which cycle rickshaw accounts for about 35 percent. Although they do not contribute to vehicular pollution, yet they affect travel speeds of motorized vehicles leading to acute congestion and more cycle time required for clearance at the intersections. Keeping this in mind, two steps should be taken:

- a) slow traffic movement should be banned on main arterial road sections (Mall road) and on some other roads (Meston road, Gumti No. 5 etc.) it should be banned during peak hours.
- b) All small moving vehicles need to be phased out gradually.

8.5.3 Road Surface Improvements

Most of the roads have poor surface quality. Only 30 percent of road length has a good surface quality. After traffic segregation and regulation of slow moving traffic, road surface quality will be improved for uninterrupted traffic flow. Proper monitoring and maintenance of new constructed road will be done. Resurfacing of the broken roads should be taken phase wise depending upon the areas.

8.5.4 Intersection Improvements

The major characteristic of traffic in Kanpur is of mixed vehicular movement ranging from primitive animal drawn carts to latest in the motor technology. While speed maneuverability, dimensions, control and other static and dynamic operational characteristics are significantly different from each other, but they occupy the same road space and move in aggregated flows having all types of vehicular interactions and impede traffic flow at important intersections. All major intersections such as Rawatpur, Bakarmandi, Chunniganj, Lal Imli, Parade, Bara Chauraha, Meghdoot, Phulbagh, LIC, Naronia etc. should be improved.

8.5.5 Parking Spots

Haphazard parking of vehicles on roads should be stopped. Parking should only be allowed at identified 158 spots. Parking lots should be developed on public-private partnership basis. Parking fee should be charged from identified parking spots and from shop owners whose cars are allowed to park in front of their premises. Due consultative process should be adopted to fix different slabs for parking.

Proper signage for parking sign boards/ No Parking should be erected at identified locations. Strict actions should be taken against those vehicle

owners who park their vehicle on roads. Collection of parking fees should be resorted as a disincentive measures.

8.5.6 Removal of Encroachment

The carriageway of all roads in the inner CBD circle should be widened to maximum extent by removing encroachments. Removal of encroachment will result in smooth and efficient vehicular movement using all the available road width and minimize congestion.

8.5.7 Conversion of Non CNG Vehicles to CNG

The mother station of CNG already exists. Therefore there is an urgent need for conversion of buses and other vehicles to CNG to make city pollution free.

8.6 KEY ACTIONS

- The need is to construct a flyover on Vijaynagar crossing and widening of existing RoB connecting Vijay nagar crossing to Dada Nagar industrial estate.
- The main trading centres like Naya Ganj, Bansmandi, Hatia etc. needs to be shifted from inner core city to outskirts in the vicinity of Transport Nagar. This will minimise the movement of slow moving carts between trading centres located in inner core city and transport nagar.
- The railway godown between Jhakarkatti ROB and Kanpur Central should be shifted to Panki Railway yard in the outskirts of the city so that traffic congestion can be avoided.
- There is requirement of at least 6 ROB's between Jarib Chowki and Kalyanpur and also at Shyam Nagar, Dada Nagar, Govind Nagar and one running parallel to Govind Puri Railway Bridge.
- All main crossings and tri-sections need to be equipped with traffic lights and glow signs to regulate the movement of traffic.
- There is a need to develop public transport system using CNG buses (108 buses procured by U.P.S.R.T.C) in the first phase of the mission.
- All slow moving animal and manual carting vehicles need to be phased out gradually and should be replaced by CNG buses and 3 wheelers all over the city.
- All the tempos and loaders need to be phased out within next two three years and buses more than 10 years should also be phased out.
- Parking lots at various locations needs to be developed for parking cars, two-wheelers etc. on PPP basis by KNN and KDA thereby removing congestion on roads due to parking of vehicles on either side of road.
- The suitable site should be identified for development of parking area for buses and trucks currently parked at G.T. Road.
- The sanctioned posts need to be filled immediately so that adequate constables could be posted in all the strategic points in city. This will help in improving the deteriorating law and order situation.
- Regulatory measures should be adopted for restricting heavy vehicular movement from city during peak hours in morning and evening

- Important intersections should be kept encroachment free by continuous monitoring. Boarding of passengers by cycle rickshaws and tempo's should be regulated 75 meter away from each approached arm to the intersection.
- Construction of public transport bays (Bus/ tempo terminal) shall be taken up.
- Tempo boarding/alighting should be displayed but it would not be allowed within 50 m reach of the intersection.



CHAPTER 9: MUNICIPAL SERVICES

9. MUNICIPAL SERVICES

9.1 INTRODUCTION

In Kanpur, steep growth (35 percent) in population from 1991-2001 has put tremendous pressure on urban infrastructure such as water supply, sewerage, solid waste etc. The primary responsibility of providing water supply and sanitation rests with state government and more specifically with municipal government. Kanpur Jal Sansthan (KJS) deals with water supply and sewerage system while Kanpur Nagar Nigam deals with social infrastructure such as Education, Health and Medical services. This chapter deals with present status, gaps and future requirement for basic civic services and focuses on strategies and investment required by different agencies to meet the gap.

9.2 KANPUR WATER SUPPLY SYSTEM

Kanpur is the biggest and most important industrial city of Uttar Pradesh (India). It is situated on the right bank of river Ganga and relatively flat alluvial plain. It is biggest water supply system of Uttar Pradesh. The capital works are carried out by U.P. Jal Nigam (UPJN) whereas the operation and maintenance is carried out by Kanpur Jal Sansthan (KJS).

9.2.1 Kanpur Jal Sansthan

In 1975, Kanpur Jal Sansthan (KJS) was constituted as a specialized body under the U.P. Water Supply & Sewerage Act and entrusted with the work of operation and maintenance of water supply and sewerage system. Prior to the creation of KJS, Water supply and sewerage services were looked after by Municipal Corporation.

The working of Jal Sansthan is de-centralised. The entire city has been divided into four service districts namely city service, west service, south service and east service district for the management of water supply system. There are 6 Zones to manage the water supply. Each zone is headed by an Executive Engineer who vested with drawing and disbursing power, is responsible for Water Supply and Sewerage and also for revenue collection.

9.2.2 Salient Features of Kanpur Water Supply

The piped water supply of Kanpur City was started in 1892. The Kanpur water works which is more than a hundred year old serves the city service district and part of south service district. Water works was established with a designed capacity of 4 million gallons per day to serve about 2 lakh population. It was started with three Settling Tanks, five Slow Sand Filters, two Clear Water Reservoirs (1.14 million gallons each) with steam operated filtered water pumping plants at Benajhabar. Distribution system was served by two balancing tanks of 3 lakh gallons capacity each. The source of intake was river Ganga and the Ganga water was pumped from Bhaironghat Raw Water Pumping Station which was about two kilometers away from

Benajhabar Treatment Works.

River Ganga started receding towards Unnao due to which raw water supply started reducing. To meet the water demand, Kutcha Nala (5.4 Km.) was constructed from lower Ganga canal as raw water channel in 1920. Electrification of Kanpur Water Works was done in 1927. Major re-organisation works were carried out in 1937-42, 1951-56, 1977-81 and 1986-97.

After construction of Ganga Barrage, a permanent and reliable source for the water supply is available to provide 1600 mld raw water. This is sufficient to cater the needs of the town upto 2031.

9.2.3 Water Purifications Measures

Conventional methods of water purification, viz, coagulation, filtration and, disinfection are used to treat surface water from the river Ganga and Lower Ganga Canal. In coagulation, raw water is treated with Alumina Ferric so that the colloidal impurities are precipitated, settled down and finally drained out in the form of sludge. There are 16 Slow Sand and 30 Rapid Gravity Filters in KJS.

Rate of filtration in slow sand filters is comparatively very low. In the beginning, it was 9-11 litres per square foot per hour, which has gradually decreased with the increase in head loss. After attaining a head loss of normally 36 inches, the filter is closed. Periodical recouping of sand is done. These filters are not functioning due to need for rehabilitation.

In Rapid Gravity Filters, filtration rate is much higher as compared to slow sand filters. Conventionally, 400-550 litres per square foot per hour rate are met. However, two conventional Rapid Gravity Filters have been converted into bituminous coal-sand dual media filter in which the rate of filtration was four times of the conventional rate. After filtration process, water becomes apparently very clear but it may contain pathogenic impurities. To remove these impurities, chlorine is used

9.2.4 Current Scenario

9.2.4.1 Source of Supply

The main source of surface water in the city is from the catchment of following:

- Ganga River
- Pandu River

The water flow in the Ganga varies between a mean minimum of 72.6 m³/s and a mean maximum of 8.860 m³/s. After tapping water from upper and lower Ganga canals, minimum water flow of 6m³/s is maintained in the river Ganga near Kanpur. The quality of water intake point has been satisfactory between the year 1997 and 2001 with DO ranging from 7.5 mg/l to 9.1 mg/l. In 2006, quality of water intake point is DO ranging from 4.5 mg/l to 7.0 mg/l

9.2.4.2 Service Coverage

The total water supply requirement is 600 mld but only 385 mld of potable water is being supplied. The total supply from treatment plants is about 255 mld water (210 mld raw water from Bhaironghat pumping station and 45 mld from Lower Ganga Canal) and approximately 130 mld water is drawn from groundwater comprising of 80 mld from tube wells (about 135) and 50 mld from hand pumps (about 9830), thereby making a total present water supply of 385 mld. In addition, there are large number of private bore wells in residential and industrial areas which are unaccounted.

The present status of water supply source and capacity of KJS is given in table 9.1.

Table 9.1 Source and Supply of Water

1. Source of Raw Water	Installed Capacity (mld)	Actual Supply in mld.	Remarks
Ganga Channel at Bhaironghat	310	210	Contaminated; needs treatment.
Lower Ganga canal	130	45	Contaminated; needs treatment.
2. Other Sources			
Tube-wells – 135	110	80	Good for use
Hand pumps – 9830	50	50	Good for use
Total	600 mld.	385 mld.	

Source: Data collected from U.P. Jal Nigam

9.2.4.3 House connections

As mentioned earlier, there are 2.84 lakh assesses and 4.2 lakh properties in Kanpur city. However, the coverage of KJS is only 1.8 lakh connections. This is woefully inadequate, specially considering that the distribution network covers 80% of the city area. The total metered residential connections are 1,77,009 whereas un-metered residential/commercial/ industrial connections are 1500.

9.2.4.4 Existing Distribution and Storage Capacities

The supply of surface water from different intakes is being treated at the Benajhabar Treatment Works from where it is supplied to 28 zonal pumping stations. From these Zonal Pumping Stations water is further distributed to the different localities of the town. Benajhabar facility has been augmented by two new intake units. Ganga Barrage, main unit was commissioned in 2005. Thus there is an installed treatment capacity/ storage capacity (OHT) of 540 mld of surface water, besides the tube wells and hand pumps. However, against installed capacity of 540 mld, presently only 255 mld of water is treated and supplied.

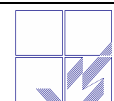


Table 9.2 Treatment Capacity

Location	Installed capacity	Running capacity
Benajhaber	310 mld.	210 mld.
Gujaini (established in 2005)	30 mld.	20 mld.
Ganga Barrage (established in 2005)	200 mld.	25 mld.
Total	540 mld.	255 mld.

Source: Data collected from U.P. Jal Nigam

The water treatment plant at Barrage unit is presently operated and maintained by U.P. Jal Nigam. Its capacity utilization will increase when more households and industries falling within its supply zone will take connections.

At the site of Barrage, 1600 mld raw water is available whereas present installed capacity is 200 mld of water treatment. For the next five years, this provides sufficient intake and treatment capacity. Keeping the potential for increasing the capacity up to 1600 mld, another 7 units of 200 mld can be added.

9.2.4.5 Service Levels (Unaccounted – for – water (UFW))

The supply per capita is 92 litres per capita per day (lpcd) with an estimated current population of 27 la khs. This is less than the prescribed per capita consumption of 150 lpcd.

The leakage (UFW - unaccounted-for water) from Benajhaber works is estimated to be 30 percent due to old and leaky pipelines. The most significant drawback of Kanpur water supply is the huge amount of water wastage and negligible revenue collection from public utilities (for example parks and fire fighting etc.) and stand posts which takes away about 10 percent of water.

Table 9.3 Future Requirement and strategies

Year	2006	2016	2031
Estimated Population in Lakhs	27.00	34.00	50.00
Demand for Water Supply mld	464	585	860

9.2.5 Stakeholder’s Consultations

Our discussions with stakeholders reveal that the water supply in inner core area may be much less than the 92 lpcd, as the pipes there are leaky and often supply contaminated water. It is not unusual to find water supply in these areas being augmented by local community based tubewells or hand pumps. Many MLA and corporators have spent their discretionary funds to set up such localized schemes.

Secondly there is unequal distribution of available water in the city. The assessment of consumers as assessed by KNN and KJS is 2.84 Lakhs of which only 1.8 lakhs are currently connected. Water meters are either not installed or not working. Hence the total water supply cannot be measured at user's point.

Thirdly, the water pressure is not maintained adequately all over the city. This is both because of old and leaky pipes and due to ad hoc style of working in giving connections from water main lines without first checking feasibility and availability of water.

The existing three water treatment plant locations are not inter-connected and as such, there is disparity in supply/demand position in various localities.

The clear water reservoirs at Benajhaber have storage capacity of 35 ml (million litres) and this water is pumped to 28 zonal pumping stations spread all over the city. The water supply is provided for 4 to 5 hours per day, which is not adequate as compared to the requirement of water supply round the clock.

The citizens also complain of unreliability of supply hours, which often become erratic because of erratic water supply. This forces consumers to depend on their own sources of water i.e. tube wells or hand pumps. The tube wells and Hand pumps also cater to those areas, which are not covered by water distribution lines from water works.

9.2.6 Key issues

- The service level in the city is around 90 lpcd. The water supply indicators suggest that the service level is well below the minimum prescribed norm of 172 lpcd (150 +15% waste). This is so, even though there is sufficient intake and treatment capacity in the city.
- The water supply system in inner core area is very old. This has resulted in water scarcity in core areas such as Chamanganj, Baeongamjek etc. from where KJS is facing complaints quite often. It is estimated that 30 percent of water is lost in the distribution due to old system. This needs to be rehabilitated in inner core areas.
- There are frequent complaints of consumers getting dirty water and contaminated water. As a result many do not consider this water safe for drinking.
- The gross per capita supply is 135 lpcd; however equitable distribution is an issue to be examined and corrective measures need to be taken to rectify the situation.
- If the installed capacity of 540 mld is fully utilized, the supply from water works alone could give service level of 199 lpcd, which is well

above the minimum prescribed level.

- It is observed that the supply is limited to 5 hours per day due to inadequate storage and pressure.
- In earlier years, there used to be shortage of water at intake at Bhaironghat and dredging was carried out to bring flow of Ganges towards city. Now with the construction of Barrage, the priorities have changed and to maintain water level at Barrage, down flow of river gets reduced, thereby all pumps do not work at Bhaironghat.
- The shortage of water at Bhaironghat will reduce the water supply at Behajhaber water works, which needs to be supplemented from Lower Ganges Canal, which can supply up to 130 mld.
- In order to get better quality raw water, pipe line of proper size is suggested to be laid for drawing water from lower Ganga Canal at Armapore estate. Behajhaber water works will keep on functioning if proper provisions are made to draw raw water from both Bhaironghat pumping station as well as lower Ganga Canal. Laying raw water pipe will also stop pollution of raw water, which flows in open canal through city area, wherein rubbish is thrown in the incoming water stream.

9.2.7 Strategy For Improving Water Supply

9.2.7.1 Intake and treatment

- Additional units of 200 mld may need to be constructed and commissioned with enhancement in water supply to meet the demand after 2016.
- The 200 mld treatment plant at Ganga Barrage is under utilised to the extent of 175 mld. On the other hand the core area of Kanpur inner city is experiencing shortage of water. To meet this shortage, water mains need to be laid from Barrage site to Behajhaber. An estimate for laying the conduit pipe line with a pumping station at Armapore estate needs to be drawn.

9.2.7.2 Transmission and distribution

- The three water treatment units should be connected, so that shortage in one system can be made up from surplus of the other system. Such a plan for interconnection has been prepared.
- The old and leaky pipes, especially in the old inner city which have outlived their useful life need to be replaced. This will improve pressure, reduce losses and hence reduce pumping costs and most importantly reduce contamination.
- The reliability of water supply needs to be improved by either arranging direct electricity connections to the zonal pumping stations or by providing standby diesel generating sets.

- There is a need for KJS to improve its image by being more responsive to complaints and by setting up an efficient grievance handling cell. Such image makeover will help it in getting more consumers to opt for water connections.
- KJS should experiment with introduction of metering of water. With the availability of new smart meters, their reliability and life has gone up many fold, and they provide a viable method of metering even where the supply is intermittent. Other cities like Hyderabad, Bangalore etc. have switched to metering
- Since billing by metering differentiates between a heavy and lighter user, experience in other cities have shown that it encourages poor and slum dwellers to take to piped water supply, thereby improving both the basic services to the poor as also improving the viability of the service provider.

9.2.7.3 Improving viability of KJS

- One of the problems of KJS is overstaffing. It has more staff than other comparable cities like Allahabad etc. As the system has inertia, drastic changes are not possible due to resistance from staff and unions. Private participation can be experimented by giving O & M for certain zones initially and then if found successful, it could be extended to the entire area.
- KJS has an advantage of possessing prime land in the heart of city. The existing slow sand filters are out of use and it is not economically viable to renovate and rejuvenate them. As such, this land can be better utilised in view of the fact that no further treatment plants are likely to be constructed in Benajhaber area. KJS can have a good source of by leveraging this land or could even use it as an incentive for P-P-P.

9.3 SEWERAGE SYSTEM OF KANPUR CITY

Sewerage network was laid in the year 1904 by providing the facility in a limited area. In 1920, it was extended to cover more areas by providing trunk, main and branch sewers. In 1952, Kanpur development Board implemented complete reorganization of sewerage system for a population of 9.5 lakh which was designed to carry sewer at the rate of 180 lpcd.

At present, total length of main and trunk sewers is 74 kms whereas branch sewer lines are 875 kms. Only 60 percent of town is covered with sewerage system. The sewerage system is being administered under five different zones. There are total 13 sewage pumping stations and 30,000 manholes. Sewer lines are presently cleaned by sewer jetting machines, sewer clearing machines and also manually as per requirement. Total numbers of regular employees are 517 whereas 178 are on daily wages basis.

The central zone of Kanpur city has the oldest brick sewers. Brick sewers, being quite old, have lived out and are in worn out state. They have also

become under size due to increase in population. In densely populated area, it has become too difficult to repair these lines. Such areas are Chamanganj, Beconganj, Talak Mahal, Pech Bagh, Rizvi Road, Fahimabad, Cooli Bazar, Dhankutti, Ram Narayan Bazar, Moti Mahal, Gadariyan Purwa, Circular Road, Sisamau, Nawabganj, Khalasi Line, Kalyanpur etc.

Beside South of Kanpur Town, other newly developed areas such as Kalyanpur, Indra Nagar, Vikas Nagar are also facing sewer problems. In these areas, the system is not up to the mark and proper arrangements for outfall are not there.

9.3.1 Source of Sewerage

The source of sewer is mostly from domestic households but the waste generated from industries also flow into sewers. The present arrangements segregate industrial effluents from domestic sewerage for sewerage treatment plants. The industrial units in Panki and Dada Nagar industrial area also discharge industrial effluents, which finally flows in River Pandu through three Nalas, flowing north to South in South of Kanpur city. In Jajmau area, cluster of tanneries are discharging effluents, which has been tapped for treatment under Ganga Action Plan Phase-I. Except for primary treatment plants, which the industries in the Jajmau areas claim to have installed, the sewage flowing in three Nalas (Ganda Nala, Halwa Khanda Nala and COD Nala) gets discharged in Pandu River without any treatment, whatsoever.

Average BOD load in domestic sewerage has increased manifold from 1993 to 2006. This is due to growth in population density and adoption of more and more chemicals/ detergents due to a changed life style.

9.3.2 Sewerage Generation

In 1997, total amount of waste water measured in drains and at the STPs was about 360 mld of which 160 mld was intercepted under GAP-1. At present inflow of treatment plants is 63 mld and only 17 percent of the total waste water generated.

The major zone i.e. City Drainage District with its underground sewerage system covers around 15 lakh population and generates 260 mld of waste water with its outfall into river Ganga at Jajmau. In the 'South Drainage District' only some pockets are covered under the sewerage system and rest is disposed into open drains. The industrial effluent from Panki area meets the river Pandu separately through industrial drains. The West Drainage District has no sewerage facilities and the waste water flows in to Pandu River through open drains. The 'East Drainage District' which is primarily comprises of developing areas has no sewerage network.

9.3.3 Sewerage Treatment Plants and their Capacity

Three sewerage treatments (STP) are in operation in Kanpur. All three plants are located in area near Jajmau, on the eastern side of the city. In Jajmau,

main sewage pumping station and treatment plants for 171 mld capacity have been commissioned in the last decade. The details of treatment plants at Jajmau are as below:-

➤ **5 MLD UASB Sewerage Treatment Plant (STP)**

A pilot STP based on new technology “Upflow Anaerobic Sludge Blanket” was constructed and commissioned in 1989. This plant was designed for treatment of 5mld of domestic wastewater. The plant functions at full capacity but in the past it has received tannery effluent which has to be discontinued since it has adverse effects on the UASB process and on the quality of the sludge which is used in agriculture. The dried sludge is sold to farmers and final effluent flows into a nala and subsequently into the Ganga.

➤ **36 MLD UASB Sewerage Treatment Plant (STP)**

The 36 mld wastewater treatment plant for the treatment of waste from 175 tanneries (presently 354 tanneries) was constructed and commissioned in 1994 after evaluating the performance of pilot plant. For further treatment of tannery wastewater after UASB reactors, a conventional treatment plant was constructed in 1996. The plant is designed for treatment of 36mld mixed tannery and domestic wastewater.

➤ **130 MLD ASP Sewerage Treatment Plant (STP)**

This plant, based on activated sludge process, was constructed and commissioned in January 1999. This planned is designed for treatment of 130 mld of domestic wastewater. Since its commission, illegal discharge from tanneries and industrial wastewater from various industries situated in city areas is being discharged regularly to 90 outfall sewers reaching the main pumping station from where sewerage is pumped to this plant. The tannery waste water and industrial wastewater contains leather flushing, chromium sulphides and other toxic elements for which the STP has not been designed. Consequently the components of the equipment are corroded. The plant is now running at 1/3^d of its capacity.

The treated effluent from two STPs (36 MLD and 130 MLD) is pumped into a channel that transports water to the sewerage farm with a total area of about 2,200 hectare. From the channel, irrigation water is fed to the farm lands.

With even 100 percent efficiency in system, there is surplus sewage, which gets discharged in Pandu or Ganges River without treatment.

9.3.4 Financial Situation

The financial resources of KJS are based on receipts from water tax, sewer tax, water and sewer user charges levied on properties and on users. At per present tariff, rates of domestic and non-domestic water supply are Rs. 2.90 and Rs. 4.00 to Rs. 5.90 per KL respectively depending on the nature and quantity of use.

The cost of operation and maintenance of water supply and sewerage is met through revenue generated from Water Tax, Sewer Tax, Minimum charges & user charges of water. The Water Tax & Sewer Tax is levied on the basis of Annual Rental Value (ARV) (assessed by KNN) of properties @ 12.5% & 4% respectively.

The main revision of Tariff was carried out in the year 1994 on the basis of MV & size of water connection with a provision of annual enhancement of rate @ 7.5%. The revision of tariff resulted in revenue enhancement as shown in table 9.4.

Table 9.4 Collection of Water and Sewerage Tax by KJS (in Lakhs)

Particulars	Year				
	2001-02	2002-03	2003-04	2004-05	2005-06
Water Tax	697.21	744.29	898.78	814.95	1005.16
Sewer Tax	270.92	301.27	289.78	258.38	270.81
Minimum Charges of Water /Sewer	1209.04	1222.48	1240.63	1647.41	1735.66
Others	83.45	88.18	101.12	100.08	67.17
Total	2260.62	2356.22	2530.45	2820.82	3078.80

Source: Data collected from Kanpur Jal Sansthan 2006

The maintenance of water supply and sewerage system is carried out by self generated income. However, 70 percent of the income is utilized to meet the establishment cost. The establishment expenditure, post retirement benefit of employees, procurement of chemical, maintenance expenditure has to be paid regularly. This leaves very little surplus to undertake any capital works. Under such circumstances, it is only possible to carry out expenditure related to break down maintenance or emergency works such as replacement of pumping set, sewer lines, pipe-lines, machine etc.

9.3.5 Issues

- The effluent quality of 5 mld UASB STP is not meeting the standard parameters for land application due to present characteristics of sewerage reaching to treatment plat and also due to illegal discharge of tannery waste water into domestic sewers. The tannery waste water contains high sulphide contents in the range of 30 to 50 mg/l which affects the performance of the STP.
- The 36 mld UASB STP was designed for 175 tanneries whereas now 354 tanneries are in operation. Most of the tanneries have adopted chrome tanning process due to which the concentration of chrome and sulphides has increased which affects the process of UASB reactors. Secondly, discharge at intermediate pumping stations has increased due to increase in number of tanneries whereas their pumping capa city is inadequate.

- The industrial effluents from tanneries have a high BOD level of 3000 to 4000 mg/l under Ganga Action, this effluent from tannery has been tapped and is being taken to sewerage treatment plant at Jajmau. But still most of primary treatment plants, though installed by tanneries, are not functional and effluents from tanneries go to STP without any primary treatment plant.
- Because of improper outfall arrangements and lack of treatment of all effluents, the sewer and industrial wastewater, flowing and discharging into Pandu River is highly polluted and the pollution levels are high.
- With the growing Industrialization and Urbanization the pollution load on the river Ganga at Kanpur is increasing day by day. Pollution is observed here both at the source due to the discharge of industrial effluents and sewage as well as the distribution system through cross contamination.
- The old sewers are choked and broken and are a cause of contamination of ground water and also of contamination of drinking water. These are a serious health hazard and urgent repairs are required.
- At several places the choked or overflowing sewers have been broken and connected to the drains resulting in serious contamination in the drains as well.
- In several new colonies, the sewer branch lines are not connected to the trunk sewer lines and the sewer is either flowing into open fields or into drains. This is once again a serious health hazard.

9.3.6 Remedies and Future Strategies

- The capacity of existing sewerage treatment plants should be increased as well as new STPs should be constructed. With the construction and commissioning of 200 mld STP at the bank of Pandu river and diversion of Sisamau Nala from discharge in Ganga to discharge in Pandu river, the treatment capacity will be increased to 371 mld against the present recorded discharge of 360 mld. With the increase in water supply in years to come, the generation of sewerage and waste water will also increase (estimated at 70 percent of the water supply). Hence there is sufficient capacity as of now but there is a need to plan for additional treatment plants in the period 2012 onwards.
- As U.P. Housing Board has planned to have provision for smaller capacity 25 to 40 mld STP for each new colony, the same can be adopted by KDA or even big builders like Sahara and others. The treated water can even be given to nearby farmers for agriculture purposes, on payment basis.
- UP Jal Nigam has a plan to spend considerable money on sewerage in the next 25 years (nearly Rs 3500 cr). It is suggested that money for providing branch connections to the houses be recovered from the house owners as a connection charge. Similarly instead of laying long trunk

lines, it is better to design small decentralized units like those planned by UP Housing Board. This will reduce both operating and maintenance costs.

- The renovation of sewers in the inner core areas should be done using latest trench less technologies, as the inner core area is very congested and it is not practical to dig up the narrow roads for renovation or for laying new sewers
- Similarly, other new technologies such as lining of old sewers, filling of joints with modern jointing material etc. can also be resorted to as at times it may be more economical and practical to rehabilitate existing sewers than to lay new sewers.

The immediate need is to cover the following works under the JNNURM scheme:-

- Renovation/replacement of existing drains, which are old and in lived out stage.
- Renovation / repair / supplement of existing and old pumping stations including Mechanical and Electrical items like motors, starters and switchgear.
- Regular sewer cleaning by adopting suitable methodology, depending location and condition of Nalas and drains.
- In densely populated areas, nalas need to be replaced by RCC conduit pipes for the purpose of security, hygiene and pollution control.
- Proper solid waste disposal is required otherwise this will find its way into drains, especially in rainy season.
- Operation and maintenance of existing STP's at Jajmau is not proper and other STP plants are also not functioning properly due to shortage of power and finance. This situation can be improved through Public Private Participation (PPP) which can be more effective by way of giving annual operation and maintenance contracts.

9.4 STORM WATER DRAINAGE SYSTEM

Kanpur city is habituated between two rivers Ganges on north and Pandu River on south. Out of 17 nalas, 14 are discharging wastewater in Ganga over a stretch of 20 KM from Bithoor downstream to Jajmau. Out of all Nala, Sisamau Nala has the biggest catchments area of 1985 hectares. The details of various Nalas discharging waste in Ganga towards North are as under:-

Table 9.5 Discharge and length of different drains

S.NO	Name of Nala	Quantity (mld)	Length KM
A) Nala's Discharging in Ganga River towards North			
1	Sisamau Nala	138.33	16.30
2	Nawabganj Nala	1.66	2.22
3	Guptar ghat Nala	2.29	1.30
4	Jageshwar Nala	0.92	0.70
5	Jewra Nala	0.79	1.50
6	Ranighat Nala	0.32	1.40

7	Parmat ghat Nala	0.43	2.18
8	Muir Mill Nala	4.91	2.00
9	Police Line Nala	0.79	0.12
10	Jail Nala/ Sarsaiya Nala	1.22	0.80
11	Golf Nala I & II	1.66	2.50
12	Kesa Colony Nala	0.16	
13	Roadways Colony Nala	0.40	0.60
14	Parmiya Purwa & Kheora Nala	0.14	2.00
	Sub Total (A)	154.02	34.82
B) Nala's discharging in Pandu river towards South:-			
1	Ganda Nala	55.09	13.50
2	Halwa Kheda Nala	11.44	6.70
3	C.O.D. Nala	8.81	6.20
	Sub Total (B)	75.34	26.40
C) Drainage from sewerage channel			
	Sub Total (C)	129.50	
	Total	358.86	

Source: GPCU Kanpur

All the Nalas, discharging in Ganga River have been tapped except Sisamau Under the GAP (Ganga Action Plan) Phase-II, Sisamau nala, the largest nala in Kanpur City, presently carrying a flow of around 138 mld will be diverted for treatment. Out of 138 mld, 80-100 mld will be tapped upstream and diverted to Binagawan STP. The remaining 30-50 mld will be tapped down stream at Parmat pumping station and diverted to Jajmau STP. Thus this flow from Sisamau nala has to be considered while finalising the capacity of the Parmat pumping station. It is also proposed to change the course of Sisamau Nala to South (discharging in Pandu River) instead of present flow towards north in Ganges.

With diversion of Sisamau Nala and three Nalas already discharging into Pandu river, 200 mld sewage treatment plant is being proposed. With 171 mld treatment capacity STP at Jajmau and 200 mld STP at the bank of Pandu river, water will be served to the Jajmau farms with a total area of about 2,200 Hectares.

9.5 SOLID WASTE MANAGEMENT

9.5.1 Solid Waste Generation

The quantity of solid waste generated in a city depends on the following factors:-

- i. Population
- ii. Socio-status of population
- iii. Number of commercial, industrial and institutional establishments

According to KNN officials, at present waste generation in the city is around 1500 MT presently.

9.5.2 Composition of Waste

For Kanpur, organic waste constitutes largest component followed by inert material such as building material and debris etc. in overall composition of waste i.e. waste generated from households, commercial establishments and institutions in Kanpur (Table 9.6).

Table 9.6 Waste Composition in Kanpur (in %)

Waste Components	ICDP	NEERI
Organic	47.27	56.67
Paper	3.58	3.18
Rubber, Leather and Synthetics	2.72	0.48
Plastics	4.5	-
Rags	3.97	-
Glass	-	0.48
Metal	0.24	0.59
Inert Material	38.82	40.07

Source: Studies conducted by ICDP and NEERI

Apart from solid waste generated by Households, commercial establishments and institutions, Kanpur also has a number of industries and other businesses that generate different type of waste as mentioned below:

- Bio-medical waste generated by Hospitals and Nursing Homes
- Sludge, buffing and other waste produced by tanneries in Jajmau area
- Industrial waste produced by textile, rubber and other industries operating in the city
- Dung, waste straw and other waste from dairies (Parag)
- Silt from Nalas and drains
- Coal ash and fly ash from Panki Thermal Power Station.

9.5.3 Waste Generated from Industries

Some of the major industries located within the Nagar Nigam Limits are LML Industries, Cerulin Chemicals, Rajendra Steel &A, Kanpur Pesticides & Chemical Tube, Hindustan Aeronautics, Hindustan vegetable Oil and ICI-Nickel and Small Arms Factory (cyanide)/Chromium. As informed by officials from KNN, total hazardous waste generated from the Industries is about 18 tons per day. Out of total industrial waste, the generation of hazardous waste containing chromium is about 10-15 MT per day. The site for disposal of the hazardous waste has been identified at Rooma, about 12-15 km away from the sewage treatment plants and the work is under progress. The site has been scientifically designed with liners etc. to avoid any leaching and contamination of ground water.

9.5.4 Waste Generated from Hospital and nursing-home

At present, Kanpur city has about 9 Government, 33 private Hospitals and about 600 clinics. Some of the major hospitals are LLR Medical College Hospital, ESI Hospital, Hallet Hospital, R.K. Devi Hospital, Swaroop Nagar etc.

The estimated quantity of bio-medical waste generated in Kanpur is about 6750 Kg per day. To manage the bio-medical waste generated from these hospitals & clinics, a Central Bio Medical Waste Treatment Plant Facility has been established at Kanpur. The facility is being operated by an NGO, named Medical Pollution Control Committee (MPCC). The facility has an incinerator, Thermoclave, Shredder, Destructor, Chemical treatment Plant and Laboratory. The facility was installed in year 2001 and the incinerator has the capacity to incinerate about 1000 kg of waste.

The bio-medical waste is to be managed according to the Bio-medical Waste (Management & Handling) Rules, 1998. Though as per these rules, it is the responsibility of the respective health care establishment & Uttar Pradesh Pollution Control Board to see that the bio-medical wastes are managed properly, its poor implementation affects KNN as these wastes get mixed with the Municipal solid waste posing serious threat to sanitary workers as well as general public. Hence measures need to be taken to prevent the mixing of bio-medical wastes with municipal solid waste.

Out of total bio-waste generated, only 1350 Kg (about 20 %) is sent to the centralized bio-medical waste management facility. Some estimate that about 30 percent of bio-medical waste is getting mixed up with other type of waste.

9.5.5 Hotel and Restaurants Wastes

Kanpur is a commercial town and therefore has hundreds of small and medium size hotels and restaurants. Some of the important hotels are: Land Mark Hotel, Hotel Gee, Hotel Gaurav, Hotel Akash, Delhi darbar and Data Restaurant etc. In most of the hotels, the wastes generated are collected in drums (300 litre) within the premises and as the drum gets filled it is taken to the nearest waste storage depot and emptied.

The floating population in the city is about 75,000 to 1,00,000 and considering waste generation rate of a modest 0.2 kg/ capita/ day), total waste generation from floating population can be estimated to be 15-20 T / day.

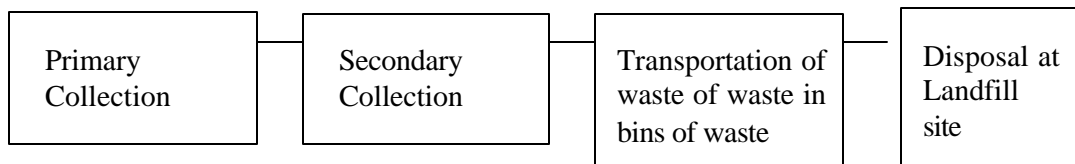
9.5.6 Present System for Solid Waste Disposal

- Kanpur Nagar Nigam (KNN) is responsible for collection, transportation and disposal of municipal solid waste.
- The handling and treatment of bio-medical waste is governed by the Bio-medical waste (Management and Handling) Rules 1998.
- The responsibility of safe disposal of bio-medical waste is on individual hospitals and nursing homes.
- The industrial waste should be treated and disposed according to

guidelines of Central Pollution Control Board and State Pollution Control Board. It is the responsibility of the concerned industry to ensure safe treatment and disposal of industrial effluents as per norms and standards.

- KNN has already given a contract for developing a facility at Rooma for safe disposal of 22,000 MT of hazardous waste from tanneries at Jajmau.
- KNN has signed MOU with IL & FS (Infrastructure Leasing & Financial Services Ltd) for Waste to Energy Project Plant at Jajmau wherein the transport of solid waste to the site will be provided by KNN and KNN will receive 5 percent of the revenues / power generated.

The primary responsibility for solid waste management is with KNN. The various stages involved in the disposal of solid waste are as under:-



It has been noticed from the discussion with KNN officials that the waste collected by the sweepers is deposited in the following type of rubbish dumps/depots:

Table 9.7 Type of Waste Storage Depots

S.NO	Type of waste storage Depot	No. of Depots
A. Open points where waste is dumped		
1	Open points-existing	126
2	Open points-not meant as disposal points	36
3	Disputed land	01
4	Built –up CC & Brickwork	01
5	Under shifting	01
		265
B. Modern waste depots in place lode ones:		
1	Solid waste depots, built already	73
2	Existing depots, wherein adequate space is not available	14
3	Disputed locations	02
4	Modern waste depot, built already	02
5	Modern waste depot under constructions	03
6	Proposed under Infrastructure fund	03
7	Proposed modern waste depots	49
8	Waste depots 12m x 6 m x 4.3m size	22
9	Waste depots 8m x 4m x size	27
		195

Source: Data received from Solid Waste Department, Kanpur Nagar Nigam

9.5.7 Future Waste Generation

The total quantity of solid waste generated in a city is estimated by taking an average quantity generated per capita per day (pcpd). According to the 2001 census, the population of Kanpur was 25.51 lakhs. The estimates given by NEERI i.e. 350 gms pcpd the quantum of waste generated in Kanpur will go up as shown in the Table no. 9.8.

Table 9.8 Projected Waste Generation

Year	2006	2011	2016	2021	2031
Population in Lakh	25.51	29.00	32.97	37.49	48.46
Waste generated as day in MT	893	1015	1155	1315	1696

9.5.8 Issues

The issues confronting primary and secondary collection of garbage at Kanpur are as under:-

- The dumping grounds, by roadside and elsewhere, are unhygienic and have deplorable look.
- Disposal of waste into drains leads to choking of drains
- Rains washed out part of garbage from these depots into drains and Nalas which leads to silting.
- Mixing of Bio-medical and other forms of waste with municipal waste is a serious health hazard.
- Lack of segregation of bio-degradable and non-degradable waste at source
- Large scale public littering leading to inattentiveness of street sweeping and cleaning activities.
- Shortage of staff and lack of motivation amongst the existing staff.
- Presently there is no waste processing plant at Kanpur and the total waste is taken to disposal size.

9.5.9 Strategies

- Door to door collection is being experimented and with implementation of source segregation the processing of waste could also be undertaken.
- It is necessary to modernize and replace the ageing solid waste equipment being used by KNN for Solid Waste Management (SWM). A study has already been conducted by NPC suggesting a three tier waste handling system with transfer stations. Such a system will not only improve the SWM but will also reduce the running of the transport vehicles and thereby reduce the cost of operation of SW Management. It is suggested that this change to a modern SW handling system should also be included in JNNURM proposals by KNN.
- SWM is an area amenable for PP-P and introduction of user charge. KNN should experiment outsourcing in a few wards together with responsibility for user charge collection by the private operator. However, this can be successful only if it is combined with a strong and vigorous community mobilization effort which is best undertaken by

- commissioning a good NGO for the purpose.
- The P-P-P experiment in a few areas can also be given to the CDS formed in slum areas. This will provide employment and also strengthen the CDS to undertake other community oriented works.
 - Public sector participation (PSP) should be invited for establishing suitable waste processing plant that could be either composting or waste to energy.
 - The waste generated from the processing plant and non-recyclable and other waste should be disposed off in sanitary landfill facility. Immediate steps need to be taken for developing such sanitary landfill facility.
 - KNN has been allotted the Transport Nagar site which is 46 Hectares for development as a sanitary landfill site. It is estimated that this area will last for 10 years. The entire area has been allotted along the bank of river Pandu and leaving a safe distance of 200 m along 1500 m long bank nearly 30 Hectare will fall under safe distance area. KNN should try to get more land allotted in the same area. This site should be developed after carrying out the environment impact assessment.
 - It is further recommended that Panki Thermal Power Station should make its own arrangement to collect and slurry before discharging in Pandu River. The downstream of the river is black with fly ash slurry. The usual sewerage treatment plants do not treat this type of effluent and as such, this job should be undertaken by Panki Thermal Power Station itself.

9.6 STREET LIGHTING

The operation and maintenance of City Street Lighting is being done by Kanpur Nagar Nigam and Mechanical Engineer (Street Lighting) is responsible for installation, replacement, repairs, operation and maintenance of street lights in the city. The budgeted amount for purchase of items for street lighting needs to be enhanced by at least 10-15% over and above Rs.3.67 cr.

9.6.1 Electricity Charges

During the year 2005-06, KESCO raised monthly bill of Rs.54.22 lakh i.e. an annual bill of Rs.6.5 cr. This is a large amount being spent on street lighting.

The bills are raised on fixed charges per light point as no metered supply is being given. For un-metered supply, KNN is being charged @Rs.850.00 per KW or part thereof per month. The monthly bills are raised on the basis of verified number of points at the beginning of the year and additions, if any during the month as intimated above.

9.6.2 Key Issues

- There is provision of improvement of G.T. road between Rama Devi and Kalyanpur to 4 lane and provision of street lighting needs to be made accordingly. A budgetary provision needs to be included for augmenting street lighting.

- The entire city area is not covered by lighting system and developing areas have no street lighting. Once the lamps and tubes get fused, it takes months for replacement and streets and roads remain dark. A system has to be developed for timely replacement.
- There is an expenditure of almost 11-12 crores in this sector and studies need to be conducted on how to reduce this huge cost.

9.6.3 Strategies

- The payment to electricity board should be based on metering. KNN should experiment with light operated sensors, which will automatically switch on and switch off the lights with daylight. This will save electricity.
- The maintenance of electric connections and fittings should be improved to reduce the burn out rate.
- It is suggested to explore public participation by giving annual operation and maintenance contracts to reputed manufacturers like Bajaj, Philips or G.E., etc. KNN may succeed to strike on lesser cost and the surplus staff may be utilized somewhere else.
- Solar system may be tried and a study is required to find viability of higher initial investment vis-à-vis electricity bills of KESCO.

9.7 SOCIAL INFRASTRUCTURE

9.7.1 Medical Facilities

In Kanpur metropolis, abundant medical facilities are available. It has large concentration of doctors and nurses and exclusive assembly of medical specialists and consultants. At present, Kanpur city has about 9 Government, 33 private Hospitals and about 600 clinics. Some of the major hospitals are LLR Medical College Hospital, ESI Hospital, Hallet Hospital, R.K. Devi Hospital, Swaroop Nagar etc. Apart from hospitals, numerous dispensaries are also functioning in Kanpur city and some of them deal with specialised treatments. These hospitals and dispensaries are heavily strained due to lack of health facilities in nearby areas. The out-patient departments are very congested. The patients have to wait for long hours for their turn.

In Kanpur, unhygienic conditions prevail throughout the city. This has an impact on contamination of the drinking water which leads to water borne diseases.

The occurrence of water borne epidemics have been nil in the last 3-5 years, however, there have been occurrence of water borne diseases in the past few years (table 9.9). The areas that are prone to water borne diseases are Sakera, Juhi Puram Purwa and Juhi Garha, Babu Purwa, Colonel ganj, Talak Mahal, Begum ganj, Rail bazaar.

Table 9.9 Trend of Water Borne Diseases in Kanpur

Description	1996	1997	1998	1999	2000
No. of Gastro cases	315	230	350	250	127
No. of deaths of gastro cases	5	2	2	3	1
No. of jaundice cases	106	63	44	53	39
No. of deaths of jaundice cases	29	19	22	20	11

Source: CMO, Kanpur

Malaria is prevalent in Kanpur from July to October every year corresponding to rainy season and the subsequent period of water retention and stagnation. Concentration of *P. vivax* cases occurs along the Ganga with a high frequency in Jajmau and Nawabganj areas. The entire river bed area poses serious health hazard for vector borne diseases due to stagnation of clear and dirty water in pools. Although malaria cases are seen on a rise in the last 4 years, there have been no major outbreaks of any water borne diseases or epidemics in the last 3-5 years. During 2000-04, cases of malaria registered with Chief Medical Officer (CMO) is given in table 9.10.

Table 9.10 Trend Analysis of Malaria Cases

Species	2000-01	2001-02	2002-03	2003-04
<i>P. falciparum</i>	2	3	-	4
<i>P. vivax</i>	370	355	400	571

Source: Chief Medical Officer, Kanpur

9.7.2 Education Facilities

Kanpur city has gradually emerged as a dynamic educational centre due to availability of every kind of academic and professional institutions. Kanpur is host of several institutes of repute such as Indian Institute of Technology Kanpur, two universities, viz. Kanpur University and Chandra Sekhar Azad University of Agriculture and Technology, a Medical College and technical institutions such as the National Sugar Institute, the Central Textile Institute and the Leather Institute etc.

At present (2006), 2 lakh students are enrolled in the 432 primary schools and 69,198 students have been listed in the 39 junior high schools.

Some of the problems faced by education department are: poor turn out in the primary and junior high schools despite several schemes launched by the state government. Secondly, there is an acute shortage of teaching staff. According to officials, no teacher has been recruited for the primary and junior high school since 1972. Most of the schools either lack of teacher or are working with the support of Shiksha Mitra. Thirdly, student's strength has decreased due to mushrooming of private schools in city areas. Fourthly, parents have lost hope in government education centres and for the better education they are sending their children to private centres.

9.7.3 Lake and Water Bodies

The main river of Kanpur is river Ganga and Pandu. Since 1921, Ganga course has shifted from the right bank to the left bank. Therefore, a channel from the river course to Bhaironghat was made for the main water supply intake of Kanpur. Another river, Pandu is meandering river and it flows into Ganga at a point of 25 km of downstream of Kanpur. The highest water level in the river is 119.6m above MSL and the mean water level is 114.5 MSL.

The naturally existing water bodies in the city are water pool near Allen Forest and water ponds in the rail yard area along GT road near tarmill (CPCB). The two tanks at Motijheel were used as freshwater reservoirs for drinking water supply to the city but now abandoned due to excess silting and damage of the feeder canal. Other fresh water bodies in the city are the upper Ganga canal network flowing in the south city.

Under U.P. Housing Board Yojana No. 1, 2 and 3 total 5 water bodies falls whose area is approx. 20 acre. There is also a hundred year old water body, whose capacity is 5000 square meter, near atik bhawan in the campus of Chandrasekhar Ajad Agriculture and Industrial College. Earlier rain water from nearby area used to be collected in this water body and used for irrigation purposes. Later on due to construction of buildings and roads, the natural flow got obstructed.

9.7.4 Development of Parks

In Kanpur, there are total 281 parks. Out of total parks, 94 are developed park whereas 49 semi-developed park and 138 are un-developed park. Maximum developed park are in 6th and 5th zone and semi-developed park are in 5th zone.

Table 9.11 Parks Developed by KNN

Zone No.	Develop Park	Semi-develop Park	Un-developed Park	Total
1	16	07	19	42
2	10	07	08	25
3	11	06	22	39
4	15	10	17	42
5	20	12	54	86
6	22	07	18	47
Total	94	49	138	281

Source: Information received from Kanpur Nagar Nigam, 2006

Kanpur Nagar Nigam is planning to develop few parks with the help of Resident Welfare Associations.

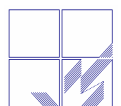
Urban Infrastructure



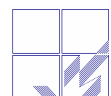
Ganga Barrage



Panki Power House



SOLID WASTE MANAGEMENT





BIO-MEDICAL WASTE TREATMENT



CHAPTER 10:
HERITAGE AND TOURISM

10. HERITAGE AND TOURISM

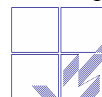
10.1 INTRODUCTION

Kanpur stands on the banks of the Ganga and is North India's major industrial centres with its own historical, religious and commercial importance. It was founded by king Hindu Singh of the erstwhile state of Sachendi and was known as 'Kanhpur'.

Upto the 1st half of the 18th century Kanpur was an insignificant village. In May, 1765, Shuja-ud-daula the Nawab Wazir of Awadh was defeated by the British near Jajmau. The strategic importance of the site was realized by British during this time. European businessmen had gradually started establishing in Kanpur. In order to ensure protection to their lives and property the 'Awadh local forces' were shifted in 1778. Kanpur passed into British hands under the treaty of 1801 with Nawab Saadat Ali Khan of Awadh. This was a turning point in the history of Kanpur as it soon became one of the most important military stations of British India. It was declared a district on 24th March 1803.

Kanpur became the epicenter of the outbreak of 1857, as some of the leading luminaries i.e. Nana Sahib, Tantiya Tope, Azimoolah Khan & Brigadier Jwala Prasad- of the War of independence hailed from here. The three strategic events of the 1857 war at Kanpur were the fight at 'wheeler's entrenchment' where British under Commander Hugh Wheeler retreated into a shallow earth entrenchment; the 'massacre at Sati Chaura Ghat' where fighting broke out between English garrison and Indians and most of the men were killed and survivors i.e. women and children were rescued and imprisoned into the Savad Kothi and later shifted to Bibighar where they were also massacred and their dismembered bodies buried in the well and this episode came to known as 'Bibighar massacre'. The Bibighar was dismantled by the British on reoccupation of Kanpur and a 'memorial railing and a cross' raised at the site of the well. The well is now bricked over and remains of a circular ridge survive which can still be seen at the Nana Rao Park. The Kanpur Memorial Church was raised in honor of the fallen at the north-east corner of Wheeler's entrenchment in 1862 by the British.

After 1857, the development of Kanpur was phenomenal. Government Harness and Saddler Factory was started for supplying leather material for the army in 1860, followed by Cooper Allen & Co. in 1880. The first cotton textile mill, the Elgin Mills were started in 1862 and Muir Mills in 1882. Today besides being the most industrialized region of the state, Kanpur is also an important educational centre and birth place of great Hindi litterateurs.



10.2 TOURIST ARRIVALS

Since 2001, number of tourists visiting Kanpur city has increased yearly. Kanpur has received 2.6 lakh tourists in the year 2005. Out of total tourist arrived in 2005, about 94 percent were Indians whereas only 6 percent were foreigners. Since 2001 to 2005, 40 percent growth has occurred in total tourist arrivals in Kanpur.

Table 10.1 Tourist Arrivals

Sl. No.	Year	Tourists		Total
		Indian	Foreigner	
1	2001	1,81,922	4,602	1,86,524
2	2002	1,85,678	6,287	1,91,965
3	2003	2,13,647	4,534	2,18,181
4	2004	2,28,411	5,987	2,34,398
5	2005	2,45,524	6,359	2,61,883

Source: Department of Tourism, Government of Uttar Pradesh, Kanpur

10.3 PLACES OF INTEREST IN KANPUR CITY

10.3.1 Historical Places

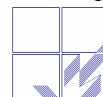
Jajmau

The mount of Jajmau on the eastern end of the city occupies a high place among ancient sites of the region. During 1957-58, excavations were carried out on mound which unearthed antiquities ranging from 600 BC to 1600 AD. In ancient times, Jajmau was known as Siddhapuri and was the kingdom of Yayati, the Puranic king. The high mound overhanging the Ganga is known as the site of his fort. Today Jajmau houses the Siddhnath and Siddha Devi temples and the mausoleum of Makhдум Shah Ala-ul-Haq, the famous Sufi saint, built by Firoz Shah Tughlaq in 1358. A mosque build by Kulich Khan in 1679 is also situated here.

Bithoor

Bithoor is situated 27 km away from Kanpur on the Kannauj Road. Situated on the banks of the Ganga, this spot is of considerable historical and religious importance. According to Hindu scriptures Lord Brahma came to Utpalaranya, as it was known then, for the creation of mankind. The place which first witnessed the creation of mankind came to be known as Brahmavarta or the seat of Brahma. Later Brahma installed a Shivalinga which is still worshipped as Brahmeshwar Mahadeva at the principal ghat of Bithoor, the Brahmavarta Ghat.

A nail of the Horse shoe embedded in the steps of the ghat is an object of special reverence for devotees as it's considered to be of Brahma's horse which he used while going for Ashwamedha Yajna. On the completion of the yajna, the forests of Utpalaranya came to be known as Brahmavarta, from which Bithoor name is derived. In later centuries, Uttanpad ruled the



Brahmavarta and his son Dhruva penanced here in order to please Brahma and place is known as Dhruva Teela.

There is a small pool inside **Valmiki Ashram**, famous as Sita-kund. Sita 'Rasoi' is still preserved, near which stands 'Swarga Naseenee' or Deep Malika Stambha, studded with niches all around for illumination.

During 1753-75 under the rule of Nawab Shuja -ud-daula, the administration of Bithoor was entrusted to Almas Ali Khan, who erected a mosque near Lakshman Ghat on the right-bank of Ganga.

Town of Ghats

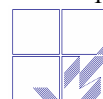
The historic town of Bithoor, once famous by the name of 'Bavan Ghaton ki Nagari', (city of 52 Ghats) is left with only 29 Gahts. The chief among them being the Tuta Ghat, Patkapur Ghat, Khanderao Ghat, Rishikul Ghat, Kalvari Ghat, Hanuman Ghat, Chhappar Ghat, Bramhavarta Ghat, Pandav Ghat, Jhansi Rani Ghat, Mahapatra Ghat, Chhatta Ghat, Maharaj Peshwa Ghat etc. Out of 29 Ghats, most beautiful is the Patthar Ghat built by the Raja Tikaitrai. The other important ghat of Bithoor is the Kalvari Ghat, where a large Garesh Temple built by the Peshwas exists. Other notable sites at Bithoor are the Tripura Sundri temple, Shivananda Ashram, Gyaneshwar Mahadev temple, Janki temple, Pantha Devi temple and Sri Gayatri Dham.

Kos Minar

During the Mughal Period, Sher shah Suri had constructed a road and built a pillar to earmark the distance called as *Kos minar*. The distance between two pillars was 1 *kos* (3.2 km). Generally the kos minar is of 3m height and area (*paridhi*) with the top shaped like a *shankh*. This minar is constructed with old bricks and lime plaster.

Nimbia Khera - Brick Temple

This ancient temple seems to be constructed in 11th or 12th century. The main hall entrance has a sub-temple situated at each of its four corners due to which this temple is called of '*Panchayatan shelly*'. It has been constructed with old home-made bricks and lime and is decorated with ornaments. The main door of the *garbh greh* is made of *Balua* stone with the statues of Brahma Vishnu Mahesh adorning at the top. Shiva's statue in the centre professes it to be a Shiv temple.



Kacheri

The Kacheri Cemetery dates back to the time when the first European troops Marched into the District in response to a treaty Negotiated in 1765 with the Nawab of Oude. The earliest epitaph of Lt Col John Stainforth dated 1781 coincides with the first ecclesiastic returns of births, marriages and deaths to reach Calcutta from Kanpur – Known as Cawnpore. Firstly, it was chiefly the military officers of the East India Company and their Wives and children who were buried here and private soldiers were buried in another cemetery at Hiramun-Ka-Purwa. In 1814, a Bishop of Calcutta was appointed after 50 Years of consecration of cemetery. Upto 1846, Kacheri Cemetery was known as the Officers’ Burial Ground but after the mutiny (1857), when the flag Staff Barracks were replaced by the Kacheri Law Courts, it came to be known as Kacheri Cemetery.

The Kanpur Memorial Church-All soul’s cathedral

The Kanpur Memorial Church was built in 1875 in honour of the British who lost their lives in the war of 1857. The Church was designed by Walter Granville, architect of east Bengal Railway. The complete church in Lombardic Gothic style is attractively executed in bright red brick with polychrome dressings. In east of the church is Memorial Garden which can be approached through two gateways. It has handsome carved gothic screen designed by Henry Yule. Its centre is occupied by the beautiful carved figure of an angle by Baron Carlo Marochetti, with crossed arms, holding palons i.e. symbol of peace. The king Edward VII memorial hall and Christ Church building are other noteworthy buildings built in 1840.

10.3.2 Religious Places– Important Temples

Shri Radhakrishna Temple (J.K. Temple)

J.K. Temple, built by J.K. Trust, is a unique blend of ancient architecture with the modern. Among the five shrines, central one is consecrated to Shri Radhakrishna and the others are adorned with idols of Shri Laxminarayan, Shri Aradhanarishwar, Shri Narmadeshwar and Shri Hanuman.

Jain Glass Temple

It is situated in Maheshwari Mahal behind the Kamla Tower. It is a beautiful temple highly decorated with glass and enamel works.

Among other temples, Hanuman temple at Panki, Anandeshwar temple, Jageshwar temple, Dwarikadhish temple, Prayagnarayan temple, Kailash temple, Buddhadevi temple, Kherepati temple, Varahidevi temple, Bhairav temple are important.



10.3.3 Places of Fun and Frolic

Kanpur Zoo, Allen Forest Zoo, was opened in 1971 and ranks among one of the best zoos of the country. Kamla Retreat lies next to the Allen Forest. It has a swimming tank with equipment for producing artificial waves and arrangement for lighting. Besides parks and a canal with boating facilities, a zoo and museum, which has a good collection of historical and archaeological artifacts is also there. Phool Bagh is another beautiful park in the heart of the city on the Mall Road. In the centre of the park, Ganesh Shanker Vidyarthi Memorial building, where an Orthopedic Rehabilitation Hospital was run after the first World War, is located. Nana Rao Park is located to the west of Phool Bagh. It is the site of the 'Bibighar Massacre' of 1857.

10.3.4 Excursions

Bhitargaon

The large Temple of Bhitargaon is a unique specimen of the brick architecture of the early Gupta period. It is built of large-sized bricks and decorated with well modeled terra-cotta panel. The temple is the oldest roofed Hindu shrine extant with a high Sikhara. The interior of the temple is plain but on the outside it is decorated with carved brickwork and numerous terracotta panels. Inside the temple only the sanctum or garbhagriha and the porch exist. The upper chamber above sanctum was damaged in the 18th century. The most marked feature of the temple is its recessed plan. The temple is the sole surviving record of this early phase of temple architecture in India.

10.3.5 Archeological Sites

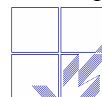
Notable archaeological sites around Kanpur are the 'Shiv temple' at Nimbika Khera, the Jagannath temple at Behta Buzurg and the Lala Bhagat Pillar. In Nimbika Khera, 9th-10th Century old Shiva temple is located at Behta Buzurg. It is Lala Bhagat houses the famous Kukkutadwaj, known as Lala Bhagat Pillar standing in the middle of a modern temple. This red sandstone, six and a half feet high octagonally carved pillar with a small inscription was once surmounted by a cock capital, which dates back to 1st century and is of unique antiquity value. It is broken from the pillar shaft and lies nearby.

Musanagar

The ancient temple of Muktadevi built in Treta-Yug by Raja Bali is located at ancient site of Musanagar. A large fair is held at Muktadevi temple on the occasion of Kartik Poornima. Musanagar is also a rich archaeological site and has yielded a large number of artifacts and specimens of the post Harappan, Shunga, Maurya and Kushana periods.

Angira Ashram

Maharshi Angira, one of the saptarishis, has penanced at Angira Ashram. The ancient Jagannath temple houses the original wooden idol of Lord Jagannath which is identical with that of the famous Jagannath temple.



Kannauj

Kannauj was the capital of King Harshavardhana's empire. Today it is famous for the Indian essence (ittar) industry.

10.4 RELIGIOUS FAIRS AND ACTIVITIES

The city attracts tourists and pilgrims throughout the city. The religious fairs are organized during festivals. The important fairs organized at city level are Shivratri mela at Sidhant temple and Anandeshwar temple; Navratri Mela at Usmanda Devi temple, chat pujan in the month of November at Ganga river and Dashera mela in the month of October at Ganga.

10.5 STEPS TAKEN TO PROMOTE TOURISM

Beautification of ghats

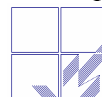
The construction of benches, bathing cubicles, electrification of ghats, provision of drinking water at various ghats i.e. Dhruv ghat, Ram ghat, Hanuman Ghat, Laxman Ghat, Chappar Ghat, Kaurav Ghat, Shra van Ghat, Sita ghat and Bhairav Ghat. Further it is proposed to divert the drainage pipe carrying sewerage water towards bhramvat ghat towards Ganga upstream. The estimated cost of this is Rs. 743.5 lakh. .

About 1.5 km above Bhairon Ghat, Ganga barrage has been constructed and the flow of the Holy Ganges water has been reverted towards Kanpur city so that it passes through each Ghat. Keeping the requirement of religious minded people coming from various parts of U.P. to Kanpur in mind, the protection and beautification of Bhairon Ghat ,Hospital ghat, Sarsaya Ghat,Gola Ghat ,Bhaskar ghat has been proposed and an estimated cost is Rs.362.2 lakh which has been put up for sanction.

The renovation of important religious places were proposed at the cost of Rs. 6 crore 22 lakh. It is proposed to provide benches, constructing water tank, toilets, providing night shelters at sarsaiya ghat, ganesh udyan, tapeswari devi temple, vaibhav lakshmi, shri chindmastika devi temple, J.K. temple, ganesh temple, hanuman temple at Panki, Manju shah majar at Jajmau etc.

It has been proposed to construct the UP Samaj Kalyan Nirman Nigam Ltd near Gautam Buddha Park, Indira Nagar Road Kalyanpur, Kanpur. The modification & up keeping of Nana Rao Park at Mall district , Kanpur has been proposed & an expenditure estimate of Rs 493.66 lakhs has been worked out.

The future vision to make the city a centre of historical importance and of tourist interest encompasses the improvement of the condition of roads with proper car and two-wheeler parking, proper traffic management, effective law and order situation, political support, provision of good hotels, water resorts and better conveyance or transportation system.

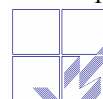


10.6 ISSUES & CONCERNS

- Non availability of public transport to visit places of historical and religious interest
- Lack of public conveniences at historical and religious places
- No proper enforcement of rules regarding prohibited area
- No strict regulation to stop encroachment on the protected areas and lack of stringent action against those who damage the protected monuments and encroach upon it
- Long hour power cuts affects tourist stay at Kanpur
- Poor Law and Order Situation

10.7 STRATEGIES

- Steps should be taken to promote Kanpur as a tourist destination through proper advertisement on television, internet, radio and billboards on airports, trains and stations.
- Steps should be taken to improve the rail, road and air connectivity to Kanpur city, provision for better civic amenities at important historical and religious places and market places within the city.
- In Kanpur, two tourist circuits i.e. historical and religious should be identified and developed by interlinking various tourist spots so that floating population can be increased which will give boost to the economy. All the basic facilities should be provided at identified spots in the circuit.
- Need is to have a Tourist Information Centre at railway station which will have all the information related to tourist spots; hotels and restaurants; trains, bus and air booking and can arrange for the same.
- Travel Tours needs to be conducted for tourists covering important tourist places
- The haat should be built on the model of Delhi haat where artisans, craftsmen can display their things and some stalls can be fixed for Kanpur industrialists and traders to display their goods.
- The feasibility study should be conducted for developing the new places of tourist interest such as amusement parks, artificial lakes etc.
- Proper enforcement of law to stop encroachment and damage to prohibited area.
- The river front of both Ganga and Pandu river should be developed by tree plantation, opening hotels and restaurants, organizing water sports, boating etc. to provide boost to economy.
- Better traffic management so that travel time taken between two tourist places can be reduced.
- Construction of footpaths, road signs and removal of encroachment on roads so that tourists can have space to walk in specialized markets
- Law and Order situation should be improved so that tourist wouldn't feel hesitant to move around different places in the city.



TOURISM



Fairs organised at Bithoor

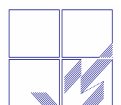




Gurudwara –Gumti No. 5



Panki Hanuman Mandir



CHAPTER 11:
ENVIRONMENTAL MANAGEMENT PLAN FOR
KANPUR CITY

11. ENVIRONMENTAL MANAGEMENT PLAN FOR KANPUR CITY

11.1 INTRODUCTION

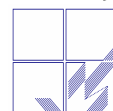
The chapter aims at developing a comprehensive environmental management strategy for the Kanpur city based on baseline information with regard to urban environment quality and services. The chapter takes a closer look at the existing framework of the state's policy on various components of environment; identify the processes and causes, which are leading to deterioration and decline of the environment in and around Kanpur. The report after detailing the threats to environment has made an attempt for future action plans aimed at ensuring compliance with the proposed city development plan.

Over the years, the city has faced huge changes not only in terms of pollution load increase, but also the infrastructure requirement (road network, water supply, solid waste management). As a result, the ambient air quality, surface water quality, ground water quality has deteriorated considerably.

Urban environment is an important component for the sustainable development of a city. While taking up developmental activities, the assimilative capacities of the environmental components i.e. air, water and land to various pollutants are rarely considered. Presently, the environmental aspects are not usually considered while preparing master plan or budget plan and the process is skewed towards developmental needs. For all developmental activities, a crucial input is land and depending on the activity a specific land use is decided. The environmentally related land use are trade and commerce, housing, transport, hazardous waste disposal facilities, quarrying and mining, power generation, forestry, recreation and tourism etc. In this back ground it is highly imperative to assess the existing status of urban environment, identify problems and issues and finally develop an environmental management strategy.

11.2 WATER POLLUTION

Kanpur is the most populated town along the river Ganga in UP. Officially the population of the city is enumerated to be 25, 51337 (2001 census) with current unofficial estimate putting it over 4 million. The decadal growth rate of population has increased from 26.5% in 1981-1991 to 35% in 1991-2001. In terms of population, Kanpur is the second largest city of North India, the largest being Delhi. 60% of the water requirements of the city are met from the river Ganga, which is badly polluted from various point and non-point pollution sources. Kanpur generates approximately 400 million litres per day (MLD) of sewage that is discharged through dozens of drains that finally opens in to the river. The stretch of Ganga near Kanpur is especially vulnerable because of inadequate discharge and flow. The Ganga in Kanpur is always strewn with human corpses and animal carcasses in addition to non-biodegradable polybags. Further a number of Dhobi Ghats (5) operating permanently in the river bank contributes substantially to water pollution.



Kanpur has roughly 5500 industries with 75 medium and large industries such as those of fertilizers, detergents, chemicals and paint industries. Another potential danger to environment (water and air) is from 367 strong leather industries located in one area called Jajmau along the river Ganga out of which 70 are reportedly closed (PCB 2006). These highly polluting leather industries pose a major threat to water quality, ecology of the river particularly to aquatic life (fish and turtles). The population of fishes and turtles has declined dramatically and even those survive are not fit for human consumption as they carry toxic elements. This in turn has severe health hazards in the form of incurable diseases.

The State Pollution Control Board which periodically monitors the water quality of the city at various points studied the water quality at designated sites (table 11.1) in March 2006 with specific parameters as indicated in the table. Water temperature and pH in all the sampling stations were within the tolerance limit, whereas Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD) and Chloride content were exceeded the standard at sites marked with asterisk*. However the presence of coliform bacteria is alarmingly high at all sampling station, which clearly indicates that the water is not potable. From the table it is evident that although the situation is not alarming at all sites, but it can not be denied that the quality of water in the stretch of Ganga passing along Kanpur is not fit for consumption.

Actions

The stretch of river Ganga passing along Kanpur (south bank) and Unnao (north bank) is getting polluted from both sides. Although pollutants/sewage released from Kanpur side is getting treated, no pollution control efforts are being made from Unnao side. Installation of STP's is urgently required to prevent pollution of Ganga water from north bank side.

11.3 AIR POLLUTION

The air pollution problems in Kanpur are due to traffic and transportation, burning of solid waste, use of coal and cow-dung for cooking purposes, lack of green belt/buffer zones etc. In addition following factors also contribute largely to the problem.

1. Increase in the number of vehicular traffic
2. Poor(damaged) road condition
3. Under construction buildings
4. Smoke emitted from factory chimneys

City encounters severe dust and smoke problems and the prescribed limit of 500 mg/m³ is often exceeded in various locations. Due to impact of vehicular pollution, air quality at major road crossings exceeds the norms of the Suspended Particulate Matter (SPM) and lead. Respirable dust concentrations are also alarmingly high in many locations in the city.

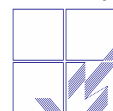


Table 11.1 Water Quality at Various Sampling Points

Sampling Points	Ghatiya Ghat	Kannauj W/S (near Mariyam Bridge)	Kanauj D/S (at Mariyam Bridge)	Bithoor (ghat)	Ganga Barrage (Kanpur u/s)	Rani Ghat (intake point)	Sarsia Ghat	Buria Ghat	Kanpur(Jana Vill.)
Date	09/03/2006	09/03/2006	09/03/2006	09/03/2006	09/03/2006	09/03/2006	09/03/2006	09/03/2006	09/03/2006
Parameters									
Temperature	24.5	25.5	26.0	25.5	25.0	25.5	26.0	26.0	26.0
PH	8.1	7.5	7.9	8.4	8.2	8.2	7.8	7.8	8.4
Alkalinity(mg/l)	138.0	172.0	186.0	194.0	200.0	192.0	212.0	188.0	210.0
Conductivity	33.7	53.6	50.7	47.2	51.3	51.1	58.4	54.6	56.8
Dissolved Oxygen	7.7	7.0	8.9	8.2	7.1	6.9	4.1	4.1	3.5
BOD (mg/l)	1.5	2.7*	2.8*	2.2	2.3	3.1*	5.4*	3.8*	4.7*
Chloride (mg/l)	16.0	24.0	22.0	24.0	24.0	20.0	30.0*	26.0*	30.0*
Total Coliform (MPN/100ml.)	4300	9300	9300	7500	4300	9300	46000	21000	46000

Source: Data collected from State Pollution Control Board 2006



The major agents currently responsible for the air pollution in the city are the life style of people and the number of vehicular traffic and industries in commercial areas. Generator and exhaust fans at factories are the other contributors of air pollution. There are 196 brick kilns in and around Kanpur which to a great extent are responsible for releasing huge amount of smoke to air. It is estimated that 25% of city's population mostly constitute labour class who use cooking fuel (coal and firewood) and in turn cause air pollution. There are 5 cremations grounds which contribute both for the air and water pollution.

11.3.1 Emissions from Vehicular Traffic

The vehicular emissions are one of the major sources of air pollution affecting the urban population in Kanpur. Unlike industrial emissions, vehicular pollutants are released at ground level and hence the impact on recipient population will be more. As of April 2002, there were a total of 3,87,697 vehicles in the city (300 sq km area). Two-wheelers constituted 83 per cent of the registered vehicles. Badly maintained roads, heterogeneous nature of traffic aggravates the nature of vehicular pollution.

According to the state pollution control board, vehicular traffic contributes to 80 per cent of the pollution load, while domestic sources add another 14 per cent and industrial 6 per cent. Tempos alone contribute 60% of the total air pollution load. However according to a study by NEERI in 2002, auto exhaust and diesel generator sets contributed 30-40 per cent of the total respirable particulate matter, while resuspended dust contributed between 20-30 per cent and other sources, including garbage burning made up the rest. A study undertaken in 2002 to monitor the air quality in three sites covering one each at residential, commercial and Industrial location showed that in the monitored sites the air quality consisting all pollutants exceeded the national standard by 3 to 3.5 times. This trend continued in 2003 even though Euro II vehicles and fuel became mandatory in the city in April 2003.

11.3.2 Emissions from Domestic Sources

Fuel used for the purpose of cooking in domestic sector principally consists of the following:

- Coal/Wood : 100t/day
- Kerosene : 105kl/day (71 t/day)
- LPG : 91 t/ day
- Cow -dung : not accounted

Kerosene and LPG are the major sources of fuel used in the city followed by coal and wood. Coal is predominantly used in slum areas, road side tea stalls, restaurants etc. Use of coal for the domestic purposes is a major source of pollution in terms of carbon monoxide, SO₂ and particulate matter

Table 11.2 Emission Loads from Domestic Source

Domestic Emission Sources		Emission Rate (kg/day)			
Types of Fuel	Consumption/day	PM	SO ₂	NO _x	CO
Coal	70 t	350	532	104	3132
Kerosene	105 kl	213	357	163	21
LPG	91 t	38	0.04	164	40
Wood	30 t	205	15	150	30

Source: State Pollution Control Board, 2006

Sulphur Dioxide (SO₂) and Nitrous Oxide are the two major air pollutants in addition to Suspended Particulate Matter (SPM). NO_x and SO₂ concentration in the city are well within national standards i. e 80mg/cu.m. However the city is facing severe dust and smoke problems that often exceeds the prescribed limit of 500 mg/cu.m in many locations.

For the purpose of monitoring air pollution, the state pollution control board has set up three stations in residential areas and one each in industrial and commercial areas.

Table 11.3 Air Pollution

	Upper Limit	Present Status
RSPM	100mg/m ³	196mg/m ³
TSPM	200mg/m ³	464mg/m ³
Sulphur Dioxide	80mg/m ³	80mg/m ³
Nitrogen Oxide	80mg/m ³	80mg/m ³

Source: TOI (May 16, 2006)

Year	Kidwai Nagar		Depty Parao		Fazal Ganj	
	RSPM(Av)	SPM	RSPM	SPM	RSPM	SPM
2003	173.84	410.49	172.82	397.38	191.49	439.73
2005	177.00	426.00	177.00	380.00	213.00	470.00
March 2006	148.15	328.25	144.21	330.72	216.83	292.15

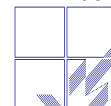
Source: State Pollution Control Board, 2006

11.3.3 Emissions from Industrial Area

The air pollution from industrial area can be quantified from the amount of fossil fuel burnt in boilers. Data on location of industrial clusters in different areas in the city, quantity of fuel used in each area and the height of release of emissions from stacks are vital for estimating the air pollution potential. Fuel consumption in each of the industrial area and prominent point source emissions in the city is provided in the table below.

Table 11.4 Point Source Emissions (in kg/hr)

Source	Emission Rate of various pollutants		
	SO ₂	NO ₂	SPM
Fazalganj Industrial Area	71	28	585
Dadanagar Industrial Area	134	101	180
Panki Industrial Area	254	112	2600



Jajmau Ind. Area	55	50	607
Industrial Estate	21	9	195
Fertiliser Unit	91	62	162
Panki Power Plant	1090	751	3900
Textile Mills	63	44	682
Lal Imli	5	697	
Sarvodaya Nagar Ind. Area	3	2	65

Source: State Pollution Control Board, 2006

A perusal of the of the above figures indicate that air quality (RSPM &SPM) both in residential and commercial areas are much above the standards fixed by the State Pollution Control Board (SPCB). The level of respirable suspended particulate matter has exceeded the upper limit in many locations. As against the upper limit of 100 microgram (μ) for cubic meter, the level of RSPM in the city has been measured at 196 micrograms per cubic meter. And the total particulate suspended material (TSPM) at the densely populated Kidwainagar was recorded at a high of 464 micrograms per cubic meter, which is twice the upper limit. In last one decade there has been a spurt in the number of cases of asthma, bronchial asthma and allergy etc. in the industrial hub of Kanpur due to declining air quality.

11.4 NOISE POLLUTION

The factors/agents such as generators, loud speakers, automobile horns and fireworks/ crackers are responsible for noise pollution in the city. Indiscriminate use of the above is leading to several complications such as stress, psychological problems and loss of hearing. In spite of the Noise (Prevention and Control of pollution) Act, 2000 in place, the authorities have found it tough to bring the noise level with in the permissible limits. Some commercial areas like Ghantaghar has noise level as high as 78.2 dB and industrial area like Dada Nagar's noise level is 75.1 Db against a permissible limit of 65 dB during day time. Corresponding to that the permissible noise pollution level during night time fixed at 55 dB for the above two localities have recorded 71.8 dB and 69.5 dB respectively. The large number of tempos, which ply all over the city, contributes greatly to noise pollution because of poor maintenance.

Table 11.5 Noise Level at Selected Locations

Monitoring Station	Category	Average Sound level recorded(dB)		Ambient Standard		Monitoring month
		Day	Night	Day	Night	
Kidwai Nagar	Residential	63.07	60.79	55	45	March 2006
Ghantaghar	Commercial	78.02	71.80	65	55	March 2006
Dada Nagar	Industrial	75.07	69.49	75	70	March 2006
Hallet Hospital	Sensitive	63.02	59.16	50	40	March 2006

Source: State pollution Control Board, 2006



Table 11.6 Sound Pollution

ZONES	UPPER LIMIT		PRESENT STATUS	
	DAY	NIGHT	DAY	NIGHT
COMMERCIAL	65db	55db	82db	78db
RESIDENTIAL	55db	45db	70db	63db
SILENCE	50db	40db	69db	69db
INDUSTRIAL	75db	70db	74db	68db

Source: TOI (16th May 2006)

From the table it is evident that the noise level both during day and night are on higher side for residential, commercial and sensitive zones for which monitoring was done, where as it is almost stable for the industrial site.

Actions

- Creation of green belt along the major roads, which would help in the reduction of noise level since the plants are best known to mitigate the sound effect
- Provision for flying squad to deal with the problem agent
- Awareness among the public on the adverse impact of noise pollution on human health

11.5 ENVIRONMENTAL RESOURCES OF KANPUR:

The environmental resource areas of Kanpur broadly consists of the following

- Natural forests
- Plantation forests
- Open lands
- Agricultural lands
- Rivers/Wetlands
- Play grounds
- Parks/recreational areas

11.5.1 Natural and Plantation Forests

Kanpur city and Dehat has 5400 hectares of forest area. Consequently, much of the natural flora and fauna has disappeared over the years due to various anthropogenic pressure. However, the city currently has negligible area under forest. The Allan Forest which originally had 200 hectares now reduced to 50 hectares only. Interestingly this natural forest patch harbours the Kanpur Zoological Garden (Allen Forest Zoo). The other area called Sanjay Van Banglia has 20 hectares. Currently these two forest patches, serves as the green lungs for the city. Other than this under the social forestry scheme, road side plantations have been taken up by the forest department. The species which are recommended for plantation are Neem, Kadamb, Gulmohar, Chilibil, Kaneer, Biganwalia and Chitwan



Action plan

- Afforestation measures in degraded ravine areas along the river Ganga and Pandu will help to meet local needs, enhance biodiversity and lead to improved environmental condition
- Strip plantations along the major city and arterial roads, railway lines and canals are important strategies for increasing the forest cover of the city
- The concept of Tree Outside Forest (TOF) should be inculcated on public, private and farmlands.
- The existing forest areas should be managed through assisted natural regeneration, enrichment plantations and soil and water conservation measures.

11.6 ISSUES RELATING TO KANPUR CITY ENVIRONMENT

- Horizontal growth of the city and defective land use planning (Refer Table 5.1 & 5.2 in Chapter -5 for details on existing and proposed land use in Kanpur) are the two most inevitable factors that attribute to poor city environment.
- The rapid increase in population together with industrialization over the years has substantial impact over the city environment.
- Haphazard developmental activities contribute significantly to the environmental pollution thus posing risk to city residents in the form of overcrowding, unhygienic living conditions and air, water and noise pollution.
- The estimated pollution loads in Kanpur is 5500 kg/d from domestic sources, 2250 kg/h (142 t/d) from vehicular sources and 12,000 kg/h from industrial sources
- Extent of pollution in the stretch of river Ganga and Pandu adjoining Kanpur is highest. The river in Kanpur is presently being used as a natural sewer, garbage dump and morgue.
- Respirable Suspended Particulate Matter (RSPM) levels in Kanpur are alarming.
- Large number of leather industries besides fertilizers, detergent, chemicals and paint factories contribute significantly for polluting air, water and noise.
- Dhobi Ghats, cremation grounds, brick kilns also responsible for polluting the city environment.
- Large number of drains empties their sewage daily to river Ganga and other city ponds.
- Noise levels are alarmingly high in commercial areas, far exceeding the prescribed limit.



11.7 INDICATIVE STRATEGIES TO IMPROVE THE CITY ENVIRONMENT

- A master plan for the city needs to be in place with clear cut guidelines for different type of land use for commercial, industrial and residential purpose
- The city planners and policy makers must not allow heavy and medium size industries within the city limit
- Environmental resource map showing distribution of natural forests, plantations, water bodies, agricultural land and open lands would help in the planning process
- Drainage and sewerage network map showing drains/nallas, sewer lines, pumping stations, disposal points and location of sewage treatment plant would guide in the preparation of environment management strategy.
- Vehicles responsible for air and noise pollutions should be phased out and in no case they should be allowed to ply on the road after 15 years
- Strict regulation to be made for not allowing poorly maintained tempos who are the main culprit for causing noise pollution. They must be banned from plying on the city roads.
- The city should take up the concept of Compressed Natural Gas (CNG) - run vehicles in phased manner.
- Phasing out of tempos must be initiated since they are mainly responsible for the air and sound pollution exceeding the set limits in the city
- Efforts should be made to identify the environmental hot spots such as poor air quality area, ground water contaminated area, unsewered area, waterlogged area, slums, polluted river stretches etc. so that remedial measures can be put in place.
- Decision makers in top policy making bodies like UP Jal Nigam, Pollution Control Board and Kanpur Development Authority should work in tandem for implementing development projects without delay
- There is a need for a centralized waste disposal facility for the city so that wastes after disinfection and incineration can be disposed to a separate dedicated facility. In addition waste collection, storage and transportation network need to be strengthened.
- Development of integrated waste management planning, inter-agency coordination and institutional capacity building measures to improve the efficiency and effectiveness of solid waste management at each stage of collection, transportation, treatment and disposal should be in place.
- Relocation of polluting industries from non-conforming areas should be made with proper supporting infrastructure.
- Projects that are earmarked for execution under GAP, Phase-II should be taken up as per the timeline and remaining drains should be tapped to bring it under STP
- KESCO, KDA and Police should not comprise on issues relating to granting of licenses for installation of industries within the city limit.
- Some senior officers of the SPCB are of the view that a quasi-judicial body such as Pollution Control Commission with sweeping powers should be in place to deal with matters for ensuring a clean city environment.

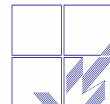


11.8 ACTIONS REQUIRED

- To ease the traffic congestion and related environmental problems, new roads with improved width should be laid, pedestrian facilities and parking facilities provided.
- Regulation of traffic is essential in the core area of the city. Mixed nature of traffic should be provided on these roads and certain slow moving traffic like bullock cart and hand carts should be banned during day time.
- All vehicles moving on the road should meet the stipulated emission norms.
- Two wheelers are responsible for 70% of the vehicular pollution. An organised mass transport system may reduce the use of two wheelers.

Conventionally, the environmental problems are solved by introducing environmental management technique such as control of pollution at source, providing sewage treatment facilities etc. However in large urban conglomeration like Kanpur city, the problems can not merely be solved by pollution control measures. The environmental aspects are to be induced into each of the developmental activities at the planning stage itself and are to be well coordinated and balanced

An analysis of the various environmental attributes such as air, water and land use indicate that the city is currently not geared to attain environmental sustainability unless remedial measures are in place. Critical assessments of the existing situation indicate that demographic structure, economic condition of the people and land use largely determine the state of the environment in Kanpur. Therefore it is the planners and policy makers who have to decide on various parameters that needs to be in place for a sustainable environmental plan for the city



PARKS



Mothijheel Park



Japanese Garden



CHAPTER 12:

STAKEHOLDER CONSULTATIONS

12 STAKEHOLDER CONSULTATIONS

12.1 INTRODUCTION

The objective of the stakeholder's consultation carried out for preparation of City Development Plan of Kanpur City was to ensure that the CDP reflects the ground realities and vision, strategies as articulated by stakeholders are incorporated in the CDP. For this purpose after identification of stakeholders, the consultation process was formulated to target stakeholders at various levels. For the discussions, two groups' i.e. primary and secondary stakeholders were identified. The primary stakeholders were the beneficiaries of the project i.e. the poor and the marginalized section of society, members of Community Development Societies (CDS), builders, trade associations, hotelier associations etc. While the secondary stakeholders were, those who were indirectly affected by the project, viz. officials from state government, urban local government, the parastatal agencies and line departments etc.

12.2 METHODOLOGY ADOPTED

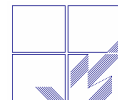
The Stakeholder consultations were held mainly to devise city vision, prioritize development issues and formulate strategy options. The methodology for the consultation included:

- Identification of Key Stakeholders
- Conducting Consultations
- Documentation and recording of consultations
- Integrating consultation findings into project related decision making.

Consultations with a varied section of stakeholders were held in April, May, June and July 2006. The details of the consultation program are as follows:

Table 12.1 Details of Consultations Held

S. No.	Stakeholder group	No. of consultations held	Dates of consultations
1.	Elected Representatives	1	3/6/06 and 5/6/06
2.	Govt. Organisations	23	19/4/06 to 14/6/06
3.	Non-Governmental Organizations	4	10/5/2006, 17/5/2006 8/6/06
4.	Traders Associations	11	1/5/06, 6/6/06
5.	Industry Associations	8	7/6/06 to 8/6/06
6.	Hotelier Associations	4	6/6/06 to 7/6/06
7.	Property dealers & associations	4	8/6/06
8.	Slum & Bastis	20	1/5/06 to 5/5/06, 31/5/06 to 1/6/06, 7/6/06 to 8/6/06
9.	Community Development Societies	19	2/5/06, 31/5/06 to 1/6/06, 7/6/06 to 8/6/06
10.	Resource persons	3	20/4/06, 3/6/06, 5/6/06
	Total	97	



12.3 STAKEHOLDER'S VIEW POINTS

The views of both primary and secondary stakeholders were sought and in-depth discussions were held to know about their views on current scenario of Kanpur, their concerns vis-à-vis development of the city and priority area which require more focus.

12.3.1 Consultation with Primary Stakeholder

Non-Government Organisations

Three non-government organizations were consulted in the city. Table 12.2 lists the name of NGOs consulted.

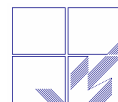
Table 12.2: NGOs consulted

S. No.	Name of NGO	Date of Consultations	No. of participants
1	Eco Friends	17/5/06	1
2	Lok Vikas Mandal	10/5/06, 8/6/06	2
3	Pandit Deen Dayal Jan Kalyan and Vikas Samiti	8/6/06	1

The NGOs seemed unsatisfied with the provision of cleanliness. They were of the view that no provision has been made to provide primary education and health facilities at slum level. The community toilets, constructed under community toilets scheme, are poorly maintained. In many areas, sewerage mixing of sewerage with storm water drains causes severe problem. Responsibility of managing solid waste management and community toilets should be given to community development societies. One of the NGO asked for alternate accommodation and title rights before demolishing any slum. Community participation should be an integral part of all the projects. On institutional aspects, the need was felt to strengthen the institutions like KNN, KJS and KDA by having specialized staff, giving option of VRS to elderly staff, introducing e-governance to maintain transparency and increasing efficiency and adequate money allocation for operation and maintenance should be taken.

Community Development Society and Slums

Consultations were held with the members of different Community Development societies i.e. Basti Vikas Samiti, Sahyog samiti, Drishti Vikas Samiti, Nayi Disha Vikas Samiti, Samuh Vikas samiti etc. The Community Development Societies were formed under DUDA in the above mentioned slum. They were of the view that training should be linked with the means of employment. Their major concerns were provision of water, electricity, sanitation, health facilities and employment generating activities for slum dwellers. According to them, present sanitation condition and health services are in poor shape. The maintenance of community toilets, which have been constructed at their slum with the collaboration of slum dwellers, KNN and energy development authority, should be given to CDS. The liberal loan



should be provided for constructing the house and to start income generating activities. More houses should be provided for slum dwellers and their location, type of construction should be with due consultation with slum dwellers.

Table 12.3 Details of consultation held with CDS

S. No.	Name of Community Development Societies	Date of Consultations	No. of participants
1	Arunodya Vikas Samiti	8/6/06	1
2	Antodya Vikas Samiti	8/6/06	1
3	Basti Vikas Samiti	8/6/06	1
4	Drishti Vikas Samiti	8/6/06	3
5	Divya Samudayik Vikas Samiti	8/6/06	1
6	Kalyan Vikas Samiti	8/6/06	1
7	Mahila Vikas Samiti	8/6/06	1
8	Mahan Vikas Samiti	8/6/06	1
9	Nai Disha Vikas Samiti	8/6/06	1
10	Pragati Vikas Samiti	8/6/06	1
11	Sahyog Vikas Samiti	8/6/06	1
12	Samuh Vikas Samiti	8/6/06	1
13	Srijan Vikas Samiti	8/6/06	1
14	Samagra Vikas Samiti	8/6/06	1
15	Utkarsh Vikas Samiti	8/6/06	1
16	Ujjawal Vikas Samiti	8/6/06	1
17	Utthan Vikas Samiti	8/6/06	1

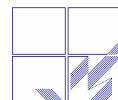
Industry Associations

Two industry associations were consulted. Table 12.4 gives details of consultation with industry associations.

Table 12.4 Details of Consultations held with Industries Associations

S. No.	Name of Association	Date of Consultations	No. of participants
1	Indian Industries Association	7/6/06	3
2	Kanpur Industrial Development Co-operative Estate Ltd.	7/6/06	5

The industrialists were of the view that most of the policies are meant for heavy and medium industries. Out of total tax collected from industrial estates and industries, 70 percent should be spent on operation and maintenance. There is no co-ordination between KNN and KDA which affects in overall development and maintenance of the area. They want that transparency should



be there between the tax collection and utilization in industrial areas. Government adopts dual policy. There should be special assistance from state or central government. They were of the view that tax benefits and subsidy should be given to industries. According to them, electricity and lack of airport is the biggest hurdle in the industrial growth.

Traders Association

Traders associations were of the view that airport is must for the city. Kanpur and Lucknow should be developed on twin city basis. Public facilities such as public conveniences, footpaths should be constructed. At present, there exists no traffic regulation. They asked for removal of on-road parking and encroachment on roads. The steps should be taken to stop the entrepreneurs from moving out of Kanpur as many of them are shifting their industries in other state like Rajasthan and Uttaranchal due to favorable government policy of those states.

Table 12.5 Details of Consultations held with Trade Associations

S. No.	Name of Association	Date of Consultations	No. of participants
1	Merchant Chamber of Commerce	6/6/06	9
2	Chauk Sharafa Vayapar Mandal	8/6/06	2

Property Dealers and Builders Associations

Property dealer and builder associations were consulted. In their view, Master plan revision on time and infrastructure development should be given due importance. The overall development of the city in terms of identification of areas under different land uses should be addressed time to time. Since long time new master plan has not come out and already commercialized places have been given the court notices on the basis of thirty years old master plan. On the traffic problems in the city they were of the view that over bridges and under passes should be built, existing railway track which passes through the city and leads to traffic jam diverting the existing railway track which falls within the city area, creating under ground parking lots and removing the unauthorized occupation of the existing under ground parking lots. For example, Navin market under ground parking which is used as commercial place and parking of vehicles on road in front of the same market place leads to road blocks and traffic congestion. The regular power supply for industries should be maintained. In order to create new employment opportunities, the Special Economic zones should be developed soon.

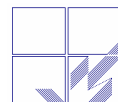


Table 12.6 Details of Consultations with Property Dealers & Builders Associations

S. No.	Name of Association	Date of Consultations	No. of participants
1	Property Dealers and Builders Association	6/6/06	2
2	Kanpur Promoters and Builders Association	1/5/06	2

Hotelier Association

Hotel associations were consulted to get their views related to facilities available in the cities for people visiting Kanpur city as Kanpur is a big industrial town. Table 12.7 provides the details of consultations held with hoteliers.

Table 12.7 Details of Consultations with hotel Associations

S. No.	Name of Association	Date of Consultations	No. of participants
1	U.P. Hotel and Restaurant Association	6/6/06	1
2	Northern Hotel and Restaurant Association	6/6/06	2
3	Hotel and Restaurant Association	7/6/06	1

12.3.2 Secondary Stake holder consultation findings

Govt. organizations

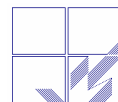
More than 35 officials from various government departments, local government officials and parastatal agencies have been consulted in the city. The major concerns raised by officials were lack of plantation on road sides, decrease in underground water level, contamination of underground water, conservation of water, irregular electricity supply, chaotic road traffic and managerial problems.

The details of discussions carried out with different stakeholders (primary and secondary) are given in annexure 1.

12.4 Workshops/Meetings Organised at Kanpur

12.4.1 City Level Workshop– Inception Report

First meeting cum workshop was held at Kanpur Nagar Nigam on 19th April 06. The officials from various departments such as Kanpur Nagar Nigam, Kanpur Development Authority, Kanpur Jal Nigam (KJN), Kanpur Jal Sansthan (KJS), Kanpur Jal Nigam, Pollution Control Board, U.P. Housing Board, District Urban Development Authority (DUDA), Public Works



Department (PWD), Irrigation Department and Archeology Survey of India attended the meeting. The list of participants, who attended the meeting, is enclosed in Annexure 2. The meeting was organized to brief the government officials about the overall JNNURM Concept, the process involved in the preparation of City Development Plan, to know their vision about the city and current state of various infrastructure facilities etc.

In the meeting, the consultant team has briefed the government department officials about the JNNURM concept, meaning of City Development Plan (CDP), constituents of city development plan, process which consultants will adopt for preparation of CDP.

12.4.2 Stakeholder Workshop – Rapid Assessment Report

Extensive consultations with various stakeholders i.e. hoteliers, industrialists, trade associations and property dealers have been conducted during preparation of rapid assessment report.

Workshop with Officials

To discuss the current status of city assessment and to build consensus on priority issues, workshop/meeting was held on 9th July 2006 with various local government, Kanpur Nagar Nigam and other parastatal agencies, govt. department's officials at Kanpur to present the findings of the rapid assessment report and to obtain their feedback.

Workshop with Trade Associations

The workshop with members of Merchant Chambers of Commerce was held on 6th June 2006. The city vision, current problems, city economy, industry and trade related specific issues and their solutions have been discussed. Their views have already been explained above and in annexure 1.

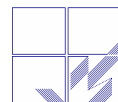
Workshop with Slum Dwellers and Community Development Societies

The workshop with slum dwellers and community development societies were held on 8th June 2006. The city level problems, their solutions, slum specific issues such as type of slum, tenure status, basic infrastructure facilities, in-situ development and resettlement colonies, condition of housing developed for EWS/ LIG has been discussed.

12.4.3 Stakeholder Workshop – Draft Final Report

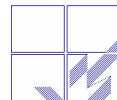
The presentation of draft final report has been made at both the state and city level.

The draft final report was presented on 25th July 2006 before the Principal Secretary and Special Secretary MoUD, GoUP; Director, Joint Director and consultant from Regional Centre for Urban and Environmental Studies, Lucknow; senior government officials from Kanpur and Lucknow, officials

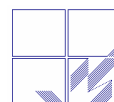


from Kanpur Nagar Nigam and parastatal agencies and comments/suggestions received from them have been incorporated in this report.

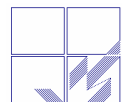
A stakeholder workshop was organized on 26th July 2006 in Kanpur to present the findings of draft city development plan to various stakeholders i.e. industrialists, merchant chamber of commerce, hoteliers, property dealers, market associations and community etc. and to receive their comments/suggestions on the Draft City Development Report. The city vision, strategy and action plan has been discussed with the stakeholders. The prioritization of projects as well as financial investment plan has also been presented before the stakeholders. The suggestions received in the workshop have been incorporated in this report. The comments/ suggestions received on the draft final report in the workshop has been incorporated in this report.



Consultation with Slum Dwellers and Community Development Society



Consultation held with Officials & Workshops held at Kanpur and Lucknow





CHAPTER 13:
INSTITUTIONAL FRAME WORK AND
INSTITUTIONAL REFORMS FOR KANPUR

13. INSTITUTIONAL FRAME WORK AND INSTITUTIONAL REFORMS FOR KANPUR

13.1 INTRODUCTION

Urban Areas are the engines of economic growth. The quality of civic infrastructure and civic services has a critical bearing on economic development of the city and State as a whole.

The 74th amendment to the constitution devolved the role of management and development of the city to the elected representatives of the city through the city's Urban Local Body (ULBs). Hence the ULBs are both the custodians of civil infrastructure and providers of civic services. Thus, ULBs are catalysts of economic growth of a city.

However, the management of a large city like Kanpur is a complex task and several institutions are involved in it, as shown below.

This chapter examines the institutional reforms and improvements that need to be made to these institutions.

13.2 AGENCIES INVOLVED IN PROVIDING URBAN SERVICES IN KANPUR

Government Departments

- Department of Urban Development GOUP
- Director of Local Bodies, GOUP
- Public Works Department
- State Pollution Control Board, Kanpur
- UP Tourism Department
- Superintendent of Police, (Traffic) Kanpur
- Archaeological Survey of India, Govt. of India's, Kanpur

Urban Local Bodies

- Kanpur Nagar Nigam (KNN)
- Kanpur Jal Sansthan (KJS)

Parastatal bodies

- UP JAL Nigam, Kanpur
- Kanpur Development Authority (KDA)
- UP Housing Board, Kanpur
- District Urban Development Agency (DUDA)

13.3 FUNCTIONS OF THE LOCAL BODIES

The UP Municipal Corporation Adhiniyam, 1959 as amended from time to time provides for majority of the function listed in the 12th schedule of the Constitution. These are:

- Urban planning including town Planning
- Regulation of land-use and construction of buildings
- Planning for economic and social development
- Roads and bridges
- Water Supply for domestic, industrial and commercial purposes
- Public health, sanitation, conservancy and solid waste management
- Fire services
- Urban forestry, protection of the environment and promotion of ecological aspects
- Safeguarding the interests of weaker sections of the society, including the handicapped and mentally retarded
- Slum improvement and up gradation
- Provision of Urban amenities and facilities such as parks, gardens, playgrounds
- Promotion of cultural, educational and aesthetics aspects
- Burials, burial grounds; cremations, cremation grounds and electric crematoriums
- Cattle Ponds; Prevention of cruelty to animals
- Vital Statistics including registration of births and deaths
- Public amenities including street lighting, parking lots, bus stops and Public Conveniences
- Regulation of slaughter houses and tanneries

13.4 KANPUR NAGAR NIGAM (KNN)

13.4.1 Functions of Kanpur Nagar Nigam (KNN)

The corporation is administered under the Uttar Pradesh Municipal Corporation Adhiniyam, 1959. The Act has been amended in 1994 by UP Act 12 of 1994 (w.e.f. 30 May, 1994), UP Act 26 of 1995 (w.e.f. 30 May 1995) and incorporates the amendments made in 74th CAA, 1992 including the functions given in 12th schedule of the constitution.

The duties and powers of the Corporation and Corporation authorities are detailed in Sections 114 of the said Act. The major functions being performed by Kanpur Nagar Nigam currently are:

- Public health, sanitation, conservancy and solid waste management
- Urban poverty alleviation
- Provision and maintenance of urban amenities and facilities such as parks, gardens, playgrounds.
- Provide and maintain the lighting of the public streets, corporation markets, and public buildings and other places vested in the corporation
- Maintenance of ambulance services
- Registration of vital statistics including births and deaths.

- Regulation of slaughter houses and tanneries
- Operation and Maintenance of burial grounds, cremation grounds, etc.

Though Water Supply and sewerage are also obligatory functions of Municipal Corporation as per the 12th schedule of 74th Constitutional Amendment Act (CAA), in the case of Kanpur they are looked after by Kanpur Jal Nigam and Jal Sansthan.

13.4.2 Organizational Structure:

The corporation is divided into two wings, viz. elected wing and the administrative wing. The corporation has an elected Mayor-in-Council System. The strength of the council is 110 in addition to the Mayor. The inner core area of Kanpur comprises of 67 wards out of total of 110 wards.

The previous Municipal Council which was headed by an elected mayor has completed its full term and as per provisions of the Act, the process of election has to be completed within six months.

The administrative wing of the corporation is headed by a Municipal Commissioner appointed by state government and supported by two Add. Commissioners also appointed by the state government.

The corporation is divided into six zones and each zone is headed by an Assistant Commissioner.

13.4.3 Revenue and Expenditure

The main sources of revenue of KNN are taxes (mainly property), license fees, rent of the municipal properties, interest, etc. The total receipt on revenue account including grants-in-aid has been estimated by KNN at Rs.193.25 crores and capital receipts are expected to be Rs.6.90 crores for the year 2006-07.

Against this the expenditure on revenue a/c is estimated at Rs.189.78 crores and outgo on capital account is estimated at Rs.958 crores. The opening cash balance as on 1.04.06 has been estimated Rs.5.68 crores which is expected to go up and close at Rs.6.47 crores at the end of the year i.e., as on 31.3.2007.

However, since the accounting is carried out on cash basis, the budget does not show payments not made. Thus KNN has outstanding liabilities of Rs 89.12 crores which include statutory payments like provident fund payment of the employees, pension to the employees for more than 14 months etc. the detail of these liabilities are attached at annexure

Hence, it may be concluded that the KNN is facing a serious liquidity problems and this has a cascading effect on morale, efficiency and in the ability of KNN to efficiently discharge its functions.

13.4.4 Property Tax

The property tax is one of the main items of internal revenue generation. It forms about 20% of total revenue of KNN and 50% of its internal revenue.

There are a total of 4.24 lakh properties in Kanpur, of which nearly 80% are residential properties as per details given below. In addition, there are another 10000-15000 new properties being added every year due to expansion of the city.

Details of Properties in Kanpur as on 31st June 2006

1.	Residential	3, 38, 114
2.	Commercial	77, 462
3.	Public Buildings	5, 810
4.	Industries	2,748
	Total	4,24,134

The number of assesses in Kanpur are however only 2.76 lakhs. This is explained by the fact that many institutional assesses hold several properties e.g. the labour commissioner holds about 29000 labour quarters, similarly Railways, HAL, IIT etc. Each hold multiple properties but are counted as a single assesses.

13.4.5 Reforms in Property Tax

Kanpur city introduced reforms in property tax in 1999-2000. It changed over from the earlier system based on 'Assessment of Rateable Value' (ARV) to a more transparent system based on the 'Unit Area based system' of tax assessment. This system not only does away with the subjectivity in assessment but is also amenable to self assessment.

However, despite best efforts in the last six years, it has not been possible to cover all properties under the 'Unit Area Assessment System'. Considerable time and energy of the officials of KNN has been directed towards improving the administration of the new property tax system.

In particular, the Nagar Nigam has been trying to tackle the following issues:

- To bring all properties under the ambit of property tax. This requires a proper inventory of all properties.
- To reassess the older properties on the new unit area based system in order to bring them in line with others and also increase the property tax collections. Since many of the older properties have been valued very low, their owners are loath to change to the new system which will increase their property tax.
- To update the Nigam's records for properties that have been rebuilt and in which considerable additional floor areas has been added and reassess the tax e.g. old bungalows giving way to multi storey flats.

The status of covering all assesses under the new unit area system is as follows:

• Total number of estimated assesses	2.82 lakhs
• Total number of assesses covered by property tax	2.74 lakhs
• Assesses covered under the unit area system	1.11 lakhs
• Assesses covered under the old system	1.63 lakhs
• Assesses still to be covered	0.08 lakhs

13.4.6 Actions plan to improve property tax administration

The following steps are being taken or proposed:

- Commission a fresh survey of all properties in the municipal boundaries, to have an up to date data base
- The survey is to cover not only location and type of property, but also a physical survey of the built area, date of construction, amenities available, whether rented or owner occupied etc.
- To update the GIS maps which were partly completed in 2000-01, but did not cover the entire city? To also load the survey data regarding properties on GIS, so that accurate and spatial data of properties is available. Some work in this direction has already started.
- To revise the rates of property tax by 10%, as provided in the Act. Public notices have been given and public comments/objections have been invited.

13.4.7 Likely impact of improving property tax administration

Based on experience of other cities which have undertaken steps to tighten property tax administration, it is expected that property tax receipts may double i.e. an increase of about Rs. 30 crore p.a. in 2-3 yrs time.

The improvement will be on account of:

- Change of old low ARV properties to unit area system
- Verification of self assessment by a survey
- Including properties hitherto not covered under the tax net
- Addition of new assesses as a result of new properties being added every year.

13.4.8 Improving management of the city

Several areas for improving urban management have been identified and these are detailed below:

13.4.9 Introduction of accrual accounting

Although the accounts of KNN are computerized and they are using the Tally software, accrual accounting is not being followed. We understand it is awaiting a notification from the GoUP.

Introduction of accrual accounting is one of the mandatory reforms and the MoUD, GoI has already issued a 'Municipal Accounting Manual'. Since the

basics for introduction of accrual accounting already exist in Kanpur, we suggest the following measures;

- The manual issued by MoUD should be adapted for needs of Kanpur
- Accrual accounting should be introduced with immediate effect after providing handholding support and training to the staff.
- The task of converting existing accounts of last two years into accrual accounting system should be outsourced to facilitate quick switch over.

This could be best done by commissioning an appropriate consultant.

13.4.10 Use of GIS based Urban Information System to improve management

GIS is a very powerful tool in improving city management and for getting spatial information about trouble spots, frequent breakdown points, analysis of outstanding against various bills, etc.

GIS also provides ready information about the city e.g. for asset management, about capital expenditure, about municipal property management etc.

Although the beginnings of a GIS system were made in Kanpur about five years ago, it is yet to be completed and widely adopted. We suggest the following measures:

- The construction and updating of the entire GIS system should be outsourced to an expert agency
- The GIS should be based on ground verification and all data about properties, roads, street lighting etc. should be inputted. This is a detailed and painstaking task and sufficient time and money should be allocated for it.
- Arrangements should be made to regularly update the GIS on a yearly basis.
- Various applications should be developed and users trained in using this very powerful management tool.
- The MIS system should be integrated with the GIS system.

13.4.11 Introduction of e-governance on a city wide basis

E-governance would improve management efficiencies of KNN and also improve service levels to the citizens, both in terms of availability of information as also in terms of better grievance handling. Areas for e-governance, besides accrual accounting and GIS which have already been mentioned above are:

- Computerization of bill payment section. Payments to be received on line
- MIS on collection efficiency and outstanding to be available on GIS
- Property details, area and year of construction to be computerized to facilitate calculation of property tax
- Administration and issue of trade licences to be on line, including payment and reconciliation of licence fee
- Computerization of registration details and land records

- Computerization of birth and death certificates and on line issue of certificates
- Computerization of public grievances and redressal mechanism
- Introduction of file tracking system to track movement and of files and their efficient disposal
- Introduction of asset management system to track O&M of assets and their replacement
- Computerized management of O&M of street lights, transformers, traffic signals etc.

13.4.12 Non-Tax Revenues

Besides property tax, the other main source of own revenues comprises of a number of items of non-tax revenues. Total revenues from rentals and fees amounts to nearly Rs 24 crores in 2005-06. Some of the important ones are 'Rent from Municipal Properties' and 'Licence Fees'.

13.4.13 Rent from Municipal Properties

KNN owns several properties in the city, which have been rented out as shops, schools and for other trade purposes. Since majority of these properties have been rented out long ago, the rents received are very low. The increase in rentals is currently pegged to 12.5% every 5 years by a circular of GoUP. With a low base, this provision for increase is thoroughly inadequate to bring the rentals inline with the market value.

Hence on the one hand, the KNN is financially strapped while on the other hand old tenants continue to pay unrealistically low rents.

13.4.14 Reforms in rental laws

- The GO limiting the increase in rent to 12.5% every five years should be rescinded and KNN permitted to find ways of bringing up the rentals to market value
- The rent laws should be modified to bring about a balance between the interests of the landlords and tenants. Those who are paying below the declared circle rates should not be provided protection under the Rent Control Act. It may be noted that the circle rates are generally lower than the market value thereby providing a cushion in favour of the tenant.
- Similarly properties beyond a certain size should not be covered by the rent control Act. That is to say that instead of the value of rent being the determining factor for coverage under the Act, the criterion should be changed to one of Area (separate for commercial use and for residential use)
- Those who have sub-let their premises to someone else in order to gain financially from the low rent being paid by them, should be permitted to be evicted or asked to pay market rent.

- To cushion the impact of increase in rentals, the tenants may be permitted to increase the rentals in stages over five years, so that sufficient time is provided to adjust to the increased rentals
- Those who refuse to pay the revised rents should be evicted, and properties re-rented at market rates

KNN can also consider that in future, market complex are built on self financing basis with an escalation clause and the allottee has to pay the actual cost worked out after completion as per laid down principles.

13.4.15 Licence Fees

Currently KNN rules provide for levy of licence fees to carry on businesses (trade) of various kinds. While many of them have obtained a stay order from the court, there are many others who haven't. However, the inventory of those who need to pay licence fees and an estimation of the licence fees has not been carried out for quite some time.

Some of the activities which require licensing include taxis, tempos, rickshaws, shops, trading activities etc. These could be an additional source of increasing revenue for KNN.

13.4.16 Actions required to improve Licence Fees

- Make an assessment of current coverage of licence fees and action required to reach full coverage
- Examine the possibility of introducing an amnesty scheme to hasten coverage by self declaration
- Make a task force to increase coverage of licence fee. If necessary, outsource the survey and increasing coverage. Incentive could be provided to the revenue collection staff as well.

13.4.17 Introducing Public Private Partnership to improve efficiency and reduction of cost

There are several areas of operation which are amenable to privatization, with the KNN taking on the role of the regulator. With this, the costs can be reduced, efficiency increased and KNN in the role of a regulator can ensure that the citizens of the city are getting a good quality service. Some of the areas amenable for Public Private Partnership are given below:

13.4.18 Door to door collection service for solid waste and introduction of user charge

Solid Waste Management is one of the major areas of costs of KNN and also accounts for maximum number of staff of the corporation. The following is suggested:

- Introduce door to door collection and levy of user charge
- Shift SWM on P-P-P basis, experiment with at least 4-6 contractors.
- The entrepreneur should be responsible for both providing the service and for collection of user charge. Community mobilization should be done by involving NGOs.
- The equipment for SWM may be provided by the KNN. This will ensure that the charges remain reasonable and in case of failure of a contractor to perform, starting with new contractors will be easier.

13.4.19 Improving parking and parking lots thru P-P-P

In order to streamline parking, introduction of parking lots has been included in the chapter on transport. The following is suggested:

- In order to maintain the parking lots and to provide proper parking service, parking is to be outsourced on P-P-P basis.
- Contractors can also be asked to pay certain royalty to KNN, which will be source of revenue
- If big, professional contractors can be made interested, construction of underground parking or multistorey parking may also be considered.

13.4.20 Outsourcing O&M of street lighting

The expenditure of KNN on street lighting is Rs 11 crore, of which about Rs 8 crore is on account of electricity charges and balance on O&M. Considerable savings are possible by P-P-P and outsourcing this function to some reputed contractor. Savings may be expected by way of:

- Savings in electricity by metering and exercising control on hours of lighting (currently electricity is charged on flat rate basis of Rs 850 p.m. per KWH)
- Savings in O&M by way of reduced repairs and replacement of burnt bulbs and light fixtures

13.4.21 Outsourcing of bill collection

Currently about 150 staff members are employed for property tax and other bill collection.

- There is a possibility of reducing this staff by outsourcing bill collection to a professional agency, who can issue bills, collect payments as also reconcile.
- The same agency can collect other bills as well e.g. telephone, electricity, water etc. Overall savings could be very substantial if we compute bill collection cost of each agency.
- In some cities, outsourcing the collection to cable operators has been very successful while in some other cities introduction of professional bill collectors has been successful.

- Bill collection could also be done through credit cards and banks.

13.4.22 Delegation of responsibility and power

Currently there are no clearly laid out rules/notification on responsibility and authority of different positions in KNN. An authority schedule has yet to be issued, laying out the authorities, both financial and administrative.

At present all executive powers vests in Municipal Commissioner. There are two Add. Municipal Commissioners but they have no administrative or financial powers delegated to them under the Municipal Corporation Act., 1959.

KNN has divided the city in six zones. Each zone is headed by a Dy. Commissioner. Though the functions have been allotted to them but no powers have been delegated. At present all the zonal offices are functioning from the KNN'S main building. These need to be shifted to the respective zones as soon as possible.

13.4.23 Action required

The state govt. may make by-laws under UP Municipal Corporation Act for delegation of both administrative and financial power to officers. This would not only give these officers a suitable status but also increase responsibility and accountability.

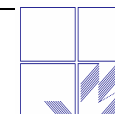
The major functions of central office shall be policy formulation, Planning, Direction, control and coordination of the activities of the zones.

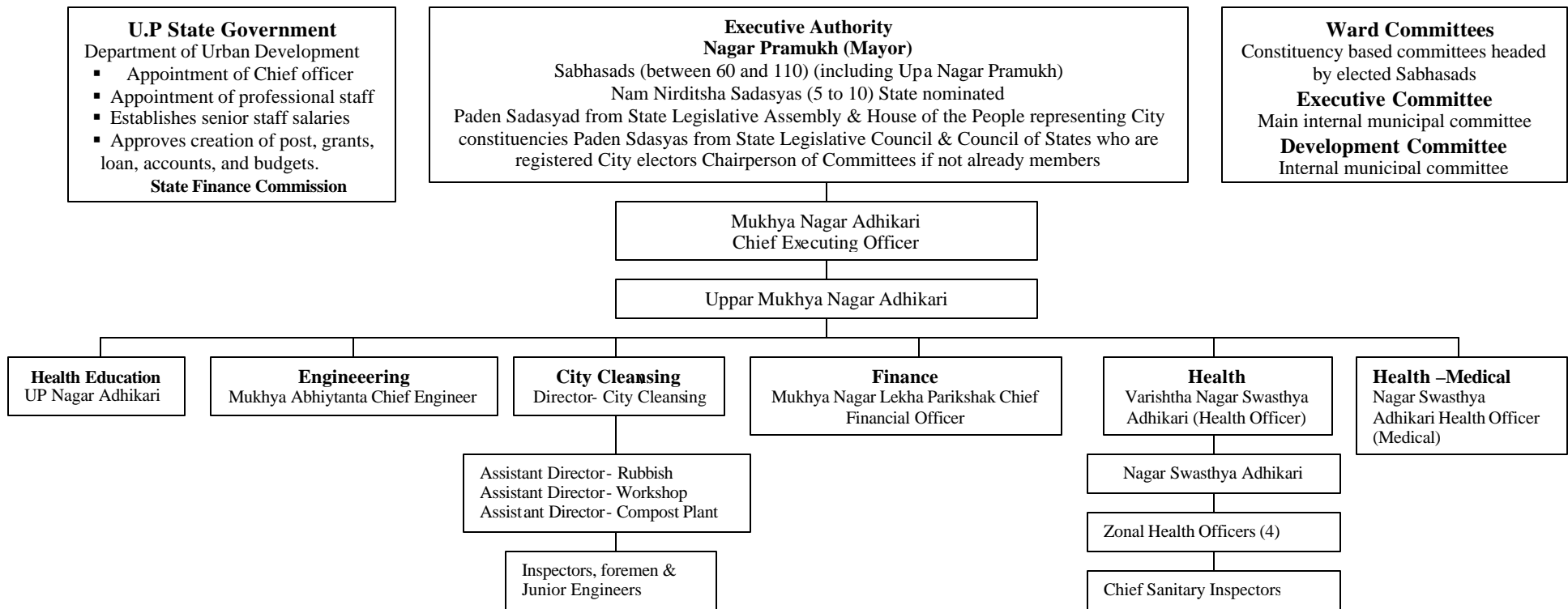
13.4.24 Reduction of overheads

KNN employs nearly 4500 employees and nearly 50% of their expenses are accounted by the wage bill. Not only is the organization bloated and unwieldy, the large number adds to bureaucratic delays and feedback from various stakeholders suggests that KNN is viewed by them as an inefficient and corrupt organization. Much of this can change with many of the initiatives described above, including

SWOT ANALYSIS FOR KANPUR NAGAR NIGAM

Strengths	Weakness	Opportunity	Threats
<ul style="list-style-type: none"> ▪ Long experience of maintaining drains ▪ Motivated Staff ▪ Willingness to adapt advance technology ▪ Adequate space available 	<ul style="list-style-type: none"> ▪ Paucity of funds ▪ All the zonal offices are centrally located and hence addressing complains take time ▪ Communication facilities are inadequate in the main office and ward offices ▪ Inadequate mechanical equipments ▪ Due to day to day public engagements, sufficient time not devoted for future developments ▪ Repair/ cleaning of drains is mostly done only in case of breakdown ▪ Latest updated maps not available ▪ Data base management, computerization and networking inadequate ▪ Absence of planning techniques 	<ul style="list-style-type: none"> ▪ Growth opportunities by updating records by continuous survey/ GIS particularly in new colonies. This is already in process. ▪ Nagar Nigam will be looked as an important service oriented organization when new additions in the city infrastructure take place. ▪ With institutional strengthening and capacity building in earnest, the organization can become an efficient organization in service delivery. ▪ With e-governance, the process of which is already commenced, it will proceed modern and transparent way of managing finances, execute urban planning and governance in time with established frame work, become more responsive, cost and time efficient through integrating technology in their governance and service delivery process. ▪ Scope of considerable revenue growth is available 	<ul style="list-style-type: none"> ▪ Since no new recruitment is taking place, most of the staff is old and thus lack vision for development ▪ No proper mechanism may be in place to maintain the new facilities ▪ Hiring of new staff / posting of technical manpower under the control of state government ▪ No core group of engineers trained in operation and maintenance





OVERALL FUNCTIONAL RESPONSIBILITIES

- Created under the Uttar Pradesh Municipal Corporations Adhiniyam Act.1959
- Urban town Planning (Drafting Development Plans), slum improvement and urban poverty alleviation
- Roads, bridge, water supply, public health, sanitation, solid waste, fire services, urban forestry, street lighting, parking lots, bus stop, parks, burials and cremations
- Protection of the environment, promotion of cultural, educational aesthetic and ecological aspects
- Regulation of land uses, building, slaughter houses and tanneries
- Safeguard the interests of weaker sections of the community (physical and mentally handicapped), and prevention of cruelty to animals
- Provision of vital statistics (eg. Births and deaths)

DEPARTMENTAL FUNCTIONAL RESPONSINILITIES

Health Education	Local roads (Major roads-PWD) Area development sanitation	Solid waste secondary collection and disposal -Transport from collection point to disposal/dumping site -Landfill disposal management	Accounting & budgeting property assessment revenue collection -Property tax and other taxes fees, charges, levies and fines.	Solid waste primary collection -Roads sweeping -Drain cleaning -Local transport to collection points	Health and Medicare -Disinfections -Epidemic control -Food sampling -Primary health care
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KANPUR NAGAR NIGAM
Figure A-1, Current organizational Structure and Functional Responsibilities

13.5 KANPUR DEVELOPMENT AUTHORITY

The State Government established the Kanpur Development Authority (KDA) in 1974. It's the largest body of its kind in Uttar Pradesh (UP). It has been responsible since its inception for providing infrastructure related development to Kanpur City as the city expands. It operates primarily at the outskirts of the KNN area i.e. 8 km stretch beyond the KNN boundary. Today the organization has jurisdiction over an area as large as 300 sq. km, which includes 312 villages. As much as 12,000 hectares of land was obtained virtually free of cost as these belonged to the Gram Samaj.

The major functions of KDA are:

- Overall development of city
- Making & implementation of Master Plan
- Planning for infrastructure for KDA colonies and its construction
- Zoning of the city
- Maintenance of KDA colonies till its handing over to Kanpur Nagar Nigam

13.6 KANPUR JAL NIGAM

This organization was formed in 1927 to undertake responsibility for the water supply and sewage disposal of the State. Later in 1975 this department was transformed into Uttar Pradesh Jal Nigam under the Uttar Pradesh Water Supply and Sewerage Act, 1975.

As per the order of the central government, Kanpur Jal Nigam is currently in the process of transferring the operation and maintenance of the assets created under Ganga Pollution Control Unit to Kanpur Nagar Nigam.

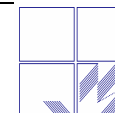
The Ganga Pollution Control Unit in Kanpur was formed to undertake the construction and execution of the assets that were created under the Ganga action plan phase I. Three sewerage treatment plants and different sewerage pumping stations were constructed to take care of the effluent flowing into the river Ganga.

Under the Uttar Pradesh Water Supply and Sewerage Act, 1975, UP Jal Nigam has to carry out the functions of preparation, execution, and promotion of water supply and sewerage schemes, state plans for water supply, sewerage and drainage and to establish standards for water supply and sewerage in the state.

The Ganga Pollution Control Unit of UP Jal Nigam in Kanpur currently has total staff strength of 269. Out of these, 200 employees are working for Ganga Pollution Control Unit, whereas the remaining 69 staff employees are contracted out. The grant provided by the state government is the main sources of funds for Kanpur Jal Nigam.

SWOT ANALYSIS FOR KANPUR JAL NIGAM

Organization	Strengths	Weakness	Opportunities	Threats
Ganga Pollution Control Unit, UP Jal Nigam, Kanpur	<ul style="list-style-type: none"> ▪ Sufficient manpower available for O & M activities of assets created under GAP Phase I ▪ Enough expertise and technical know how amongst the staff to construct and maintain big size sewerage treatment plants 	<ul style="list-style-type: none"> ▪ Paucity of funds which regularly hinders proper operation and maintenance and also creates industrial relation problem ▪ Updates in latest technological innovations is not given to staff ▪ Lack of networking and data base management ▪ Appropriate training modules are not constituted for enhancing the talent of staff ▪ Laboratory needs strengthening 	<ul style="list-style-type: none"> ▪ Under GAP Phase II execution work is being carried out by UP Jal Nigam and this system may continue in case of further development activities 	<ul style="list-style-type: none"> ▪ Reluctance on the part of local body to take over O & M of assets may force UP Jal Nigam to go on maintaining these assets which is not their primary function ▪ Surplus staff and side by side paucity of funds results in most of the funds being diverted for salaries and creating industrial relation problems



13.7 KANPUR JAL SANSTHAN

Kanpur Jal Sansthan was established in the year 1976 under UP Water Supply and Sewerage Act, 1975 to provide a specialized organization to focus on operating and maintaining water supply and sewerage services. It worked under Kanpur Nagar Nigam till 1979 as its part.

In 1979, water supply and sewerage works were taken out from the activities of the Nagar Nigam and entrusted to a local authority duly constituted under the above Act.

In order that the Jal Sansthan responded to the aspirations and requirements of citizens, it had the Mayor of the KNN as the Chairman of Jal Sansthan Committee. The committee comprised of following members besides the Mayor/ Chairman;

- General Manager,
- Jal Sansthan;
- Municipal Commissioner, Kanpur Nagar Nigam;
- Superintending Engineer, Jal Nigam Kanpur;
- Senior Accounts Officer, nominated by Jal Nigam;
- Joint Director, Medical and Health; Director, Local Bodies, UP Government Lucknow.

In the year 2003, Jal Sansthan was merged with Nagar Nigam with the condition that Chairman and General Manager will have same powers as before. At present they are working independently.

13.7.1 Financial Performance of Kanpur Jal Sansthan (KJS)

KJS has at present total of 1,77,009 water connections -both domestic and commercial. The total revenue from water tax, water user charges, sewerage tax, sewerage user charges and miscellaneous income for the last financial year i.e. 2005 - 2006 has been estimated at Rs. 3078.80 Lakhs. Against this, the expenditure of KJS is Rs. 2774.29 lakhs. However, KJS has not made provision for a liability of Rs. 845.25 lakhs on account of power and electricity charges for the year. This means that there is in fact an excess of expenditure over revenue of Rs. 540.74 lakhs

Analysis of the expenditure of Rs.2774.29 lakhs for the year 2005-06 clearly shows that more than 70% of the expenditure is on establishment. After meeting the essential cost of procurement of chemicals, chlorine and bleaching powder etc., there is hardly any amount left for prevent in maintenance or development works. Only break-down maintenance and emergency works on complaints are done to keep the system going. KJS in fact is doing crisis management and slowly making the organisation sick. The sewage system is very old. Hardly any capital expenditure has been incurred on improvement of system, replacement of worn out pipes in the

last 10 year due to paucity of funds. The system in the inner core areas is more than 100 year old. UPJN has now made the estimate for the replacement of the old system in inner core area of the city and included in the infrastructure improvement under JNNURM.

13.7.2 Suggestions for Improvement of Financial Position

- 1) The properties assessed by KNN for property tax are 2, 74,205. However KJS has levied water tax and sewage tax on 1,58,955 properties only there is, therefore a scope for KJS to improve its water and sewage taxes. Hence KJS needs to reconcile its data with KNN and bring the left over assessed properties into its tax to shore up its revenues.
- 2) With the completion of GIS by KNN annual Rateable value of the properties shall go up manifold, KJS should therefore, keep a close liaison with KNN to get the required information for working out the revised water and sewerage taxes. This will give a big boost to KJS
- 3) As per KJS own admission, water losses due to leakage are 30% after accounting for stand post supply and other emergency sources which account for another 20%. There are no metering arrangements and it is very difficult to assess areas of high losses. With the proposed renovations and replacement of leaky old pipes under JNNURM the effort should be made to take special care that the losses are reduced to the minimum, thereby increasing the profitability.
- 4) There is a general feeling that water supply of KJS is not consistent and its quality of water is not good. The citizens do not take connections even though system exists in their areas because of these factors. KJS is therefore, required to take measures to improve their acceptability and creditability in the eyes of general public.
- 5) KJS should persuade and educate the people to take house connections and try to reduce the stand posts supply. KJS need to expand its distribution system in Municipal area to improve its revenues since availability of water has increased due to commissioning of 200 mld WTP from Ganga Baggage.
- 6) At present the cost of water is Rs. 5.26/1000L while recovery is only Rs. 4.13/1000L. KJS is maintaining the hand pumps while there is no generation of Revenue. System needs to be strengthened to reduce leakage and it needs to be expanded particularly in areas where distribution system has not reached.

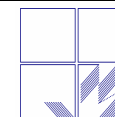
13.7.3 Strategies to improve performance of KJS

- Since power is one of the major operating costs of KJS, it should take steps to make efficient use of power by (i) improving the condition of the pumps in operation or by introducing variable frequency drives (ii) reduce transmission and distribution losses in the system which cause wastage of power
- Reduce the non-technical staff to a minimal. Computerization of operations, introduction of e-governance, outsourcing of bill collection etc. will help reduce non-technical staff

- Similarly assess the requirement of technical staff and recruit or contract the requisite manpower to improve the service levels
- Increase efficiency of staff by devising on the job training program
- Create a data abase of the water and sewerage net work and integrate it with the property GIS with a view to widen the tax net
- Carry out a study and implement a system of metering throughout the city. New improvements in water meters have made them very reliable and accurate, such smart meters should be used, as is being done in other cities like Hyderabad and Bangalore.
- Experiment with outsourcing O&M in a few zones with a view to improve reliability and reduce costs. The private party could also be responsible for collection of bills.
- Increase the coverage of water connections by (i) improving the pressure in the supply lines and (ii) by improving reliability of supply by installing standby generators to pump water on time and stick to supply timings
- Improve quality of water supplied by repair and replacement of old pipes, with a view to reduce contamination.

SWOT ANALYSIS FOR KANPUR JAL SANSTHAN

Strengths	Weakness	Opportunity	Threats
<ul style="list-style-type: none"> ▪ Long experience of maintaining sewer and small sewer pumping stations ▪ Motivated Staff ▪ Willingness to adapt advance technology ▪ Adequate space available 	<ul style="list-style-type: none"> ▪ Inadequate technical staff ▪ Paucity of funds ▪ Inadequate mechanical cleaning equipments ▪ Due to day to day public engagements, sufficient time not devoted for future developments ▪ Repair/ cleaning of sewers is mostly done only in case of breakdown ▪ Maintenance of sewer being a tough job, skilled manpower is inadequate ▪ Latest updated map of sewer system not available ▪ Data base management, computerization and networking inadequate 	<ul style="list-style-type: none"> ▪ Laying of new trunk sewers and rehabilitation of old network will give better service to public which will lead to better revenue collection ▪ Growth opportunities by increasing new sewer connections particularly in new colonies. ▪ With institutional strength erring and capacity building particularly in operation and maintenance of large STP's, the organization can built itself into an efficient organization in water supply and sewerage operation and maintenance. 	<ul style="list-style-type: none"> ▪ No proper mechanism may be in place to maintain the new facilities ▪ Hiring of new staff / posting of technical manpower under the control of state government ▪ No core group of engineers trained in operation and maintenance of sewer treatment plant identified.

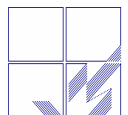


KANPURJALSANSTHAN, KANPUR

NAME OF OFFICERS

|
CHAIRMAN
MAYOR / NAGAR AYUKT (M.N.A.)
 |
GENERAL MANAGER
 |

Executive Engineer Zone – I	Executive Engineer Zone – II	Executive Engineer Zone – II – A	Executive Engineer Zone – III	Executive Engineer Zone – IV	Executive Engineer Zone – V	Executive Engineer Zone – VI	Executive Engineer (H.Q.)	Executive Engineer (Raw Water Pumping Station)
Assistant Engineer	Assistant Engineer	Assistant Engineer I/C	Assistant Engineer	Assistant Engineer	Assistant Engineer	Assistant Engineer	Assistant Engineer	Assistant Engineer
			Accounts Officer	Finance Officer		Assistant Manager Billing	C.W.A. Chemist	PHS Assistant Chemist
		Accountants		Audit Officer		Accountants		
				Auditors				



13.8 U.P. HOUSING AND DEVELOPMENT BOARD

U.P. Housing and Development Board have been set up under the Act of 1965 in April 1966. It has been established to implement the various housing and development schemes in a planned way and to bring harmony by keeping in mind the state level and national level residential policy and programmes.

The main objectives of U.P. Housing and Development Board are to:

- Make the plan for all residence related activities in the urban areas and to get them implemented fast and in effective way;
- Receive grant and loan from central and state government, commercial bank, financial organizations, public bodies etc.
- Acquire the land and construct roads, electricity, water supply, and other urban facilities and to arrange and distribute the land and constructed houses according to the demand from registered people
- Make special arrangement for the houses for the backward class and scheduled caste and tribe, security workers and freedom fighters.

13.9 OVERLAP OF INSTITUTIONAL RESPONSIBILITIES

The multiplicity of organizations involved in providing urban services makes the management of affairs of the city highly complex. It becomes essential to define the roles and responsibilities of each of the Agencies very clearly. The inter-relationships of various departments play an important role in making available good quality of services to the community /citizens of the city. More-over overlapping of some of the functions requires a high level of coordination.

The following table indicates the service-wise planning, implementation and operation and maintenance function being carried out by various agencies involved in providing services in Kanpur Urban Area. It will be seen that many services are being provided by more than one agency resulting in avoidable delays at the time of handing over the assets who has to ultimately maintain them.

Table 13.1 Institutional Responsibility Matrix

Institution's Responsibility			
Sector	Planing	Implementation	Operation and Maintenance
Land use/ Master Plan/Building Byelaws	K.D.A.	K.D.A.	K.D.A.
Water Supply	UPJN/KDA/UPHB for colonies developed by them/DUDA for slum area.	KJS/UPJN/DUDA for Slum	KJS/UPJN
Sewerage		KJS/UPJN	KJS/UPJN
Roads / Bridges / Flyovers / RoB / Multilevel Parking	PWD, KDA, KNN	KNN/KDA/PWD/ Housing Board/ UPSIDC	KNN/KDA/PWD UPSIDC/Housing Board
Traffic Control and Management Systems City Public Transportation	SP Traffic, RTA, KNN	KNN/Traffic Police	KNN/ Traffic Police / RTO
Street Lighting	KNN	KNN	KNN
Storm Water Drainage	KNN, UPJN	KNN / KDA	KNN
Solid Waste Management	KNN	KNN	KNN
Parks/Playground/Golf Course / Beautification of Road Intersections / Urban Forest	KNN, Forest, KDA, UPHB,	KNN/KDA/ Housing Board/ Forest	KNN/KDA/ Housing Board / Forest
Air, Water and Noise Pollution Control	SPCB	Pollution Control Board	Pollution Control Board
Slum Development	CDO,KNN, DUDA	DUDA/ KDA	DUDA
Urban Poverty Programme	KNN, DUDA	DUDA / DIC	DUDA / DIC
Housing for EWS		KDA/ Housing Board/ DUDA	KDA/ Housing Board/ DUDA
Public Conveyance		R.T.O.	R.T.O.
Heritage Building Conservation	KNN, Archaeological Department	Archaeological Department/ KNN	Archaeological Department/ KNN

13.10 KEY ISSUES

The critical issues that emerge from the existence of multiple Agencies include:

- Spatial and functional fragmentation
- Overlapping functions
- Multiple accountability lines
- High service delivery gaps and
- Increasing Urban poverty

13.10.1 Lack of clarity in local functions

The Constitution 74th Amendment Act, 1992 envisages that the functions listed in 12th schedule of the Constitution is entrusted to elected municipalities. This is with a view to minimize ambiguities and overlapping functions between local bodies and other authorities. However, in practice, several agencies are responsible for the functions and in some cases local bodies have no role.

13.10.2 Inter-institutional conflicts

The large number of departments, institutions, agencies and officers undertaking similar, related and overlapping functions or the functions not clearly defined lead to conflicts in operation. Moreover the various agencies over the same or overlapping jurisdiction and are not in a position to understand and evaluate the backward and forward linkages associated with these functions.

13.10.3 Municipal-Parastatal Coordination

There is a lack of coordination between urban local bodies and parastatals in areas such as inter-municipal, inter district and inter-state roads, Storm water drainage and sewerage, common amenities like whole-sale markets, truck terminals, bus stations, garbage dumping yards, landfill sites. The real problem is noticed in plan implementation. No clearly defined mechanism exists to take up such works in an integrated manner taking into account the geographical factors.

13.10.4 Managerial Coordination Issues

There are many managers connected with metropolitan service delivery and infrastructure management. All these make the task of metropolitan management highly complex and difficult. In addition to general coordination between urban and rural local authorities, there are several inter-departmental and inter institutional coordination issues, which arise in day to day administration of the metropolitan area.

13.10.5 Jurisdictional Issues

It is very difficult to arrive at a common boundary for all services. The geographical Area required for internalizing the costs and benefits of a service like urban transport, water supply, storm water drainage etc.

If such matching is not ensured, there will be perennial problems of service revenues falling short of service costs, mounting inter-institutional conflicts, increased cost of public administration, lack of integrated development and imposition of high social cost on the public.

Thus it is important that the jurisdictional issues are sorted out carefully. While it is important to keep the costs of metropolitan administration low, exploitation of development potential of the metro area and its contribution to national wealth and income should be the primary consideration for metropolitan spatial organization.

13.10.6 Grievance Redressal

The Grievance Redressal mechanism in the city is weak and the people are made to run from pillar to post for grievance redressal. There is also no proper platform to provide information to the citizens on all services. Lack of awareness and information is affecting the citizen's access to grievance redressal mechanisms. Though citizen's charters are established for the

service providing agencies, majority of the public is not aware of the duties and rights under the same.

13.11 INSTITUTIONAL STRATEGIES

There is a need to address the institutional and other challenges to provide good governance to the city. Unless the roadblocks are removed, economic development is hampered and efficient service delivery becomes difficult. This adversely affects the community particular the 'poor'.

There is need, therefore, to restructure the governance framework, remove the roadblocks and streamline the lines of accountability. The governance reforms become all the more critical in the context of Kanpur, which has got the dying city reputation to become more competitive and to become an investment destination. The city should offer high quality services and promote inclusiveness and citizen friendly governance institution. Only when it is environment friendly and is well governed, the vision of the city can be realized. The institutional strategies required include:

- Spatial integration of KNN surrounding municipalities and their service providing agencies for better planning and delivery of services. (Kanpur Metropolitan Area).
- Establishing clear lines of accountability of service delivery agencies Constituting autonomous service delivery agencies in different structures like water supply, sanitation, sewerage, transport, roads, solid waste management etc. with KNN playing the role of a regulator.
- Performance based memorandum of understanding (MOU) between the Municipal Corporation (KNN) and various service delivery agencies, focusing on targets and outcomes.

13.11.1 Institutional Implementation Mechanisms

Within the overall framework, institutional and implementation mechanisms need to be worked out. These include:

- Establishing a Reform monitoring Unit as an 'Overseeing Body' to monitor the reforms under way and being proposed.
- Strengthening local Government capacities by outsourcing project management and M & E function
- Establishing appraisal mechanism for institutions and processes.

13.11.2 The Institutional and Governance Reform Strategies

- Strengthening decentralization – 74th CAA, 1992
- Evolving inclusive governance mechanisms
- Institutional integration
- Evolving partnerships for service delivery
- Evolving coordination mechanisms to overcome spatial and functional fragmentation.

13.12 A POSSIBLE AGENDA FOR STATE LEVEL INSTITUTIONAL REFORMS

13.12.1 General

- Implement the devolution of power to citizens of the city as prescribed in 74th CAA, 1992
- Development of a State Urban Development and Poverty Reduction Strategy.

13.12.2 Governance

The strategy performance cell should be established and its main job should be to keep track of new technology, best practices, and innovations in relation to improvement of municipal services in India and abroad. It may carry out experiments with the help of the local bodies in big cities like Kanpur, Lucknow, Allahabad, Agra, Varanasi etc and develop new ideas for improvement in municipal services.

- Development of a model citizen charter
- Guidelines for E-Governance
- Guidelines for out sourcing of services
- Developing partnerships in service delivery
- Simplification of planning regulations
- Develop framework for solid waste management
- Rationalization of stamp duty

13.12.3 Pro-Poor Strategies

- Preparation of Municipal action Plans for poverty reduction by ULBs
- Making available affordable water supply connection to below poverty line families
- New people friendly street vendor policy
- Notification of slums

13.13 CONCLUSION AND RECOMMENDATIONS

- Due to involvement of multiple agencies in providing urban services, there is a clear overlap of institutional responsibilities causing various problems. In view of the circumstances GOUP may consider issuing clear directions that Kanpur Nagar Nigam is the prime agency in providing urban services within the municipal area and any other agency that needs to take up urban development work within the KNN area shall obtain written permission of KNN before commencement of the work. These directions shall be in line with the constitution 74th Amendment which envisages that the functions listed in 12th Schedule of the constitution be entrusted to elected municipalities.
- While framing unit area rates for assessment of ARV of the properties, the market value of such properties needs to be kept in view but in

practice circle rates notified by District Magistrate which are much lower as compared to market rate are used. It is true that the property tax may work out much higher as compared to existing tax amount and it may not be possible to bridge the difference and implement the same. However, KNN needs to calculate the Unit Area rates as per provisions of the Act and bring to the notice of the government the true amount of tax and existing amount of tax for their guidance in the matter as to how to bridge the difference in amounts. Similar will be position regarding user charges levied with no relation to the cost of services.

In our view, true values need to be brought to the notice of the public and put for open debate. The matter needs to be discussed with various citizens' forum for their full participation in finding the solutions to these problems for improving the financial position of the service provider so that quality service is available to the citizens as most of the services have direct impact on the health of citizens.

The other alternative could be to constitute a statutory Regulatory Authority who shall mediate between service providers and beneficiaries and whose decision shall be binding on both the parties. Such type of regulatory bodies in the case of electricity, telecom, etc. already exists.

- Various suggestions for improvement of financial position of KNN and KJS need to be considered by them and immediate necessary action needs to be initiated for early results.
- KNN needs to ensure that the GIS is got completed within the time allowed to the GIS company and implementation part should start as a parallel activity as soon as property data starts pouring in.
- Various task force/ service delivery agencies needs to be constituted along with reform monitoring unit. Performance based MoU between KNN and various service delivery agencies focusing on target and outcome need to be entered into as early as possible.
- KNN has initiated to introduce e-governance in their day-to-day activities. It should be ensured that it is awarded and implementation is expedited and completed within time allowed to the contractor.

CHAPTER 14:
KANPUR CANTONMENT BOARD

14. KANPUR CANTONMENT BOARD

Kanpur Cantonment is situated on the right bank of Ganga River. It has a predominant position among the various cantonments due to its huge population, large number of important defence installations and units and strategic location within the highly industrialized Kanpur City. It was established in 1811 and admeasures a total of 4243 acres out of which bungalow area is 3899.18 acres and civil area is 334.83 acres. It has played an important role in the freedom struggle of 1857 under the leadership of Nana Saheb and Tantya Tope. This chapter will deal with the demographic analysis, current status of various infrastructure facilities, financial analysis and issues which require immediate actions.

14.1 DEMOGRAPHIC CHARACTERISTICS

There was a steep increase in the population growth rate from 1941-61 due to declaration of Second World War, partition of the country and rapid industrialization. Since 1961, civil population of the cantonment has increased with a steady rate from 61,223 in 1971 to 95,021 in 1991. From 1991 to 2001, there was a marginal increase in population. In 2001, out of total population (1,00,796), 55 percent was male.

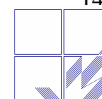
In Kanpur Cantonment, schedule caste population is 9.3 percent whereas 0.1 percent is schedule tribes. The total households are 16,900 and household size is 6. The total literates are 64.7 percent and literacy rate is 73.9 percent. The sex ratio in Kanpur Cantonment is 802.

As per 2001 census, total workers in KCB are 30,822. Out of total workers, 26.1 percent (26,353) are main workers whereas 4.4 percent are marginal workers. Out of total main workers, 2.9 percent are cultivators, 0.7 percent is agriculture labourers, 5.4 percent is household industries and other workers are 91 percent.

14.2 PHYSICAL INFRASTRUCTURE

14.2.1 Water Supply

Prior to 1962, the water requirement was met through open shallow well except for few areas where it's provided by MES and the ordinance factories. The underground reservoir, pumping station and distribution network was provided by Kanpur Development Board in 1962. The water was received in bulk from Kanpur Jal Sansthan into this underground reservoir and is pumped throughout the cantonment. Since then, no further extension/ augmentation were undertaken by KJS to meet the demand of additional population. The problems faced were frequent breakdowns of the old worn-out pump sets at



the only pumping station. Mainly bungalow area, small bazaar areas of Golaghat and Satti Chaura suffered from severe water shortage.

In 1989, first phase of water supply reorganization project consisting of construction of one overhead tank, 6 new pumps at ZPS for the replacement of 6 wornout old pumpsets of and 12.5 km of new pipelines to augment/reorganize water supply for entire cantonment area including the small bazaar area was undertaken. Due to this, problem of acute shortage of water have reduced.

At present, there are 3722 private water connections and 350 public stand posts besides the 70 Indian mark II handpumps to augment and boost the water supply. The provision was also made to supply 6000 litres water through the board's tankers.

14.2.1.1 Issues

The water supply project received a setback due to non-payment of service charges by the Ordinance Equipment Factory and Ordinance Parachute Factory since long time.

14.2.1.2 Strategies

The need is felt to reduce the number of existing public water stansposts and replacing them by India Mark – II handpumps. This will help in two ways: one to meet the demand in the interior areas of civil are and secondly to reduce the wastage of water due to public standposts.

14.2.2 Sewerage

The underground sewerage system is non-existent in the civil area. At present, there exists only 10 km length of old sewer lines of diameter 9” to 15” which are acting as mains and sub-mains. These lines cover only a scant proportion of the civil area.

14.2.2.1 Issues

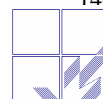
- Non-existence of sewerage infrastructure has led to wide spread insanitation throughout the civil area.
- Due to increase in population, sewerage lines are choked, ineffective and outdated.

14.2.2.2 Strategies

- The existing sewerage lines need to be cleaned properly through machines.
- The provision for well designed sewerage infrastructure should be made to remove the problems related to sewerage blockage.

14.2.3 Storm Water Drainage

The infrastructure (waste water and storm water) drainage system was laid in 1940s. It consists of 4km length of large rectangular main drains besides



smaller intercepting and service drains. There are total four drains i.e. tobbenallah and nalas around Azad Park, Tank Road and Jaipuria road in civil lines area. The waste water in the main drains or nallahs is disposed off at various points into trunk sewers of Municipal Corporation passing through cantonment area.

14.2.3.1 Issues

- Many streets and lanes of civil and small bazaar areas are devoid of drains.
- Three drains are in extremely bad state of repairs due to which they have become quite un-functional and ineffective.
- All these open drains are located within the densely populated areas and have become serious health hazards.
- During periods of concentrated heavy rainfall, streets and lanes got flooded. This lead to increase in disease and pollution through spreading of faecal material in the streets and lanes. In this period, effects of ineffective drainage become more visible.
- Besides main drains, large number of service drains is also in poor state of maintenance.

14.2.4 Solid Waste Management

In Cantonment Board, total rubbish collection points are 195. Out of total, close dustbins are 124 whereas open dustbins are 71. Out of total close dustbins (124), 88.7 percent (110) are in bungalow area. The conservancy services are rendered with the help of fleet consisting of 2 rubbish loaders, 6 trucks and 1 night soil tanker besides hand cart.

At present, there are 35 blocks of public group latrines and 48 urinals. Other than 12 sulabh complexes and 4 NEDA Complexes, remaining 19 public latrines are cleaned and maintained by Board's conservancy staff.

14.2.4.1 Issues

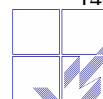
- The conservancy services should be mechanized to reduce the physical burden on the conservancy staff and result in reduction in establishment cost.

14.2.4.2 Strategies

- The locations of dustbins in the civil area should be reviewed and refixed with proper intervals at proper places so that efficiency can be increased.
- Proper sewerage infrastructure should be laid so that open main drains can be eliminated.
- The maintenance of public group latrines should be given to voluntary organizations such as Sulabh International, Suvidha and NEDA etc.

14.2.5 Street Lighting

Street lighting is maintained by Board's staff with the help of Hydraulic ladder truck. The cantonment board is maintaining 270 number 250 Watt sodium vapour lamps (SVLs) and about 4000 tube lights of BOW each. All the roads



in the bungalow and civil areas are lit up by tube lights. In the bungalow areas, other than a few roads such as Tagore road, portion of M.G. and Nathu Singh road, old Allahabad road, New Cemetery road and canal road, all remaining roads have been provided with SVLs.

14.2.5.1 Issues

- In civil area, SVLs have been provided on very few roads and road crossing only.
- Most of the roads lack adequate street lighting.
- The tube lights lighting on the most busy jaipuria road, where central railway station is located, is very inadequate in view of high traffic movement throughout the night.
- The Station road and Elliot road also need SVLs as it links the civil areas directly to the railway station.
- The lighting on some of the important roads i.e. Faulkner road, hospital road, Biscoe road, tank road etc. are inadequate.
- Some narrow lanes in cantonment area are totally devoid of lighting.
- The remaining roads, which bear high volume of nocturnal traffic, need to be provided with SVLs for safe movement of traffic and security view point.

14.3 SOCIAL INFRASTRUCTURE

14.3.1 Medical Facilities

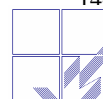
In Cantonment, there is one general hospital, one O.E.F. combined hospital, 7 air force hospitals, 2 state government dispensaries (E.S.I.), 3 private nursing homes and 18 private clinics. The 36 bedded cantonment board hospital is consist of 12 bedded male ward, 12 bedded female ward, two maternity wards of 6 bed each, one operation theatre and a OPD.

14.3.1.1 Issues

- Facilities such as X-ray, ECG and major pathological investigations are not provided in the hospital.
- Due to lack of specialized doctors and equipments, people from weaker section have to refer some other hospital.
- There are always long queues of patients in the OPD who are not able to receive adequate medical attention.
- Though the condition of the hospital building is quite satisfactory, the roof requires repair work and water proofing treatment.

14.3.2 Education Facilities

The cantonment board has provided only 9 primary schools. These schools were established by the board during the 1930-1950. Out of these 9 schools, 4 are located in the distant small bazaar areas of B.I.bazar, Kakori, Golaghat and remaining 5 are located in the civil areas of Faithful ganj, Mirpur, Khapra Mahal and Harrisganj. The literacy level in Kanpur cantonment is 73.9 percent as per 2001 census. The board is having a staff of 9 headmasters and 31 assistant teachers.



The main educational effort in the cantonment is provided by the voluntary and philanthropic organizations. Most of the top-rated convent and public schools of the district are located in the bungalow area of the cantonment.

14.3.2.1 Issues

- The condition of the school building provided by Cantonment Board is very unsatisfactory. Other than Mirpur and Muir Road schools, which were renovated by the board in 1987 and 1988, remaining are in poor state of maintenance.
- In KCB area some of the top-rated convent and public schools are located; however, the weaker section has virtually nil access to these middle and rich class schools.
- The existing education facilities in cantonment are not only quantitatively insufficient but their distribution is very uneven.
- The primary schools provided by Kanpur Nagar Nigam are quite far of from cantonment area and are mostly dilapidated and overcrowded. Due to which they are not used by residents of cantonment.

14.4 FINANCIAL ANALYSIS

The main source of income is from taxes such as house tax, water tax, conservancy tax (sewer/solid waste) and non-tax such as hoardings, lease rent etc. The total revenue collection in 2005-06 was 13.53 crore out of which revenue from tax and non-tax was 3.67 crore, octroi compensation from State Finance Commission is 1.86 crore and income from realisation under special acts is 54 thousand, revenue derived from property and powers apart from taxes and miscellaneous is 93 lakh, extraordinary and debt is 1.8 lakh.

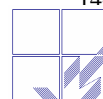
The total expenditure of Kanpur Cantonment Board in 2005-06 was 13.5 crore out of which 3.74 crore was spent on medical services and sanitation, 1.58 crore on public works, 70 lakh on public safety and convenience, 29 lakh on general administration, 17 lakh on collection of revenue, 67 thousand on public institutions, 1.1 crore on pension gratuity and annuities, 43 lakh on proceeds from water tax and rest was spent on payment to sinking fund and other miscellaneous expenses.

14.5 KEY ISSUES

Some of the issues, which need immediate attention, are:

- a) Acute Shortage of Water Supply
- b) Old and dilapidated dry type public group latrines
- c) Non-existence of sewerage infrastructure
- d) Damaged and congested roads
- e) Unpaved streets and lanes
- f) Broken service and large open main drains
- g) Lack of adequate education and medical facilities

All this has resulted into unhealthy and degraded environment in the densely populated civil areas.



CHAPTER 15:

VISION AND STRATEGIES

15. VISION AND STRATEGIES

The vision of a 'Resurgent Kanpur' is to build on its twin strengths of industrial base and knowledge base. This base combined with plans to build new world class townships around the old city, would act as a magnet to attract fresh investments and spur economic development.

The alumnus of IIT Kanpur and the students from the innumerable coaching classes who enter several competitive institutes including IAS are the intellectual wealth of our city which we should leverage. The leveraging of emotional ties is only possible if it is combined with good and healthy living conditions and an environment that is conducive to economic growth. The overall vision is

To make Kanpur a clean and healthy city with high quality infrastructure such as better roads, airport, and basic services so that it is recognized as a premier city of U.P. and an environment which attracts people and develops business. The government machinery should be efficient, effective, accountable and transparent by adopting customer oriented approach to improve confidence of entrepreneurs and encourage them to come forward for P-P-P schemes.

Kanpur will have a level of economic development wherein its people will have sufficient opportunities for growth and all have access to high quality infrastructure. Kanpur will be able to leverage on its proximity to the State's capital (Lucknow) and other advantages to attract new business opportunities in the city. Kanpur would also have a responsive and proactive city administration set-up that would provide effective redressal to citizens' problems and involve citizens in finding sustainable solutions to city's issues. The main objective is to enhance the current infrastructure status as infrastructure development leads to significant impetus for investment decision taken by an investor and inturn leads to sustainable economic growth.

The main focus is on two aspects.

- One, taking the maximum benefit of current positive factors such as locational advantage, availability of manpower, and proximity to markets/raw materia, support of state government for the city's development i.e. its decision to setup an integrated Special Economic Zone (SEZ) that will act as a magnate to fuel growth in the city, entrepreneurial spirit of large number of population, large pool of cost effective labour, various technical and research institutions, presence of a healthy working class, poorer sections of society (very active community development society groups) and administration/officials dialogue that serves as a platform to find sustainable solutions to city's problems and
- Secondly, removing the current bottlenecks which are leading to deterioration in the city management, by way of infrastructure



improvements and bringing reforms in urban management by making policy level changes.

15.1 STRATEGIES AND ACTION PLAN

Sl. No	Area	Strategies	Plan of Action
1	Demographic Issues	<ul style="list-style-type: none"> ➤ Provision of additional housing to meet the demand of growing population ➤ Decongesting the inner core city by growth on out skirts 	<ul style="list-style-type: none"> ➤ Faster development of proposed townships and housing colonies to meet the additional demand of housing and to decongest the inner city
2	Economic Development	<ul style="list-style-type: none"> ➤ Bringing improvement in law and order situation ➤ Improved infrastructure for industries ➤ Giving incentives to entrepreneurs for establishing an industry or carrying out trading activities ➤ Improving power supply ➤ State government's aggressive and promotional industrial policy and ensure its implementation 	<ul style="list-style-type: none"> ➤ Filling vacancies in Police Dept. at earliest and proper police patrolling so that law and order situation can be improved. ➤ Increasing the Power Supply and decreasing line losses in Power Distribution ➤ Provision of incentives such as rebate in sales and excise tax, cheap land, 24 hours power supply etc.
3	Land Use Development	<ul style="list-style-type: none"> ➤ Provision for improved services and facilities such as water supply, roads etc. ➤ Identification of parking lots and developing it on PPP basis ➤ Making arrangement 	<ul style="list-style-type: none"> ➤ Funding to be arranged for new infrastructure projects ➤ Parking lots identified and tendering process started ➤ widening of roads and provision of ROBs and flyovers during first phase



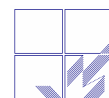
	<p>for loading and unloading platforms in most of the commercial and industrial areas.</p> <ul style="list-style-type: none"> ➤ Provision of more open spaces in high density built up areas ➤ Strict enforcement of rules regarding carrying out commercial activities and small scale industries from residential areas ➤ Increasing the area covered under road vis-à-vis traffic volume by widening of roads, removal of encroachment etc. ➤ Shifting of industries from non-confirming area to confirming area. ➤ Reduction in time taken in preparing the master plan and its Speedily approval ➤ Better connectivity to new markets and terminals to ensure its success. 	
<p>4 Housing</p>	<ul style="list-style-type: none"> ➤ Better linkage of new housing colonies/townships with old city ➤ Motivating residents of inner core city to shift to newly developed colonies. ➤ differential pricing 	<ul style="list-style-type: none"> ➤ Speedy land & infrastructure development for townships and housing colonies ➤ Arranging the fund for off-site development



	<p>policies for plots/ plotted houses used by H.I.G. /M.I.G. /L.I.G. for residential-cum-work purpose</p> <ul style="list-style-type: none"> ➤ Adoption of methods such as single window clearance, online facility ➤ Matching supply of EWS housing vis-à-vis demand ➤ Better connectivity of EWS/LIG area with main city 	
5 Slum Improvement		
<p>A) Physical and Social Infrastructure</p>	<ul style="list-style-type: none"> ➤ Improvement of roads, water supply, sanitation & street lighting etc. in those slums which are not covered under U.B.S.P. and N.S.D.P ➤ Those slums which will be cleared for development work should be properly protected. ➤ Rehabilitation of slum dwellers only in the nearest vacant area 	<ul style="list-style-type: none"> ➤ CDS should be actively involved in the infrastructure projects such as construction of brick roads, community toilet blocks, collection of solid waste etc. ➤ community toilets as per community need, proper design ➤ O&M should be laid in the hands of the Community ➤ Water facility should be positively provided round the clock ➤ If the land which slum dwellers are occupying is required for the development project, they will be removed and provided housing on alternate sites ➤ Relocation of slums



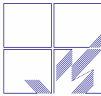
		will be in a planned manner keeping in mind their holistic development and by adopting consultative process.
B) Housing for EWS	<ul style="list-style-type: none"> ➤ multi-storey construction at selected slums ➤ house allotment on hire and purchase basis i.e. re-sale not allowed for 10 years ➤ liberal loan advancement 	<ul style="list-style-type: none"> ➤ in-situ development for ensuring the planned development of those slums and low income areas which are not required urgently for public purpose ➤ loans to improve their shelters, should be provided to improve quality of life. ➤ Five slums such as vijay nagar, kalwa mandi, dabouli west, juhi ambedkar nagar and ravidas vihar at jajmau will be taken up for model development on Pune model
6 Road and Transport	<ul style="list-style-type: none"> ➤ Introducing CNG buses and taxes for public transport ➤ Restriction of trucks and slow goods vehicle on main roads during peak hours ➤ Proper regulation of slow traffic system. ➤ Road surface improvements to improve the traffic movement and minimize the congestion. ➤ Private sector 	<ul style="list-style-type: none"> ➤ Cycle rickshaws should be banned on the main roads and highways ➤ Development of parking lot on PPP basis



	<p>participation for road improvement</p> <ul style="list-style-type: none"> ➤ Discouraging private vehicles usage by imposing parking fees and declaring busy areas and old city markets as vehicle free zone ➤ Removing encroachments over the roads ➤ Implement computerized signalling ➤ Involvement of CDS, community for awareness generation about traffic rules, safety rules etc. 	
<p>7 City Environment</p>	<ul style="list-style-type: none"> ➤ Heavy and medium size industries will not be allowed within the city limit. ➤ CNG based transport vehicle should be introduced in phased manner. ➤ vehicles responsible for air and noise pollutions will be phased out ➤ Strict regulation for not allowing poorly maintained tempos ➤ Identification of environmental hot spots such as poor air quality area etc. ➤ Decision makers in top policy making bodies like UP Jal Nigam and Pollution Control 	<ul style="list-style-type: none"> ➤ Preparation of Environment Resource Map to help in Planning Process ➤ No polluting vehicle would be allowed to ply on the road ➤ Projects that are earmarked for execution under GAP Phase-II should be taken up as per the timeline



	<p>Board and Kanpur Development Authority should work in tandem for implementing development projects</p> <p>➤ KESCO, KDA and Police should not issue licenses to industries with in the city limit.</p>	
8 Basic Services		
A Water Supply	<ul style="list-style-type: none"> • Reducing transmission and distribution losses with identification of illegal water connection and discourage public stand posts • Refurbish the old distribution system and leak detection study and UFW • upgrading the storage capacity of drinking water • providing 100% house service connections and metered supply to all houses 	<ul style="list-style-type: none"> • Carry out a study on sample basis and establish actual T&D losses, with steps to reduce losses • The leaky and old pipes in inner core area, which have outlived their life should be replaced • Inter-connect the three treatment plants so that surplus capacity of one can balance the shortfall in another system • Improve reliability of supply by providing larger storage at zonal pumping stations
B Sewerage	<ul style="list-style-type: none"> • Industries should be instructed strictly to treat their wastewater • Remedial measures such as trapping of the source, effective treatment and care of the piping system needs to be adopted • Renovation/replacement 	<ul style="list-style-type: none"> • Improve surveillance and compliance with pollution norms by industry • Renovate the sewers in the inner core area using trench less technology • Segregate sewers from the drains to avoid



<p>C. Solid Waste Management</p>	<p>of existing drains, which are old and in lived out stage.</p> <ul style="list-style-type: none"> • Renovation / repair / supplement of existing and old pumping stations • Regular sewer cleaning by adopting suitable methodology depending location and condition of Nalas and drains. • In densely populated areas, nalas need to be replaced by RCC conduit pipes for the purpose of security, hygiene and pollution control. • Proper solid waste disposal arrangement • Introduce door to door collection and introduction of ‘user charge’. • Outsource SWM including collection of user charge • Proper processing of waste by implementing source segregation • Public sector participation (PSP) for establishing suitable waste processing plant 	<p>contamination of drains</p> <ul style="list-style-type: none"> • Improve solid waste collection and removal, specially plastics to reduce choking and blockage of sewers • Study feasibility of decentralized sewer treatment plants to provide treatment in remote colonies • Introduce bin less collection in inner core area • Introduce transfer stations for improving efficiency and reducing operating costs • Outsource to RWAs and/or CDPs besides private contractors • Introduce segregation at composting plant
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<p>9. Institutional Framework and Reforms</p>	<ul style="list-style-type: none"> • Decentralization of authority to improve efficiency and reduce response time to citizens 	<ul style="list-style-type: none"> • Shift zonal offices to the respective zones • Revise authority schedule and give sufficient authority to zonal officers to solve problems on the spot • Reduce manpower in non-technical areas by computerization, e-governance, and by outsourcing bill collection. • Reduce surplus manpower by introduction of VRS
	<ul style="list-style-type: none"> • Stimulate the land and housing market to make housing sector an economic driver 	<ul style="list-style-type: none"> • KDA to prepare a time bound plan for development of new townships • Employ best town planners and architects to design new townships as model townships • Stimulate the market by involving private developers on the lines of Shara or ELDECO etc.



	<ul style="list-style-type: none"> • Improve transparency and accountability of KNN/KJS etc. 	<ul style="list-style-type: none"> • Set up an active complaints and grievance handling centre, under charge of a senior officer • Computerize most interfaces with the citizens such as bill payments, enquiries, submission of returns etc. to provide speedy service • Implement provision of RTI bill faithfully • Put up rules and procedures on web site and advertise the same to citizens
	<ul style="list-style-type: none"> • Strengthen Government-community interface by greater community participation 	<ul style="list-style-type: none"> • Involve citizens in a forum of “Resurgent Kanpur” with ex IITians, leading industrialists, NRIs of Kanpur region to partake in development schemes • Form a Stakeholder advisory body of experts and city leaders to advice KNN and GoUP on directions of development • Form and support active RWAs in all areas to assist in management of urban services • KNN to present its annual plans in workshops of citizens for suggestions



	<ul style="list-style-type: none"> • Budgetting for the poor 	<ul style="list-style-type: none"> • Cull out a subsidiary budget from the main KNN budget, to highlight the expenditure on provision of basic services to the poor
10 Strengthening of Municipal Finance	<ul style="list-style-type: none"> • Property tax reform 	<ul style="list-style-type: none"> • Modernization of property tax system by linking GIS and property data base • Reassessment of all properties on unit area basis • Improving rentals of municipal properties by amendment of Rent control Act and GoUP GOs • Introduce 'user charge' and outsource solid waste collection system Examine P-P-P in O&M of street lighting system.



	<ul style="list-style-type: none"> • Improving Financial management Systems 	<ul style="list-style-type: none"> • Change to accrual accounting • Account for fixed and immovable assets to strengthen the balance sheet • Put in place an asset management system to keep track of assets, their maintenance etc. Set up a strong MIS system with quantifiable targets set for each management level. Set up a monthly, quarterly and yearly review system • Introduce management by objectives
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CHAPTER 16:
FINANCIAL STATUS OF URBAN LOCAL
BODIES (ULBs) IN KANPUR

16. FINANCIAL STATUS OF URBAN LOCAL BODIES (ULBs) IN KANPUR

16.1 INTRODUCTION

In the development and smooth functioning of any city, there is, generally, more than one player, which plays the important role in the provision of efficient service delivery. The first and most important aspect is the identification of these major bodies of the urban centre. The second step is to make an evaluation and analysis of financial position of these agencies. This would help in assessing the sustainability in the development of the city.

In the case of Kanpur city, there are three important bodies who responsible for the overall development and smooth running of the city. These are:

1. Kanpur Nagar Nigam (KNN);
2. Kanpur Jal Sansthan (KJS); and
3. Kanpur Development Authority (KDA)

The KNN and KJS and mainly responsible for the provision of basic services to the city dwellers whereas the responsibility of KDA helping in the development of the city. In the era of decentralization, community participation has also assumed important role. However, here, we are focusing on the major responsibilities and financial status of these bodies above-mentioned bodies.

16.2 KANPUR NAGAR NIGAM

Under the provision of *Uttar Pradesh Nagar Nigam Adhiniyam*, (UP Municipal Corporations Law) the Municipal Corporations are responsible for the provision of basic needs and maintenance core services in the city. To meet the requirement for the provision of these services, these bodies are empowered to levy certain municipal taxes and fees. Similarly, the KNN is responsible for upkeep and maintenance of basic minimum civic services the city. It provides the basic municipal services to the city dwellers residing in the municipal limit. The KNN meets it financial requirements by generating the resources through taxation, rental income from the municipal properties (own income) and the transfers from the centre and the state (which are constitutional obligations of these higher level of governments).

The KNN is mainly responsible for the provision of basic services and not for the developmental activities (barring a few) in the city. The important services provided by the KNN includes: provision (maintenance) of good roads in the city, maintenance of streetlights, drainage and sewers, solid waste management, parks, gardens and the play grounds, basic educational and medical needs, provision of markets, cremation grounds, slaughter houses, and controlling the advertisement agencies.

For the purpose of analysis of financial status of KNN the basic data on income and expenditure are obtained from KNN through basic and revised budget documents for various years. The financial analysis of the KNN carried out in three accounts. On the income side, under the revenue account, the resources are generated through levying of various taxes and the rental income from municipal properties. The other two sources of income are capital and suspense accounts, which deals with the transfers (grants and contribution) from higher level of governments. Similarly, the expenditure is also divided into three major heads of revenue expenditure, capital expenditure and suspense account expenditure. The details of income-expenditure of Kanpur Nagar Nigam are indicated in Table 16.1 below.

Table 16.1: Revenue Composition of Kanpur Municipal Corporation (Rs lakh)

	Income	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
A	Revenue Account							
1	General Tax	880.12	1225.97	1700.00	1690.00	1605.68	2573.09	2800.00
2	Advertisement Tax	69.87	66.76	100.00	83.47	105.47	119.39	125.00
3	Tax on Cinema Hall	8.08	7.17	10.00	2.91	7.12	9.72	10.00
4	Total Tax Revenue	975.62	1358.56	1870.00	1776.38	1718.27	2702.20	2935.00
5	Income from Municipal Properties & other sources	391.88	347.44	2254.30	1129.67	1057.71	1207.72	2384.30
6	Water treatment drainage sanitation	9.83	3.75	26.50	6.27	5.98	5.39	6.50
7	Income under special Acts	5.09	7.13	8.50	5.08	4.94	8.33	8.50
8	Income from Interest on Investment	1.19	25.60	10.00	0.00	0.38	195.88	2.00
9	Grants and Contribution	5537.92	6166.25	8752.44	7183.63	7944.12	7127.39	9725.00
10	Miscellaneous Income	78.37	69.10	100.00	159.85	169.38	179.14	150.00
A	Revenue Account	6024.30	7977.85	13022.74	10260.88	10900.79	11426.05	15212.35
B	Total Capital Account	0.00	48.70	2000.00	0.00	0.00	0.00	0.00
C	Total Other Account Income (suspense)	586.87	684.37	170.00	384.37	221.59	188.08	190.00

Source Budget Documents of 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 (Original and Revised), Kanpur Nagar Nigam.

The income of KNN is presented under three heads of accounts, such as revenue account, capital account and other (suspense) account

16.2.1 Revenue account

Under the revenue account, the own revenue comprises of tax and not-tax sources. The major taxes levied by KNN are property tax (general tax), advertisement tax and tax on entertainment places (cinema halls etc).

16.2.1.1 Tax Revenue

The share of tax revenue in total income increased from 16% to 24% for the years from 1998-99 to 2003-04. However, the share has declined in 2004-05

to 19%. In absolute term, the tax income has gone up from Rs 98 million to Rs 294 million.

Property Tax

Amongst the important taxes, the major share comes from property tax. It contributes more than 95% in the total tax revenue. The share of property tax in total income of KNN was 15% in 1998-99 which has gone up to 23% by 2003-04, but declined to 18% in 2004-05. In absolute term, the revenue from property tax has increased from Rs 88 million to Rs 280 million. With the reforms package, such as shifting of assessment method from Annual Ratable Value (ARV) to Unit Area Method, reviewing of properties under exemption, Rent Controlled Properties, survey of all properties in the city, computerization of data base in various zones, as carried out by the KNN, the revenue from this source is expected to increase in future.

Other Taxes

The share of other taxes (advertisement tax and entertainment tax) was less than 10%. The contribution of tax on advertisement has declined from 7% to 4% during the period from 1998-99 to 2004-05. In rupee term the revenue from this source has increased from Rs 6 million to Rs 13 million. The tax on entertainment places (cinema halls) has increased marginally from less than one million to one million from 1998-99 to 2004-05.

16.2.1.2 Non- Tax Revenue

The non-tax revenue comprises of rental income from municipal properties, rent from *Nazul* land, interest and miscellaneous receipts. Amongst them, most important source is rental income from municipal properties. The contribution from this source in the non-tax revenue accounts for more than 96%. Its share in the total income was 7% in 1998-99, which has reached to 16% in 2004-05. The earnings from this source were Rs 39 million, which increased to Rs 238 million during 1998-99 to 2004-05. Assuming that the growth in population would lead to increase in demand for houses, considering such demand of real estate in view, the non-tax income expected to grow more in the coming years.

16.2.1.3 Transfers (Grants and Contributions)

In the post decentralization reform period and introduction of 74th Amendment, the transfers from the higher level of governments, both centre and state, has increased substantially. However, in the case of KNN, the transfers under the head of grants and contribution, accounted for 92%, but declined to 64% during 1998-99 to 2004-05. The amount transferred under this head was Rs 554 million, which further increased to Rs 973 million for the same period.

The total income under the revenue account was Rs 602 million in 1998-99, which have gone up to Rs 1521million in 2004-05. On the basis of assumption that the KNN would introduce the reforms in property tax and

other taxes, that the income under revenue head would likely to increase in the coming years.

16.2.2 Expenditure Account

16.2.2.1 Revenue Expenditure

Similar to income pattern, the expenditure is also accounted under three heads of revenue, capital and suspense. In total expenditure of KNN, the major share was spent on revenue account only, its share was 97% during 1998-99, which increased to 99% in 2003-04, but slightly declined to 94% in 2004-05. In absolute term the expenditure incurred under the revenue account in 1998-99 was Rs 715 million. In 2004-05, it has increased to the tune of Rs 1293 million (see Table 16.2). On the assumption that the expenditure may grow initially, but would come down because of many expenditure compression package (such as VRS, right sizing of staff strength, public-private partnership and the partially or wholly privatization of some the services) of KNN, which it would be introducing in the near future.

As the KNN has to provide various services related to education, medical and public health, O & M of street lighting, water supply and sewerage, parks and gardens, public works, roads, it has to incur a substantial amount of its earnings on the provision/maintenance of these basic needs. A large work force is also engaged for the purpose of revenue collection and the provision of these services.

Table 16.2: Expenditure Pattern of Kanpur Municipal Corporation (Rs lakh)

	Expenditure	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
A	Revenue Account Expenditure							
1	General Administration	221.23	267.62	282.13	292.88	299.35	351.19	340.00
2	Revenue Collection	288.99	327.24	383.50	367.07	376.71	409.26	405.00
3	Total General Administration & Revenue Collection	510.22	594.87	665.63	659.95	676.06	760.45	745.00
4	Sanitation	3306.20	3572.94	3922.00	3676.82	3883.67	4222.07	4506.00
5	Medical and Public Health	372.74	469.95	486.55	505.53	521.84	681.54	640.70
6	Public Safety/Public convenience:-	533.36	777.22	996.09	876.47	949.94	970.62	1847.75
7	Public Works (construction)	669.81	1469.09	1485.50	1815.71	1720.14	1237.90	2410.00
8	Higher Education/Other Education	453.35	551.61	578.50	704.83	659.66	796.13	710.50
9	Grants & Contribution	0.00	0.00	0.00	0.00	0.00	1282.15	1700.00
10	Total Refund	0.00	0.00	0.20	0.00	59.50	26.62	100.00
11	Other Expenditure	1080.96	1494.92	4421.36	2011.55	1155.23	2321.46	1732.70

A	Total Revenue Expenditure	7147.87	9198.23	12837.76	10543.74	9865.89	11341.36	12932.65
B	Capital Account Expenditure	2.95	648.26	302.00	1.99	337.35	0.75	552.00
C	Other Account (Suspense) Expenditure	228.21	91.98	141.00	96.12	127.60	78.38	206.00
	Total (A+B+C) Expenditure	7379.02	9938.48	13280.76	10641.86	10330.84	11420.50	13690.65

Source Budget Documents of 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 (Original and Revised), Kanpur Nagar Nigam

General Administration and Revenue Collection

In the total revenue expenditure, about 6% goes on General Administration and Revenue Collection. In that the share of General administration is slightly more than 2%, and about 3% is on revenue collection. The cost of property tax collection is high. On an average more than 3% of revenue expenditure is being spent on property collection. It is expected that after implementation of property tax reform package (such as out sourcing tax collection) by KNN, the cost of collection would decline in future.

Sanitation

For the clean and healthy atmosphere in the city, the upkeep and maintenance of cleanliness is very important. The KNN is responsible for the efficient delivery of this service to its citizens. In 1998-99, as percentage of total revenue expenditure, the maximum share (about 46%) was incurred in the provision of this service, which declined to 35% during 2004-05. The KNN is incurring more than 25% of revenue expenditure for the provision of wages and salaries to sanitation staff. Similarly, it is spending, on an average, more than 4% on petrol and diesel. It is expected that the under the JNNURM, the improvement in roads and addition of new roads would increase the fuel efficiency, and the expenditure under this head may reduce in the future.

Medical and Public Health

Amongst the major heads of expenditure about 5% of the revenue expenditure is being incurred for the provision of medical facilities. Of this, about 4% is incurred by way of wages and salaries/establishment. The absolute figures were Rs 32 million, Rs 64 million for the years 1998-99 and 2004-05 respectively.

Public Safety and Public Convenience

The expenditure on public safety and public convenience accounted for 7% in 1998-99, has gone up to 14% by 2004-05. Of this, the share of wages and salaries (establishment) is more than 2 % for the entire period. The maintenance of parks is one of the important components of this service. The KNN is spending more than 1 % of total revenue expenditure on this service. As practiced in some of the Municipal corporations such as Ludhiana Municipal Corporation and Udaipur Municipal Council, it is expected that KNN would involve business houses/industrial groups for the maintenance of

parks in the city. The supervision of maintenance parks can be done through community participation in the wards/*mohllas* etc. If this were implemented effectively, it would help in reduction of expenditure under this head.

Public Works (construction)

Though the KNN is not directly involved in the development and expansion of the city, still it undertakes the work of repair and maintenance of roads, government building etc. In 1998-99, its share in total revenue expenditure was a little less than 10%, which was continuously increasing and reached to 19% in 2004-05, except in 2003-04 when it has declined to 11 %.

Higher Education and Other Education

Of the total expenditure incurred (about 6%) on this service, almost all of it goes for the payment of wages and salaries (establishment). Under this head, the amount in 1998-99 was Rs 45 million that increased to Rs 71 million in 2004-05.

Other Expenditure

The share of other expenditure, comprising of miscellaneous expenditure for the development of councilors', nominated members' areas, expenditure on computer and stationery etc. accounted for 15% in 1998-99 and reached to 20% in 2003-04, but declined to 13% in the following year.

16.2.2.2 Capital and Suspense Account

As per the budget definition, the capital expenditure is generally meant for the capital (development) works in the city. As discussed earlier, the KNN is not directly involved in large capital works. For KNN, the capital works are the works carried out under water treatment, World Bank project, Ganga Action Plan, UPUDP, Indo-Dutch, Low cost sanitation and equipment for solid waste management. The works related to MPLADS are also accounted under Suspense account. On an average, the KNN is incurring expenditure to the tune of 4% of the total expenditure on capital and other works.

16.2.3 Surplus/Deficit of Kanpur Nagar Nigam (Exiting Scenario)

Based on the budget figures provided by the KNN, there was deficit under the revenue account for the years 1998-99, 1999-2000 and 2001-02. It was of the order of Rs 112 million, Rs 122 million and Rs 28 million respectively. For the year 2000-01 there was revenue surplus of Rs 18 million, which has increased to Rs 103 million and further to Rs 228 million for the years, 2002-03, 2003-04 and 2004-5 respectively. Except 2003-04, when there was a surplus of Rs 8 million only (see Table 16.3).

Table 16.3 Resource Gap of KNN (1998-2005) (Rs lakh)

Income	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05
Revenue Surplus/Deficit	-	-	184.98	282.87	1034.90	84.69	2279.70
Capital Surplus/Deficit	-2.95	-599.56	1698.00	-1.99	-337.35	-0.75	-552.00
Suspense Account Surplus/Deficit	358.66	592.38	29.00	288.25	93.99	109.69	-16.00
Total Surplus/Deficit	-767.85	1227.56	1911.98	3.39	791.54	193.63	1711.70

On the Capital account, there were deficits in all the years except 2000-01, which has witnessed a surplus of Rs 170 million. On the other hand, in the suspense account, except 2004-05 when there was a deficit of Rs 1.6 million, for the remaining period, this account was in surplus and varied in the range of minimum of Rs 3 million in 2000-01 to maximum of Rs 29 million in 2001-02.

In all, except for the beginning of two years, when there were deficits of Rs 77 million and Rs 123 million, for rest of the period, it has incurred surplus of highest of Rs 191 million in 2000-01 and the lowest just 0.3 million in 2001-02.

16.2.4 Important Issues of Kanpur Nagar Nigam

In addition to the analysis, the other important issues emerged during the discussions held with the officials of the Kanpur Nagar Nigam are as follows:

- Kanpur Nagar Nigam has an outstanding liability of approximately Rs.920.00million comprising of salaries, pension, Provident Fund Payments to the tune of Rs.800.00million (Provident Fund amounts deducted from the account of employees, have not been deposited since 1990. The amount outstanding as of date is Rs.250.00million; this amount is included in Rs.800.00 million).
- Outstanding payments against development works done is Rs.120.00million.
- Pension has not been paid for last 14 month and the amount against this works out to Rs.210 million.
- The monthly expenditure on Diesel and Petrol is around Rs.7.00 million which needs examination.
- As per the provisions of the 74th Constitution Amendment, giving clearance is a function of the Nagar Nigam, but in Kanpur, the Kanpur Development Authority is discharging this responsibility. Hence, the revenue from source has also goes to KDA.

16.2.5 Suggestion for Revenue Enhancement

- Reforms in Property Tax, i.e. completely shifting from ARV to unit area method;
- Assessment of all the properties of KNN;
- Reviewing of exemption under the property tax;
- Outsourcing the collection of Property tax;
- Effective Enforcement of property tax laws;
- Computerization of data base at all the Zones;
- Community participation in maintenance of service (such as parks etc.)
- Expenditure compression through VRS, right sizing of staff strength;
- Introduction of Public-Private-Partnership programmes in selected services;
- Wholly/partially privatization of selected services (such as cleaning/sweeping of roads etc)

16.3 UTTAR PRADESH JAL NIGAM

Though the provision of water supply and sewerage service is the main responsibility of the local government (Municipal Corporation), but in Uttar Pradesh, this responsibility is assigned to Uttar Pradesh Jal Nigam and Jal Sansthan. The Uttar Pradesh Jal Nigam is a State Level organization and is responsible for setting up water supply and sewerage infrastructure in various cities of Uttar Pradesh. After setting up the infrastructure the same is handed over to the city level Water supply & Sewerage Organization for Operations and Maintenance. In case of Kanpur, Uttar Pradesh Jal Nigam after setting up the water and sewerage system hands over the same to Kanpur Jal Sansthan for Operations and Maintenance.

Since the Uttar Pradesh Jal Nigam is a state level organization it will be difficult to analyze its financial status for the city of Kanpur separately. The UP Jal Nigam as such does not generate any revenue of its own. The operational and maintenance (O&M) of water supply and sewerage system is carried out by the Kanpur Jal Sansthan and it collects water tax, sewer tax, water charges and sewer charges. Therefore, it would be more meaningful to analyze the financial position of Kanpur Jal Sansthan than the UP Jal Nigam.

16.4 KANPUR JAL SANSTHAN (KJS)

In Kanpur, as mentioned above the Kanpur Jal Sansthan is responsible for the supply of water and provision of sewerage services to the city dwellers.

16.4.1 Financial Position of Kanpur Jal Sansthan

The main taxes/charges imposed by the KJS are: (a) water tax; (b) Sewer tax; (c) Water charge and (d) Sewer charge.

The basis of charging Water Tax, Water Charge, Sewer Tax and Sewer Charge is that both tax and charge are calculated and the higher of the two is charged from the consumer.

Water and Sewer Tax

The Water Tax and Sewer Tax are charged based on Annual Rental Value/Annual Ratable Value of the properties, as assessed by the Kanpur Nagar Nigam. The current maximum rate of tax is 12.5% for water and 4% for sewer. The water tax rate has been dropped from 14 % to 12.5% with effect from 1-4-2003.

Water Charges

The Water Charge on the other hand was fixed at a base price Rs.3.00 per kiloliter in December 1999 and the same is increased by 7.5% every year as per the Government order. The consumers are charged on the basis of water consumed as per meter reading. In case the meter is not working then the consumer is charged on the basis of minimum average consumption (It was informed that most of the water supply is not metered in residential areas. Only non-residential areas are connected through water meter.

Sewer Charges

The Sewer charge is fixed at 25% of the water charge or Rs.435/= per seat per year which ever is higher.

16.4.2 Revenue of Kanpur Jal Sansthan

Amongst the major sources of revenue for the KJS the water charge is very important. The share of water charge in total income in 1999-2000 was 53%, which declined to 51% during 2006-07. In absolute amount, it has gone up from Rs 76 million in 1999-2000 to Rs 181 million in 2006-07 (see Table 16.4).

The next important source is water tax. The revenue yield under this head has also become double from Rs 52 million to Rs 107 million. The percent share in total income declined from 37% to 30% for the same period.

The income from sewer charges has also gone down from 1.58 % to 1.34%, from 2003-04 to 2006-07. In rupee term it has increased to Rs 7 million in 2004-05 against Rs 4 million in previous year. However, it has declined to Rs 4 million in next year.

The other income is the compensation received against the electricity charges payment from the state government. It has increased from 1.95% in 1999-2000 to 4% in 2003-04, but gone down to 1.34 % in 2006-07. In rupee term, the compensation increased to Rs 10 million in 2003-04 against Rs 3 million in 1999-2000, but decreased to Rs 5 million in 2006-07.

Table 16.4 Finances of Kanpur Jal Sansthan (Million Rupees)

Description	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
Income								
Water tax	52.20	58.55	69.72	74.43	89.88	85.50	100.51	106.50
(% to total)	36.64	30.05	30.84	31.59	35.52	28.55	32.65	29.69
Water charge	75.66	110.45	120.90	122.25	124.06	154.86	173.56	181.28
(% to total)	53.11	56.68	53.48	51.88	49.03	51.71	56.37	50.54
Sewer tax	11.83	21.63	27.09	30.12	28.99	50.16	27.08	61.30
(% to total)	8.30	11.10	11.98	12.78	11.46	16.75	8.80	17.09
Sewer charge	-	-	-	-	4.00	6.96	3.95	4.80
(% to total)					1.58	2.32	1.28	1.34
Other Income	2.78	4.24	8.35	8.82	10.11	8.94	6.72	4.80
(% to total)	1.95	2.18	3.69	3.74	4.00	2.99	2.18	1.34
Total Income	142.47	194.87	226.06	235.62	253.04	299.46	307.87	358.68
Expenditure								
Establishment	132.63	161.18	170.94	182.22	175.73	191.04	217.8	230.80
(% to total)	87.74	86.95	81.64	82.00	78.96	53.64	59.18	55.47
Electricity	3.47	3.77	15.08	15.77	8.12	108.00	110.00	114.00
(% to total)	2.30	2.03	7.20	7.10	3.65	30.32	29.89	27.40
Consumables	6.35	12.04	11.89	11.94	14.58	19.42	23.95	25.00
(% to total)	4.20	6.50	5.68	5.37	6.55	5.45	6.51	6.01
Maintenance	7.63	6.85	9.89	10.64	22.36	34.70	39.1	42.40
(% to total)	5.05	3.70	4.72	4.79	10.05	9.74	10.62	10.19
Others	1.09	1.53	1.58	1.66	1.76	3.00	3.84	3.90
(% to total)	0.72	0.83	0.75	0.75	0.79	0.84	1.04	0.94
Total Expenditures	151.17	185.37	209.38	222.23	222.55	356.16	368.03	416.10
Surplus/Deficit	-8.70	9.50	16.68	13.39	30.49	-56.70	-60.16	-57.42

(Note) Expenditure for Establishment includes salary and wages.

Source: Kanpur Jal Sansthan.

16.4.2.1 Demand and Collection of Water and Sewerage (Collection Rate) Charges

As expressed in Table 16.5, collection rate for the two main items of revenue i.e. water tax /water charge and Sewer Tax/ Charge for the period 2003-04 to 2005-06 has been in the range of 85% to 94%. The rate has shown fluctuating pattern. From 2002-03 to 2003-04 it has declined whereas it has gone up in 2004-05 but later declined in 2005-06. The ideal recovery rate should be more than 95%.

Table 16.5 Demand and Collection of Water Charges (Rs Million)

Item	2002/03	2003/04	2004/05	2005/06
Demand for Water & Sewerage	270.33	294.53	299.48	332.66
Actual Collection	235.62	253.05	282.08	307.88
% Recovery	87.16	85.92	94.10	92.55

Source: Kanpur Jal Sansthan

16.4.2.2 Water Tariff

The Table 16.6 given below shows the Water Tariff per kiloliter for last five years. The high tariffs are levied on Industrial and commercial categories whereas on consumption it was lowest amongst all the categories of consumers. The increase in rates was more in Special Industry category. For the efficient delivery of this service, there is need to increase tariff on non-commercial consumers also.

Table 16.6 Tariff Rates of Water Consumption (in Rs /Lakh)

Year	Domestic	Special Industry	Commercial	Mixed	Govt. & Semi Govt.	Cantonment	Municipal
2002-03	3.45	18.40	11.04	6.67	6.67	5.52	3.68
2003-04	3.68	19.60	11.76	7.11	7.11	5.88	3.92
2004-05	3.90	20.80	12.48	7.54	7.54	6.24	4.16
2005-06	4.12	22.00	13.20	7.97	7.97	6.60	4.40
2006-07	4.35	23.20	13.92	8.40	8.40	6.96	4.64

Source: Kanpur Jal Sansthan

Special Industrial category includes Star Hotels, Other Hotels, Nursing Homes, Cold Storages, Ice and Ice cream factories, Bottling plants, Petrol pumps and Service stations.

However, as per the information provided by officials of the Kanpur Jal Sansthan the consumers of the Special Industry are not connected to Jal Sansthan water supply.

16.4.3 Expenditure Pattern of Kanpur Jal Sansthan

16.4.3.1 Establishment Charges

Similar to KNN, amongst the major heads of expenditure of KJS, the most important is the establishment. More than half of the expenditure goes in payment of the wages and salaries. In the beginning of period, from 1999-2000 to 2003-04, it was near 80% but declined to 54% in 2004-05, which again marginally increased in the following two years.

16.4.3.2 Expenditure on Maintenance and Consumables

The second important head of expenditure is the maintenance followed by consumables. The percent share of maintenance increased from 5% to 10% for

the entire period under consideration. The proportion of expenditure on consumables has gone up to 5% in 2004-05 against the figure of 4% in 1999-2000.

16.4.3.3 Electricity Expenditure

Electricity is the next major head of expenditure having a share of around 28%. The estimated expenditure is around Rs.114.00 million for the year 2006-07. It is clear that the Jal Sansthan is unable to pay its own electricity bill hence the same is paid directly by the State Government.

16.4.3.4 Other Expenditure

The expenditure on other head was less than one percent for the whole period.

16.4.4 Issues of Kanpur Jal Sansthan

- The increase in revenue is mainly due to the increase in tariff every year by 7.5% and as well as due to increase in number of connections
- Annual increase in tariff is having a negative impact on the revenue and connections.
- As per the survey conducted by the Jal Sansthan, there is not even a single Special Category consumer connected to the Jal Sansthan water supply. The rate under this category is approximately Rs.23/= per kilo liter.

It was also observed during the discussion with the official of Jal Sansthan that there is a lack of coordination between Kanpur Development Authority and Kanpur Jal Sansthan. The KDA does not inform KJS about the new projects, and by the time, KJS is informed about the development the demand for water and sewer is met out of a different source. Hence there is no gain in number of consumers.

There should be coordination between the departments in general and KNN, KDA and KJS in particular. This would not only enhance the efficiency in service delivery but also increase revenue collection.

Assumptions:

KJS is expected to mobilize more resources due to:

- (a) Improvement in water quality
- (b) Increase in water supply
- (c) With the renewed system and reduction in water leakage
- (d) Coverage of water connection would go up and also the water tax and water charges

Expenditure

- (e) As a result of improved system consumption of electricity would drop and accordingly its electricity charges would go down in the future

16.5 KANPUR DEVELOPMENT AUTHORITY (KDA)

As discussed in previous sections, the KDA is an important organization playing the crucial role in the overall development of city and its expansion. Therefore, it would be more useful to evaluate and analyse its financial position in detail. This would help in assessment of the financial support the KDA is expected to provide for JNNURM.

16.5.1 Revenue Account of KDA

The major source of revenue of KDA comprises of rent from lease and free hold, rent from the buildings, income from stamp duty, interest receipts, income from the building department against the regulation and approval of maps for the construction of building, shops and commercial complexes, from sale of different Forms (Application Forms etc), deduction from the deposits of allottees not taking the possession of land, and other sources such as, surcharge/fee on non-construction on the allotted land, registration of sale of various land and buildings etc. (see Table 16.7).

16.5.1.1 Revenue Receipts

Out of total income of KDA, the revenue receipts contributed about 46 percent in 1999-2000 but dropped over the period to 38% in 2004-05. In absolute term, it was Rs 359 million in 1999-2000, which increased over the period gone up to Rs 453 million in 2004-05.

Under revenue receipts, the major share of income comes from registration. Its contribution in total income has increased from 48% to 49 % from 1999-2000 to 2004-05.

The income from building department and infrastructure development fund contributed more than 10% in total income. The share of income from this source (building department) varied from 11 % (2003-04) to 17% (2000-01). On the other hand, the receipts under the infrastructure development fund fluctuated during the entire period. Its minimum share was 9% in 2003-04 whereas highest amount was 26% in 2002-03.

In the revenue receipts of KDA, the income from interest and fine on interest has also made substantial contribution. Its share varied in the range of 7% to 18% during 1999-2000 to 2004-05. The KDA is also earning from the other sources (sale of various Forms/Application/Tender Forms etc). In the total revenue receipts, its share fluctuated in the range of 10% (2001-02) to 19% in 2000-01.

Table 16.7 Financial Status of Kanpur Development Authority (Rs lakh)

I	Revenue Receipts	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06BE
1	Rent	131.24	125.91	97.78	171.24	106.43	99.18	163.00
2	Income from Stamp Duty (10%)	0.00	0.00	41.79	39.96	0.00	19.76	30.00
3	From Interest and fine on interest	266.01	281.76	317.64	394.09	476.78	441.01	482.00
4	Income from Building Dept	484.10	301.13	268.45	449.08	296.17	482.79	476.00
5	From sale of Forms/Documents	10.62	3.47	7.55	8.78	12.45	26.22	10.00
6	Income from Deduction from Instalments	8.24	5.76	2.29	4.71	7.12	4.46	10.00
7	Income from other sources	391.61	342.84	245.01	394.96	396.59	536.51	455.00
8	Income from Registration	1740.64	477.21	1014.94	886.71	938.45	2233.54	1500.00
9	Recovery of Loans	0.06	0.03	0.00	0.00	1.27	1.03	1.00
10	Miscellaneous Income	126.96	54.08	46.08	107.31	146.38	81.36	120.00
11	Infrastructure Development Fund	432.85	211.28	525.17	853.81	230.94	609.02	707.00
	Total Revenue Receipts	3592.33	1803.47	2566.70	3310.65	2612.58	4534.88	3954.00
II	Capital Receipts							
12	Sale of Land (Plots)	1629.25	1993.92	1665.41	1274.34	2463.84	3629.21	18948.00
13	Income from Sale of Buildings	2149.94	2434.05	2847.51	4013.40	3425.29	3137.60	5810.00
14	Deductions from Temporary Advance	133.30	2.39	17.75	539.62	8.18	0.44	10.00
15	Income from sale/auctions of old machinery	0.00	0.00	0.00	0.00	42.25	9.07	15.00
16	Loans	62.32	2533.09	0.00	0.00	0.00	0.00	12320.00
17	Grants	0.00	0.00	0.00	62.31	75.14	171.12	1.00
18	Income from Deposits	23.63	585.98	280.00	235.28	10.40	12.50	341.00
19	Recovery of advances from staff	24.97	35.55	33.15	34.96	34.07	33.21	40.00
20	Infrastructure Development Fund	203.43	235.09	165.17	146.03	80.75	331.49	450.00
	Total Capital Receipts	4226.84	7820.07	5008.99	6305.94	6139.92	7324.64	37935.00
	Total (Revenue+ Capital) Receipts	7819.17	9623.54	7575.69	9616.59	8752.50	11859.52	41889.00
	Opening Balance	3176.23	3629.67	6708.76	5167.77	7159.38	8716.51	11634.00
	Grand Total	10995.40	13253.21	14284.45	14784.36	15911.88	20576.03	53523.00

Source: Budget Documents of KDA for various years

16.5.1.2 Capital Receipts

In the total income of KDA, the contribution from capital receipts has increased over the period. The highest earning under this head was 81% in 2000-01, whereas the lowest income 54% received during 1999-2000. In absolute term the capital receipts contributed in the total income, Rs 423 million to Rs 732 million for the years from 1999-2000 to 2004-05.

Under capital receipts, the major source of income comes from sale of land and sale of buildings. Both put together accounted for 91% in 2004-05 against 26% in 2000-01. The earning from the sale of plots was Rs 162 million (1999-2000) which has gone up to Rs 363 million (2004-05).

The total income of KDA increased from Rs 782 million to Rs 1186 million from 1999-2000 to 2004-05.

16.5.2 Expenditure pattern

In the total expenditure of KDA, the expenditure under revenue head accounted for about one third whereas under capital head it varied from 65% to 74%.

16.5.2.1 Revenue Expenditure

Similar to KNN and KJS, the major head of revenue expenditure is 'wages and salaries' paid to its employees. It accounted for more than fifty percent. The other important heads of expenditure are refund of deposits and miscellaneous expenditure. These both put together contributed about 50% in the revenue expenditure. In absolute amount, it was Rs 124 million increased to Rs 145 million for the wages and salaries.

16.5.2.2 Capital Expenditure

In the capital expenditure, the major heads were development works, construction works, repayment of loans and interest payments. The share of development works declined from 58% to 35%. Similarly, on construction works, it has decreased from 6% to 3% for the period under consideration (1999-2000 to 2004-05). The expenditure on repayments of loans has increased from 13% to 22%. The expenditure on infrastructure development works undertaken under the World Bank project has gone up from merely less than one percent to 8% during the entire period.

16.5.3 Surplus/Deficit of KDA finances

Under the revenue head, it has generated surplus for all the years, except 2000-01, when the deficit was to the tune of Rs 50 million. The surplus amount varied from minimum of Rs 11 million in 2003-04 to highest figure of Rs 172 million in the following year of 2004-05.

On capital account, there was deficit for the years 1999-2000, Rs 67 million and Rs 177 million in 2001-02. The surplus generated under this account

varied in the range of Rs 120 million in 2004-05 against the highest amount of Rs 358 million for the year 2000-01.

In overall, the KDA has generated surplus of Rs 45 million in 1999-2000, to Rs 308 million in next year. The deficit year was 2001-02 when it has incurred a deficit of Rs 154 million.

16.6 OVERALL ISSUES AND THE STRATEGIES

Issues

- Efficient service delivery to the existing and future population;
- Resource mobilization by all the stakeholders for meeting financial requirements

Strategies

- Reforms in existing taxation system (property tax and other taxes)
- Expenditure compression
- Public-private partnership
- Privatization of selected services
- Community participation
- Good governance

16.7 REFORMS AND ITS IMPACT ON FINANCES OF ULBS

In the above sections, the financial positions of KNN, KJS and KDA have been analyzed. As proposed, the KNN and KJS would improve their efficiency and enhance their fiscal health by adoption of certain measures related to the reforms in resource mobilization and expenditure compression. The following assumptions, as suggested, would help in overall improvement in the finances of KNN and KJS.

16.7.1 Assumptions related to KNN

The KNN would mobilize its income by introducing certain reforms measures. In doing so, it would consider the above-mentioned assumptions (Table 16.8). The major amongst them for resource mobilizations are: reforms in property tax, its coverage and reviewing of assessment. It would also introduce new levy, such as betterment levy and user charges. On the expenditure side, the KNN would increase its efficiency by reduction in fuel cost and maintenance cost. The introduction of e-governance would save on account of surplus manpower.

The following assumptions would be adopted by the KNN, which would help in the overall improvement of its financial position.

Table 16.8: Assumptions for Revenue Mobilization of KNN.

Revenue Mobilization		
1	By improved coverage of Property tax	By converting 2 lakh properties from ARV to Unit Area System
2	By new properties constructed every yr	New properties @ 12,000 properties p.a., each at average of Rs 800 p.a.
3	By review of area wise rates to align them in line with changing scenario	This review will result in an increase of property tax @ 10% p.a.
4	By introduction of user charge in SWM	By door to door collection. user charge @ Rs 30 p.m., 50,000 households added p.a.
5	By Reviewing of Exempted Properties	By reassessment of 20,000 exempted properties having ARV below Rs 360/-
6	By introduction of betterment tax	A betterment tax @ 5% of property tax is proposed for benefits from improved infrastructure
Reduction in expenditure of KNN		
7	Reduction of fuel cost in SWM by trf. Stations and new fuel efficient vehicles	The Kms run will be reduced by 20%, fuel efficiency will improve 25% (4 km/l instead 3 km/l)
8	Reduction in maint. cost by replacement of SWM fleet	Ageing fleet to be replaced by new, will reduce maintenance costs 30%
9	Savings in electricity costs by P-P-P of street lights	Metering, shutting lights on time and better maintenance by P-P-P
10	Savings in manpower costs by e-governance	Reduction of non-technical staff by computerization & VRS by 10%
11	Savings by outsourcing bill collection	Reduction of bill collectors and costs by outsourcing and VRS of 25%
12	By abolishing surplus posts in technical and unskilled labour	A reduction of 340 numbers has been identified

16.7.1.1 Impact on Fiscal Health of KNN

With the introduction of certain reforms measures with respect to resource mobilization and expenditure compression, financial status of KNN would likely to improve in the future. The monetary impact based on the above-mentioned assumptions would enhance the finances of KNN, which is expressed in the Table 16.9 below.

Table 16.9: Impact of reforms on KNN -(Ph-I) (Rs Crore)

S. No	Item	Improvement	2006-07	2007-08	2008-09	2009-10	2010-11
1	Improvement in property tax	various	8.09	12.00	16.30	21.03	26.24
2	User charges for SWM	Rs 30 pm	1.80	3.60	7.20	10.80	14.40
3	Reduction of SWM costs	20%	0.16	1.46	1.93	2.40	2.81
4	PPP in streetlights	15%	0.08	0.15	0.30	0.36	0.45
5	Savings by e-governance	10%	0	0.19	0.37	0.56	0.75
6	Abolition of surplus posts	340 no	0.61	0.92	1.22	1.22	1.22
7	P-P-P in bill collection	25%	0.20	0.40	0.61	0.81	1.01
	Total		10.94	18.72	27.93	37.18	46.88

As indicated in the table above, on revenue account, the KNN would be likely to earn revenue from improvement in property tax to the tune of Rs 26.24 crore by end of Phase-I. It expected to raise another Rs 14.40 crore from introduction of user charges for Solid Waste Management. On expenditure compression, there would be likely saving of Rs 2.81 crore on account of reduction of SWM costs. It further, expected to save of the order of Rs 0.45 crore and Rs 0.75 crore on account of Public Private Partnership in street lights and savings by e-governance. The abolition of surplus posts would save an amount of Rs 1.22 crore. And lastly, PPP in bill collection would yield Rs 1.01 crore to the KNN. In total, it is expected that the KNN would raise Rs 46.88 crore by way of revenue mobilization and cost savings by during 2010-11.

16.7.2 Assumptions related to KJS

The followings assumptions proposed to be adopted by KJS to enhance resources on account of resource mobilization and expenditure compression. The assumptions detail is presented in Table 16.10.

Table 16.10: Assumptions for Resource Mobilization of KJS

S.N.	Item	Assumptions
1	By improved coverage of properties	Water and sewerage tax is linked to property tax, property revaluation by KNN will improve water tax
2	By increased number of connections	With improved pressure and reliability, more households will take connections
3	By introduction of metering	Metering will charge heavy users on consumption basis
4	By savings in power due to reduced losses	Losses will be reduced by renovation of leaky pipes in the inner core area
5	Savings in manpower due to renovation of sewers	Maintenance cost will come down with renovation
6	Savings in repairs costs due to renovation of leaky pipes	Maintenance cost will come down with renovation

The KJS is likely to yield more income by way of improvement in water tax. As the water and sewerage tax are linked to property tax and the revaluation of property tax would enhance the revenue from water tax. Another source of revenue increase is due to increase in number of water connections. The consumption of water by the heavy users would be caught by metering of water connections. In term of cost savings, it is likely to come down with the renovations of leaky pipes etc.

16.7.2.1 Impact on Income Generations of KJS

The major impact on the finances of KJS would be due to reduction in leakage, introduction of user charges, increase in number of water connections and the improvement in water and sewer tax. The yearly details are given below in Table 16.11.

Table: 16.11 Impact of Reforms on KJS Finances (Rs Crore)

S.N.	Item	2006-07	2007-08	2008-09	2009-10	2010-11
1	Increased income by reduced leakages in inner core area	0.00	2.04	4.59	8.68	10.21
2	Introduction of user charge for treating waste water	1.00	3.32	9.72	18.36	21.60
3	Additional revenue by increasing connections	1.20	1.20	1.20	1.20	1.20
4	Improvement in water & sewer tax	4.05	6.00	8.15	10.52	13.12
	Total improvement	6.25	12.56	23.67	38.75	46.13

At the end of Phase-I (by 2010-11), the KJS is expected to raise its resources, by total improvement, to the tune of Rs 46.13 crore. The major chunk is likely to come from user charges, Rs 21.60 crore. The reduction of leakage and increase in number of connections would earn about Rs 10.21 crore and Rs 1.20 crore respectively.

The strategies proposed to be adopted by all the stakeholders for the implementation of various selected projects under JNNURM is discussed in the next chapter on 'Financing of Investment Plan and Project Phasing'.

CHAPTER 17:
FINANCING OF INVESTMENT PLAN AND
PROJECT PHASING

17. FINANCING OF INVESTMENT PLAN AND PROJECT PHASING

17.1 INTRODUCTION

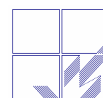
For the development of any city, huge investment is required to undertake many multiyear projects. There would be different sectors needs to be expanded. The most important aspect is to prioritize the development of sector and accordingly the investment. The many stakeholders do the identification of these priorities. The next step after identification is the scheduling or phasing of development and investment plan. This would be mainly dependent on the availability of fiscal resources with the stakeholders. In the total investment, in addition to the new investment for any project the cost of operational and maintenance (O&M) is very important. Therefore, while planning for the new investment, the O&M cost should also be included in the total project cost. This would enhance the sustainability of the project and would add to fiscal resources availability for the development project. After fiscal availability, the technical capacity for the development of old areas as well as new expansions needs to be looked into. The scheduling to total plan and its investment should be done very carefully. The scheduling or phasing of development plan required as per the JNNURM period.

For scheduling of CDP of Kanpur, the main stakeholder, the Kanpur Nagar Nigam (KNN) has initiated the following steps:

1. It has discussed with many stakeholders the norms and standard of infrastructure presently existing and the availability of resources for renewal, replacement and improvement of old system as well as for development of new infrastructure for the added population in the long term requirement of the city and newly expanded areas of the city.
2. The identification of the priority sectors has also been discussed with all the stakeholders.

For the long-term financial strategy the KNN along with its stakeholders plans to mobilize resources through various sources such as:

- (A). Availability of resources in the present financial position of all the stakeholders;
- (B). Funds provided by State government in the form of grants to its line departments, are also important for the stakeholders;
- (C). Reform package to be under taken by the KNN for resource mobilization and expenditure compression. These include:
 - (i.) reform in existing system of property taxation, by completely shifting from the present ARV method of assessment to the new unit area method;
 - (ii.) complete assessment of all the properties;



- (iii.) reviewing the exiting exemptions granted to the property owners;
- (iv) computerization of data base at zonal offices and head office of KNN;
- (v.) right sizing of the staff and redeployment of surplus staff;
- (vi.) introduction of public-private partnership programmes;
- (vii.) introduction of community participation in maintenance of parks etc.;
- (D) Fund devolved by State Finance Commission to the KNN;
- (E) Fund transferred by the Central Finance Commission;
- (F) Revision of water and sewerage charges at specific interval by Kanpur Jal Sansthan;
- (G) Improvement in the collection performance of local taxes and charges;
- (H) Saving on the front of terminal benefits and liabilities of the out going employees based on VRS;

17.1.1 Scheduling or Phasing Principles

The old developed areas (inner old city of Kanpur) receiving priority over the new development area in long term;

Forward and backward (inter-linkages) linkages between inter and intra-service (for instance, investments on water supply shall be complemented by improvement in the existing sewerage/sanitation programmes;

Linkages between the supply and demand of services and the revenue generation;

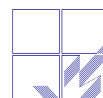
Under the JNNURM, the capital investment plan and identification of public capital facilities is done to cater the demand of increasing population of city in the years 2011 and 2031. The investment plan would be scheduled / phased as per the requirement under these two periods.

In the city's management process and its sustainability of provision of the basic services, the capital investment plan is most important and crucial element.

The capital investment is required because of:

- (a) Five yearly phasing of assessment of city's growth and the requirement of infrastructure need of the increased population;
- (b) For new projects the Detailed Project Reports would be prepared;
- (c) Rescheduling of investment on old projects due to overrun of project cost/time factors;
- (d) Assigning of priority within the financial constraints of the available resources;

Therefore, the basic objectives of the capital plan would be:



Mobilization of capital resource that sustain the present population and added population of the city.

Since in the development of city, the community participation has assumed great importance, hence capital facilities of the city should be considered as community assets.

17.2 CAPITAL INVESTMENT PLAN AND FUTURE STRATEGIES

17.2.1 Identification of Priority Projects

The projects have been identified with the help of all the stakeholders and after many rounds of detailed discussion on availability of resources; phasing of investment plans; and the role and involvement of each stakeholder in the development plan for the present and future added population of Kanpur. The KNN has identified the projects based on efficient and optimal use of existing infrastructure facilities and the modernization of core and prioritized sector.

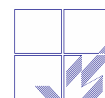
17.2.2 Priority Sector

- 1 Improving transport infrastructure including improving trunk Roads
- 2 Improving solid waste management both in the inner core and outer city
- 2 Redevelopment of inner core city including shifting of industries to conforming areas
- 3 Renovating old/broken water pipelines resulting in contaminated water
- 4 Repair / rehabilitation of broken sewerage / sewerage connected to drains
- 5 Redevelopment of slums according to Bombay Model
- 6 Improving basic services in Slums
- 7 Housing for the EWS

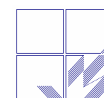
The projects-wise/sectors-wise investment plan prepared by the KNN with all the stakeholders is present in the Table 17.1.

Table 17.1: Project-wise Investment Plan (2006 -31)

(Rs crore)										
S. No.	Name of the Work in Plan	Name of the Planning Department	2006-07	2007-08	2008-09	2009-10	2010-11	Total Proposed cost Ph-I	Balance Phase-II (2011-2031)	Total (2006-2031)
1	Sub-Mission-I: Urban Infrastructure Renewal of inner (old) city									
1a.	Widening of roads, including drains and footpaths	KNN	50	55	61	59	77	303	0	303
1b.	Industrial/ Commercial confirming									



	Establishment of non area to convert Confirming area	UPSIDC	70	86	100	100	70	426	193	619
1c.	Old water supply pipe line / low in									
	Capacity pipe line to convert into high capacity pipe line	JAL Nigam	77	69	61	62	51	319	225	544
1d.	Modernization in Sewerage line	Jal Nigam	44	79	60	39	39	262	207	469
1e.	Modernization in Drainage	Jal Nigam	1	2	2	1	0	6	0	6
1f.	Solid waste Management									
	Construction of modern dustbins & equipment	KNN	9	4	1	1	1	15	0	15
	Inner City Sub Total		251	295	286	262	238	1332	625	1957
2	Water supply	Jal Nigam	0	0	0	0	0	0	469	469
3a.	Sewerage	Aawas Vikas	6	11	5	5	0	27	0	27
3b.	Sewerage	Jal Nigam	1	2	1	0	0	4	3593	3597
4	Solid Waste Management	Nagar Nigam Aawas Vikas	11	13	11	6	2	43	562	605
5	Construction and Repair Drains/ raining drains	Jal Nigam Aawas Vikas	34	35	35	34	34	172	0	172
6	Urban Transport	UP Parivahan Nigam	4	7	3	0	0	14	0	14
7a.	Improvement of roads under KNN	KNN	31	43	43	25	34	175	0	175
7b.	Widening and improvement of main corridor roads of city	KDA	110	150	156	201	152	768	492	1260
7c.	Construction of ring road and expressway	KDA	22	26	34	10	31	123	0	123
7d.	Construction of bridge over ganga	KDA	5	20	25	25	25	100	0	100
7e.	Construction of ring road and Express highways	KDA	0	0	0	0	0	0	469	469
8a.	Development of Parking Areas	KNN	0.84	0.46	0.46	0.46	0.46	2.68		2.68
8b.	Parking space /plot (PPP basis)	KDA	4	4	4	2	1	14	0	14
9	Development of social infrastructure	KNN/Tourism/ Archeology	0	4	7	4	0	15	0	15
9a.	Preservation of water Bodies	Irrigation/Bar rage const	2	4	5	2	3	15	0	15
9b.	Improving environment	CSA	1	2	2	2	1	8	0	8
	Lake and green belt									
	Sub-total (KNN)	Sub Total-I	481	609	607	575	521	2793	5740	8538
	Kanpur Cantonment Board (KCB)									
1	Improving road infrastructure	KCB	1	1	1	2	2	8	0	8
2	Reducing traffic congestion by Rail	Bridge Corporation	0	5	10	5	0	20	0	20
3	Modernization of Solid waste	KCB	0	0	0	0	0	1	0	1



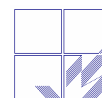
4	Renovation of sewerage system	KJN	0	1	1	2	0	4	0	4
5	Development of social infrastructure	KCB	1	1	1	0	0	3	0	3
	Sub-Total-KCB		2	9	13	9	2	35	0	35
	Sub-Total KNN and KCB	Sub-total	483	618	621	584	523	2828	5740	8573
Submission-II		Basic Services for Urban Poor								
	a) Development of infrastructure as well as construction of EWS Housing in existing malin bastis.	DUDA	15	17	14	18	12	77	173	250
	b) construction of EWS houses for the poor in new colonies									
	i) in new colonies by DUDA or KDA/UPHB on behalf on DUDA	UP housing Board	1	1	5	8	9	24	250	274
	ii) by KDA		65	100	174	174	127	640	0	640
	iii)in new colonies by U.P.H.B and infrastructure development 6480 in 1st phase and 43,200 in 2nd		2	7	74	71	66	220	2835	3055
	Sub- Total (Sub-Mission-II)	Sub Total-II	83	125	267	271	213	960	3258	4218
	Grand Total (I+II)	Grand total	566	743	888	855	736	3789	8998	12791

As per the information provided by KNN and all the stakeholders for the provision of basic infrastructure/services to the existing city population and the future estimated population of KNN by the year 2031, the total capital investment requirement estimated at Rs 12791 crore. This is proposed to be phased in two phases, i.e. in Phase I, the requirement would be of Rs 3789 crore at the constant prices and the balance investment of Rs 8998 crore in Phase II.

The summary of sector-wise tentative investment requirements and sector-wise tentative investment for next 25 yrs is depicted in **Tables 17.2**. Some part of this investment is earmarked for the development of inner city revitalization, restoration of heritage structures relocation of industries and markets.

Table 17.2 - Sector-wise Tentative Investments (2006-2031)

S. No	Description	(Rs crore)	(%)
1	Re-Development of inner city	1957	15.29
2	Augmenting water supply	469	3.66
3	Extending sewerage	3624	28.33
4	Improving solid waste management	605	4.73
5	Construction/improvement of drains	172	1.34



6	Improving roads, RoBs, Flyovers, Urban Transport	1671	13.06
7	Development of parking lots	17	0.01
8	Water bodies/Ganga barrage	15	0.01
9	Development of social infrastructure	22	0.02
10	Basic Services for Urban Poor	4218	32.98
11	Kanpur Cantonment Board Dev.	35	0.27
	Total	12791	100.00

In the total identified projects the about 28.33% is proposed for extension of sewerage works. Another 3.66% is for augmenting water supplies. It includes conversion of old and low capacity water supply pipelines to new high capacity pipelines.

The second important sector is Re-development of inner city. About 15.29% of the total investment is proposed for this sector. The widening of narrow roads drains and pavement would be undertaken in the inner (old) city areas.

The next identified sector is about the improvement of roads, RoBs, Fly-overs, and the Urban Transport. On this sector it proposed to invest nearly 13.06 % of the total investment.

The improvement in municipal solid waste management has assumed significant importance, particular after the Supreme Court Judgment, which directs all the ULBs for improvement in solid waste management, about 4.96 % of the total investment is proposed for the improvement in his sector.

For the urban poor, the proposed amount works out to 32.98% of the total investment.

A very small proportion (0.27%), has also been earmarked for the proposed developmental activities in the area of the KCB.

Considering the priorities and the immediate requirements, the KNN along with its stakeholders, has worked out the phasing of capital investment. The sector-wise detailed investment total (for centre, state and local) and local share for each sector for the five years, i.e. 2006-07 to 2010-11 is presented in **Tables 17.3 (a) and 17.3(b)**. The investment on these prioritized sectors would be able to meet the requirements of the estimated population up-to the year 2010-11.

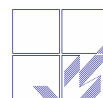
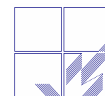


Table 17.3(a) : Project -wise Investment Plan (2006-11) Summary

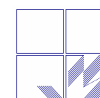
S. No.	Name of the Work in Plan	Name of the Planning Department	2006-07	2007-08	2008-09	2009-10	2010-11	(Rs crore)	
								Total Proposed cost Ph-I	% share
Sub-Mission-I: Urban Infrastructure									
1	Renewal of inner (old) city								
1a.	Widening of roads, including drains and footpaths	KNN	50	55	61	59	77	303	8.00
1b.	Industrial/ Commercial confirming								
	Establishment of non area to convert Confirming area	UPSIDC	70	86	100	100	70	426	11.25
1c.	Old water supply pipe line / low in								
	Capacity pipe line to convert into high capacity pipe line	JAL Nigam	77	69	61	62	51	319	8.42
1d.	Modernization in Sewerage line	Jal Nigam	44	79	60	39	39	262	6.92
1e.	Modernization in Drainage	Jal Nigam	1	2	2	1	0	6	0.16
1f.	Solid waste Management								
	Construction of modern dustbins		9	4	1	1	1	15	0.40
	Inner City Sub Total		251	295	286	262	238	1332	35.16
2	Water supply	Jal Nigam	0	0	0	0	0	0	0.00
3a.	Sewerage	Aawas Vikas	6	11	5	5	0	27	0.71
3b.	Sewerage	Jal Nigam	1	2	1	0	0	4	0.11
4	Solid Waste Management	Nagar Nigam Aawas Vikas	11	13	11	6	2	43	1.14
5	Construction and Repair Drains/ raining drains	Jal Nigam Aawas Vikas	34	35	35	34	34	172	4.53
6	Urban Transport	UP Parivahan Nigam	4	7	3	0	0	14	0.37
7a.	Improvement of roads under KNN	KNN	31	43	43	25	34	175	4.61
7b.	Widening and improvement of main corridor roads of city	KDA	110	150	156	201	152	768	20.28
7c.	Construction of fly overs and ROBs	KDA	22	26	34	10	31	123	3.24
7d.	Construction of bridge over ganga	KDA	5	20	25	25	25	100	2.64
7e.	Construction of ring road and Express highways	NHAI							
8a.	Development of Parking Areas	KNN	1	0	0	0	0	3	0.07
8b.	Parking space /plot (PPP basis)	KDA	4	4	4	2	1	14	0.38
9	Development of Social Infrastructure	KNN, Tourism, Arch.	0	4	7	4	0	15	0.40
9a.	Preservation of water Bodies	Irrigation/Barrage, CSA	2	4	5	2	3	15	0.39
9b.	Improving environment and development of lake and green belts	KNN	1	2	2	2	1	8	0.21
	Sub-total (KNN)	Sub Total-I	481	609	607	575	521	2793	73.72
	Kanpur Cantonment Board (KCB)								



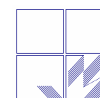
1	Improving road infrastructure	KCB	1	1	1	2	2	8	0.20
2	Reducing traffic congestion by Rail	Bridge Corporation	0	5	10	5	0	20	0.53
3	Modernization of Solid waste	KCB	0	0	0	0	0	1	0.03
4	Renovation of sewerage system	KJN	0	1	1	2	0	4	0.09
5	Development of social infrastructure	KCB	1	1	1	0	0	3	0.08
	Sub-Total-KCB		2	9	13	9	2	35	0.93
	Sub-Total KNN and KCB	Sub-total	483	618	621	584	523	2828	74.65
Submission-II		Basic Services for Urban Poor							
	a) Development of infrastructure as well as construction of EWS Housing in existing malin bastis.	DUDA	15	17	14	18	12	77	2.04
	b) construction of EWS houses for the poor in new colonies								
	i) in new colonies by DUDA or KDA/UPHB on behalf on DUDA	DUDA	1	1	5	8	9	24	0.63
	ii) by KDA	KDA	65	100	174	174	127	640	16.88
	iii) in new colonies by U.P.H.B and infrastructure development 6480 in 1st phase and 43,200 in 2nd phase	UP Housing Board	2	7	74	71	66	220	5.81
	Sub-Total (Sub-Mission-II)	Sub Total-II	83	125	267	271	213	960	25.35
	Grand Total (I+II)	Grand total	566	743	888	855	736	3789	100.00

Table 17.3 (b) : Sector-wise Cost of Project Allocation- City Share

Sub-mission: I Urban Infrastructure		(Rs Crores)						
Scheme	Department	2006-07	2007-08	2008-09	2009-10	2010-11	Total	(%)
1. Urban Renewal Redevelopment of Inner (Old) city								
(a) Widening of Roads (Roads, Drainage, Pavement)	KNN	15	17	18	18	23	91	7.98
(b) Shifting of Industries from non-confirming to confirming areas	UPSIDC	21	26	30	30	21	128	11.21
(C) Replacement of Old Pipe and low capacity pipe line to new and more capacity pipe line	Jal Nigam	23	21	18	19	15	96	8.39
(d) Renewal of Sewer lines		19	24	18	12	12	84	7.36
(e) Renewal of Drainage	Jal Nigam	0	1	1	0	0	2	0.16
(f) Solid Waste Disposal System	KNN	3	1	0	0	0	5	0.40
2. Water Supply	Jal Nigam							0.00
3.(a) Sewerage	Awas vikas	2	3	2	2	0	8	0.71
3(b) Sewerage	Jal Nigam	0	1	0	0	0	1	0.11
4 Solid Waste Management	KNN&HB	3	4	3	2	1	13	1.14



5 Repair & Improvement of Storm water drainage	JN&HB	10	11	10	10	10	52	4.52
6 Urban Transport	UPSRTC	1	2	1	0	0	4	0.37
7 (a) Road Construction (I)strengthening of roads	KNN	9	13	13	8	10	52	4.59
(b) Renewal of City corridor	KDA	33	45	47	60	46	231	20.21
(c) 3 flyovers, big crossing etc.	KDA	7	8	10	3	9	37	3.23
(d) Construction of Over Bridge on River Ganges	KDA	2	6	8	8	8	30	2.63
(e) construction of ring road and expressway	NHAI	0	0	0	0	0	0	0.00
8 (a) Development of (a)Parking Areas	KNN	0	0	0	0	0	1	0.07
(b) Parking Lot/Space Based on PPP	KDA	1	1	1	1	0	4	0.37
9. Development of Heritage area	KNN,Tou,Ar	0	1	2	1	0	5	0.40
9 (a) Preservation of water Bodies	Dept of Arch	1	1	1	1	1	3	0.26
(b) Development of a water Bodies	Dept of Irrigation	0	0	1	1	0	2	0.20
Sub-Total (KNN)	Total	150	183	182	172	156	842	73.81
Kanpur Cantonment Board (KCB)								
1. Improving road infrastructure	KCB	0	0	0	1	1	2	0.20
2. Reducing traffic congestion by Rail	Bridge Corporation	0	2	3	2	0	6	0.53
3. Modernization of Solid waste	KCB	0	0	0	0	0	0	0.03
4. Renovation of sewerage system	KJN	0	0	0	0	0	1	0.09
5. Development of social infrastructure	KCB	0	0	0	0	0	1	0.08
Sub-Total (KCB)	Sub-Total	1	3	4	3	1	11	0.93
Sub-Total (KNN and KCB)	Sub-Total	150	185	186	175	157	852	74.74
Sub –Mission :II Basic Services for Urban Poor								
a) Development of infrastructure as well as construction of EWS Housing in existing malin bastis.	DUDA	5	5	4	5	4	23	2.03
b) construction of EWS houses for the poor in new colonies								
i) in new colonies by DUDA or KDA/UPHB on behalf on DUDA	DUDA	0	0	2	2	3	7	0.63
ii) by KDA	KDA	20	30	52	52	38	192	16.82
iii)in new colonies by U.P.H.B and infrastructure development 6480 in 1st phase and 43,200 in 2nd	UP housing Board	1	2	22	21	20	66	5.78
Sub-Total (Sub-Mission-II)		25	38	80	81	64	288	25.26
Grand Total (Sub-mission-I & II)		175	223	266	257	221	1141	100.00



17.3 URBAN INFRASTRUCTURE DEVELOPMENT

Sub-mission -I

1. Urban Renewal Redevelopment of Inner (Old) city

Under Sub-mission-I, the followings works are proposed to be undertaken by various stakeholders

(a) Widening of Roads (Roads, Drainage, Pavement/Footpaths)

Under this head it is proposed that the KNN would undertake the widening of about 338.44 km roads. The construction of K.C drains and deep drains and footpath in the inner city areas would also be carried out by KNN. It is also proposed to add streetlights wherever not present. The total investment for these works is estimated at Rs 303 crore.

(b) Shifting of Industries from non-confirming to confirming areas

This scheme would be carried out by UPSIDC. Under this scheme shifting of industrial and commercial establishment from non-confirming area to confirming areas is proposed. For this purpose, the UPSIDC would construct the industrial areas at Chakeri-1, Chakeri-2 and at Bhauti-Mandhana bypass. On this project, an investment of Rs 426.18 crore is proposed.

(c) Replacement of old and low capacity pipeline to new and more capacity pipe line

For the completion of this scheme, an investment of Rs 319.10 crore is estimated. The UP Jal Nigam would undertake the work of raw water pump house raising; main water treatment plan; renovation of C.W.R. reservoir; distribution system of 530 km; renovation of Benajhawar water works; and Bhairav Ghat intake well.

(d) Renewal of Sewer lines

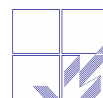
Under this project Jal Nigam would carry out the renovation work of sewerage pumping station and sewer lines, and construction of new sewage pumping station at Bhawatdas Ghat. An investment of Rs 262 crore is estimated for this work.

(e) Renewal of Drainage

Jal Nigam would also undertake the renewal of drainage in the inner areas of city. It would require an investment of Rs.6.22 crore.

(f) Solid Waste Disposal System

For the solid waste disposal system, an investment Rs. 16 crore is identified. The KNN would take the responsibility of scheme of solid waste disposal system. Under the proposed work the construction of modern garbage stations (Bins), 152 modern dustbins would be constructed to replace the old dustbins.



For the maintenance of cleanliness, it would purchase special container, dumper placer and material handling equipment etc.

2. Water Supply

The scheme of water supply is plan to be carried out by Jal Nigam. The capital cost of the project in phase is identified as nil. The capital investment plan for water supply is estimated on the basis of requirement and demand for the JNNURM period. The main thrust will be to improve the distribution in the inner area, and the balance works will be taken up in Phase-II only.

Issues

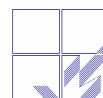
- With the new scheme in the inner area, the availability of the safe, equitable, reliable and adequate water supply would be assured;
- Reduction in transmission and distribution losses;
- Illegal water connection would be identified;
- Increase in revenue from collection charges

3. (a) Sewerage

As per the project feasibility report for sewerage work of inner old city areas, most of the exiting trunk sewers and branch sewers are overloaded and the existing carrying capacities are not sufficient to cater the future demand of increased population. These sewers need to be replaced by the larger pipelines in the congested areas. Therefore, it is proposed for new trunk sewers, replacement of existing ones, and construction of pumping station, rising of main and branch sewers, renovation of exiting branch sewers, treatment plant, and house connections. A capital investment of Rs 27 crore is identified for the project. The Jal Nigam and UP Housing and Development Council would jointly take the responsibility of this project. Similarly sewers in Cantonment Board Area laid as far back as 1940, will also be renovated and extended. A cost of Rs 3.5 crore has been provided for it. Laying of trunk sewer near COD will be carried out under GAP-II at a cost of Rs 4 crore.

3. (b) Solid Waste Management

For this project also, the Jal Nigam and UP Housing and Development Council would carry out responsibility. It is proposed to purchase cleaning equipments such as 13 dumper placers, 43 special waste containers, back hold loaders, 31730 tri-cycles, 40 auto rickshaws for the project. To improve disposal of plastic, a plant for converting plastics into hydrocarbons is proposed at a cost of Rs 12.5 crore. This will be done on PPP basis with 50% investment coming from private party. For the financial capital requirement, a total investment of Rs 42 crore is estimated. Solid waste equipment in the Kanpur Cantonment Board areas will also be modernized by spending Rs 1.05 crore.



Issues

- Recycling in SWM is suggested
- Decentralization of Solid waste disposal and treatment needed
- Plant for conversion of plastic waste into hydrocarbons on PPP basis
- Enhancing of Segregation by involvement of community participation
- Involvement of NGO for awareness

4. Repair and Improvement of Storm water drainage

The existing system of storm water drainage comprises 23 nalas, which carry most of the storm water to river Ganga and Pandu. These drains have also add to the pollution level in the city when the solid waste flushed away with the rainwater. The FPR suggested that the existing system of drainage is lacking in its utility because most of the dirt, debris, dung and are thrown in these drains, which blocks the drainage system in the city. For this project the responsibilities are assigned to Jal Nigam and Awas Vikas and KNN for repair and improvement in the drainage system. The capital investment of the order of Rs 172 crore is estimated to meet the financial requirement of the project.

5. Improving transport system

5. (a) Improving Urban Transport

The UP Parivahan Nigam is made responsible for the improvement of existing insufficient urban transport system in the city. It would carry out the construction of Central Bus Station, Jhakarkati and Chunniganj Bus station in Phase-I. The renewal of Azadnagar Bus Terminal is also proposed under the project. An amount of Rs 14.00 crore is estimated for the investment under this project.

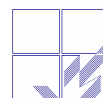
UP road transport is also planning to induct CNG buses in the city bus routes to reduce pollution. 108 CNG buses are already on order and more will be ordered after gaining some experience.

Issues

- Promotion of public transport
- Replacement of shared auto rickshaws by good buses
- Private participation needs to be explored
- Usage of private cars to be discouraged to reduce congestion
- Computerization of traffic signaling for efficient traffic management

5. (b) Improving traffic management

Because of narrow trunk roads and heavy traffic, there is severe congestion and traffic speed is very slow. It is proposed to improve the road area by widening and modernizing the trunk roads including road furniture, footpaths and intersection design.

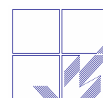


5. (c) Metro Rail (Mass Rapid Transport System-MRTS)

In every city and growing urban centers, the traffic become a major problem. In the city of Delhi Metro has gained popularity. After seeing its success, it was felt that metro rail facility should also be started in other large cities of the country. Considering that by 2031 Kanpur Metropolitan Area will cross a population of 50 lakhs and the pressure it will put on the existing transport system in the city, it is proposed to carry out a study and if feasible, introduce Metro Rail facility under JNNURM in phase –II. This would ease out the traffic problems of the present and future overloaded pressure of traffic on the roads of Kanpur city. However, in the absence of any feasibility study, no money has been earmarked in Phase-II for this activity.

The KNN, KDA and other departments are assigned the duty of carrying out the following works under this project.

- (i) Widening and improving of roads in inner city (KNN); investment Rs 293.39 crore;
- (ii) Renewal of City corridor 116.45 Kms- KDA; investment Rs 768.30 crore;
- (iii) 3 flyovers at Bada Chauraha, Vijay Nagar Chauraha and at G.T.Road near Railway Station. In addition five Rail Over Bridges are also proposed at Kalyanpur (crossing No. 13), Dadanagar (Crossing No. 240A), Zarib Chauki (Crossing No. 2), at Shyam Nagar (Crossing No. 77B) and at Gobindpuri. This work will be carried out by KDA/UP Bridge Corporation; investment Rs 123 crore; One Rail Over Bridge will also be constructed at Allahabad crossing (Murray & Co) in the Cantonment Board Area at a cost of Rs 20 crores.
- (iv) Construction of Over Bridge on River Ganges–KDA; investment Rs 100 crore by UP Bridge Corporation
- (vi) Development of –
 - (a) Parking Areas- by interlocking of tiles; KNN investment Rs 2.68crore
 - (b) Parking Lot/Space with automated, multi level parking, based on PPP- parking for 750 cars-KDA An expenditure of Rs 14 crore has been provided as 50% share of KDA.
- (vii) Improvement of social infrastructure is also planned in the city. This comprises of a working women’s hostel of 60 rooms, six community halls, Rain Baseras (night shelter) at ten ghats, development of Ganesh Udyan in Phoolbagh area and development of the old British Cemetry as a heritage site. A total investment of Rs 15 crores is envisaged.
- (viii) Preservation of Water Bodies and development of Ghats, providing night shelters, lighting etc. including Bithoor Ghats. Development of 5 water bodies in UPHB colonies and development of water body by CSA is also envisaged.-Irrigation Dept; investment Rs 16 crore



- (ix) To improve environment, greening and development of lakes and green belts including development of 95 parks, development of nauka vihar with boating etc. a sum of Rs 8 crores has been earmarked.

The total investment for sub-mission-I is estimated at Rs 2828 crore.

Sub -Mission: II Basic Services for Urban Poor

Under the JNNURM the improvement of slums is most important aspect of development for the urban poor. There is a need to improve the economic conditions of slum dwellers in the city of Kanpur. Under this mission, the following projects are proposed to be undertaken by the stakeholders (DUDA and UP Housing Development Council).

For improving basic services to the urban poor, an investment of Rs 77.10 crore is identified for improving water supply, sewerage, sanitation and paving of roads. Improving of houses in slums will also be undertaken

Five slums have also been selected for in-situ development on the Pune/Bombay model, where new multistory development will be done and the layout and amenities of the slums will be substantially improved, at the same time releasing about 50% land area for other developments, thus making this a financially feasible proposition. If the experiment is successful, more slums will be selected for such development in phase-II.

For resettlement and improving the living conditions, it is proposed to carry out extensive construction of EWS housing. KDA will construct 25450 houses and develop the connectivity of the area for urban poor including infrastructure development. An investment of Rs 639.50 crore estimated.

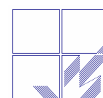
The construction of 6480 EWS houses by UPHB in new colonies would require an investment of Rs 219.93 crore.

For the sub-mission II, a total investment of Rs 960.41 crore has been estimated in Phase-I.

The details of investments at all the three levels (centre, state and local) along with the work plan, proposed work and the present status of all the projects are given in detail in **Table 17.4**.

17.4 KANPUR CDP - FINANCIAL OPERATING PLAN (FOP)

Financing of any project is a crucial task. As the phasing of project work is done, accordingly, there is need to have plan for financial requirement for completion of the project. Financial Operating Plan is a multi year concept. It has to be phased out as per the availability of fiscal resources with the local governments (stakeholders). Accordingly, the Financial Operating Plan for the



city of Kanpur scheduled/phased out for the period of five years, from 2006-07 to 2010-11, in phase-1. The remaining period of JNNURM would be covered under phased 2.

The main objective of the FOP is to generate the resources for the assessment of investment sustainability or sustaining capacity of the KNN (and the stakeholders). The total project cost would be financed by three sources. (I) The GoI would be contributing 50% of the JNNURM cost. (II) The state share would be 20%. (III) The remaining 30% share of the project cost required to be generated by the KNN and the various stakeholders. Therefore, the KNN is required to generate 30% of the project cost through internal resources (see **Table 17.4** for more details of the project and work plan). The summary of the total fund (Centre, State and Local) requirement is depicted in **Table 17.4 (a)** and the department-wise details are expressed in **Table 17.4(b)**.

17.4.1 Assumptions for the generation of Funds by KNN, KJS and KDA

As mentioned, the stakeholders (KNN, KJS and KDA) have to generate the resource to contribute their share in the total contribution by the stakeholders. The assumptions for the generation of resources of fund are presented in **Table 17.5**. The KNN would generate surpluses through reforms in property tax, and the cost savings by way of reduction in fuel cost, savings in electricity cost by P-P-P of streetlights, and the manpower costs by good governance (e-governance).

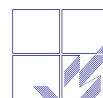
The KJS would generate its surpluses by introducing the improvement in its coverage, metering, savings in power and work force because of renovation of sewers etc. The KJS and KDA would also contribute by way of providing the subsidized land for the houses for the urban poor. Many line departments, which are also play the role of stakeholders, would get budgetary support from their head quarters (GoUP)

17.4.2 Sources of Funds for 30% contribution of City

Based on the above-mentioned assumptions these stakeholders would generate their 30% contribution by way of generating the surpluses. The **Table 17.6** gives the details of sources of funds for 30% contribution of city amounting to Rs 1168.91 crore. This comprises of (a) Surpluses generated by the institutions such as KNN and KJS and (b) contribution from the departmental budgets of Kanpur city for capital works.

The KNN would be able to generate the surplus amounting to Rs 373.77 crore. The surplus contribution from the KJS would be of the order of Rs 142.36 crore. The KCB contribution works out to Rs 10.57 crore. Additional yield from introduction of a 'Betterment Tax' would be around RS 11.93 crore. In all the total institutional contribution works out to RS 538.63 crore.

The contribution from departmental budgets is expected to be 630.18 crores, mainly from the UPSIDC for relocation of industries from non-conforming areas into new industrial estates, from PWD department for improvement of



their portion of roads in the city and from UPSRTC for construction of bus stations/terminals.

17.4.3 Surplus generation by KNN for contribution to JNNURM

The generation of surplus contribution by KNN as provided by its officials is shown in **Table 17.7**. It indicates that the KNN would be mobilizing additional revenues amounting to Rs 353.58 crore. It would generate its major surplus from SFC grants, increase in property tax, and introduction of user charges.

On cost saving side, it is likely to initiate certain measures through which it would be able to reduce the cost on various accounts. These include reduction of fuel cost, improvement in fuel efficiency, reduction in maintenance cost, savings in work force cost etc. It would be able to save an amount of Rs 20.18 crore. In total, it would generate a surplus amount of RS 373.77 crore.

17.4.4 Generation of surplus by the Kanpur Cantonment Board for its contribution to JNNURM

It is proposed that Kanpur Cantonment Board would contribute Rs 10.45 crores over the five years of Phase-I from its development funds.

17.4.5 Surplus generation by KJS for contribution to JNNURM

The **Table 17.8** gives details about the surplus generation by KJS. As shown in table, it indicates that the reduction in leakage by 10% would generate an amount of Rs 25.52 crore. The KJS would be generating by way of own revenue to the tune of Rs 7.50 crore. The imposition of user charges by KJS would yield an amount of Rs 54 crore. Additional revenue from new water connection would be contributing Rs 6 crore. In total, the KJS would be able to contribute surplus revenue of Rs 93.02 crore.

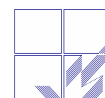
17.4.6 Generation of Resources for meeting the O&M cost of new assets created under JNNURM

It is suggested that a revolving fund for meeting the O&M cost of new assets should be created. Every stakeholder should contribute in the corpus fund. The year-wise percentage contribution from various stakeholders for the period of six years is shown in **Table 17.9**. The interest earned on this fund would be able to meet the cost of operation and maintenance on the newly created assets.

Table 17.9: Generation of resources for meeting O&M cost for the new assets to be created under JNNURM

(Year-wise % to be contributed by the Institutions in the revolving fund)

S.N.	Institution	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6
1	Roads -KNN	0	1	2	2.5	4	5
2	Roads -PWD	0	1	2	4	5	5
3	SWM	3	3	3	3	5	7
4	Water	1	1	2	2	3	4
5	Sewerage	0	1	1	2	2	3



15.4.7 Capacity Building under JNNURM

In the development of any city, the role of all the stakeholders is very significant. The administrative machinery, which is responsible for the execution of the projects, has to be sensitized with the dynamics of development and the expectations of the citizens. Capacity building through intensive and comprehensive training programmes at all the levels of officers would help in enhancement of the performance. It would add to the knowledge and skills of the staff engaged in the mission. The capacity building through effective training programmes would help in achieving the objectives of modernization of through process and the re-orientation of administrative system. This would help in enhancement of skills for the better performance and understating of professional requirements. In sum, the capacity building is considered as the most effective tool for the achievement of goals of the mission. The Centre and State governments need to ensure for the adequate provision of such requirements of capacity building.

It is proposed that 5% of the project costs mentioned above would be used for training, capacity building and systems development. Such capacity building details will form a part of the DPRs to be prepared for each project.

15.4.8 Highlights of Phase-I

In Phase-I, it is proposed to undertake the works amounting to Rs 3896.03 crore. Out of this, about Rs 1168.81 crore would be contributed the KNN (city share), which is 30% share. The GoI's share of 50% works out to Rs 1948.01 crore. The remaining balance of 20% of the total investment of Phase-I would be supported by GoUP, which is about Rs 779.21 crore. The total investment proposed and projects to be undertaken in phase-I work out Rs 3896.03 crore.

15.4.9 Highlights of Phase-II

The total investment in phase-II is proposed to the tune of Rs 8592.93 crore. Of this the 50% share of GoI works out to Rs 4296.47 crore. The state contribution estimated at Rs 1718.59 crore (20% share). The KNN (city share 30%) is estimated at Rs 2577.88 crore.

15.4.10 Concluding Summary

The FOP as discussed above is indicative of the near sustainability of the projects under JNNURM framework. The presence of fifty percent share in the form of JNNURM grants by the Centre and twenty percent from the State and the remaining balance of local contribution would support in successful completion of the task under JNNURM by various stakeholders of the City of Kanpur.

Table 17.10 Source of funds for funding of the JNNURM program

		Total Proposed cost under JNNURM		(Rs crore)
S.N.	Contribution	Phase -I	Phase -II	Total
1	Centre	1948	4499	6395
2	State	779	1800	2558
3	KNN(city)	1169	2699	3837
	Total	3896	8998	12791



Table 17.4 JAWAHAR LAL NEHRU URBAN RENEWABLE MISSION (JNURM) KANPUR as on 29th July 06

SUBMISSION-1 URBAN INFRASTRUCTURE-For Kanpur Nagar Nigam (KNN) (Figures In Crore)										TOTAL		Balance		Remark	
Sr.No.	Name of the Project	Department	Description of the scheme	Present Status	Contribu	2006-07	2007-08	2008-09	2009-10	2010-11	Proposed	Phase-II	Total		
1	Renewal of inner (old) city														
1a.	Widening of roads, including improvement of drains and footpaths	Kanpur Nagar	Widening and improving 338.44 Kms of roads including construction of K.C.Drains, deep drains and footpaths & provision of streetlights	Feasibility report and detailed costing for DPR	Centre State KNN Total	25 10 15 50	28 11 17 55	31 12 18 61	30 12 18 59	39 15 23 77	152 61 91 303			303	
1b.	Shifting of industrial and commercial undertakings from non-conforming areas to conforming areas		Construction of new industrial estates at: 1.Chakeri-1 in Phase-I 2.Chakeri-2 in Phase-I 3.Bhoubi Mandhana by pass in Phase-II	Feasibility Repo for DPR	Centre State KNN Total	35 14 21 70	43 17 26 86	50 20 30 100	50 20 30 100	35 14 21 70	213 85 128 426		193		This is a scheme for Rs 619 crores. Balance work of 3rd industrial estate will be undertaken in the 619 second phase
1c.	Replacement of old and leak lines with new higher capacity pipelines	Jal. Nigam	Raw water pump house rising main, water treatment plant CWMR, renovation of the reservoir, renovation of 530 Kms of water distribution system. Renovation of Benajhawar water works, and Bhaira ghat intake well	Feasibility Repo for DPR	Centre State KNN Total	38 15 23 77	35 14 21 69	30 12 18 61	31 12 19 62	25 10 15 51	160 84 96 319		225	544	A total cost of Rs.544.45 crore is to be spent of which Rs 225.35 crore will be spent in Phase-II
1d.	Renovation of sewer lines in the inner old city	Jal Nigam	Renovation of sewage pumping station and repair/renovation of old and broken sewer lines. Construction of a new pumping station at Bhagwat Das Ghat	Feasibility Repo for DPR	Centre State KNN Total	13 12 19 44	39 16 24 79	30 12 18 60	20 8 12 39	20 8 12 39	122 56 84 262		207	469	Total cost of modernization of sewers is Rs 466.70 cr of which Rs 206.70 cr will be taken up in next phase
1e.	Renovation of Drainage system in inner old city	Jal Nigam	construction works of open drains in 23 roads, covering 15.25 Kms in inner core area		Centre State KNN Total	1 0 0 1	1 0 1 2	1 0 1 2	1 0 0 1	0 0 0 0	3 1 2 6			6	
1f.	Solid waste Management Construction of modern dustbins and equipment		Construction of 152 modern dustbins in the inner core to improve disposal of solid waste. Procurement of dumpers and material handling equipment	Feasibility Repo for DPR	Centre State KNN Total	4 2 3 9	2 1 1 4	1 0 0 1	0 0 0 1	0 0 0 1	8 3 5 16				A binless system with a transfer station will be experimented with. If successful, number of dustbins 15 may change
1 Inner City Sub Total					Total	251	295	296	262	238	1332	625	1957		
2	Water supply	Jal Nigam	Treatment Plant feeder Main CWR distribution etc.	Feasibility Repo for DPR	Centre State KNN Total								469	469	Total Proposed is Rs. 466.93 crore Except renovation of inner old city, the renovation of balance water system will be done in Ph-II Work will be started 2011-12
3a.	Sewerage	Awas Vikas		Feasibility Repo for DPR	Centre State KNN Total	3 1 2 6	6 2 3 11	3 1 2 5	3 1 2 5		14 5 6 27			27	
3b.	Sewerage	Jal Nigam	Towards cost of completing the trunk sewer work under GAP-II, to be constructed parallel to COD, excluding the cost of land acquisition		Centre State KNN Total	1 0 0 1	1 0 1 2	1 0 0 1	0 0 0 0	0 0 0 0	2 1 1 4		3583	3597	Except inner old city, renovation of balance sewer system will be done in Ph-II
4	Solid Waste Management	Nagar Nigam Awas Vikas	Purchase of cleaning equipment like . 13 Dumper Placer, 43 special waste container van, back holder,31736 Tri-cycle and 40, Auto rickshaws Plant to convert plastic to hydrocarbons on 50% PPP	Feasibility report and DPR	Centre State KNN Total	6 2 3 11	7 3 4 13	5 2 3 11	3 1 2 6	1 0 1 2	22 9 13 43		562	605	Total cost of SWM system is Rs 605 cr, balance Rs 576.59 cr will be spent in next phase
5	Construction and Repair Drains/ storm water drains	Jal Nigam Awas Vikas KNN	Construction and renovation of Drains/storm water drains, including 11 drains (13.85 Kms) by KNN	Feasibility Repo for DPR	Centre State KNN Total	17 7 10 34	18 7 11 35	17 7 10 35	17 7 10 34	17 7 10 34	86 34 52 172			172	
6	Urban Transport	UP Parivahan	Construction of Central Bus station at Jharkarti and Chunniyagar city bus station, and renewal of Ajad Nagar bus terminal	Feasibility Repo for DPR	Centre State KNN Total	2 1 1 4	4 1 2 7	1 1 1 3	0 0 0 0	0 0 0 0	7 3 4 14			14	

Sr.No.	Name of the Project	Department	Description of the scheme	Present Status	Contribu	Total					Total	Remark		
						2006-07	2007-08	2008-09	2009-10	2010-11			Proposed	Phase-II
7a.	Improvement of roads under KNN		Widening and improving 163.88 Kms of roads including construction of K.C.Drains, deep drains for DPR footpaths and provision of street lights	Feasibility Repo Centre	15	21	21	13	17	87	0	175		
					State	6	9	9	5	7			35	
					KNN	9	13	13	8	10			52	
					Total	31	43	43	25	34			175	
7b.	Widening and improvement of main corridor roads of city	KDA	Modernisation of 116.45 km city corridor roads comprising of 23 different roads	Feasibility Repo for DPR Centre	55	75	78	100	76	384	492	1260	A total of 220 kms roads have to be widened and improved. Balance work will be undertaken in Phase-II	
					State	22	30	31	40	30				154
					KNN	33	45	47	60	46				231
					Total	110	150	156	201	152				768
7c.	Construction of flyovers and Bridge over bridges	Corporation	3 fly over, Bada Chouraha, Vijay Nagar Chouraha and Guthaha crossing and five ROB's (Rail Over Bridge) at Kayanpur, Dada Nagar, Zarib Chauki, Shyam Nagar and Gobindpuri	Centre	11	13	17	5	16	61	123			
					State	4	5	7	2	6		25		
					KNN	7	8	10	3	9		37		
					Total	22	26	34	10	31		123		
7d.	Construction of bridge over Ganga	KDA	Construction of bridge over Ganga river to connect the main city with the new Gangotri township	Centre	3	10	13	13	13	50	100			
					State	1	4	5	5	5		20		
					KNN	2	6	8	8	8		30		
					Total	5	20	25	25	25		100		
7e.	Construction of ring road or NHAI expressway		This will be constructed by NHAI, hence its cost is not provided	Centre							Expenditure to be incurred by NHAI			
					State									
					KNN									
					Total	0	0	0	0	0		0		
8a.	Development of Parking Area	KNN	About ten parking lots with interlocked tiles and proper entry and exit will be developed by KNN on P-P-P basis for 750 cars	Feasibility Repo Centre	0	0	0	0	0	1	3			
					State	0	0	0	0	0		1		
					KNN	0	0	0	0	0		1		
					Total	0	0	0	0	0		3		
8b.	Parking space /plot	KDA	Four parking lots with automated parking and multi level parking are proposed on BOT basis. Hence their cost is provided only 50% balance from PPP	Feasibility Repo Centre	2	2	2	1	0	7	14			
					State	1	1	1	0	0		3		
					KNN	1	1	1	1	0		4		
					Total	4	4	4	2	1		14		
9.	Development of social infrastructure	KNN	Working women's hostel (60 rooms), 6 community halls, Rain Baseras (Night Shelters) on 10 ghats, for DPR Community halls (6 nos), Dev. Of Ganesh Udyan, Development of british cemetery as heritage site	Feasibility Repo Centre	0	2	3	2	0	8	15			
					State	0	1	1	1	0		3		
					KNN	0	1	2	1	0		5		
					Total	0	4	7	4	0		15		
9a.	Preservation and development of water bodies	KNN	Improvement of five ghats of Kanpur city and 15 ghats of Bilthoor. Work includes renovation, repairs and electrification of the ghats, development of water bodies etc. incl. 5 water bodies of UPHB	Feasibility Repo Centre	1	2	2	1	1	5	15			
					State	0	1	1	0	1		2		
					KNN	1	1	1	1	1		3		
					Total	2	4	5	2	3		15		
9b.	Improving environment and development of lakes and green belts	KNN	-Nauka Vihar in lake with facilities like boating, recycling of water, pathways and green belt, toilets etc -Dev. of parks (25 nos.) and green belts	Feasibility Repo Centre	0	1	1	1	1	4	8			
					State	0	0	0	0	0		2		
					KNN	0	0	1	1	0		2		
					Total	0	1	2	2	1		8		
Sub-Total Sub-mission 4 for Kanpur Nag:					Centre	231	304	304	287	260	1385			
					State	100	122	121	115	104	561			
					KNN	150	183	182	172	156	842			
					Total	481	609	607	575	521	2793	5740	8538	

Sr.No.	Name of the Project	Department	Description of the scheme	Present Status	Contribu	FOUR					BALANCE		Total	Remark
						2006-07	2007-08	2008-09	2009-10	2010-11	Proposed	Phase-II		
SUBMISSION-1 URBAN INFRASTRUCTURE-For Kanpur Cantonment Board (KCB) (Figures in Crore)														
1	Improving road infrastructure KCB		Widening and strengthening of 30 kms of roads. Signage, developing traffic lights etc. Improving footpaths and concreting certain areas	Feasibility report for DPR	Centre	1	1	1	1	1	4			
					State	0	0	0	0	0	2			
					KCB	0	0	0	1	1	2			
					Total	1	1	1	2	2	8			6
2	Reducing traffic congestion t overbridge	Bridge Corpor	Construction of Rail overbridge at Allahabad level crossing (Murray & Co.)	Feasibility report for DPR	Centre	0	3	5	3	0	10			
					State	0	1	2	1	0	4			
					KCB	0	2	3	2	0	8			
					Total	0	5	10	5	0	20			20
3	Modernization of Solid waste disposal system	KCB	Purchase of dumper-placer, front end Containers etc.	Feasibility report for DPR	Centre	0	0	0	0	0	1			
					State	0	0	0	0	0	0			
					KCB	0	0	0	0	0	0			
					Total	0	0	0	0	0	1			1
4	Renovation of sewerage syst	KJN	The sewerage system of 1940 vintage will be renovated	Feasibility report for DPR	Centre	0	1	1	1	0	2			
					State	0	0	0	0	0	1			
					KCB	0	0	0	0	0	1			
					Total	0	1	1	2	0	4			4
5	Development of social infras	KCB	-Construction of community toilets -Construction of community hall/transit facility -Preservation of ghats and temples -Development of Ram Lila Maidan as a stadium	Feasibility report for DPR	Centre	0	1	0	0	0	2			
					State	0	0	0	0	0	1			
					KCB	0	0	0	0	0	1			
					Total	1	1	1	0	0	3			3
Sub-Total Sub-mission-I for KCB						Centre	1	4	7	4	18			
						State	0	2	3	2	7			
						KCB	1	3	4	3	11			
						Total	2	9	13	9	35			35
Grand total of Sub-mission-I for both Kanpur Nigam & Kanpur Cantonment Board						Centre	232	309	310	292	262	1403		
						State	100	124	124	117	105	568		
						KNN & K	159	185	186	175	157	852		
						Total	483	618	621	584	523	2828	5740	8573
Submission-II Basic Services for the Poor for Kanpur Nagar Nigam & Kanpur Cantonment Board (Rs crores)														
a)	Development of infrastruc well as construction of EWS Housing in existing main bas	DUDA	Improving basic services to the urban poor by improving water and roads in slums & construction of 7461 EWS houses. 89 slums to be improved in Ph-I		Centre	8	9	7	9	6	39			
					State	3	3	3	4	2	15			
					KNN	5	5	4	5	4	23			
					Total	15	17	14	18	12	77	173		250
b)	construction of EWS houses for the poor in new colonies	DUDA			Centre	1	1	3	4	4	12			
i)	in new colonies by DUDA or KDA/UPHB on behalf on DUDA	DUDA	construction of additional 2388 houses for redevelopment of five slums on Pune/Bombay model in Phase-I, and 25000 houses and their infrastructure in Phase-II		State	0	0	1	2	2	5			
					KNN	0	0	2	2	3	7			
					Total	1	1	5	8	9	24	250		274
a)	by KDA	KDA	construction of 25450 new houses & infrastructure development		Centre	33	50	87	87	63	320			
					State	13	20	35	35	25	128			
					KNN	20	30	52	52	38	192			
					Total	65	100	174	174	127	640	0		640
ii)	in new colonies by U.P.H.B and infrastructure development B480 in 1st phase and 43,200 in 2nd	UP housing B	construction of 6480 EWS houses in new colonies by UPHB and development of associated infrastructure in Phase-I		Centre	1	4	37	36	33	110			
					State	0	1	15	14	13	44			
					KNN	1	2	22	21	20	66			
					Total	2	7	74	71	66	220	2835		3055
Sub-Total of Sub-mission-II Basic services for the Urban Poor						Centre	42	63	134	136	107	480		
						State	17	25	53	54	43	192		
						KNN	25	38	80	81	288			
						Total	83	125	267	271	213	960	3258	4218
Grand Total of both Sub-Mission-I & Sub-mission-II for both Kanpur Nagar Nigam & Kanpur cantonment Board						Centre	274	372	444	428	368	1883		
						State	117	149	178	171	147	780		
						KNN	175	223	266	257	221	1141		
						Total	566	743	888	855	736	3780	8998	12791
Source: KNN & KCB														

Table 17.4 (a) Source and use of funds for the JNNURM
(Under Sub-mission- I and Sub-mission- II)

(Rs crore)

S.N.	Use of funds		2006-07	2007-08	2008-09	2009-10	2010-11	Total Proposed cost Phase-I	Balance Phase-II	Total
1	Sub-mission-I		483	618	621	584	523	2828	5740	8573
2	Sub-mission-II		83	125	267	271	213	960	3258	4218
3	Total		566	743	888	855	736	3789	8998	12791
	Source of funds	Share (%)	2006-07	2007-08	2008-09	2009-10	2010-11	Total Proposed	Balance Phase-II	Total
1	Centre	50	312	346	388	435	468	1948	4499	6395
2	State	20	125	138	155	174	187	779	1800	2558
3	KNN (City)	30	187	207	233	261	281	1169	2699	3837
	Total	100	623	691	775	870	936	3896	8998	12791

Table 17.4(b) : Department and Institution-Wise Cost of Project Allocation

(Rs Crore)

S.N.	Institution	Department	Contribution	2006-07	2007-08	2008-09	2009-10	2010-11	Total Proposed	
1	Kanpur Nagar Nigam	Urban Dev. Dept.	Centre	33.52	37.81	42.24	35.79	64.82	214.16	
			State	13.41	15.02	16.89	14.31	25.92	85.55	
			KNN	20.11	22.69	25.34	21.48	38.89	128.51	
			Total	67.03	75.51	84.47	71.57	129.63	428.21	
2	UPSIDC	Industrial Dept.	Centre	35.00	43.00	50.00	50.00	35.09	213.09	
			State	14.00	17.20	20.00	20.00	14.04	85.24	
			KNN	21.00	25.80	30.00	30.00	21.05	127.85	
			Total	70.00	86.00	100.00	100.00	70.18	426.18	
3	JaL Nigam	Urban Dev. Dept.	Centre	69.67	92.56	78.01	68.34	61.28	369.85	
			State	35.08	37.22	31.20	27.33	24.50	155.34	
			KNN	52.60	55.53	46.80	41.00	36.77	232.69	
			Total	157.35	185.31	156.00	136.66	122.55	757.88	
4	Awas Vikas (UP Housing Board)	Housing Dept.	Centre	4.07	9.08	39.46	38.07	32.80	123.47	
			State	1.63	3.63	15.78	15.23	13.12	49.39	
			KNN	2.44	5.45	23.67	22.84	19.68	74.08	
			Total	8.13	18.15	78.91	76.14	65.60	246.93	
5	UP Parivahan Nigam	Transport Dept.	Centre	2.10	3.50	1.40	0.00	0.00	7.00	
			State	0.84	1.40	0.56	0.00	0.00	2.80	
			KNN	1.26	2.10	0.84	0.00	0.00	4.20	
			Total	4.20	7.00	2.80	0.00	0.00	14.00	
6	KDA	Housing Dept.	Centre	90.04	134.77	177.46	199.97	151.69	753.93	
			State	36.02	53.91	70.98	79.99	60.62	301.52	
			KNN	54.03	80.86	106.47	119.98	91.01	452.35	
			Total	180.09	269.54	354.91	399.94	303.32	1507.80	
7	Bridge Corporation		Centre	11.21	15.35	21.81	7.52	0.00	55.89	
			State	4.48	6.14	8.72	3.01	0.00	22.35	
			KNN	6.73	9.21	13.09	4.51	0.00	33.53	
			Total	22.42	30.69	43.62	15.04	0.00	111.77	
8	Archeology/Tourism		Centre	0.00	0.00	0.00	0.00	0.00	14.00	
			State	0.00	0.00	0.00	0.00	0.00	5.60	
			KNN	0.00	0.00	0.00	0.00	0.00	8.40	
			Total	0.00	0.00	0.00	0.00	0.00	0.28	
9	Irrigation/Baarrage const		Centre	0.25	0.75	0.81	0.00	0.00	1.81	
			State	0.10	0.30	0.32	0.00	0.00	0.72	
			KNN	0.15	0.45	0.49	0.00	0.00	1.09	
			Total	1.50	3.50	3.62	1.00	1.50	11.12	
10	CSA		Centre	0.20	0.00	0.00	0.00	0.00	0.20	
			State	0.08	0.00	0.00	0.00	0.00	0.08	
			KNN	0.12	0.00	0.00	0.00	0.00	0.12	
			Total	0.40	0.00	0.00	0.00	0.00	0.40	
11	KCB		Centre	1.06	1.90	1.63	1.88	1.16	7.62	
			State	0.42	0.76	0.65	0.75	0.46	3.05	
			KCB	0.64	1.14	0.98	1.13	0.70	4.57	
			Total	2.12	3.79	3.26	3.75	2.32	15.24	
12	DUDA		Centre	8.09	9.08	9.58	13.16	10.59	50.49	
			State	3.24	3.63	3.83	5.26	4.23	20.20	
			KNN	4.85	5.45	5.75	7.89	6.35	30.29	
			Total	16.18	18.16	19.16	26.31	21.17	100.98	
	Grand Total		Centre	255.20	347.78	422.39	414.71	357.42	1811.49	
			State	109.30	139.21	168.94	165.88	142.90	731.83	
			KCB	163.93	208.66	253.42	248.82	214.45	1097.68	
			Total	529.42	697.65	846.75	830.41	716.27	3620.79	
			C	255.195	347.78	422.39	414.71	357.42	1811.49	
	Grand Total (with O&M cost)		S	109.3	139.21	168.94	165.88	142.90	731.83	
			N	163.93	208.66	253.42	248.82	214.45	1097.68	
			O&M @1.5%	2.46	3.13	3.80	3.73	3.22	16.47	
			Total-Local	N*	166.38	211.79	257.22	252.56	217.66	1114.15
			Grand Total	T	530.88	698.78	848.55	833.15	717.99	3657.47

Source: Kanpur Nagar Nigam

Table 17.5

Assumptions for the generation of funds by KNN, KJS and KDA

S.No	Item	Assumptions
A	Surplus to be generated by KNN	
A.1	By improved coverage of Property tax	By converting 2 lakh properties from ARV to Unit Area System
A.2	By new properties constructed every yr	New properties @ 12,000 properties p.a., each at average of Rs 800 p.a.
A.3	By review of area wise rates to align them in line with changing scenario	This review will result in an increase of property tax @ 10% p.a.
A.4	By introduction of user charge in SWM	By door to door collection, user charge @ Rs 30 p.m., 50,000 households added p.a.
A.5	By Reviewing of Exempted Properties	By reassessment of 20,000 exempted properties having ARV below Rs 360/-
A.6	By introduction of betterment tax	A betterment tax @ 5% of property tax is proposed for the benefits from improved infrastructure
	<i>Total improvement in revenues</i>	
	<i>Reduction in expenditure of KNN</i>	
A.7	Reduction of fuel cost in SWM by trf. Stations and new fuel efficient vehicles	The kms run will be reduced by 20%, fuel efficiency will improve 25% (4 km/l instead of 3 km/l)
A.8	Reduction in maint. cost by replacement of SWM fleet	Ageing fleet to be replaced by new, will reduce maintenance costs 30%
A.9	Savings in electricity costs by P-P-P of street lights	Metering, shutting lights on time and better maintenance by P-P-P
A.10	Savings in manpower costs by e-governance	Reduction of non-technical staff by computerization & VRS by 10%
A.11	Savings by outsourcing bill collection	Reduction of bill collectors and costs by outsourcing and VRS of 25%
A.12	By abolishing surplus posts in technical and unskilled labour	A reduction of 340 numbers has been identified
B	Surplus to be generated by KJS	
B.1	By improved coverage of properties	Water and sewerage tax is linked to property tax, property revaluation by KNN will improve water tax
B.2	By increased number of connections	With improved pressure and reliability, more households will take connections
B.3	By introduction of metering	Metering will charge heavy users on consumption basis
B.4	By savings in power due to reduced losses	Losses will be reduced by renovation of leaky pipes in the inner core area
B.5	Savings in manpower due to renovation of sewers	Maintenance cost will come down with renovation
B.6	Savings in repair costs due to renovation of leaky pipes	Maintenance cost will come down with renovation
D.	By way of departmental budgets for capital works from GoUP	
D.1	Departmental Capital budget for setting up new industrial estates and shifting of non-conforming industries to conforming areas by UPSIDC	Two new industrial estates will be developed in Phase-I, funded by departmental budgets and by development and selling of industrial sheds
D.2	Departmental Budget of PWD for renovation and broadening of the PWD roads in the city under JNNURM (29.40 KM)	PWD will obtain budgets from GoUP for improving its portion of the roads covered under the JNNURM, which will be city's share
D.3	Departmental budget of UPSRTC for construction of bus terminal in Kanur city	UPSRTC has indicated that it will get full cost of construction of new terminals from the GoUP.
D.4	Budgetary grant for improving Sewerage treatment under GAP-II	A total of Rs 7.5 cr will be spent by way of improving sewerage treatment by departmental budgets

Table 17.6: Source of Funds for 30% contribution of city

(Rs Crores)

S.No.	Description	Total	2006-07	2007-08	2008-09	2009-10	2010-11
1	Surplus from KNN-Table	373.77	49.05	61.02	73.60	87.99	102.10
2	Contribution from KCB from its development budget	10.57	0.64	2.64	3.98	2.63	0.70
3	Surplus from KJS-Table	142.36	9.25	15.56	26.67	41.75	49.13
4	Additional funds thru Betterment tax @ 5% of property tax	11.93	1.95	2.15	2.37	2.60	2.86
	sub-total (Institutional)	538.63	60.89	81.37	106.61	134.98	154.78
5	Contribution from departmental budgets for capital works						
5.a	Departmental budget for shifting of industries from non-conforming areas to UPSIDC	426.18	85.24	85.24	85.24	85.24	85.24
5.b	Dept. budget to PWD for PWD roads included in the road improvement project (29.20 KM out of 116.45)	190.00	38.00	38.00	38.00	38.00	38.00
5.c	Departmental budget of UPSRTC for construction of bus terminal in Kanpur city	14.00	2.80	2.80	2.80	2.80	2.80
	Sub-total GoUP	630.18	126.04	126.04	126.04	126.036	126.04
	Grand Total	1168.81	186.92	207.40	232.65	261.01	280.82

Table 17.7: KNN-surplus for contribution to JNNURM

S.No.	Item		2006-07	2007-08	2008-09	2009-10	2010-2011	2006-11	(Rs Crore)
A	Revenue Mobilization								
1	By increase in Property Tax collections by steps given below								
a	Current property tax		31.00	31.00	31.00	31.00	31.00	31.00	155.00
b	Increase due to addition of new properties @12000 p.a. @ Rs 1200 each		1.44	2.88	4.32	5.76	7.20	7.20	21.60
c	Change from ARV to unit area method @Rs 600/property @ 35000 properties.yr		2.10	4.20	6.30	8.40	10.50	10.50	31.50
d	Reassessment of 20000 exempted properties @ Rs 500/property		1.00	1.00	1.00	1.00	1.00	1.00	5.00
e	Total property tax based on improved coverage		35.54	39.08	42.62	46.16	49.70	49.70	213.10
f	Total property tax based on 10% increase in rates p.a.		39.09	43.00	47.30	52.03	57.24	57.24	238.67
g	Less existing property tax		31.00	31.00	31.00	31.00	31.00	31.00	155.00
A.1	Net increase in property tax		8.09	12.00	16.30	21.03	26.24	26.24	83.67
A.2	By raising revenues from other source of funds								
a	SFC grant @20%		17.80	19.58	21.45	23.59	26.00	26.00	108.42
b	12th Finance Commission		4.16	4.16	4.16	4.16	4.16	4.16	20.80
c	Infrastructure fund@2%		4.00	4.00	4.50	4.50	4.50	4.50	21.50
d	Land Sale		0.50	0.50	0.50	0.50	0.50	0.50	2.50
e	Introduction of user charge in SWM @Rs 30 p.m.		1.80	3.60	7.20	10.80	14.40	14.40	37.80
f	Tax on cable TV		0.06	0.06	0.06	0.06	0.06	0.06	0.30
g	MLA/MP Quota		11.59	14.00	15.00	18.00	20.00	20.00	78.59
A.2	Additional Revenue Mobilization from other sources		39.91	45.90	52.87	61.61	69.62	69.62	269.91
A	Total Additional Revenue Mobilization		48.00	57.90	69.17	82.64	95.86	95.86	353.58
	B-Cost Savings								
1	Reduction of fuel cost in SWM by trf. Stations	20%							
	Expenditure on Petrol/Diesel (2004-05) (Rs)	58999295	0	0.59	0.88	1.06	1.18	1.18	3.72
2	Improvement in fuel efficiency by modern vehicles	25%							
	Expenditure on Petrol/Diesel (2004-05) (Rs)	58999295	0	0.71	0.88	1.18	1.47	1.47	4.25
3	Reduction in maint. cost by replacement of SWM fleet	10%	0.16	0.16	0.16	0.16	0.16	0.16	0.79
	exp.on Machinery &equip supply (2004-05)(Rs)	15780196							
4	Savings in electricity costs by P.P.P. of street lights	15%							
	Operation & maintenance cost on street lighting (Rs)	30000000	0.08	0.15	0.30	0.36	0.45	0.45	1.34
5	Savings in manpower costs by e-governance	10%							
	Exp on General admn & Rev coll.(2004-05) (Rs)	74500000	0	0.19	0.37	0.56	0.75	0.75	1.86
	Assuming that there will be incremental saving over the period								
6	Savings by outsourcing bill collection	25%							
	Cost of tax collection (2004-05) (Rs)	40396414	0.20	0.40	0.61	0.81	1.01	1.01	3.03
7	Savings by abolishing surplus posts (Nos)	340							
	Assuming that salary of surplus staff is Rs 36000 p.a.	36000	0.61	0.92	1.22	1.22	1.22	1.22	5.20
	B-Total Cost Savings		1.05	3.11	4.43	5.35	6.24	6.24	20.18
	Grand Total (A+B)		49.05	61.02	73.60	87.99	102.10	102.10	373.77

Table 17.8: KJS-surplus for contribution to JNNURM

(Rs Crore)

A-Revenue Mobilization		2006-07	2007-08	2008-09	2009-10	2010-2011	2006-11
1	Increased income by way of increased water and sewerage tax						
	Increase in water and sewerage tax in the same ratio to property tax as now (app. 50%)	4.05	6.00	8.15	10.52	13.12	41.84
2	(b) Income by reducing leakage 10%	0.00	2.04	4.59	8.68	10.21	25.52
	Water production = 350 mLd						
	Saving in water = $350 \times 10 / 100 = 35$ mLd						
	Income of selling water/year = $35 \times 5000 \times 365 =$ Rs. 6.38 crore						
	Income during 4 year = Rs. 25.52 crore						
3	(c) By way of Jal Sansthan's own revenue @ Rs. 1.5 crore/year for 5 year	1.50	1.50	1.50	1.50	1.50	7.50
	= Rs. 7.50 crore						
4	(d) By imposing user charges to share the cost of treated (house connection) (rate) (no. of year) waste water	1.00	3.32	9.72	18.36	21.60	54.00
	= Rs. 180000 x 600 x 5 = Rs. 54.00 crore.						
5	(e) Additional revenue for new water connection (house connection) (rate) (no. of year)	1.20	1.20	1.20	1.20	1.20	6.00
	= $10000/- \times 1200 \times 5 =$ Rs 6.00 crore.						
6	(f) Balance work (COD Nala sewer, land) under GAP - II = Rs. 7.50 crore	1.50	1.50	1.50	1.50	1.50	7.50
	Grand Total	9.25	15.56	26.67	41.75	49.13	142.36

CHAPTER18:
STATUS URBAN REFORMS

18. STATUS OF URBAN REFORMS

A.	Mandatory Reforms	
1.	Urban Local Body Reforms (at ULB level)	
i.	Adoption of modern, accrual-based double entry system of accounting in Urban Local Bodies	i.
		To maintain transparency in finance department, double entry system has been adopted due to which making of income/ expenditure statement and balance sheet preparation has become easy. But rules to introduce accrual based double entry system have not changed. Currently software being used is "Tally". At present KNN is only doing cash accounting. KNN has the system in place only need is to switch over to accrual based accounting. It is suggested that KNN should prepare itself to shift over to accrual based accounting from the next financial year i.e. from 01.04.2007.
ii.	Introduction of system of e-governance using IT applications like GIS and MIS for various services provided by ULBs	ii.
		KNN has initiated action to have own website shortly. Under URIF Yojana computer works have been proposed.
iii.	Reform of property tax with GIS, so that it becomes major source of revenue for Urban Local Bodies (ULBs) and arrangements for its effective implementation so that collection efficiency reaches at least 85% within the mission period.	iii.
		Under GIS, marking of left over houses and including them under zonal regulation has already started. Under URIF scheme, adding covered area and up-gradation in existing G.I.S. map has been proposed. KNN has already initiated action for complete GIS with collection of required data of all the properties. Selection of competent firm for this work has been done and recommendations have been sent to competent authority for approval.
iv.	Levy of reasonable user charges by ULBs/ Parastatals with the objective that full cost of operation and maintenance is collected within the mission period. However, cities/ towns in North East and other special category states may recover at least 50% of operation and maintenance charges initially. These cities / towns should graduate to full O&M cost recovery in a phased manner.	iv.
		To use the nagar nigam facilities, process has started for fixing the user charges under section 541 (42) and has been sent for gazette notification. The heads are: parking, green belt land use, picking up of garbage in residential and non-residential areas, community toilets of higher category, using the land for generators, usage of recreation/ green areas, other type of land uses etc.



v.	Internal earmarking within local body budgets for basic services to the urban poor.	v.	With the help of DUDA, KNN will earmark such provision in revised budget for 2006-07.
vi.	Provision of basic services to urban poor including security of tenure at affordable prices, improved housing, water supply, sanitation and ensuring delivery of other already existing universal services of the government for education, health and social security.	vi.	With the support of KDA and DUDA, necessary arrangements will be made during 2006-07 financial year
2. State Level Reforms			
i.	Implementation of decentralization measures as envisaged in Seventy Fourth Constitutional Amendment. States should ensure meaningful association / engagement of ULBs in planning function of Parastatals as well as delivery of services to the citizens.	i.	This is under consideration of the State Government
ii.	Rationalization of Stamp Duty to bring it down to no more than 5% within the mission period	ii.	This is under consideration of the State Government
iii.	Enactment of Public Disclosure law to ensure preparation of medium-term fiscal plan of ULBs release of quarterly performance information to all stakeholders.		This is under consideration of the State Government
iv.	Enactment of community participation law to institutionalize citizen participation and introducing the concept of the Area Sabha in urban areas	iii.	This is under consideration of the State Government
v.	Assigning or associating elected ULBs into “city planning function” over a period of five years; transferring all special agencies that deliver civic services in urban areas and creating accountability platforms for all urban civic service providers in transition.	iv.	This is under consideration of the State Government
B. Optional Reforms			
i.	Repeal of Urban Land Ceiling and Regulation Act.	i.	GOUP has adopted the Urban Land (ceiling and regulation) Repeal Act, 1999 on 18.3.1999 vide GO No. 502/9-No. BHU 099/216 UC / 90 TC dated 31 March, 1999.



ii.	Amendment of Rent Control Laws balancing the interest of landlords and tenants.	ii.	Necessary reform for balancing the interests of landlords and tenants was made in Uttar Pradesh Urban Building (Regulation of letting, Rent and Eviction) Act, 1972 by UP Act 17 of 1999
iii.	Revision of bye -laws to streamline the approval process for construction of buildings, development of sites, etc.	iii.	This has to be done by Kanpur Development Authority at the city level.
iv.	Simplification of legal and procedural frameworks for conversion of agricultural land for non-agricultural purposes.	iv.	This is under consideration of Kanpur Development Authority.
v.	Introduction of Property Title Certification System in ULBs.	v.	This is under consideration of the State Government
vi.	Earmarking at least 20-25% of developed land in all housing projects (both Public and Private Agencies) for EWS/LIG category with a system of cross subsidization.	vi.	This is under consideration of Kanpur Development Authority
vii.	Introduction of computerized process of registration of land and property.	vii.	This is under consideration of the Kanpur Development Authority
viii.	Revision of bye -laws to make rain water harvesting mandatory in all buildings to come up in future and for adoption of water conservation measures.	viii.	This has to be done by different departments.
ix.	Bye-laws on reuse of recycled water.	ix.	This is under consideration of the State Government
x.	Administrative reforms, i.e., reduction in establishment by bringing out voluntary retirement schemes, non-filling up of posts falling vacant due to retirement, etc., and achieving specified milestones in this regard.	x.	This is under consideration of the State Government
xi.	Structural reforms	xi.	This is under consideration of the State Government
xii.	Encouraging Public-Private partnership	xii.	This is under consideration of the State Government



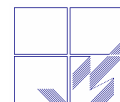
ANNEXURES

ANNEXURE I:
STAKEHOLDER CONSULTATIONS

Annexure 1

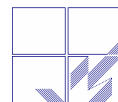
Details of Consultations held with Stakeholders

S. No.	Name	Designation	Department
1.	Ms. Anita Bhatnagar Jain	Divisional Commissioner	Kanpur
2.	Mr. Anurag Srivastava	District Magistrate	Kanpur
3.	Mr. Badal Chatterjee	Municipal Commissioner	Kanpur Nagar Nigam
4.	Mr. Deepak Kumar	Vice Chairman	Kanpur Development Authority
5.	Mr. Rakesh Singh	Suptd. of Police (Traffic)	Kanpur
6.	Mr. U.N. Tiwari	Addl. Municipal Commissioner	Kanpur Nagar Nigam
7.	Mr. Lalta Prasad Yadav	Chief Engineer	Kanpur Nagar Nigam
8.	Mr. D.S. Tripathi	Nodal Officer,	Kanpur Nagar Nigam
9.	Mr. S.A. Royal	Assistant Engineer	Kanpur Nagar Nigam
10.	Mr. Mukesh Agnihotri	Drawing Suptd. Maps	Kanpur Nagar Nigam
11.	Mr. V.P Jaiswal	Junior Engineer	Kanpur Nagar Nigam
12.	Mr. R.K. Singh	Assistant Engineer, Zone I	Kanpur Nagar Nigam
13.	Mr. R. M. Asthana	Chief Engineer (Mechanical)	Kanpur Nagar Nigam
14.	Ajay Kumar	Executive Engineer	Kanpur Nagar Nigam
15.	M. D. Girdhani	Director	Kanpur Nagar Nigam
16.	Mrs. Shobha Kapur	Secretary	Kanpur Cantonment Board
17.	Mr. Anil Kumar Garg	Chief Engineer	Kanpur Development Authority
18.	Mr. Shivpuri	Assist. Town Planner	Kanpur Development Authority
19.	Mr. M.P. Srivastava	Suptd. Engineer	U.P. Hosing Development Board
20.	Mr. M.C. Tiwari	General Manager	Ganga pollution Control Board, UP Jal Nigam
21.	Mr. Avni Kumar	District Forest Officer	Forest Office, Allen Forest ,Nawab Ganj, Kanpur
22.	Mr. S. K. Rajput	General Manager	KESCO
23.	Mr. S.M. Aggarwal	Chief General Manager	KESCO
24.	Mr. S. R. Sachin	Regional officer,	U.P. Pollution Control Board
25.	Mr. B.K. Gupta	Regional Transport Officer	Regional Transport Office
26.	Mr. Manoj Kumar Verma	Conservation Assistant	Dept. of Archeology
27.	Mr. Anoop Bajpai	Project Officer,	District Urban Development Authority
28.	Mr. K.C. Vishwanathan	Chief Executive Officer	U.P. Trade Promotion Authority
29.	Shri Tirth Raj	Addl. Commissioner,	Trade Tax Dept.
30.	Mr. Vijay Kapoor & A.S. Kotwal	Chairman	Kanpur Industrial Dev. Co-operative Estate Ltd.
31.	Mr. Sunil Vaishya	General Secretary	Indian Industries Association
32.	Mr. Anup Asthana	Secretary	Kanpur Builders and Promoters Association
33.	Mr. B.K.Bharatiya and Rajiv Bharatiya	President	Property Dealers and Builders Association



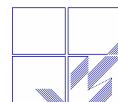
34.	Mr. Vijay Pande	Mahamantri	U.P. Hotel and Restaurant Association
35.	Mr. Mohanlal Chandani	President	Hotel and Restaurant Association
36.	Dr. I.C. Gupta A.K. Sinha (11)	President Secretary	Merchant Chamber of Commerce
37.	Mr. Mahesh Jain	President	Chauk Sharafa Vayapar Mandal
38.	Shri Prakash Jaiswal	Minister of State	Home Affairs, Govt. of India
39.	Surinder Mohan Aggarwal	Chairman	U.P.D.E.S.C.O
40.	Mr. Jagender Swarup	MLC	
41.	Mr. Anil Kumar Sharma	Ex. Mayor	Kanpur Nagar Nigam
42.	Mr. Yogendra Mohan	Director	Jagran Group
43.	Mr. Jagdish Yadav	Chairman,	Lok Vikas Mandal, Kanpur
44.	Mr. Rakesh R. Jaiswal	CEO	ECO Friends Ngo, Kanpur
45.	Girish Bajpai	Chairman	Pandit Deen Dayal Jan Kalyan and Vikas Samiti
46.	Ms. Bimlawati (Bindu)	Leader, CDS society	Raja Pura slum, Kanpur
47.	CDS Members (19)*	Leader	Community Development Societies

* Figure in bracket shows the number of participants in the workshop organized at city level



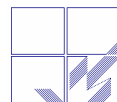
Discussions carried out with Various Stakeholders

Name of the Stake Holder:	Ms. Anita Bhatnagar Jain
Contact No.:	09415117891, 0512-2546100, 2525441
Date of Discussion	15/05/2006, 9/06/06, 4/7/06, 10/7/06
Discussion Team	Mr. D.C. Awasthi, Mr. S.K.Relan and Mr. Pritam Kapur and Dr. Vinita Yadav
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in her view ? 	
<p>Focus Areas</p> <ul style="list-style-type: none"> • Roads and Traffic Management • Improving infrastructure • Inner Core area development 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • As a coordinator of various agencies, which are involved in the management of the city, her vision has guided and shaped the mega strategy of transforming the city of Kanpur by fully leveraging the opportunity provided by JNNURM. • According to her, industries of yesteryears are no longer the leading industries, in fact most of them are sick and lying closed. On the other hand new age industries have not come to Kanpur as yet • Kanpur City needs to improve its infrastructure if it has to gain its pre-eminent economic position. JNNURM is an opportunity for the city to get its act right • The prioritization of work should be such that we take up projects which will show an impact in a short time. Improving roads and transport is one such priority area. • Efforts are being made to introduce P-P-P in various areas, but it is difficult to attract many private entrepreneurs for infrastructure projects as they are not convinced of the viability of such projects. • Kanpur suffers from lack of air connectivity. One lone flight that touches Kanpur is inconvenient and hence not popular. The need is to have air connection between major trading cities. Earlier there was an air connection between Gujarat and Kanpur. • Though Kanpur city has sufficient supply of water, many people are not taking water connections as they dig tube wells or hand pumps and use that water. This is depleting the ground water levels and is untreated. Rules should be made to restrict extraction of ground water • The problems of old and broken water pipes and damaged sewer lines in inner city need urgent attention. • Past efforts at slums development and rehabilitation have not been entirely successful. The reasons for such failure in the past needs to be understood and strategies, which are demand driven and acceptable to slum dwellers, should be devised. • It is possible that there may be some overlap between various institutions in Kanpur, but as administrators we have to get the work done, and if one institution is weak, we may try and get the work done by another institution. • The administration is also keen to tackle the problem of pollution in Kanpur city. For this purpose, we are shortly planning to introduce CNG buses. • The new master plan which is under consideration of the government of UP has provided for expansion of the city and development of new townships like Gangotri 	

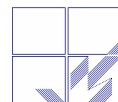


have been planned

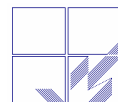
- The river front and various ghats should be developed as thousands of people use these ghats. The facility such as bathing facility, lighting should be provided.
- The special focus should be on reforms to make Kanpur Nagar Nigam financially viable.



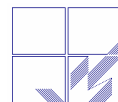
Name of the Stake Holder:	Mr. Anurag Srivastava
Designation	District Magistrate
Contact No.	0512-2306577 (0), 094155224608
Date of Discussion	20/4/2006
Discussion Team	Mr. P. Kapur, Mr. S.K. Relan, Dr. Vinita Yadav & Mr. D.C. Awasthi
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in his view? 	
Focus Areas	
<ul style="list-style-type: none"> • Roads and Traffic Management • Underground water depletion • Water Supply situation • Ground water recharging • Improving infrastructure • Better Governance 	
Summary of Discussion	
<ul style="list-style-type: none"> • Priority should be given to restore the underground water level which is continuously depleting. • Due to water usage from down stream of Ganga, water availability for city is less. Keeping this in mind, schemes for water recharge such as water harvesting should be introduced. • Priority should be given to stop the contamination of ground water • Managerial problems should be solved through better governance i.e. accountable, efficiency, effective, transparency, participation and usage of e-governance • There should not be a complete mismatch between electricity demand, its generation and supply • Efforts should be taken to stop/decrease the increase in population both natural increase as well as migration. • Road widening, wherever possible, should be on priority. • Priority should be given to introduce the effective city bus system so that the Tempos related traffic and pollution problems can be minimized. • Double entry accounting system should be introduced. • There should be time to time updation of land records. • While introducing user's charge, interest of people should be taken care and subsidy, if required, should be provided • The bureaucratic system should have minimum babus. • In development related departments, minimum one month training should be given to officers. • Reports submission should be made online • Fresh recruitment should be such that qualified, experienced and trained staff should be appointed. Some posts should be declared sick and no new recruitment should be held against those posts. • Different ways should be adopted to augment the financial resources of corporation 	



Name of the Stake Holder:	Mr. Badal Chatterjee
Designation	Municipal Commissioner
Contact No.:	09415247879, 0512-2546194 (O), 2531215 (R)
Date of Discussion	15/05/2006
Discussion Team	Pritam Kapur, D.C.Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in his view ? <p>Focus Areas</p> <ul style="list-style-type: none"> • Roads and Traffic Management • Inner core Area Development • Improving infrastructure • Solid Waste Management <p>Summary of Discussion</p> <ul style="list-style-type: none"> • There is a need for allotment and development of cattle colonies in the outskirts to keep the city clean and hygienic. • South city should be connected properly with the main city • Door to door domestic waste should be collected in polythene bags and to be transferred/ transported to final disposal point. There is no need of intermediate dumping grounds. • Sewerage, which have been broken and mixed with the drains, should be separated to reduce pollution. • The renovation of sewerage in the inner city should be done using trench less technology. • Due to encroachments, manholes of sewers and banks of Nalas are not accessible while cleaning nalas by machinery, making the de-silting extremely difficult. Such encroachments must be removed. • Restoration of financial health of K.N.N. must be top priority as only then K.N.N can discharge its functions properly. • The staff of KN.N needs to be disciplined so that adhoc or informal permissions given on various accounts are stopped. • K.D.A must take NOC from K.N.N before sanctioning any new building plans specially in case of construction of high rise buildings. • Pigs are another nuisance in the city. Earlier there have been quite a few <i>Abhiyans</i> (Campaign) to catch loitering pigs and imposing penalty on owners during Ex Mayor time. But still the city is not free of this nuisance. Certain area needs to be allotted to those who are in the profession of pig farming. • New modern slaughter houses need to be developed outside residential and commercial areas to cater requirement of meat and chicken as old slaughter houses such as one in Bakarmandi contribute to city mess and unhygienic conditions. • Immediate need is being felt to re-assess all multi-storey complexes, residential cum commercial, shops and other establishments, which have come up in place of old residential bungalows in Civil Lines, Tilak Nagar, Swaroop Nagar, Nawab Ganj and Tax charges need to be managed and imposed on owners of flats, shops, offices, restaurants, hotels, clinics, private hospitals, nursing homes etc. 	

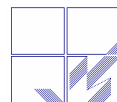


Name of the Stake Holder:	Mr. Deepak Kumar
Designation	Vice Chairman, Kanpur Dev. Authority
Contact No.:	09415037001, 0512- 2546026 (O), 2526477 (R)
Date of Discussion	7/06/06
Discussion Team	Pritam Kapur, D.C.Awasthi, Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important and what it should focus on? • What are areas of concern in his view? 	
Focus Areas	
<ul style="list-style-type: none"> • Roads and Traffic Management • Old Area Development • Improving infrastructure 	
Summary of Discussion	
<ul style="list-style-type: none"> • KDA was conceived as a specialized agency for development of the city and to plan for its orderly growth. Since KNN has its own focus of providing services to the citizens, it is better to have a development authority different from the city corporation • At present, 3 modes of public-private partnership arrangements are followed by KDA. In first model, government decide the players, land acquisition is done by KDA and given to private builders to develop the land as in the case of HI-tech city where Sahara has got a huge chunk of land. In the second model, KDA do land acquisition, development and disposal by way of selling the plots and constructing EWS housing and in the third model, private builders acquire the land, develop it and dispose it off. In the 3rd model, KDA is encouraging smaller builders, who own 25-50 acre, 50-100 acre and 100-500 acre land, to come in and develop housing projects and for them KDA plays the role of a regulator. However, it is not easy to attract quality builders to come to Kanpur in a big way because of their doubts about viability of their projects. • In the land acquisition and development done by KDA, differential prices can't be given by KDA that's why too many litigation cases happen whereas private builders purchase the land directly at market price and hence no litigation takes place. The price of land acquisition should be fixed with growth rate of land cost • For decongesting the inner core area, counter magnet area development, expansion of city towards Bithur and development by Sahara will be major steps. • The houses which are constructed faraway from the city have remained vacant due to bad planning. The reasons for non-selling of these properties should be assessed and plans to sell them should be made. • The huge chunk of gram samaj land is lying vacant in the city periphery. The housing for EWS should be built on these lands as EWS merges well with villagers. For this purpose, EWS people should be consulted to decide the area and plan to build housing. • Government subsidy should be given to EWS people for purchasing the houses and land development. • KDA has plans to develop new townships and also to develop the belt of 8 kms around the boundary of Nagar Nigam. However, by the time KDA start the land acquisition process, people acquire land in areas earmarked for development and later 	

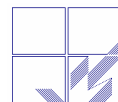


it become an obstacle in orderly and speedy development

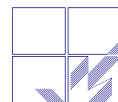
- Increasingly the attention of KDA is towards land development and it plans to reduce its involvement in construction of houses except for EWS and LIG



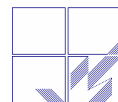
Name of the Stake Holder:	Mr. Rakesh Singh
Designation	S.P. (Traffic)
Contact No.	09415042700
Date of Discussion	14-6-2006
Discussion Team	D.C. Awasthi, Mr. Sanjeev Shukla
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • What are areas of concern in their view 	
Focus Areas	
<ul style="list-style-type: none"> • Traffic related issues • Improvement in the functioning of transport system • Better infrastructure Facility 	
Summary of Discussion	
<ul style="list-style-type: none"> • Railway Line between Kanpur and Farrukhabad divides the city in north and south city and movement of traffic is restricted on railway crossings right from Jarib Chwoki to Kalyanpur on G.T. Road. The ROB's are non-existent and traffic jam is frequently seen at railway crossings all along GT road. • The tempos and vikrams are plying unabated but these vehicles stop at any place for boarding and alighting the commuters without any check and control which causes traffic nuisance. • The main trading centres like Naya Ganj, Bansmandi, Hatia etc. need to be shifted to the outskirts minimizing movement of slow moving carts between these trading centres and Transport Nagar. • The railway godown in city between Jhakarkati ROB and Kanpur Central should be shifted to Panki Railway Yard in the outskirt so that congestion of traffic can be avoided. • There is need to develop public transport system using CNG buses (108 buses procured by UPSRTC) for deployment in first phase. All old buses (more than 10 years) need to be phased out as these contribute to air pollution and traffic disorder. • All the tempos and loaders need to be phased out within next two to three years. • Parking for cars, two-wheelers etc. at 158 identified spots need to be developed by KNN and KDA so that congestion on roads can be removed. • Parking lots have been spotted at places and need to be developed. • Presently slow moving animal and manual carting vehicles i.e. 500 Kharkharas, 200 Bhainsa Thela, 350 Hanth Thela, 400 trolleys and 5000 Rickshaws are plying in the city. These needs to be phased out gradually paving way for fast moving vehicles to avoid traffic jams and should be replaced by CNG buses and three wheelers for public transport. • The staff in Traffic Police Cell is inadequate. Present requirement is of 600 constables whereas sanctioned staff is 400 constables. Out of which only 200 are available for traffic duty. The sanctioned posts need to be filled so that adequate constables could be posted at all strategic points. • There is requirement of at least 6 ROB's between Jarib Chowki and Kalyanpur and also at Shyam Nagar, Dada Nagar, Govind Nagar and also one running parallel to Govind Puri Railway Bridge. • NGO's/Community Development Societies need to be involved for creating better traffic sense among the commuters. • All main Crossings and Tri-sections need to be equipped with traffic lights and glow signs to regulate the movement of traffic. Presently this all is controlled manually. 	



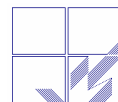
Name of the Stake Holder:	Mr. U.N. Tiwari
Designation	Add. Commissioner
Contact No.	0512 – 2525792 (R), 2551416 (O)
Date of Discussion	22/4/2006, 15/5/2006
Discussion Team	Mr. S.K. Relan, Dr. Vinita Yadav, D.C. Awasthi, Mr. Pritam Kapur
Discussion Agenda :	
<ul style="list-style-type: none"> • Status of various items of Reforms Agenda of Govt. of India • Role and focus of KNN • What are areas of concern in their view 	
Focus Areas	
<ul style="list-style-type: none"> • Organizational set up of KNN. • Update on GIS • Views on E-Governance • Steps taken to introduce E-Governance in KNN. • Activities of KNN • Improvement in the functioning of KNN • Exchange of views on various activities of KNN for over all improvement of working of KNN. • Improving infrastructure 	
Summary of Discussion	
<ul style="list-style-type: none"> • 74th CAA has not been implemented fully. Only State Finance Commissions have been constituted regularly and their recommendations have been more or less accepted. • City management is a specialized field. Specialized urban management person should be employed at KNN. Municipal Commissioner and Add. Municipal commissioner should be imparted training to manage the municipal affairs. The top officials should be given appropriate time to study the city problems and take corrective steps. • The following shortcomings are observed in the recruitment system: <ul style="list-style-type: none"> – 20 percent people who are less qualified are getting employed in KNN on the post vacated after their father/mother death. Due to this quality of staff gets deteriorated. – No training (for usage of computer as well as for better functioning) has been provided to the Middle level positions and their overall exposure is quite poor. Computerization may be introduced and all officers may be provided with computers with inter-connectivity, thereby reducing the babu system to minimum. – staff is not self motivated and no decentralization of powers at medium or lower level. For this those officers, who are working with dedication and professionally may be honored periodically to keep them motivated. – surplus staff in one activity should be shifted to other to make better use of available manpower – VRS may be introduced and no fresh appointment to be made – recruitment of middle level positions (tax suptd., J.E., A.E. Revenue Inspector) should be through state service commission • The status of Municipal Commissioner has been diluted in the last few years which had adversely affected the working of the organization • Overlapping of different functions carried out by organization takes place. • Need for updating different type of properties and introduction of user charges • GIS and MIS needs to be updated for better governance. 	



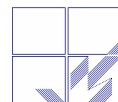
Name of the Stake Holder:	Mr. Lalta Prasad Yadav
Contact No.:	09336274223
Date of Discussion	20/4/2006
Discussion Team	Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Roads and Traffic Management • Old Area Development • Improving infrastructure 	
Summary of Discussion	
<ul style="list-style-type: none"> • Maintenance of roads and sewerage should be proper • Existing roads should be properly maintained as it's not possible to build a new road. • Development in old area should be carried out keeping in mind the heritage as dismantling is not possible in few areas 	



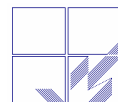
Name of the Stake Holder:	Mr. D.S. Tripathi
Contact No.:	0512-2306577 (0), 094155224608
Date of Discussion	21/4/2006
Discussion Team	Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Inter-Institutional Relationships • Underground sewerage system • Drainage System 	
Summary of Discussion	
<ul style="list-style-type: none"> • Sewerage Disposal system should be proper. Direct Sewerage Disposal in rivers i.e. Ganga and Pandu river should be stopped • Sewerage and Drains should be separated from each other. Mixing of sewerage with drains creates problem for the city specially during rainy season • Priority should be given to connect the drainage with big drains in old area rather than connecting it with sewerage • Sewerage Treatment Plant should be functional in proper way. • Houses should not be allowed to build on low land so that water overflow can be avoided. 	



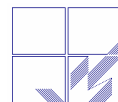
Name of the Stake Holder:	Mr. S.A. Royal
Contact No.:	09336106521
Date of Discussion	21/4/2006
Discussion Team	Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Finance availability for infrastructure • Inter-Institutional Relationships • Efficient Service Delivery • Sewerage System 	
Summary of Discussion	
<ul style="list-style-type: none"> • Contractors' payment should be done on time. • There should be appropriate fund availability for different infrastructure facilities • Jal Sansthan should stop connecting the sewerage system to drains and rather improve the sewerage connections • Before accepting the transfer of different services of newly developed colonies, KNN (roads and drains) and KJS (water and sewerage) should check that they should be properly linked with the main lines. • Proper monitoring should be there at the time of transfer of new developed colonies. • Other than higher officials, training should also be provided to the lower level officials as they are the one who execute the orders. • There should be a proper promotion policy. Otherwise the work efficiency gets reduced. • Inter divisional transfers should be avoided to the extent possible. Person's expertise should be kept in mind before transferring him to any particular department 	



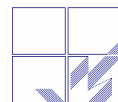
Name of the Stake Holder:	Mr. Mukesh Agnihotri
Contact No.:	09415477022
Date of Discussion	21/4/2006
Discussion Team	Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Urban Planning Issues • Inter-Institutional Co-ordination 	
Summary of Discussion	
<ul style="list-style-type: none"> • Multiplicity of institutions involved in city planning. • There should be clear cut demarcation between functions and financial responsibilities of different organizations involved in planning. Currently, Town and Country Planning Organisation (TCPO) prepare Master Plan whereas zonal plans are prepared by KDA. 	



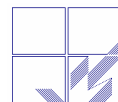
Name of the Stake Holder:	Mr. V.P Jaiswal
Designation:	J.E., Kanpur Nagar Nigam
Contact No.:	0935969217
Date of Discussion	21/ 4/2006
Discussion Team	Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? 	
Focus Areas	
<ul style="list-style-type: none"> • Smooth Traffic management • Well planned Parking areas • Education on Traffic Rules 	
Summary of Discussion	
<ul style="list-style-type: none"> • Signals should function through solar system • Proper parking arrangement needs to be made • Over bridge should be built up. • Proper flood management plan should be prepared for the city • People should be made aware about traffic system through television, city cable, hoardings on major crossings • Schools should have Awareness programs on Traffic rules with school children • Special funds should be provided for educating people on traffic management. • Position of Traffic Planner should be created to have specialized staff • Training about traffic system to various segment of population should be provided • The staff should be provided incentive such as promotion, increment in pay and recognition in terms of prizes or certification. 	



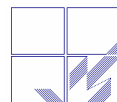
Name of the Stake Holder:	Mr. R.K. Singh
Designation:	Assistant Engineer, Kanpur Nagar Nigam
Contact No.:	-
Date of Discussion	21/04/06
Discussion Team	Dr. Vinita Yadav
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Existing Sewerage system • Co-ordination between different agencies 	
Summary of Discussion	
<ul style="list-style-type: none"> • Existing sewerage system is quite old and even locating the sewerage lines in old city area is a problem. • There is a lack of co-ordination between departments. • Other organizations don't take NOC from KNN while working within their jurisdiction. • Drains, which are already identified, can be maintained properly. • The agency, which developed residential colony should take care that level of newly laid sewerage lines should match with the existing lines laid by other organization outside the boundary. For example, sewerage lines lay under GAP and in Usmanpur area. • No proper maintenance of back lanes • encroachment found as well as filthy back lanes • In V.I.P roads, side lanes are 6 feet higher than the main roads. This creates problem in cleaning of drains and joining the trunk lines to the main lines • Difference in ranks of higher officials of different organizations lead to the inter-departmental co-ordination problem. • Overlapping of functional jurisdiction. There is a separate department called District Rural Engineering Dept. which undertakes/ executes the work allocated under M.P.L.A.D and M.L.A fund scheme. • Different organizations jurisdiction both area as well as functions should be well defined. 	



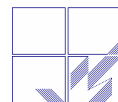
Name of the Stake Holder:	Mr. R. M. Asthana
Designation:	Chief Engineer (Mechanical), Kanpur Nagar Nigam
Contact No.:	09839945241
Date of Discussion	05/05/2006
Discussion Team	Dr. Vinita Yadav & D.C. Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in his view ? 	
Focus Areas :	
<ul style="list-style-type: none"> • Health & Sanitation • Solid waste management • Housing problems 	
Summary of Discussion	
<ul style="list-style-type: none"> • Modern type Solid Waste Collection centers has been proposed in place of existing old centers. • Mobile bins should be provided at the place where depots are not possible • Future demand for Bio-medical incinerators should be assessed on the basis of total as well as per capita bio-medical waste generation and as per demand they needs to be installed • Proper landfill sites needs to be developed. • Door-to-door waste collection services need to be initiated and their coverage should be increased in phased manner. • Instead of slums relocation, they need to be removed and multi-storey structure needs to be developed at the same site and slum dwellers should be allocated the same area which they were occupying. Housing problems-slums should be demolished & 4 storey houses constructed to be provided to the slum dwellers. • Widening of roads, provision of ample parking places and smooth flow of traffic should be brought about. 	



Name of the Stake Holder:	Mr. Ajay Singh
Designation:	Executive Engineer, Kanpur Nagar Nigam
Contact No.:	09839025897
Date of Discussion	05/05/2006
Discussion Team	Dr. Vinita Yadav & D.C. Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view <p>Focus Areas :</p> <ul style="list-style-type: none"> • Cleanliness • Transport • Sanitation <p>Summary of Discussion</p> <ul style="list-style-type: none"> • Open drains should be covered & footpath needs to be defined • A user friendly system to be introduced for cleanliness of the city • Develop MRTS & evolve an efficient parking strategy. • Greenery should be enhanced in the city 	

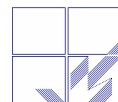


Name of the Stake Holder:	Dr. M.D. Girdhani
Designation:	Director, SWM, Kanpur Nagar Nigam
Contact No.:	09935318400
Date of Discussion	20/07/2006
Discussion Team	D.C. Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view <p>Focus Areas :</p> <ul style="list-style-type: none"> • Solid Waste Management • Transport • Sanitation <p>Summary of Discussion</p> <ul style="list-style-type: none"> • The two tier system should be adopted for collecting the garbage by way of primary collection i.e. sweeping or surface cleaning the roads, cleaning of KC drains and collection of rubbish by hand cart into rubbish depot. • The secondary collection will be done by tippers and loaders into close rubbish depot. All depots are to be closed by supreme court order as open to sky depots pollute atmospheric air. • The final disposal should be by way of sanitary land-fill. For the disposal, new land fill has been arranged at Transport Nagar near Bhunti (46 Hectares) arranged from KDA. • The solid waste should be treated by any of the following methods such as composting, Vermi Culture Composting, Waste to Energy or any other suitable process. KNN has signed a MoU with IL & FS (Infrastructure leasing and Finance services) for generating energy from solid waste and 15 acre has been allotted near Jajmau Pumping Station. A No-objection certificate is awaited from Airport Authority of India for installation of chimney. • Bio-medical waste is being treated by two firms namely MPCC (Medical Pollution Control Committee) at Bhauti near Bhimsen Station and at Bithoor. It is estimated that 60 percent of bio-medical will be treated by these two firms and balance 40 percent will be left out but not mixed with domestic waste. The U.P. Pollution Control Board has to act upon this matter. • The following strategy would be adopted for solid waste disposal: <ul style="list-style-type: none"> ➤ Door to door collection and MoU is being prepared to be signed with Lucknow based NGO for collection of garbage from 2,000 houses in the beginning ➤ Waste to Energy will produce RDF (Refuse Derived Pallets) from solid waste. This will give 800-1000 calories when burnt alone. If mixed with residue from tanneries, its caloric value with petroleum waste will generate much more heat to generate electricity. Under this scheme, garbage will be given free of cost and demolition waste @ Rs. 800/- per truck. The demolition material and residue from pallets will go to land fill. By adopting this method, volume of garbage will be substantially reduced thereby land fill can be used for longer period without being filled completely. This will be implemented in two years. • In the past decade, there have been water born diseases Gastroenteritis etc. in the city but there was no epidemic. Other common diseases are Hepatitis, Jaundice, Malaria and Dengue. 	

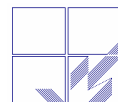




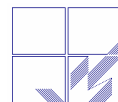
Name of the Stake Holder:	Mrs. Shobha Kapur
Designation:	Executive Engineer, Kanpur Nagar Nigam
Contact No.:	0512 – 2381285, 2383600
Date of Discussion	29/07/2006
Discussion Team	D.C. Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in her view ? <p>Focus Areas :</p> <ul style="list-style-type: none"> • Cantonment Board Act • Role of Elective members • Source of Revenue and Expenditure • Sanitation <p>Summary of Discussion</p> <ul style="list-style-type: none"> • According to her, Cantonment Board Act, 1924 (amended in 1983) is again under amendment wherein the powers of elected members are likely to be withdrawn. • Board has income from taxes such as house tax, water tax, conservancy tax etc. and non tax such as hoardings, lease rent, registration charge etc. • Lot of works needs to be done to keep the area clean and to provide basic amenities to its habitants. • Cantonment Board is in a position to contribute its share of 30 percent from their revenues and also to arrange O&M subsequently. • Cantonment Board is also in a position to save some amount varying from 1 to 7 crore per year and same goes to reserves to be utilized as per need. 	



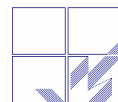
Name of the Stake Holder:	Mr. Anil Kumar Garg
Contact No.:	09415309898
Date of Discussion	19/4/2006, 18/5/2006
Discussion Team	Dr. Vinita Yadav & Mr. D.C. Awasthi
Discussion Agenda:	
<ul style="list-style-type: none"> • Inform the Stakeholders on JNNURM Concept • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in their view 	
Focus Areas	
<ul style="list-style-type: none"> • Roads and Traffic Management • Housing Sector • Improving infrastructure • Water- Equitable distribution • Improving infrastructure in inner city 	
Summary of Discussion	
<ul style="list-style-type: none"> • Road widening should be on priority basis. • Priority should be given to provide additional housing for different Income Groups • Housing should be provided for Economically Weaker Section and 5 years stay should be made compulsory. • Proper housing arrangements for Migrant labours should be made • Priority should be given to River Front Development so that it can be used as tourist and housing place • Cross sections, intersections, cycle tracks should be developed • Plantation should be done along with inner roads • Industries should be shifted outside municipal limits to the area earmarked under Metropolitan Region • In most commercialized zones, proper traffic management is required • Tempo should not be allowed in the commercial areas and small buses should be introduced. Bus stands should also be provided • Steps should be taken to minimize the accidents by removing the bottlenecks at identified 70 black spots • At Bawana road, only vehicles of shopkeepers and buyer's should be allowed • Proper parking arrangements should be made • Traffic signal light should be installed • Identification of parties to whom identified parking lots can be given for management • Un-declared slums to be regularized and provide sites and services for poor • Public transport services to be improved • To develop the 225 kms of roads including re-surfacing of service roads, street furniture, cross section, removal of encroachments. 	



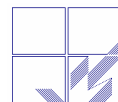
Name of the Stake Holder:	Shivpuri
Designation:	Assistant Town Planner, KDA
Contact No.:	-
Date of Discussion	7/6/2006
Discussion Team	Pritam Kapur, D.C. Awasthi, Dr. Vinita Yadav
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? • What are the planning related issues for the city⁴³ in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • Infrastructure Provision • Land Development by K.D.A • Budgetary provisions in K.D.A 	
Summary of Discussion	
<ul style="list-style-type: none"> • K.D.A can increase its resources by charging compounding fee from illegal construction, sanctioning of map and through levying of betterment charges. • Special budgetary powers should be given to K.D.A. • There should be speedy approval of master plan. • There is no senior planner posted at Town and Country Planning Dept. (T.C.P.D). The town planner has only one Assist. Town Planner to assist her. • Mati's master plan has been sanctioned in fifteen days time whereas Kanpur's master plan has been lying with government since March 2003. This reflects that Kanpur is politically neglected city. • No promotion policy exists at the city level which leads to disappointment among staff. • There are frequent transfers of top officials which lead to procedural delays in getting the approvals. It should be made mandatory that for 3 years an officer will not be transferred. 	



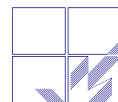
Name of the Stake Holder:	M.P. Srivastava
Designation:	Suptd. Engineer
Contact No.:	09415005679
Date of Discussion	2/5/2006
Discussion Team	Mr. S.K Relan, Dr. Vinita Yadav and D.C. Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Infrastructure Provision • Housing Development by U.P. Housing Board • Inter- departmental co-ordination <p>Summary of Discussion</p> <ul style="list-style-type: none"> • Better Inter departmental co-ordination is required for speedy delivery of urban services. • At the time of handing over of colonies to KNN for maintenance, they should ensure the provision of urban services as per the requirement. • Time taken in taking NOC from KDA is quite high. • There should be nodal agency to govern different institutes for faster service delivery. • Better Road connectivity from Kanpur to Lucknow should be made through Ganga Barrage • Better Planned Service is required. • The mechanism to make better provision for water to low income group area and poor areas should be worked out. • Solid Waste disposal system should be re-designed. • Better environment management plan for slum bastis. • Timely preparation and implementation of Master Plans should be give primary importance. • Clear cut division of KDA and Housing Board jurisdiction • Strict vigilance to stop encroachment • Administration needs to be strengthened. 	



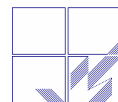
Name of the Stake Holder:	Mr. M.C.Tiwari
Designation:	General Manager, Ganga pollution Control Board, UP Jal Nigam
Contact No.:	0512-2545598(o), 09415067456
Date of Discussion	16/5/2006
Discussion Team	Mr. D.C.Awasthi
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Sewage treatment Plants • Ganga Action Plan Phase-II • Rain water Harvesting 	
Summary of Discussion	
<ul style="list-style-type: none"> • U.P. Jal Nigam handed over the STP 130 MLD and 5 MLD and 36 MLD UASB plants at Jajmau to Kanpur Nagar Nigam. Hence forth, KNN will be responsible for running these plants. • Ganga Action Plan Phase –II for South Kanpur is being revived by G.O. for Rs. 36.00 crore from State Govt. Initially the sanctioned estimate for south city (200 MLD UASB sewage treatment plant at Pandu River, diversion of Sisamau Nala presently flowing to Ganga river, to pandu river; other three Nalas) COD, Ganda Nala and one more Nala, Intermediate pumping stations at Rakhi Mandi and Munshi Purwa etc. was Rs. 105.00 crores in 1996 and this budget got enhanced to Rs.250.00 crores approx. in 2006. • The funds are likely to flow from centre also with input of Rs. 36.00 crore by State Govt, Sewage Line from Munshi Purwa is 2200 mm dia. The project for south city is being handled by Ganga pollution Control Unit under Ganga Action Plan and is likely to kick off after gap of two years. • The ground water level and water strata have gone down by 7 M in Kanpur city. As such, certain provisions need to be made for rain water harvesting. 	



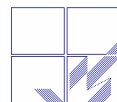
Name of the Stake Holder:	Mr. Avni Kumar
Designation:	DFO, Forest Office, Allen Forest Nawab Ganj, Kanpur
Contact No.:	09415017227
Date of Discussion	16/05/2006
Discussion Team	Mr. D.C.Awasthi,Dr.Vanita
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Plantation on Road sides • Conservation of water • Master Plan 	
Summary of Discussion	
<ul style="list-style-type: none"> • In the absence of approved master plan of Kanpur, it is difficult to tell where plantation is required and also proposed green belt in the city is not known. This is the biggest hurdle in planning the plantation network in the city. Generally road side plantation is done 6 meter centre to centre in two or three rows depending on the available width. • There is a sudden fall in water strata in Kanpur. This is cause for worry as further drop will lead to dry up of existing plantation. To avoid this, recharge of ground water through rain water harvesting is strongly recommended. • Kanpur City and Dehat has 5400 Hectares which cannot be acquired by any department without express permission of the forest department. 	



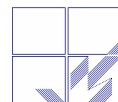
Name of the Stake Holder:	Mr. S. K. Rajput
Designation:	General Manager, KESCO
Contact No.:	09839108319
Date of Discussion	03/05/2006
Discussion Team	Mr. S.K Relan, Dr. Vinita Yadav and D.C.Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas :	
<ul style="list-style-type: none"> • Provision of Electricity 	
Summary of Discussion	
<ul style="list-style-type: none"> • To improve the power sector generation & distribution • The 70-75 years old under ground cable network is under capacity & worn out. Hence it needs to be replaced. • Alternative source of supply through alternate breakdown system • Electricity cable should be in ring form • Transform should be provided to meet the demand. 	



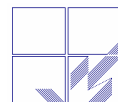
Name of the Stake Holder:	Mr. S.M.Agarwal
Designation:	Chief General Manager, KESCO
Contact No.:	9839104005
Date of Discussion	03/05/2006
Discussion Team	Mr. S.K Relan, Dr. Vinita Yadav, D.C.Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas :	
<ul style="list-style-type: none"> • Power supply • Cleanliness of the city • Transport upgradation 	
Summary of Discussion	
<ul style="list-style-type: none"> • Solid waste disposal system for the city should be designed & implemented. • Fine should be imposed on people for dirtying the city. • Law & Order situation of the city should be improved. • Metro should be introduced in the city. • Chamanganj, Begumganj – Electricity system should be improved. • Current power supply status needs to be improved. • Only single point supply should be provided. • Shortage is due to local area infrastructure & losses in transmission & local area theft of power. 	



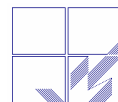
Name of the Stake Holder:	Mr. S. R. Sachen
Designation:	Regional officer, U.P. Pollution Control Board
Contact No.:	09415405907
Date of Discussion	3/05/2006
Discussion Team	Dr. Vinita Yadav & D.C. Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas :	
<ul style="list-style-type: none"> • Environmental Pollution 	
Summary of Discussion	
<ul style="list-style-type: none"> • City has to be planned keeping separate place for all type of land-use. • Industries not to be permitted within the city. • Road length is much less per capita. • Direct discharge of city waste into nallahs should be stopped. It needs to be directed to a STP for treatment. • Strategic plan should be made for flow of rivers continuously. Minimum flow of water to be maintained. 	



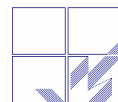
Name of the Stake Holder:	Mr. B.K. Gupta
Designation:	Regional Transport officer, R.T.O.
Contact No.:	09336246790
Date of Discussion	6/06/2006
Discussion Team	Dr. Vinita Yadav & D.C. Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in his view? <p>Focus Areas :</p> <ul style="list-style-type: none"> • Traffic related problems <p>Summary of Discussion</p> <ul style="list-style-type: none"> • Roads are in very bad condition. Road width has decreased due to encroachment. • There is no parking area earmarked in busy markets. • The number of registered vehicles has increased steeply in last 5 years. There should be different ways to control private vehicles registration. Old and slow moving vehicles should be phased out. After 15 years, vehicle renewal for another 5 years should be banned. One vehicle per family system should be introduced. • In all the congested pockets, four wheeler entries should be banned and proper parking places should be provided in the vicinity. • In all the multi-storey buildings, parking arrangement should be made compulsory. Otherwise NOC shouldn't be given. • Proper signal system should be in place. • Transport Nagar should be developed with all the basic infrastructure facilities • The order for 108 CNG buses has been placed and eighteen routes for plying these buses have already been finalized. Thousand new CNG taxi permits have already been given. 	



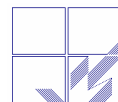
Name of the Stake Holder:	Manoj Kumar Verma
Designation:	Conservation Assistant Archeology
Contact No.:	9415092529
Date of Discussion	2/5/2006
Discussion Team	Mr. S.K Relan, Dr. Vinita Yadav and D.C.Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas :	
<ul style="list-style-type: none"> • Important protected monument, religious places and fairs • Restoration of monuments • Availability of funds for restoration work • Better Planning Mechanism • Traffic Management • Planning for development • Financial budget 	
Summary of Discussion	
<ul style="list-style-type: none"> • Religious fairs viz. Shivratri at Anandeshwar Temple, Navratri at Usmanda Devi Temple, Dussehra mela and Chat Pujan on the bank of Ganga river etc. are organised every year. This lead to the additional burden on the city hence the provision for improved infrastructure and public convenience facilities need to be organised. • Some restoration work has already taken place on ancient monuments like four temples at Nimbya kheda, compound wall at Bhitargaon Temple, setting of platform, leveling, repair of compound wall at ancient temple of Mahadev, Temple of Phoolwati devi and 50 % work at Katchery cemetery. Still more fund is required to further improve the area • Steps should be taken to stop encroachment on 100 m prohibited area and 100-200 metre regulated area around the protected monument. • The protected monument should be strictly monitored to avoid the damage to them. • Proper planning should be done for Heritage conservation and promotion. • Better Traffic Management is required as traffic system is quite unsystematic, no traffic signal is functioning and time taken in travel is quite high. 	



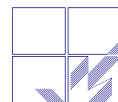
Name of the Stake Holder:	Mr. Anoop Bajpai
Designation:	Project Officer, DUDA
Contact No.:	0512 – 2555284, 09450023939
Date of Discussion	01/5/2006
Discussion Team	Mr. S.K Relan, Dr. Vinita Yadav &D.C.Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas :	
<ul style="list-style-type: none"> • Urban poverty • Programmes for Slums Improvement • Sanitation issues • Traffic system • Roads & transport • Employment issues 	
Summary of Discussion	
<ul style="list-style-type: none"> • During National Slum Development Programme (1997-98), many slums have been developed in a short period. Under the scheme, Drainage, roads, lighting has been provided but now as that scheme has been closed it's very difficult to fund the physical infrastructure development in slums. • At present, only urban self employment training programmes were organized. For men, training for electrician, repairing of radio, T.V., Refrigerator, computer training, motor driving, Mobile Repairing and for female, stitching, parlor, fashion designing etc. is provided. • Low cost sanitation programme should be adopted in slum areas. • Roads should be improved. • Traffic system should be improved. For example – there should be complete ban on tempos and rickshaws on main roads and CNG run bus service should be introduced. • 6-7 railway over bridge needs to be constructed • Criminal activities in unauthorized colonies need to be checked. • Existing sewerage lines are quite old. There is no proper leveling and cleanliness of sewerage lines. • Sewerage lines should be cleaned from time to time and wherever possible should be widened keeping in mind the increased pressure of increase in number of households. Unauthorized occupation of existing sewerage lines, open drains and railway land should be stopped. For example – Katchi Basti Gobind Nagar • The measures should be adopted to provide better education and mechanism to generate more employment. In slum areas, education and employment level is less. Only 25-30 percent people are educated in slums. 	



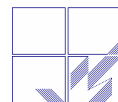
Name of the Stake Holder:	Mr. K.C. Vishwanathan
Designation:	Chief Executive Officer, U.P. Trade Promotion Authority
Contact No.:	09839101670
Date of Discussion	10/05/2006
Discussion Team	Mr. D.C. Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • Industries and their growth • Power Scenario • Schemes for Industrial Growth 	
Summary of Discussion	
<ul style="list-style-type: none"> • Closure of many textile and woolen industries • Some of the major industries are either closing down or growth is very less whereas small scale industries are prospering. • Need to bring improvement in the overall power availability as currently power scenario is poor in Kanpur with rostering from 8 to 12 hours per day. • Poor law and order situation • There is a need to bring attitudinal change of Govt. Officials for industrial growth. • Transparent system required while sanctioning loans by financial institutions • Various schemes, which are introduced by the government for growth of small scale industries, are not implemented in letter and spirit. • The projects costs are deliberately inflated to reduce the entrepreneur's contribution and also cover hidden costs. The repayment in most of the cases is very difficult. 	



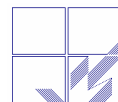
Name of the Stake Holder:	Shri Tirth Raj
Designation:	Addl. Commissioner, Trade Tax Dept., Avadh Puri
Contact No.:	0512-2581041
Date of Discussion	22-5-2006
Discussion Team	Mr. D.C. Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • Industries and their growth • Power Scenario • Schemes for Industrial Growth 	
Summary of Discussion	
<ul style="list-style-type: none"> • Presently there is no medium and heavy industry operating in Kanpur Nagar and most of the industries are small scale. • Unlike history of Kanpur as a Manchester of India, it has a low profile of industrial business and this will remain so in the near future. • Power scenario in city is poor and long hours of roistering takes place. • Poor law and order condition (Kidnappings and abduction for ransom) • There is no air connectivity between Kanpur and Delhi and other major towns. • Only one five star hotel has been developed. • Public transport for industrialist such as air conditioned taxis etc is not developed. • Current state of infrastructure is not congenial for foreign investments and big industrial houses. • For taxation, more and more tax payers are coming for registration. The department is taking different steps for bringing more traders and commercial establishment in the taxation net. 	



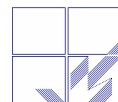
Name of the Stake Holder:	Mr. Vijay Kapoor
Designation:	Chairman, Kanpur Industrial Development Co-operative Estate Ltd.
Contact No.:	09336104555
Date of Discussion	7/6/2006
Discussion Team	Pritam Kapur, D.C. Awasthi, Dr. Vinita Yadav
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern for industrialists in his view? 	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Industries and their growth • Power Scenario • Schemes for Industrial Growth 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • Kanpur Industrial Development Co-operative is one of the biggest industrial estates in U.P. and only a few exists in India. Kanpur is the biggest industrial district in Uttar Pradesh and it has industrial atmosphere. • There is no assistance from state or central government for small and medium scale industries. • Most of the government policies are meant for heavy and medium scale industries. • Now a day's margin has decreased at a faster pace. Due to lack of investment and reduced margins, they are not able to compete with other industries. • The government policies such as charging excise on MRP from medicines etc. are unfavorable. • Marketing people want to take maximum benefits whereas manufacturer gets very little margin. • Out of total tax collected from industrial estate, 60 percent should be spent on the operation and maintenance in the industrial estate itself. • There exists no co-ordination between KDA, who develop the land and KNN who maintains the services. • Government adopts dual policy for industries. 	



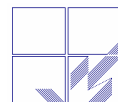
Name of the Stake Holder:	Mr. Sunil Vaishya
Designation:	U.P. General Secretary, Indian Industries Association
Contact No.	09415040829
Date of Discussion	
Discussion Team	Pritam Kapur, D.C. Awasthi, Dr. Vinita Yadav
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern for industrialists in his view? 	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Industries and their growth • Power Scenario • Schemes for Industrial Growth 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • Kanpur is old industrial city and is known for its leather (tanneries, saddleries) and plastic industries. • Kanpur has many industrial estates such as Panki site I to V, Dada Nagar 6 industrial estate, co-operative industries, govt. industrial estate at Panki etc. • Govt. of U.P. has adopted single table system to issue the licenses for industries. • The government has to take initiatives to invite big industrialists to set up large scale industries as Kanpur has the locational advantage, resource base and entrepreneurship. • U.P.S.I.D.C top person should be appointed and posted for minimum 3 years at a particular position and place. • Industries should receive excise and income tax exemption and rebate on electricity etc. • There should be air connectivity between Kanpur and other major places and if that is not possible, name of Lucknow airport should be changed as “Lucknow-Kanpur Airport” so that Kanpur can be placed on World Map. • Air cargo facility should be introduced in Kanpur. • Out of total industries, 30 percent are in non-confirming areas. • In Kanpur, different areas are specialized for cloth, machineries, spices, food grains, steel, electric items etc. • Mainly migration is from Bundelkhand region and eastern U.P. • More than 7 hours electricity cut is observed in Kanpur city. • Flyovers are required at C.O.D, Coca cola crossing etc. • Special drives should be organized to remove encroachments on public roads. Special powers to officers should be given and flying squads should be created to penalize the people with heavy penalty. <p>Railway line passing through the city should be diverted so that chaos on roads and traffic jams can be averted.</p>	



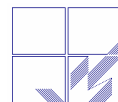
Name of the Stake Holder:	Anup Asthana
Designation:	Secretary, Kanpur Builders & Promoters Association
Contact No.:	09935556632
Date of Discussion	01/05/2006
Discussion Team	Mr. S.K Relan, Dr. Vinita Yadav and D.C. Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • Revision & Notification of Master Plan • Traffic Management • Housing Development • Increased power supply • Public conveniences 	
Summary of Discussion	
<ul style="list-style-type: none"> • Time taken in preparation of development plans is quite high and Existing Master plan is quite old. On the basis of old master plan, KDA has issued notices to 42,000 people for land violation as they were not obeying the master plan of 1968. We have put a P.I.L for getting the Master Plan notified immediately. • The area designated as residential, commercial and industries should be known to the public to stop further violation. • Total railway crossing between Kalyanpur to Central Railway Station is 17 and frequent passage of train and closing of crossings lead to traffic congestion which can be avoided by shifting railway from Kalyanpur and to Panki. For example only 2-3 trains passes through the Farrukhabad line whereas stoppage is of two hours. This will reduce the existing traffic problem and over bridge requirement would be minimized. • Need to identify new areas to be developed for housing purpose. The existing housing colonies are not linked with the city by good roads, street light and drains. • Haphazard development is creating chaos. • Regularization of colonies, which have come up on government land, after charging the regulation fee. • Single Window system needs to be adopted as in current system a builder has to take approval from 14 departments to get his plan sanctioned. Due to cumbersome approval process, in last 6 month no building plan is passed. • Under ground parking lots should be created. • Power generation & its supply for industries should be at subsidized rates. • Special Economic Zones should be development as it will create new employment opportunities. • Parks & Amusement Parks should be given on lease to private entrepreneurs for better management. • National/ international Airport should be provided at Kanpur. 	



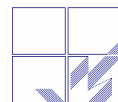
Name of the Stake Holder:	Mr. B.K. Bharatiya and Rajiv Bharatiya
Designation:	President, Property Dealers and Builders Association
Contact No.:	09839104726, 0512-2304895
Date of Discussion	06/06/2006
Discussion Team	Mr. D.C. Awasthi & Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Why Kanpur is Important? • What are areas of concern in his view? • What are the problems/ issues faced by property associations and industry? 	
Focus Areas :	
<ul style="list-style-type: none"> • Revision & Notification of Master Plan • Property Dealers specific problems • Infrastructure Facilities 	
Summary of Discussion	
<ul style="list-style-type: none"> • Law and order situation in Kanpur is bad. The steps should be taken to provide clean and safe environment for industrialists and traders. • Airport is must for the city. Lucknow and Kanpur can be developed on a twin city concept. • Bridge on Ganga is quite old. It should be rebuilt. • Out of total tax collected from traders, a percentage should be spent on improving the infrastructure. • Lack of traffic management and poor regulation of traffic • Encroachment on public land due to construction of temples and • Auto rickshaws should be metered. • Public toilets at market places need to be constructed. • Cleanliness drive should be organized in various parts of the city. • Private sector should be involved in the collection of taxes, road development etc. 	



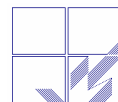
Name of the Stake Holder:	Mr. Vijay Pande
Designation:	Mahamantri, U.P. Hotel and Restaurant Association
Contact No.:	09415043592, 0512-2381072, 2381430
Date of Discussion	06/06/2006
Discussion Team	Mr. D.C. Awasthi & Dr. Vinita Yadav
Discussion Agenda:	
<ul style="list-style-type: none"> • Why Kanpur is Important? • What are areas of concern in his view? • What are the problems/ issues faced by hotel industry? 	
Focus Areas :	
<ul style="list-style-type: none"> • Revision & Notification of Master Plan • Traffic Management • Hotel specific problems • Increased power supply • Public conveniences 	
Summary of Discussion	
<ul style="list-style-type: none"> • In master plan, sites for hotel are not earmarked. • No development authority has taken interest in proper site identification for hotels taking into consideration its approachability, proximity to hotels, industries, railway station etc. • KDA has submitted its master plan long time ago but it has not been passed by the state government. • The law and order situation is deteriorating day by day. Security is the major problem for tourists and industrialists visiting Kanpur city. • In the inner core area, sewerage pipelines are 100 years old. Till now no investment has been made in inner city though authority receive tax. • There are no fixed timings for electricity cut. For long hours (10-12 hours) electricity cuts are observed. • Hotel has been declared an industry but no additional benefits have been given to them. That's why our business is not flourishing. • There is no proper mechanism for solid waste collection and disposal from hotels. Proper dumping sites have not been identified. The segregation of solid waste does not take place. • Even if no piped water is supplied and an hotelier is getting the water through boring, they have to pay for the piped water supply which is going within 100 meter of their premises. • The taxes charged from hotels are too many whereas taxes vis-à-vis benefits are too less. For example- The generator license fee, registration fee, water testing fee, weight and measurement fees, luxury tax, music system fee and T.V. fee etc. are imposed on hotels. There should only be one tax and it should be fixed after due consultation with hoteliers so that unnecessary harassment can be stopped. • Roads should be widened so that traffic can move smoothly. In all the roads, divider should be built. • Old railway station should be made functional so that city can be less congested. • Proper enforcement of laws should be there. • Taxation system should be simplified and some percentage of taxes should be reserved for the benefit of hotel industry. 	



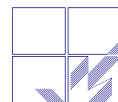
Name of the Stake Holder:	Shri Mohanlal Chandani
Designation:	President, Hotel and Restaurant Association
Contact No.:	09839900401, 0512-2314776
Date of Discussion	07/06/2006
Discussion Team	Mr. D.C. Awasthi & Dr. Vinita Yadav
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? • What are the problems/ issues faced by hotel industry? <p>Focus Areas :</p> <ul style="list-style-type: none"> • Revision & Notification of Master Plan • Traffic Management • Hotel specific problems • Increased power supply • Public conveniences <p>Summary of Discussion</p> <ul style="list-style-type: none"> • Major problem of Kanpur city is electricity. In Kanpur, 12 to 18 hours electricity cut is imposed which is a great problem for industries especially for hoteliers. Due to this industrialists prefer to stay in Lucknow rather than in Kanpur. • There is no proper traffic control system in place. • Too many taxes (13) are imposed on hotels. There should only be single tax imposed on hotels. • U.P.F.C. has imposed so many restrictions on disbursing the loan. The interest charges have increased manifolds. • There is no proper provision for train and no airport facility is available. • Without basic infrastructure, it is very difficult to develop SEZ. 	



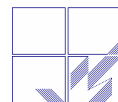
Name of the Stake Holder:	Dr. I.C.Gupta & Shri A.K.Sinha
Designation:	President & Secretary Merchant Chamber of Commerce
Contact No.:	0512-2531306
Date of Discussion	06/06/2006
Discussion Team	Mr. D.C. Awasthi & Dr. Vinita Yadav
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? • What are the problems/ issues faced by merchants? 	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Trade and Commerce activities • Industry specific problems • Quality of Infrastructure • Involvement of Private Sector 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • From Kanpur, total export of leather is 3500 crore, detergent is 700 crore and other items of export are machines, plastics and textiles. • Loading and unloading of containers is a problem. They have to pass through the main city. • Farrukhabad train line has started functioning which has added woes of citizens. • There are total seventeen railway crossings from Kalyanpur to Panki. • Private sector should be involved in the provision of infrastructure. • There are problems in the preparation of map by K.D.A. K.D.A charges compounding fee from those structures who has either encroached upon the public land or using their premises for residential cum work purpose. • Coaching industries are mushrooming in the city. • Entrepreneurs are going out of Kanpur to establish their industries due to lack of opportunities. • Steps should be taken to develop the food and processing industries i.e. spices, masala, floor mills etc. and service industry. • In 1991, chungli has been abolished but alternate grant doesn't match with the revenue required. 	



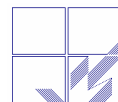
Name of the Stake Holder:	Mr. Mahesh Jain
Designation:	U.P. Sharafa Va yapar Mandal
Contact No.:	0522- 2360445
Date of Discussion	08/05/2006
Discussion Team	Mr. Pritam Kapur and Dr. Vinita Yadav
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? <p>What are areas of concern in his view?</p>	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Revision & Notification of Master Plan • Traffic Management • Housing Development • Increased power supply • Public conveniences 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • Major problem of the city is polluted water, electricity, transport and law and order situation. • A committee consisting of ret'd. Engineers, business men, public should be formed to put a check on funds utilized by government departments. • Law and Order situation is really bad. The goons are troubling traders by harassing them, too many chain snatching cases have come into picture. • Main problem is due to unauthorized occupation of spaces in busy markets such as Birhana road etc. • In tempos, 10 to 20 persons sit whereas its capacity is for seven people. Police people charge money that's why they law is not enforced. • Main problem is of electricity. They do not supply enough electricity and if people use generator, the officials say that it pollutes the environment. • All the industries should get special electricity lines and water facilities. Why should we be pay electricity sub-charges and load money when the service is not provided satisfactorily? • Many of the big industries have closed down in recent times due to trade unions. • No rent control exists. In Birhana road, people are paying very less rent. • In the first phase, employed class would like to shift from inner core area. • Some of the areas are badly developed due to outdated master plan. • Only a few officials are honest. KDA officials receive money from co-operative society and in return, they are allowed to sell the flats at price which they want 	



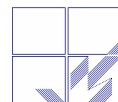
Name of the Stake Holder:	Mr. Shri Prakash Jaiswal
Designation:	Minister of State, Home Affairs, Govt. of India
Contact No.:	0512 -2450685 /2450686, 09935157479
Date of Discussion	11/06/2006
Discussion Team	Mr. D.C. Awasthi
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus on? • What are areas of concern in his view? <p>Focus Areas :</p> <ul style="list-style-type: none"> • Roads • Property Assessment • Traffic Situation • Role of Public Representative in the City <p>Summary of Discussion</p> <ul style="list-style-type: none"> • He is the former Mayor of Kanpur Nagar and well acquainted with city. • He has informed about the following developments taking place in city: <ul style="list-style-type: none"> ➤ road from Rama Devi to Kalyanpur has been given to State Highway Division of PWD and the bridge at COD crossing has been taken for construction. ➤ National Highway Authority of India will also build Rail over Bridge at Jhakarkatti. ➤ Kanpur has been selected to be one of 42 National Airports and arrangements are being made to provide CIF security at Kanpur. The funds are being made available to up-grade present airport to national airport and very soon domestic airlines will start operating. ➤ NHAI is going to build ring road around Kanpur Metro and will provide two bridges at Ganges River. • Flyover right from Sunder Talkies to Colonelganj Police Station (Chunniganj Xing) is required to ease traffic load. This fly-over is to get bifurcated at Chunniganj Xing towards Bakarmandi and Company Bagh Crossing. • Senior Bureaucrat or Elected Member (Mayor or Nagar Pramukh) should be head of all three institutions viz KNN, KJS and KDA for smooth and effective functioning. • KNN should immediately undertake task of assessment of those properties, which remain un-assessed even now and do sample checking of properties, covered under self assessment scheme. • Old bungalows, which have been converted in to multi-storey flats and complexes, schools, nursing homes, private hospitals, should be re-assessed for house and property tax. 	



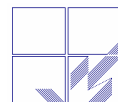
Name of the Stake Holder:	Mr. Surinder Mohan Aggarwal
Designation:	Chairman, UPDESCO
Contact No.:	09415043964
Date of Discussion	24/07/2006
Discussion Team	Mr. D.C. Awasthi
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • City Contribution • Power Scenario • Institutional Reform 	
Summary of Discussion	
<ul style="list-style-type: none"> • 30% share of the local bodies (KNN and KJS) can be best met by disposal of one or two premium properties in the city. The reforms, suggested by the consultants, may take a year or two before the start of any financial improvement. • On power sector, he assured the co-operation of state government by way of giving guarantee to NTPC Ltd. on behalf of KESCO so that MoU could be signed 	



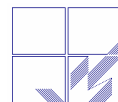
Name of the Stake Holder:	Mr. Jagendra Swarup,
Designation:	MLC
Contact No.:	0512-2303138/39/40, 9839085577
Date of Discussion	11/06/2006
Discussion Team	Mr. D.C. Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • City Contribution • Power Scenario • Institutional Reform 	
Summary of Discussion	
<ul style="list-style-type: none"> • On poor traffic management, he suggested that Rail-over-Bridge should be constructed at Shyam Nagar x'ing (on Delhi-Howrah Rail line) from G.T. Road to Shyam Nagar in addition to other ROBs on GT Road. • On Education line, he agrees that seats available in Degree College are much less than the actual demand. There has been no increase in fees for quiet some time in Govt. aided Intermediate and Degree College in the city. • From 1st April 1975, 80 percent of the fees collected from the students go to Government and only 20 percent comes to Management. Out of this 20 percent, no infrastructure development is possible. • From 1980 onwards, all the appointments of teachers are made by the Govt. • As per latest Supreme Court Judgment, the power to appoint rest with the management. The fee should have reasonable structure. In case of dispute, the Tribunal will decide the matter. • In private sector, the role of Govt. should be minimum to promote quality education and also to develop necessary infrastructure for enhancement of seats with time. 	



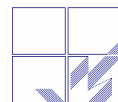
Name of the Stake Holder:	Mr Anil Kumar Sharma
Designation:	Ex. Mayor
Contact No.:	9839085565
Date of Discussion	03-06-2006 & 05-06-2006.
Discussion Team	D.C. Awasthi
Discussion Agenda:	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • What Kanpur should focus? • What are areas of concern in his view? 	
Focus Areas :	
<ul style="list-style-type: none"> • Taxation System • Traffic Management 	
Summary of Discussion	
<ul style="list-style-type: none"> • There should be different policy to fix a reasonable tax for 70-75 percent from ESW ownership, who could be brought under tax net, which they can afford and pay assessment. • The property tax rate for old Bungalow and Kothis in posh areas, which have been converted into multi-storey Complex but house tax, is still being paid at the rate of old bungalow needs to be revised. • There should be a check on the conversion of residential areas into commercial centers as there is rapid growth of commercial activities in Swaroop Nagar, Arya Nagar, Kaka Deo, and Civil Lines. • Health Club, Beauty Parlors, Hi-fi Schools, Guest Houses, Marriage Halls, Bars and restaurants etc. need to be brought in Tax Net. • By Saral Kar Yojna, the number of assesses have gone up, but to increase revenues, systematic approach is needed. At present, there are only two categories i.e. residential and non-residential for assessment of municipal tax. These categories need to be increased to five categories i.e. industrial, institutional, commercial, residential and residential cum commercial land use. The rate of taxation should be reasonable and fair. • Institutional reforms are required for bringing three institutions under one net. Presently Mayor is chairman of KNN and KJS, but not of KDA. One head should cover all three organisation KJS, KDA and KNN. • Under the present system, overlapping of functions take place e.g. roads which are built by PWD, KDA and KNN in the city. • The policy for recruiting class IV employee should be decided by Nagar level and not directed by state govt. • The numbers of vehicles, plying on roads, have increased manifolds in last 5 years. The public transport system needs to be put in place like one in Mumbai. • The ROBs/flyovers are required at COD, Tat mill, Coca Cola, Sharda Nagar, Kalayan Pur and Jarib Chowki railway crossings; Lal Imli crossing to avoid traffic jams and easy movement between main city and south city. • The existing Railway bridges at Govind Nagar and Dada Nagar need to be widened to avoid traffic jams in the city. • There are 350 parks in the city, managed by 90 Malis (Gardeners) and there is ban on further appointments, consequently some parks have become defunct and have been encroached by public. • The condition of roads in south city i.e. Yashoda Nagar, entire Barra, Naubasta, Machharia and Shyam Nagar in East is in poor condition. This needs to be improved. • The inner core city needs to be checked from further loading by way of multi-complexes and commercial land use etc. The water supply, sanitation, sewerage system and traffic get over-loaded with this trend. KDA is sanctioning map for change over from old Bungalow to new complexes without caring NOC from KNN. 	



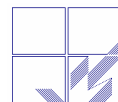
Name of the Stake Holder:	Mr. Yogendra Mohan
Designation:	Director, Jagran Group
Contact No.:	09336816820
Date of Discussion	19/07/2006
Discussion Team	Mr. D.C. Awasthi
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus? • What are areas of concern in his view? 	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Revision & Notification of Master Plan • Traffic Management • Housing Development • Increased power supply • Public conveniences 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • Kanpur is an educational hub but quality of education needs to be improved. • Non-aided schools are doing better and are better disciplined than aided schools. • Teachers are better paid in government aided schools still there is no accountability. • There should not be any interference of state Govt. in running of aided schools. • For starting such institutions, Government's role should be to approve and recognize them without delay and red tapism. • Mr. Yogendra Mohan is involved in the provision of both Health and Education of the City. • He is running charitable institutions for homeopathy. Homeopathic clinics are being run at Tilak Nagar, Parbati Bagla Road and Govind Nagar - Barra Area. • He also run following institutes <ol style="list-style-type: none"> 1. Shri Purnachandra School for 10+2 on CBSE pattern since 1991. 2. Jagran Institute of Management and Mass Communication to impart one year training in print media, TV media, Broadcasting, Advertising and Public Relations. - There is 100 percent placement for passing graduates from Jagran Institute of management and mass communication. T.V Channel -7 is owned by Jagran group. 3. Institute of Jagran Management (starting in 2006) – it will provide 2 year post diploma course (PDGM) affiliated to AICT, MBA degree. 4. Jagran College of Arts, Science and Commerce. 	



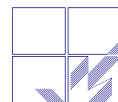
Name of the Stake Holder:	Mr. Jagdish Yadav
Designation:	Chairman, Lok Vikas Mandal, Kanpur
Contact No.:	09450149688
Date of Discussion	10/5/2006, 8/6/2006
Discussion Team	Mr. D.C. Awasthi, Pritam Kapur, Dr. Vinita Yadav
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
<p>Focus Areas :</p> <ul style="list-style-type: none"> • Slum up gradation • Housing for poor • Basic services to the poor 	
<p>Summary of Discussion</p> <ul style="list-style-type: none"> • From March, 1996 to 2004 National Slum Development Project was implemented by KDA by selecting 315 Malin Bastis. • Out of 390 slums, 150 have been developed by spending 26 crore for providing basic infrastructure and became Adarsh Bastis. The results were apparent and appreciated. • At present, no yojana (Plan) is in operation for Malin Basti. Only job trainings have been provided to girls and boys. In this scenario, JNNURM is only hope. • With the limited money allotted for Malin Basti, the physical infrastructure has been provided but at socio-economic front no development has taken place. Even no provision has been laid to provide health and education at slum level. The socio-economic issues need to be addressed. • At slum, basti dwellers do not have any public dispensary. They have to go to private doctors after covering large distances which means increased inconvenience and high cost. There is no study available to find out that what type of disease happened at slum level. • After anganwadi, there is no scheme for providing basic education. • Most of the community toilets are not working properly in spite of huge expenditure incurred on them. • Mainly agencies such as DUDA, SUDA and KNN are involved for upliftment of slums. • In 70-80 slums, re-building of houses are required. • The women should be made aware of the benefits of cleanliness and cleanliness drives should be organized at different slums. • The authorities have demolished around 25 slums whereas only 1200 houses are built. • Before demolishing any slum, alternate site and accommodation should be provided first. 	



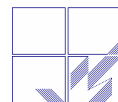
Name of the Stake Holder:	Mr. Rakesh R. Jaiswal
Designation:	CEO,ECO-Friends Ngo,Kanpur
Contact No.:	09415129482
Date of Discussion	10/05/2006
Discussion Team	Mr. D.C.Awasthi
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
Focus Areas	
<ul style="list-style-type: none"> • Discharge of dirty water • Institutional Reforms • E-governance 	
Summary of Discussion	
<ul style="list-style-type: none"> • All the Nalah's discharging in Ganges and Pandu rivers need to be tapped and effluents need to be created or else to be discharged in the rivers at 15 KM downstream. • Institutional reforms for institutions like KJS, KNN and KDA are of utmost urgency. Elderly staff may be given opinion of VRS and new staff as per need is to be trained to run the plants and system efficiently and objectively. • E- Governance to maintain transparency and increase efficiency in the system. • Computerization and development of softwares for better financial control and discipline. • Adequate generation of money for operation and maintenance of current plants as well as those coming up in future 	



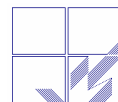
Name of the Stake Holder:	Mr. Girish Bajpai
Designation:	Chairman, Pandit Deen Dayal Jan Kalyan and Vikas Samiti
Contact No.:	09839875876, 09838562057
Date of Discussion	8/6/2006
Discussion Team	Pritam Kapur, Dr. Vinita Yadav
Discussion Agenda :	
<ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • What Kanpur should focus on? • What are areas of concern in his view? • What are the problems faced by slum dwellers? • What is the likely solution of problems faced by slum dwellers? 	
Focus Areas :	
<ul style="list-style-type: none"> • Basic services for the poor • Slum up-gradation • Housing for poor 	
Summary of Discussion	
<ul style="list-style-type: none"> • In Kanpur, few hatas are located on religious trust land, some hata's landlord has migrated to Pakistan and in a few hatas court cases are going on. • Sewerage lines are hundred years old and their diameter is too small. • In 40 to 50 percent areas sewerage is mixed with storm water drains. This leads to chocking of sewerage and should be stopped immediately. • Community participation should be an integral part for all the projects to be implemented at slum level. • Complete responsibility for sanitation work should be given to community and they should be accountable for the same. • The relocation sites are not connected by link roads and no public transport is available to travel to the city. 	



Name of the Stake Holder:	Bimlabati (Bindu)
Designation:	President, Community Development Society (CDS)
Contact No.:	0512- 2231059
Date of Discussion	02/05/2006
Discussion Team	Dr. Vinita Yadav and D.C. Awasthi
<p>Discussion Agenda:</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • Why Kanpur is Important? • What Kanpur should focus • What are areas of concern in his view 	
<p>Focus Areas</p> <ul style="list-style-type: none"> • Community Development Activities. • Sanitation & Health facilities • SHG & Income Generating activities. <p>Summary of Discussion</p> <ul style="list-style-type: none"> • The CDS society was formed under the DUDA. • Total no. of families are 775 in 556 houses. • For the Household Toilets a sum of Rs 200/- was collected from each house and this amounted to a total collection of Rs 1,20,000/-. • Rs. 7 lacs was given by Kanpur Nagar Nigam & 2 lacs was given by energy development Authority. • A 5 room school has been provided by SUDA along with drains, roads & electricity in the community. • A savings group has been formed in the community with 9 members. Each member contributes Rs.30. • Income generating activities have not been initiated for want of financial assistance. • Access to personal loan is difficult. • Moreover the women prefer to have an employment opportunity within the compound of their community. • No health services are provided for in the community. • The community lanes need to be broadened 	



Name of the Stake Holder:	19 CDS Members
Designation:	Community Development Societies
Contact No.:	-
Date of Discussion	8/6/2006
Discussion Team	Pritam Kapur, Dr. Vinita Yadav
<p>Discussion Agenda :</p> <ul style="list-style-type: none"> • Discussion on JNNURM objectives and vision for the city • What are the areas of concern in their view? • What Kanpur should focus on? • What are the problems faced and their likely solutions according to them? <p>Focus Areas</p> <ul style="list-style-type: none"> • Basic services for the poor • Slum up-gradation • Housing for poor <p>Summary of Discussion</p> <ul style="list-style-type: none"> • Maintenance of sulabh shochalaya and community toilets should be with CDS members as currently they are in real bad shape. • The storm water drains and sewerage should be cleaned and maintained regularly. • Proper sites to dump the waste needs to be identified. • Community toilets should be provided where plinth area is too small to have individual toilets. • The design for community toilets i.e. whether it would be soak pits, septic tank or sewerage system, number of seats, lighting and water arrangement and place should be discussed with slum dwellers. • In some of the slum basties such as Govardhan Purva, Kanjaram Purva and Natvan Tala, no sewerage lines have been laid. The provisions to lay sewerage lines should be made. • Budget for O&M should be earmarked for maintaining different services. • Out of total 425 slums, 390 were selected under NSDP. Under N.S.D.P and U.B.S.P. programme, both physical and social infrastructure has been provided to slum dwellers but after these schemes have been closed there is no such provision and development work suffers. • Earlier there were anganwadi for children's and health programmes at slum level. At present, there is no scheme to provide primary education and health benefits at slum level. The provision for primary education and health camps should be organized at slum level. • The land titles should be given to slum dwellers and their contribution (monetary and physical) should be sought so that they should feel attached to the land. • At the places where multi-storey housing for slum dwellers is proposed, firstly alternate sites should be arranged and they should be relocated. Some part of the slum should be taken up for constructing the houses first, so that people will have confidence in government schemes and are willing to be evacuated for the time being • Transparency should be maintained in the procedure for allotting houses to slum dwellers. 	



ANNEXURE II

Annexure II

List of Officials who attended the meeting held on 19th April 2006

S.No	Name	Designation	Department
1.	S.S.Mathur	Architect Planner	J.P.S Associates (P) Ltd.
2.	S.K.Relan	Institutional Expert	J.P.S Associates (P) Ltd.
3.	D.C.Awasthi	Consultant	J.P.S Associates (P) Ltd.
4.	Dr. Vinita Yadav	Consultant	J.P.S Associates (P) Ltd.
5.	P.Kapur	Executive Director	J.P.S Associates (P) Ltd.
6.	U.N. Tiwari	Add. Commissioner	Kanpur Nagar Nigam
7.	Lalta Prasad	Chief Engineer	Kanpur Nagar Nigam
8.	Satish Chandra	Executive Engineer	Kanpur Nagar Nigam
9.	Hari Ram	Executive Engineer	Kanpur Nagar Nigam
10.	H.C.Chauhan	Director (C.C.)	Kanpur Nagar Nigam
11.	Shanshah Sultan	Executive Engineer	Kanpur Nagar Nigam
12.	Sudhir Kumar Ozha	Assistant Engineer	Kanpur Nagar Nigam
13.	S.A.Royal	Assistant Engineer	Kanpur Nagar Nigam
14.	D.S.Tripathi	Assistant Engineer Zone 4	Kanpur Nagar Nigam
15.	R.K.Agnihori	Junior Engineer	Kanpur Nagar Nigam
16.	Jagdish Prasad	Junior Engineer	Kanpur Nagar Nigam
17.	Pankaj Bhushan	Junior Engineer	Kanpur Nagar Nigam
18.	M.K.Agnihotri	Drawing Supdt.	Kanpur Nagar Nigam
19.	Anil Garg	Chief Engineer	Kanpur Development Authority
20.	M.C.Tiwari	General Manager	Pollution Control Unit, U.P.Jal Nigam, Kanpur
21.	Mukesh Kumar	Project Manager	Ganga Action Plan
22.	R.B.Singh	Executive Engineer	Kanpur Jal Sansthan
23.	S.K.Verma	Assist. Engineer	Kanpur Jal Sansthan
24.	R.N.Goyal	Assist. Engineer	Kanpur Jal Sansthan
25.	M.P.Srivastava	Supt. Engineer	U.P. Housing Board
26.	S.K.Rajput	General Manager	KESCO
27.	Manju Gupta	Scientific Officer	U.P. Pollution Control Board
28.	Anoop Bajpai	Project Officer	District Urban Development Authority (DUDA)
29.	R.N.Mishra	Assist. Project Officer	DUDA
30.	Trijin Bisen	C.O. Traffic	Kanpur Nagar
31.	U.K.Gonlart	Assist. Engineer, CD-2	Public Works Dept.
32.	Dr. R.B.Singh		C.S.A University of Agriculture
33.	Dr. S.Kumar		C.S.A University of Agriculture
34.	Shashikant Asasthi	C.O.	
35.	Radha Krishan	Suptd. Engineer	Public Works Dept.
36.	P.N.Gupta	Suptd. Engineer	Irrigation Department
37.	M.K.Verma	Conservation Assistant	Archeology Survey of India
38.	R.K.Sehgal	Administrative Officer	Archeology Survey of India
39.	M.F.R.Zaid	Foreman	Archeology Survey of India



**ANNEXURE III:
INTRODUCING E-GOVERNANCE IN
KANPUR**

Annexure III

INTRODUCING E-GOVERNANCE IN KANPUR

WHAT IS E-GOVERNANCE IN THE CONTEXT OF KANPUR?

E-governance in the context of a city like Kanpur means use of electronic data processing and electronic data display systems (e.g. maps, charts or graphs) for easy and speedy access of urban information both to the city managers and to the citizens of the city.

One of the essential characteristics of a e-governance systems is, that data should be available to the city managers on line and on real time basis. This means that all recording units such as payments and receipts, registration of properties, birth and death certificates should be on line i.e. all transactions should be directly entered into the computer by the concerned operator.

As for the citizens, it should ease interaction with the government agencies, increase speed and transparency. An advanced system of e-governance should preferably be web based and citizens should be able to access information as also file returns etc electronically from the comfort of their home.

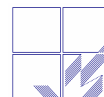
Another characteristic of e-governance is easy availability of information and various disclosures to the public through interactive web sites so that any citizen can access not only general information like rules, procedures, rights of the citizens and the citizen's charters but can also access information like city's finances, personal disclosures of the wealth of the councillors etc.

OBJECTIVE OF RECOMMENDING E-GOVERNANCE IN KANPUR

- To provide electronic information to city managers both by way of MIS and by way of spatial displays, both for financial matters and on physical progress with a view to improve city management
- To integrate and computerize all front end offices that interact with citizens to both provide better service to citizens as also to provide real time information to city managers on issues like collections, outstanding, grievances, breakdowns and repairs etc.
- To provide a host of information to the citizens by web services or by touch screen kiosks such as monthly and quarterly progress reports of key service departments, tenders and forms, rules on property tax, information on bus timings, train timings, eating places, markets etc.

CURRENT STATUS OF E-GOVERNANCE IN KANPUR

Currently, e-governance as outlined above is non-existent in Kanpur city. Some amount of computerization has been carried out and a partial GIS map has been prepared. However, the data is rarely up to date because data entry is not on-line and the computers are not linked to each other by LAN or



WAN. City data or property data has not been entered onto the GIS, and hence information about any road, property or any asset of the municipality or the KJS is not readily available from the GIS.

On the positive side, a number of employees are computer literate and accounts of various service organizations are computerized, though not on real time basis. Similarly some of the employees in KNN are proficient with GIS and can provide a base on which the e-governance initiatives can be built.

ELEMENTS OF E-GOVERNANCE AND IT'S IMPLEMENTATION PLAN

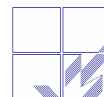
Obviously e-governance cannot be introduced overnight and a process approach has to be followed, where the e-governance is established in phases. Our recommendations are as follows;

Phase-I

- Computerization of financial accounting together with introduction of accrual accounting. This should include setting up of computers at all payments and receipts centres, and linking them to the zonal and H.O. computers so that the financial information is always up to date and on real time basis.
- Computerization of property tax system, including a data base on all properties to track the details of sanctioned plans, actual construction, calculation of property tax and actual tax paid. This should be linked to the financial accounting system, so that MIS on Property tax is readily available.
- Completing the GIS mapping and linking the property and other data base to the GIS, so that the information and MIS is also available on spatial basis to city managers.
- Computerization of Public grievances and redressal mechanism. This information should also be available on GIS, so that areas of recurring grievances and trouble spots can be identified and city managers can analyse reasons and take corrective action.
- Computerization of birth and death certificates and data on birth and death.

Phase-II

- Introduction of a file tracking system, so that movement of files and their efficient disposal can be electronically tracked and delays can be reported to the city managers in the form MIS.
- Adding information on urban services to the poor and location of slums etc. on the GIS, so that concentration of slums, progress on provision of basic services can be followed up pictorially on GIS
- Introduction of an asset management system, so that the status of assets both KNN and KJS could be managed efficiently. This will include information on age and condition of assets, status on maintenance, breakdowns, rents received etc. so that the efficiency of utilization of



assets can be improved and trouble spots in terms of repeated breakdowns can be tracked and rectified.

- Adding information on roads, streetlights, transformers, traffic signals, parking lots and spaces to the GIS so that traffic management and maintenance of roads can be improved.

Phase-III

- Setting up a web site and setting up touch screen kiosks in public places so that ordinary citizens can access any information about the city easily.
- Setting up bill payment kiosks that accept both cheques and cash on 24 hr basis ala ATM style so that all bill payments be it property tax, water charges, telephone bill or electricity bills can all be paid at one place and conveniently.
- Loading information about the city, such as 24 hr chemists, location of hospitals, emergency services, bus stops and petrol stations etc. Bus and train timings and various other information of interest to the citizens. This should be available both through web site and by touch screen kiosks.

ORGANIZATIONAL ARRANGEMENTS

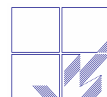
For such an e-governance plan to be successfully implemented, organizational arrangements have to be made for the following three stages:

Development stage

- Appoint competent consultants to develop the e-governance system in stages, including drawing up specifications and assistance in hardware purchase
- Appoint a senior nodal officer to co-ordinate the development of e-governance systems and for co-ordinating with the different departments
- Outsource feeding in of previous data in the computers to enable the electronic records to be brought up to date and on line
- Synchronise the MIS system with the GIS system, so that all data can be accessed on the GIS platform as well

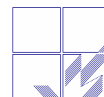
Capacity building stage

- Intensive training programs should be undertaken by the consultants to train the various persons responsible for feeding in data on line and for accessing the data
- Develop and train an e-governance officer in each department who should manage the system and take corrective actions in case of bugs and breakdowns
- Provide training to the city managers on accessing computerized data both in the form of tables and graphs and in spatial format on GIS platform
- Provide an extended period of hand holding to build capacity 'on the job'



Taking over and internalizing stage

- In this stage the consultants should slowly withdraw and the management of the e-governance system should be taken over by the nodal officers appointed.
- The entire organization should start feeling at ease with the e-governance system and the computerized environment.
- Stabilize the system and take over the system.



**ANNEXURE IV:
JNNURM AND METHODOLOGY FOR
DEVELOPING ‘CITY DEVELOPMENT PLAN’**

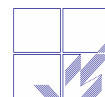
**JNNURM AND METHODOLOGY FOR DEVELOPING ‘CITY
DEVELOPMENT PLAN’**

BACKGROUND

Urban population of India has increased from 23.34 percent in 1981 to 27.8 percent in 2001 (Census of India 1991, 2001). It has been predicted that by 2020, about 50 per cent of India's population will be living in cities. It's mainly the larger urban centres which experienced faster demographic growth as compared to smaller order settlements. With the increase of population, the cities are not able to cope with the pressures of industrial development and the growth of the services economy on one hand. On the other hand, we are unable to address the needs of the poor i.e. basic services like drinking water supply, sanitation, housing and social services are not available to an increasing percentage of urban population. Cities need to be developed on a long-term planning framework to cope up with this problem. All previous efforts in city planning have been limited by “a narrow-focused project approach”. The cities are often facing problems of inadequate service levels and inadequate infrastructure, of inadequate investment and the non-availability of adequate land and housing. The legal systems, lengthy procedures and the inability of local bodies to perform effectively make it difficult to deal with the problems which cities face. The Planning Commission and the Ministries, in consultation with States, have developed an agenda of reform to persuade urban local bodies to look ahead and plan for growth in a sustainable manner.

In many states, cities are seen as ‘wards’ of the State governments. They are not able to look inward and build on their inherent capacities i.e. both financial and technical. Though the cities have the financial as well as technical resources, the need is felt to emphasize the governance related reforms in the Mission which will enable the cities to locate the needed human and financial resources for improving its service delivery. Against this background, the central government has come out with the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), which is a city-based programme, to build the capacity of cities for better urban management.

This programme has been launched for neglected cities willing to undertake time bound reforms to enable them to improve their infrastructure and quality of life that falls short of global benchmarks. An outlay of Rs. 100,000 crores has been provided under JNNURM. It covers 63 cities over a period of seven years starting from 2005-06. Other than 7 mega cities, the mission proposes to cover around 30 other cities with population of over one million while the balance will be important urban centers with crumbling infrastructure and sizeable population. Smaller cities are covered under the Urban Infrastructure



Development Scheme for Small and Medium Towns (UIDSSMT) and Integrated Housing and Slum Development Programme (IHSDP).

JAWAHARLAL NEHRU NATIONAL URBAN RENEWAL MISSION

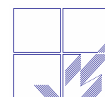
The Jawaharlal Nehru National Urban Renewal Mission addresses the problems created by outdated laws, systems and procedures and aims to align them to the contemporary needs of our cities and towns. The Mission seeks to do away with those statutes that inhibit the functioning of land and housing markets and seeks to bring in the improvements which will enable the city-level institutions to become financially strong and viable.

The JNNURM aims to provide an incentive to large urban areas to undertake institutional, structural and fiscal changes necessary for developing improved service delivery systems that are sustainable, address poverty and enhance local economic performance. The overall objective of the scheme is to improve the economic and physical infrastructure for the rapidly increasing urban population and also to provide essential facilities and services across the fast growing cities using public private partnership. To receive the assistance under the scheme, the states are required to bring reforms in the areas like stamp duty, rent control and repeal of urban land ceiling act and commitments on issues like regulatory framework for civic amenities, accountability standards and e-governance projects for land records, property tax and issues of automobile licenses etc.

While the mission requires several mandatory state and city level reforms, and proposes a range of optional reforms, success depends ultimately on city and state governments achieving the following outcomes:

- Modern, transparent budgeting, accounting, financial management systems designed and adopted for all urban services and governance functions
- City-wide framework for planning and governance established and operational
- All urban residents having access to a basic level of urban services
- Financially self-sustaining agencies for urban governance and service delivery established, through reforms to major revenue instruments
- Development of well functioning, efficient and equitable urban land market
- Local services and governance conducted in a manner that is transparent and accountable to citizens
- e- governance applications introduced in core functions of ULBs resulting in reduced cost and time of service delivery processes

The twin focus of the Mission is (a) improved urban infrastructure and (b) improved urban basic services. The role of governance reform in the Mission is to catalyze a process that enables both these to move forward.



OBJECTIVES OF JNNURM

The JNNURM mission's objectives are to ensure that urban sector is able to achieve the following aspects:

- integrated development of infrastructure services
- linkage between asset creation and its management through a slew of reforms for long term project sustainability
- ensuring fund availability to meet the deficiencies in urban infrastructure services
- planned development of identified cities including peri-urban areas, out growths and urban corridors
- improved delivery of civic amenities and provision of utilities
- urban renewal programme for the old city areas
- providing basic services to the urban poor

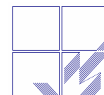
This approach to central funding of city restructuring is new and innovative, and requires significant institutional reform at both state and urban local government levels. Cities are expected to articulate their vision, their plans and their commitment through a City Development Plan. The City Development Plan jointly provides the starting point for this process.

CITY DEVELOPMENT PLAN AND ITS OBJECTIVES

A City Development Plan is both a perspective and a vision for the future development. It involves studying the current stage of city's development, setting out the direction for change, identifying the thrust areas and suggesting the alternative strategies and interventions for bringing in the required change. The core objective of CDP is to identify the infrastructure projects to be implemented during mission duration across various urban sectors along with the proposed implementation mechanism including the Private Sector Participation (PSP) strategy. The CDP focuses on the urban reforms measures needed to be implemented to improve the health of ailing municipalities.

THE CDP PROCESS

The process of formulating a CDP as outlined in the JNNURM toolkit is presented in figure 1.



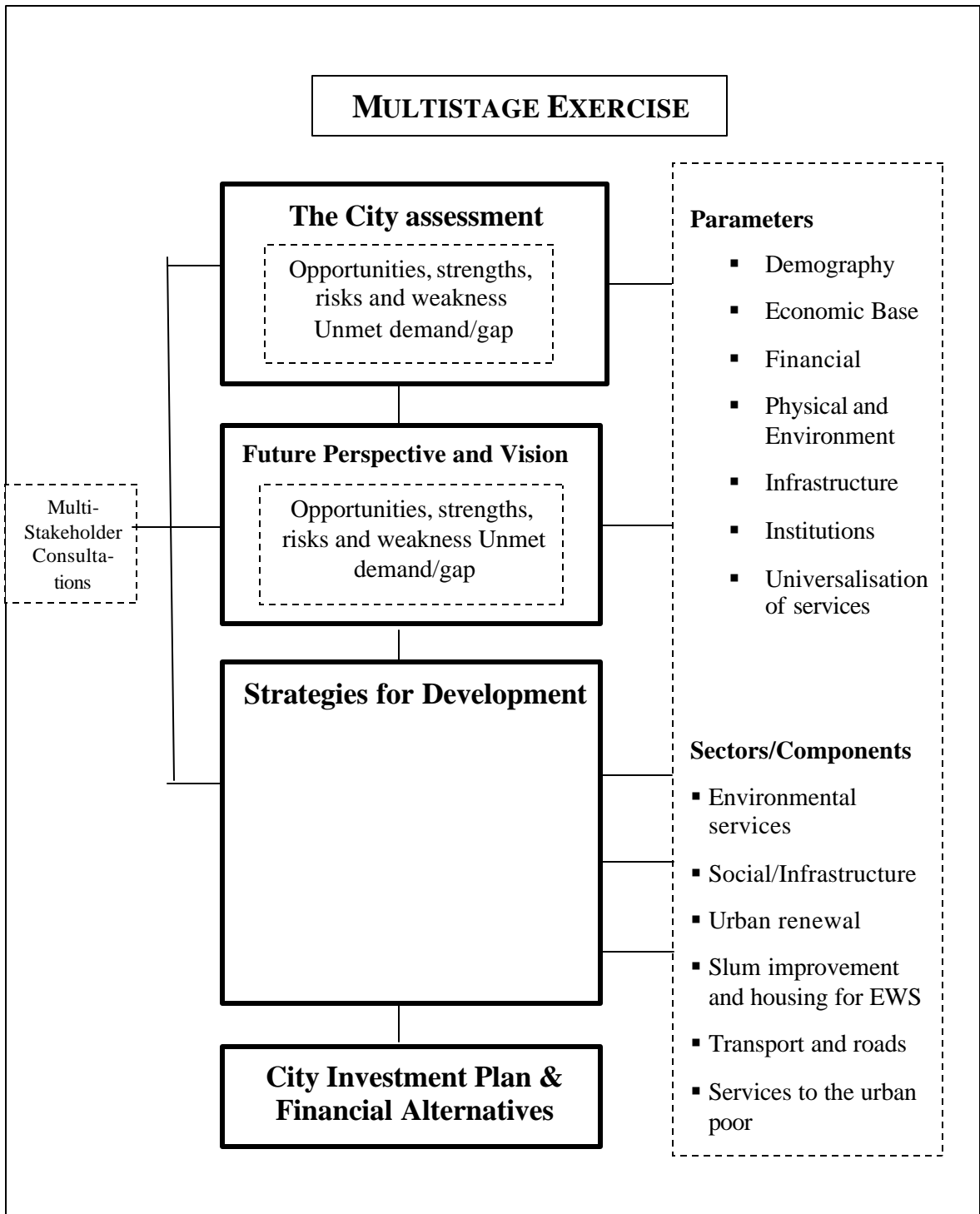
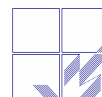


Figure 1: Process of Formulation of CDP



City Development Plan tries to address the following:

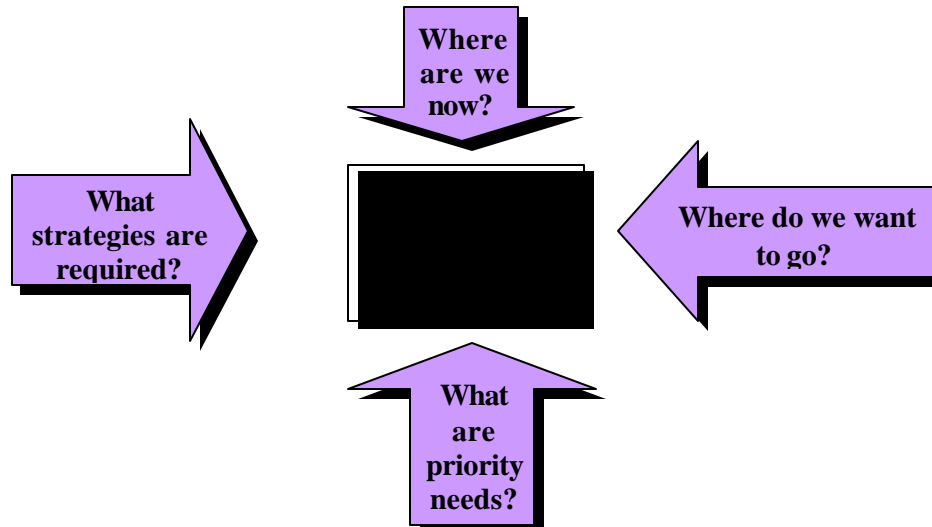


Figure 2: Questions Addressed in CDP

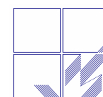
CITY DEVELOPMENT PLAN FOR KANPUR CITY

The objective of preparation of City Development Plan for Kanpur was to identify the infrastructure projects to be implemented in the city during the duration of JNNURM across various urban sectors together with the proposed implementation mechanism including the Private Sector Participation (PSP) strategy. The CDP focused on the urban reforms measures which need to be implemented to improve the health of ailing municipalities and to make them sustainable and financially independent.

OBJECTIVES OF THE ASSIGNMENT

The objectives of the Kanpur CDP were:

- To identify the core city challenges, a perspective and vision for the future development of a city, its present stage of development (current status) and sets out a direction of change
- To focus on the development of economic and social infrastructure, policies and programmes addressing the specific issues of urban poor, strengthening of municipal governments and their financial management and accounting processes, promoting transparency in their functioning etc.
- To provide a direction for cities and state governments to undertake urban sector reforms which will facilitate flow of investments into city based infrastructure.
- To systematically think of the future and to determine how it wishes to shape their future
- Finally, to develop a City Development Plan for Kanpur



The coverage of the CDP was as follows:

- What did the analysis of city's profile show? Where were the opportunities and where are the key constraints?
- Given the opportunities and constraints, where did the city wishes to move in a medium term perspective? While the vision was forward-looking, it was also a realistic vision, achievable within a given time frame.
- What strategic options were available to achieve the vision?
- What was the aggregate investment needed to implement the vision? What were the options for mobilizing resources for implementing the City Development Plan (CDP)?
- What reforms other than those embodied in the JNNURM were necessary for effectively implementing the City Development Plan (CDP)?

SCOPE OF WORK

The scope of work entailed the following three key stages:

- City Assessment
- Development of Strategic Agenda and A Vision for the City
- Evolved Strategies for Development
- Development a City Investment Plan and Financing Strategy
- Stakeholders Consultation

The detailed scope of work as per ToR is enclosed in annexure 1

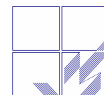
DELIVERABLE AND TIMELINE

Inception Report: It has outlined the overall approach The report was submitted after 10 days i.e. on 12th May from the commencement of the assignment.

Rapid Assessment Report: Outlining a snapshot assessment of the main issues that need to be addressed while formulating the CDP. The report got submitted within 20 days i.e. on 24th May from the commencement of assignment

Draft City Development Plan Report: The report was submitted within 60 days from the commencement of the assignment i.e. on 10th July from the commencement of the assignment.

Final Comprehensive City Development Plan Report: The report was submitted within 90 days from the commencement of the assignment i.e. on 5th August after incorporating the comments received on the draft city development plan.



APPROACH AND METHODOLOGY

Approach for Preparation of CDP

A fully consultative and participatory approach with local stakeholders and development partners was adopted while developing a city development strategy and development plan for Kanpur. Consultative meetings and city wide workshops were held at critical stages of the process to arrive at a consensus on key issues and to frame optional strategies to address the service delivery and financial issues identified.

The consultations were carried out with officials from departments such as:

- Kanpur Nagar Nigam
- Kanpur Development Authority
- Kanpur Jal Nigam
- Kanpur Jal Sansthan
- U.P. Housing Board
- U.P. Pollution Control Board
- District Urban Development Agency
- Archeology department
- U.P. Tourism Dept.
- KESCO
- Public Works Department
- District Industry Centre etc.

and with other stakeholders such as trade associations, industrialists, hoteliers, Merchant Chamber of Commerce, community development societies etc. The CDP therefore reflects a broadly shared understanding of the city's socioeconomic structure, constraints, and prospects (the analytical assessment) and a shared "vision" for Kanpur city with agreed goals, priorities and requirements (the strategic plan of action).

The steps followed in the preparation of CDP are shown in figure 3

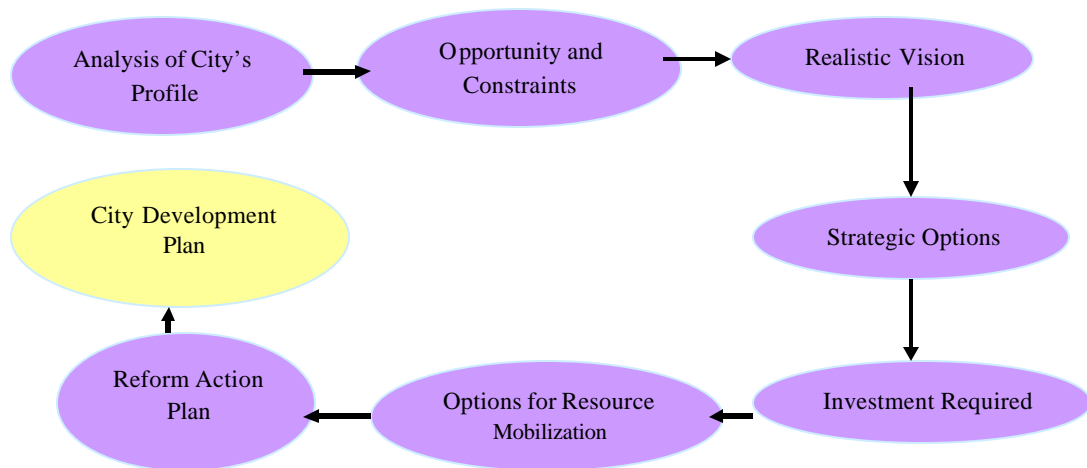
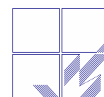


Figure 3 Steps followed in the Preparation of CDP



Methodology:

Mobilization of Team

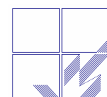
The team of consultants were mobilized and familiarized with the project. The team was introduced to the officials of Kanpur Nagar Nigam with a view to obtain their perspective on the objectives of the study. The team has fine-tuned its understanding of the assignment, related approach and methodology, and deliverables in consultation with the Client.

A plan for inputs required from different consultants at different times was drawn. A project manager (Dr. Vinita Yadav, urban planner) was appointed from the staff of the company and the overall direction was to be provided by Project Director (Mr. P.Kapur). In addition, highly qualified staff (Mr. D.C. Awasthi, ex Indian Institute of Technology, Kharagpur) was also mobilized to collect data and to analyse the same

City Level Workshop I

Due to excellent initiative taken by KNN, meeting cum workshop was held at Kanpur Nagar Nigam on 19th April 06. The officials from various departments such as Kanpur Nagar Nigam, Kanpur Development Authority, Kanpur Jal Nigam (KJN), Kanpur Jal Sansthan (KJS), Kanpur Jal Nigam, Pollution Control Board, U.P. Housing Board, District Urban Development Authority (DUDA), Public Works Department (PWD), Irrigation Department and Archeology Survey of India attended the meeting. The list of participants, who attended the meeting, is enclosed in Annexure 2. The meeting was organized to brief the government officials about the overall JNNURM Concept, the process involved in the preparation of City Development Plan, their vision about the city, the current state of various infrastructure facilities etc.

In the meeting, the consultant team briefed the government department officials about the JNNURM concept, meaning of City Development Plan (CDP), constituents of City Development Plan, process which consultants will adopt for preparation of CDP. The meeting was attended by the officials from the rank of Executive Engineer, Assistant Engineer, Director, Project Manager etc. The summary of discussions is presented in brief in Annexure 1.



Data Collection

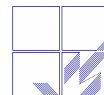
A comprehensive list of data to be collected from secondary sources such as demographic information, socio-economic development, location and connectivity, spatial growth and land use, growth potentials of the city, roles and responsibilities of different institutions, housing stock and housing supply, extent, quality, reliability and level of urban basic services, road and transportation, slums, protected monument, urban services, institutional arrangements and environmental aspects and financial assessment was compiled. The discussions with Kanpur Nagar Nigam officials were held to finalise the checklist. The checklist was finalized after the discussion. The checklist covered the following areas:

- (a) City Profile
- (b) Demography
- (c) Kanpur City Economy
- (d) Urban Planning and Land Use Management
- (e) Poverty and Slums
- (f) Roads and Transportation
- (g) Infrastructure – Sectoral Analysis
 - Water Supply
 - Sewerage
 - Storm Water Drainage
 - Solid Waste Management
 - Street Lighting
 - Housing
 - Social Infrastructure i.e. Education, Medical Facilities etc.
- (h) City Environment Status
- (i) Heritage and Tourism
- (j) Municipal Finance
- (k) Institutional Framework

Analysis of Secondary data

The data collected from secondary sources and through interactive sessions/ interviews was analyzed to make a realistic assessment of where the city was and the direction in which it will move and its strengths and weaknesses. An analysis of the Kanpur City’s existing situation with respect to the followings was carried out to see its implications for service delivery and urban management.

- Demography,
- economic activities i.e. identification of existing nature of commercial and industrial establishments,
- urban land use
- transportation
- urban poverty
- urban infrastructure and services (like transportation, water supply and sanitation, sewerage and solid wastes management, drains etc.)
- physical and environmental aspects and



- institutional aspects

The critical assessment as well as projections of population growth, infrastructure needs and resource requirements was carried out.

This task provided us an initial background about where the city is in context to the demography, economic, historical development, present status of basic infrastructure, financial situation as well as key emerging issues in Kanpur.

Identification of Key Stake holder's

A list of officials from different departments such as Housing Board, District Urban Development Authority, Kanpur Development Authority, Kanpur Jal Nigam, Kanpur Jal Sansthan, Department of Industries, U.P. State Industrial Development Corporation, U.P. Financial Corporation, Pollution Control Board, Traffic cell, Kanpur Police etc. involved in the preparation of urban development plan was also drawn up to carry out detailed discussions.

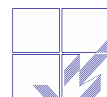
The list of key stakeholders, who were involved in the urban service delivery, was collected from various government departments i.e. Kanpur Nagar Nigam and other agencies such as Kanpur Development Authority (KDA), District Urban Development Authority, District Industrial Department and Director of Industries etc. and compiled to prepare a final list. They were as follows:

- ex- appointed Elected Representatives
- trade associations
- industries associations
- hotel associations
- builders associations
- non-government organizations
- community development societies (CDS)

Discussions/ Consultations with key stakeholders

The objective of the stakeholder's consultation was to ensure that the CDP reflect ground realities and the needs of the people as articulated by them were incorporated in the CDP.

For this purpose the methodology to be followed was: After identification of stakeholder, consultations with various stakeholders i.e. both officials from departments such as Kanpur Nagar Nigam, Kanpur Development Authority, Kanpur Jal Nigam, Kanpur Jal Sansthan, Housing Board, PWD, KESCO, District Development Authority (DUDA), U.P. State Industrial Development Corporation etc. were carried out to make them aware of city development plan, city's vision and strategy. Besides carrying out discussions with the officials, discussions with discussions with key stakeholders such as Community Organisations, trade associations etc were also carried out to find out their roles in city development, know their perception about the city vision and develop a set of mission statements during different stages of project. The



consultative process through stakeholder consultations formed an integral part of the preparation of City Development Plan.

Areas of Rapid Assessment:

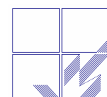
- a) **Rapid Assessment of Infrastructure, Land Use and Environment**
The secondary information was collected and discussions/ consultations with key officials from various government departments, the municipal corporation of Kanpur, civil society organisations were carried out to understand the current situation, identify key issues and critical infrastructure gaps and bottlenecks as well to synthesize suggestions for improvement in the urban service delivery
- b) **Rapid Assessment of Institutional Mechanism**
The assessment of Kanpur Nagar Nigam and other parastatal agencies was carried out with the help of secondary data collected and discussions held with municipal officials in Kanpur Nagar Nigam as well as officials of Kanpur Development Authority, U.P. Housing and Development Board, U.P. Jal Nigam, U.P. Jal Sansthan etc. examining institutional issues and identification of key constraints and points of citizen interface.
- c) **Rapid Assessment of Financial Health of Different Institutions**
The financial status of Kanpur Nagar Nigam and other parastatal agencies dealing with the service provision and efficiency of their institutional framework was also analyzed. The analysis focused on assessing the financial status of city government and also of other parastatal organizations responsible for service provision, status of current assets and liabilities including outstanding debt and analysing the role of inter-governmental transfers in the finances of municipal government.

SWOT Analysis

The Strength, Weakness, Opportunity and Threats (SWOT analysis) of the city government/ parasitical agencies and related government departments will be carried out to have an overall understanding of the factors responsible for inefficient and inadequate production and delivery of urban services, their managerial deficiencies and financial constraints and to highlight critical factors with calls urgent remedial measures at the city and state governments levels.

Stakeholder's Workshops (Workshop II) to discuss the status of City and building consensus on priority issues

Stakeholder Workshops was held on 6th, 8th and 9th June at Kanpur to present the findings of the rapid assessment and also to obtain feedback from the stakeholders, through group discussions, on the priority issues affecting the growth and development of Kanpur. The city vision was also discussed in the workshop.



Methodology for Preparation of Draft Final Report

Developing a Future Vision - What Need to be done & where we want to go

Based on the outcomes of the City assessment and discussions with various stakeholders, a city vision was developed, which provided the direction of change with a specific time frame, to guide the future development of the City.

Mission Strategies or Reforms required to achieve the Vision

Based on the vision, strategies identifying key strategic issues, risks and opportunities facing the city with focus on JNNURM goals, objectives and reform priorities were formulated. Through strategy, the gap between where the city is and where it wishes to go was filled up. The vision and strategies was shared through wide ranging consultations among key stakeholders. This was done by adopting consensus building measures i.e. stakeholder consultation and discussions with KNN officials etc. The action plan was prepared to achieve Mission targets through consultation process.

The milestones and targets, which were measurable and achievable within a timeframe, were identified.

Infrastructure Development Needs

A demand and supply gap analysis for basic infrastructure and services requirements was carried out. This was to ensure that the proposed initiatives and action plans as outlined in the CDP were not only be able to fulfill the critical gaps and bottlenecks but also caters to future demand taking into consideration the population growth and the urban growth.

Infrastructure Financing Plan (City Investment Plan) and Means of Finance

Based on the demand analysis carried out and the issues identified earlier, specific projects were conceptualised. A city investment plan provided the estimate of the level of investment which was required at the city level to implement the City Development Plan. The assessment of the financial status of municipal bodies and other financial institutions was also carried out to determine their creditworthiness to provide funding for identified reforms/projects/ Programmes.

Workshop III for presentation of findings and building consensus on draft City Development Plan for Kanpur

The workshop was organized on 26th July for key stakeholders from Kanpur where the draft CDP was presented with the objective of obtaining their consensus on CDP. The consensus was arrived at after detailed consultations with various stakeholders in the workshop on the key findings of the draft report. The draft report was also presented on 25th July before Principal Secretary and Special Secretary, Ministry of Urban Development, GoU; Director, Joint Director and Consultant, RCUES; State government and local government officials and officials from parastatal agencies.



Finalization of the City Development Report

Alterations were made to the draft City Development Plan on the basis of feedback obtained from various stakeholders in Workshop III to prepare the final City Development Plan report. The final City Development Plan was prepared on the basis of feedback received from stakeholders in workshop and suggestions received from officials of Kanpur Nagar Nigam, State Resource Centre (RCUES) etc.

