Table 6.2
Per Capita Investment Norms of Core Services As Developed By Planning Commission
(Rs.)

Services	At 1980 Prices		At 1997/98 Prices	
	Low	High	Low	High
1-Water Supply				
a-Surface System	245	350	1067	1524
b-Ground System	200	300	871	1306
2-Sewerage/ Sanitation				
a-Water Borne System	350	500	1524	2177
b-Septic Tank	200	225	871	980
c-Pit Latrines	120	150	522	653
3-Solid waste Disposal	25	40	109	174
4-Roads	200	300	871	1306
5-Street lighting	60	60	261	261

Notes: 1. All India Consumer Price Index for non-manual urban employees (Base 1984/85=100) has been used as inflator.

2. The Planning Commission high cost estimates pertain to higher design standards and quality of service specially in larger urban centers. Curiously, low cost estimates for provision of ground water system, septic tank and roads are identical. It is possible that these are only rough estimates or arrived at by proportionate allocation of combined costs.

3. For provision of service, different technological options are available for which financial requirements may also vary. For example, in water supply ground water and surface water estimates will be different or in sewerage, estimates of water borne system, septic tank and pit latrines would be different. We have considered low cost technological options e.g. ground water system for water supply and septic tank for sanitation for preparing our estimates.

Source: Planning Commission, Government of India (1983), **Task Force on Housing & Urban Development (Vol II). Financing of Urban Development,** New Delhi, and **India Database, Vol I (1990)** by H.L. Chandhok and The Policy Group.

Investment Requirements

SSFC has worked out estimates of financial requirements for provision of core services by ULBs in U.P. during the period 2001-2006, both for the increase in population and upgradation of existing level of services. This exercise has been undertaken by the Commission taking into account the Zakaria Committee norms and Planning Commission low and high norms. Per capita expenditure norms at 1996-97 prices for the above three levels of norms have been taken from M.P.Mathur & Satpal Singh "Financial Implications of Upgrading Municipal Services - A Normative Assessment" **Urban India,** Vol.XVIII, No.1, 1998. These have been updated to 2000-01 prices on the basis of urban non-manual workers consumer price index. Thereafter, resource needs for core services have been calculated for the three levels of norms, on the basis of projected increase of 51 lakhs in urban population using CAGR of 2.89% observed during 1991-2001.

NIUA in their study of financial requirements of ULBs in India for provision of core services during the period 2000-05 have assumed a backlog of 30 per cent in the existing level of services at the national level. This backlog is likely to be much more in case of U.P., where the per capita expenditure on core services of ULBs is much lower as compared to most of the other States. On the basis of the figures given in the Report of the Eleventh Finance Commission per

capita expenditure on core services in case of U.P. was only around Rs.8/- in 1997-98 against the average of Rs.33/- for major States. In several States the level of expenditure on core services was nearly ten times more than in U.P. Studies by NIPFP also show that per capita expenditure on core services in U.P. is less than one-third of the national average. Thus, the extent of backlog in core services in U.P. is likely to be very high and may be on an average 50 per cent, or, perhaps, even more. However, it is not possible to cover the total backlog within the span of next five years. We have, therefore, assumed a figure of 30 per cent for the removal of backlog in calculating the financial resources required for core services in the next five years. The removal of the rest of the estimated backlog (20%) would have to spill over to period beyond 2006.

The updated per capita expenditure norms and total investment requirements for the period 2001-06 have been given in Table 6.3. These estimates include financial requirements both for removing 30 per cent backlog and for core service needs to be provided for to cover for this very period the increase in urban population. We have taken the estimates based on Zakaria Committee norms as representing low estimates and those based on Planning Commission low and high estimates as medium and high estimates, respectively.

Table 6.3
Itemwise Per Capita Expenditure Norms and Financial Requirements (Low, Medium and High Level Estimates) for Provision of Core Services By ULBs For the Period 2001-06 (At 2000-01 prices)

Core Service	Percapita Expenditure Norms (in Rs.)			Estimated Resource Needs (Rs. in Crore)		
	Planning Commission		Zakaria Committee (Wt. Avg.)	Planning Commission		Zakaria Committee (Wt. Avg.)
	Low	High		Low	High	
1-Water Supply	1065	1597	756	1614	2420	1145
2-Sewerage/Sanitation	1065	1198	1028	1614	1815	1558
3-Solid Waste Disposal	133	213	N.A.	202	323	N.A.
4-Storm Water Drains	399	532	518	605	806	785
5-Roads	1065	1597	886	1614	2420	1342
6-Street Light	319	319	439	483	483	665
Total	**4046**	**5456**	**3627**	**6132**	**8267**	**5495**

Notes: 1. Per Capita Expenditure Norms at 1996-97 prices are taken from M.P.Mathur & Satpal Singh, "Financial Implications of Upgrading Municipal Services : A Normative Assessment", **Urban India,** Vol.XVIII, No. 1, 1998. These have been converted into 2000-01 prices on the basis of consumer price index for urban non-manual workers.

2. Total estimated expenditure has been worked out on the basis of projected population using CAGR of 2.89% observed during 1991-2001.

3. Per capita expenditure norm for water supply is for ground water system only.

4. Per capita expenditure norm for sanitation is for septic tank system only.

5. Planning Commission high cost norms refer to higher design standards and quality of service in larger urban centers.

O & M Requirements

For working out the requirements for O&M of core services Zakaria Committee norms, as given in M.P.Mathur and Satpal Singh, "Financial Implications of Upgrading Municipal Services – A Normative Assessment" **Urban India,** Vol.XVIII, No.1, 1998 have been used. These have been

updated to 2000-2001 prices on the basis of urban non – manual workers consumer price index. The per capita norms and annual financial requirements for O & M are given in Table 6.4. These have been worked out on the basis of projected median population for the period 2001-06.

Table 6.4
Estimated Annual Financial Requirements For O & M Of Core Services For ULBs As Per Zakaria Committee Norms

Core services	Per Capita Norms at 1996-97 prices (In Rs.)	Per Capita Norms at 2000-01 prices (In Rs.)	Estimated Annual Financial Requirements at 2000-01 prices (Rs.in crore)
1	2	3	4
1. Water Supply	135	176	643
2. Sewerage	152	197	722
3. Storm Water Drains	Included in Sewerage	-	-
4. Roads	25	33	120
5. Street Lighting	37	48	175
Total	**349**	**454**	**1660**

Note : 1. Worked out on the basis of unweighted average as given in M.P. Mathur & Satpal Singh "Financial Implications of Upgrading Municipal Services : A Normative Assessment" , **Urban India,** Vol. XVIII, No. 1, 1998.

2. Figures have been updated for 2000-01 on the basis of urban non-manual workers consumer price Index.

3. Mid (2001-06) urban population (i.e. 3.66 crores) has been taken into account for working out the estimates.

The annual financial requirement for O&M of core services, using the Zakaria Committee norms, comes to Rs.1660 crore, which is almost double of the present total annual expenditure of ULBs in U.P. Hence the use of Zakaria Committee norm for O & M would be totally unrealistic in the context of U.P., though it can be seen as indicative of the very low level of core services being provided in the State at present.

The actual reported per capita expenditure on O & M of ULBs in U.P. for the year 1999-2000 comes to around Rs.40. Taking into account the rise in prices, this may be taken at Rs.50 per capita. This represents low estimate for O & M. We have taken Rs.75 and Rs.100 per capita per year expenditure on O & M as corresponding to middle and high level norms respectively. Multiplying these figures with the projected 2001-06 median urban population of 3.66 crores would give the annual requirement of O & M expenditure on core services. For the five year period 2001-06, total O & M requirement comes to Rs.915 crore for low estimate, Rs.1373 crore for middle estimate and Rs.1830 crore for high level estimate.

Estimated Total Financial Requirements For Core Services

Adding the investment required to provide additional core services in ULBs in 2001-2006 to the O & M requirements the total requirements for ULBs, worked out by the Commission, come to Rs. 6410 crore for low level estimate, Rs. 7505 crore for medium level estimate and Rs. 10097 crore for high level estimate. The details are given in Table 6.5 below :

Table 6.5
Projected Financial Requirements (Low, Medium and High level estimates) For Providing Additional Core Services and for Operation & Maintenance of such Services By ULBs During 2001-2006 (At 2000-01 Prices)

(Rs.Crore)

Item	Low Estimate	Medium Estimate	High Estimate
1.Provision of Core Services	5495	6132	8267
2. O & M	915	1373	1830
Total Requirement	6410	7505	10097

It may be clarified here that the estimates of financial requirements cover the needs both on plan and non-plan sides and the maintenance expenditure on those plan schemes which have been entrusted to these bodies and have been completed by March 31, 2002.

Financial Requirements As Projected By Nagar Vikas Vibhag

The revised Memorandum submitted by Nagar Vikas Vibhag of U.P. to the Commission had put the requirement for core services for 2001-06 at Rs. 7615.65 crore (see Table 6.6), which is close to the medium level estimate worked out by this Commission. However, the Nagar Vikas Vibhag had not included expenditure on O & M in its estimate.

Table 6.6
Requirements For Core Services as Worked Out by the Nagar Vikas Vibhag of U.P. in Their Revised Memorandum

(Rs. crore)

Core Services	Requirement as reported in the Revised Memorandum
1-Water Supply	2520.00
2-Sewerage	2910.00
3-Sanitation	25.27
4-Roads	1162.65
5-Street Lighting	18.73
6-Solid Waste Management	70.45
7-Drainage	908.55
Total Core Services	7615.65

Source : Memorandum submitted by Nagar Vikas Vibhag to SSFC.

Projected Resources

Projected available financial resources to ULBs during 2001-06 at current rates have been worked out by the Commission at Rs.2234 crore as shown in Table 6.7.

Table 6.7
Projected Available Financial Resources for Provision of Core Services in ULBs During 2001-06

Item	Amount (Rs. Crore)
I - Projected Resources	
(1) Estimated Own Income of ULBs (Tax & Non-Tax) at the past trend growth rate of 14.69 percent.	1780
(2) Eleventh Finance Commission Devolution	252
(3) State Finance Commission Devolution at existing rate (7% of net State tax revenue)	4935
Total I (1+2+3)	**6967**
II. Projected Expenditure	
(1) Establishment Cost *	4177
(2) Expenditure on Non- Core Services*	556
Total II (1+2)	**4733**
III. Net Available Balance For Core Services (I - II)	**2234**

Note :- * Expenditure has been projected to increase @ 10% per annum.

Resource Gap

The position in respect of resource gap for additional core services and O & M costs for the period 2001-06 thus works out as per details given in Table 6.8 below. The uncovered gap works out to Rs. 4176 crore according to low level estimate, Rs.5271 crore to medium level estimate and Rs. 7863 crore according to high level estimate.

Table 6.8
Resource Gap During 2001-06

(Rs. in crore)

Estimate Level	Required Resources	Resources likely to be available	Gap Over Available Resources
1	2	3	4
(a)Low Estimate	6410	2234	4176
(b)Medium Estimate	7505	2234	5271
(c)High estimate	10097	2234	7863

Meeting The Resource Gap

Efforts are required to meet the resource gap through various measures including the following :

1. Proposed new taxes and additional share in State taxes
2. Funds to be available from Central and State Plan Schemes (non-devolutionary)
3. Augmentation in existing share of SFC devolution
4. Increase in own income
5. Institutional Finance/Borrowings/Municipal Bonds and external funding
6. Cost reduction
7. Tapping of the State level Urban Infrastructure Development Fund
8. Other measures.

Estimates of funds likely to be available from each of the above sources are given below.

Proposed New Taxes and Additional Share in State Taxes

The estimated revenue potential of the recommendations of SSFC regarding new taxes and additional share in certain State taxes can be put at Rs. 274 crore per year as shown in Table 6.9 below. Total contribution has been worked out for three years only since, by the time the SSFC recommendations can be expected to become operational, first two years of the period 2001-2006 would have passed by. Total estimated revenue generation for three years from these measures can be put at Rs.822 crore.

Table 6.9
Likely Resources To Be Available Annually to ULBs From New Proposed Taxes and Additional Share in State Taxes

SL. No.	Source	Annual Income (Rs.Crore)
1-	Urban Vacant Land Tax (on the basis of the tax @ 0.5 to 1% of Capital Value of land)	2.00
2-	Entertainment Tax. (50% of Entertainment Tax levied by the Government to be shared by ULBs)	52.00
3-	Share of cess on Trade Tax on Petroleum and Diesel Products. (70% of the proceeds of surcharge, which may be imposed @ 5% on trade tax on petroleum and diesel products, the other 30% would go to ZPs)	56.00
4-	Share of Additional Stamp Duty	36.00
5-	Profession tax (Estimated income Rs.320 crore 50% of which will be shared by local bodies, out of which share of ULBs would be 80%)	128.00
	Total (1 to 5)	**Rs. 274.00**
	For the period 2003 to 2006 (3 years)	**Rs. 822.00**

Funds to Be Available From Central and State Plan Schemes

15.16 The present level of expenditure on these schemes is around Rs.175 crore per year. It is assumed that the funds to be available from Central and State Schemes would approximately average Rs.200 crore per annum or so during the period 2001-2006. Contribution from these schemes is taken at Rs.1000 crore over five years.

Augmentation in the Share of ULBs in State Finance Commission Devolution

A part of the resource gap of ULBs needs to be met by an enhancement in their existing share in SFC devolution. If the existing share of ULBs is augmented by 1 percent, i.e., from the existing 7 percent to 8 percent, the additional devolution amount would be of the order of around Rs. 600 crore for four years (i.e. 2002-06) and, if 0.5 percent increase is assumed, then the amount of additional devolution available would be Rs. 300 crore.

Increase In Own Income

The situation requires an all out effort by ULBs to increase their own income through deepening and widening of the tax and non-tax base for which SSFC has given several suggestions. Additional resource mobilisation through these measures, on the basis of a higher growth rate of

around 18% in income from own sources, against the historical growth rate of 14.69%, is projected at Rs. 176 crore.

Total Funds Likely To Be Available

Thus, the total resources likely to be available from the above mentioned sources for meeting the gap can be estimated to be of the order of around Rs.2298 crore as per details given in Table 6.10 below.

Table 6.10
Resources Likely To Be Available to ULBs for Meeting The Resource Gap during 2001-2006

SL.No.	Source	Amount (Rs.crore)
1.	Proposed new taxes and additional share in State taxes @ Rs. 274 crore per year for 3 years	822.00
2.	Funds to be available from Central and State Plan and other schemes for the period 2001 -06 @ Rs. 200 crore per annum	1000.00
3.	Augmentation of existing share of SFC devolution by 0.5 percent i.e. from 7% to 7.5% for the period 2002-06	300.00
4.	Additional estimated own resources (Tax & Non-Tax) to be available through resource widening and deepening, (projected growth rate at around 18% per annum during 2001-06)	176.00
	Total	**2298.00**

Institutional Funds and Market Borrowings

Thus, taking into consideration the above mentioned sources through which funds are likely to be available to ULBs during the period 2001-06, these bodies would still be left with an uncovered gap of Rs.1878 crore for low level, Rs.2973 crore for medium level and Rs.5565 crore for high level estimates. All-out efforts, thus, need to be made to fill this uncovered gap through institutional finance, bank loans, assistance from institutions like LIC, IL & FS, HUDCO, HDFC, ICICI, etc., (some of these institutions have even contributed to the equity of a State Urban Infrastructure Fund as in Tamil Nadu), issue of municipal bonds, assistance from external sources and leveraging of the proposed State Level Urban Infrastructure Development Fund. To Vadodara Municipal Corporation, banks have extended loans for projects without any State guarantee. A number of ULBs in other States are actively tapping these varied types of sources to raise funds. Thus, recently, a loan of 250 million US dollars is reported to have been made available by the Asian Development Bank to Kolkata Municipal Corporation. Again, the USAID in association with IL & FS, has helped Ahmedabad Municipal Corporation to prepare pre – feasibility study for its Rs.400 Crore Water Supply Project under FIRE (D) programme. Resource mobilization of a substantial dimension could also be made through utilizing and leveraging the proposed Urban Infrastructure Development Fund (UIDF). A Revolving Fund of Rs. 140 crore, created recently by U.P.Government, would also add to the resources of ULBs. We are suggesting that the Revolving Fund be made a part of the proposed State Level Urban Infrastructure Development Fund (UIDF).

If the resource gap still persists, the time frame for implementation of the indicated normative levels of services may have to be staggered to a longer period, i.e. from 5 years to say 7 years. Besides, the possibility of reduction in establishment cost and expenditure on non-core services would also have to be explored. Cost reduction can also be possible through properly planned public – private partnerships and also through enlisting community participation in construction as well as maintenance. Some services may even be possible of being privatized to reduce costs. Also, further additional sources of income for ULBs would have to be mobilised by tapping institutional and external agencies. External assistance is being made available by foreign agencies for urban development projects. The Asian Development Bank (ADB) is understood to be in the process of extending financial assistance for Agra, Mathura and Firozabad ULBs. It is understood that the World Bank may be providing funds to Lucknow Nagar Nigam. The Dutch Government has provided assistance for urban development projects in Kanpur and Mirzapur. The Government of India has recently made available funds for special development programmes in Varanasi. In addition, funds would also flow under Ganga and Gomti Action Plans.

The Union Finance Minister, in his budget proposals for 2002-03, has announced the following measures for improving financial resources and functioning of ULBs:

(a) An Urban Reform Incentive Fund would be set up with an initial allocation of Rs.500 crore to provide reform linked assistance to States.

(b) The City Challenge Fund is proposed to be set up to provide incentive based facility that will support cities to fund transitional costs of moving towards sustainable and credit worthy institutional system of municipal management and service delivery.

(c) A Pooled Finance Development Scheme will be put in place to provide credit enhancement to assist local bodies to access market borrowing on a credit worthy basis.

(d) The limit of Tax Free Municipal Bonds has been enhanced from Rs.200 crore in 2001-02 to Rs.500 crore in 2002-03.

The Government of Uttar Pradesh and the ULBs of the State should brace themselves up to tap all these sources for raising funds to the maximum extent possible for improvement in the financial position and functioning of ULBs and in the level and quality of services in cities and towns.

Chapter 7

Liabilities Of Urban Local Bodies

I Debt Position

The debt position of urban local bodies is articulated in the succeeding paragraphs.

Out of 623, 607 local bodies, , furnished the required information. The details, thus received, showed that the urban local bodies owed a loan liability of Rs.62.04 crore. The three tier- wise position of this kind of liability is given in the following Table 7.1.

Table 7.1
Loan Liability

(Rs. Crore)

Sl.No.	Local Body Category	No. Reporting	Loan Liability as on 31.03.1999
1	2	3	4
1.	Nagar Nigam	11 (Out of 11)	38.68
2.	Nagar Palika Parishad	192 (Out of 195)	22.76
3.	Nagar Panchayat	404 (Out of 417)	0.60
	Total	607 (Out of 623)	62.04

Source : Information provided by ULBs to SSFC.

As mentioned in the Second SFC Report of Uttar Pradesh, the Commission had also requested Secretary, Nagar Vikas Vibhag and Secretary, Vitta Vibhag to make available detailed information regarding debt position of urban local bodies as on March 31, 1999. But neither of these two Departments furnished these details to the Commission. As a result the figures of outstanding loans reported by the ULBs can not be verified.

On the recommendation of the First State Finance Commission, the State government took a decision that the loans advanced to urban local bodies by State Government which were of non-remunerative nature, like loans for water supply schemes, integrated urban development schemes, special and general component plan schemes for scheduled castes and scheduled tribes, integrated development of small and medium towns, etc. and were outstanding as on March 31, 1997, together with interest thereon would be converted into grants. The Commission has been informed by the Directorate of Local Bodies that this decision of the State Government could not be implemented fully owing to non-availability of details in respect of outstanding loans. This information it is reported has been asked from all urban local bodies by the Directorate. In the light of the above mentioned decision of the State Government loans which were outstanding on 31-3-1997 stood converted into grants. Thus the loan liabilities of urban local bodies as on March 31, 1999 would be confined only to the loans taken by them during the years 1997-98 and 1998-99. Therefore, an exercise was undertaken at the Commission level to compile, from the filled up schedules received from urban local bodies, information about the amount of loans they had taken and the amounts

they had repaid during the years 1997-98 and 1998-99. The position of loans taken and repaid by ULBs that emerged from the compilation is given in Table 7.2 below:-

Table 7.2
Position of loans taken and repaid during 1997-98 and 1998-99 by ULBs

(Rs.lakh)

Local Body	1997-98			1998-99			Total of 1997-98 & 1998-99			Income of ULBs in 1999-2000
	Loan taken	Repaid	Out-standing	Loans Taken	Repaid	Out Standing	Loans taken	Repaid	Out-standing	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
1. Nagar Nigams	180.00	53.80 (29.9)	126.20	949.50	176.28 (18.6)	773.22	1129.50	230.08 (20.4)	899.42	41138.84
2. Nagar Palika Parishads	36.14	10.43 (28.9)	25.71	99.59	14.00 (14.1)	85.59	135.73	24.43 (18.0)	111.30	31969.18
3. Nagar Panchayats	40.87	0.24 (0.59)	40.63	48.52	0.10 (0.21)	48.42	89.39	0.34 (0.38)	89.09	8951.12
Total	257.01	64.47 (25.08)	192.54	1097.61	190.38 (17.34)	907.23	1354.62	254.85 (18.81)	1099.81	82082.16

Source : Information provided by ULBs to SSFC.
N.B. The figures in brackets in cols. 3,6 and 9 denote percentages.

It would be seen from Table 7.2 that during the two years, 1997-99, the amounts of loans taken, repaid and the balance outstanding as on March 31, 1999 were Rs.1354.62 lakh, Rs.254.85 lakh, and Rs.1099.81 lakh, respectively. This suggests that the amount of Rs.62.04 crore reported by urban local bodies as outstanding loan on March 31, 1999 also include loan liability incurred before 31.3.1997, which is to be converted into grant as per decision already taken by the State Government.

From the above analysis it would appear that the additional debt liability incurred by the ULBs during the year 1997-98 and 1998-99 are at a very modest level of nearly Rs.10.17 crore, that represented just 1.2% of their annual income in 1999-2000. It seems to us that the ULBs would be in a position to repay this liability from their own income. Therefore, the Commission does not recommend any relief on account of debt liabilities to ULBs. However, the outstanding debt liability as on 31.3.1997 would be converted into grants as per the earlier decision of the Government of U.P. following the recommendations of the first SFC.

II Outstanding Electricity Bills

In pursuance of the terms of reference, the Commission sent a questionnaire to all 623 urban local bodies to obtain information regarding their liabilities, including electricity dues, as on March 31, 1999. The required information was furnished by 607 LBs. An analysis of the data received shows that these bodies owed a liability, on account of electricity charges, amounting to Rs.161.46 crore on March 31, 1999. Detailed break-up on this account is given in Table 7.3 below:

Table 7.3
Outstanding Electricity Dues as on 31-3-1999

Local Body(Category)	No.Reporting	Electricity dues as on 31.3.1999 (Rs.crore)
1	2	3
1. Nagar Nigams	11 (Out of 11)	33.48
2. Nagar Palika Parishads	192 (Out of 195)	105.62
3. Nagar Panchayats	404 (Out of 417)	22.36
Total	607 (Out of 623)	161.46

Source : Information supplied by ULBs

16.9 As against the dues of Rs.161.46 crore reported by ULBs, the Urban Development Department, U.P.Government, has reported an outstanding amount of Rs.180.72 crore on the account as on 31.3.1999, as detailed in Table 7.4 below:

Table 7.4
Outstanding Electricity Dues as on 31-3-1999

Local Body	No.of claims to be covered by Director (Urban Local Bodies)	Outstanding Electricity dues as on 31.3.1999 (Rs.crore)
1	2	3
1. Nagar Nigams	11	32.20
2. Nagar Palika Parishads	195	122.86
3. Nagar Panchayats	417	25.66
Total	623	180.72

Source: Directorate of Local Bodies, U.P.

The above two sets of information do not tally with each other owing to different sources of information and the differing numbers of reporting local bodies. But, these are broadly indicative of the dimensions of liability on this account.

During the course of meetings that the Commission held at divisional headquarters, representatives of ULBs accepted that large dues are outstanding in respect of electricity bills to be paid to the U.P.Power Corporation Limited (UPPCL). But, at the same time, they made a counter claim regarding their bills uncleared on account of rent for land on which the UPPCL had set up transformers, sub-stations and other installations and also property tax and service charges and rates payable to them by the UPPCL.

The First State Finance Commission had also observed that ULBs had incurred huge liabilities in the form of unpaid electricity dues payable to the then UPSEB. The FSFC felt that, due to their poor financial condition, ULBs would not be able to clear the dues. The Commission, therefore, recommended that the State Government should convert these dues, upto 31.3.1996, into grants and pay these to the UPSEB through adjustment out of their outstanding ways and means advances against the UPSEB. The UPSEB, in turn, was to treat that amount as payment made by ULBs towards electricity dues till 31.3.1996. The State Government accepted the recommendation of the FSFC and cleared the electricity dues of ULBs, which were outstanding till March 31, 1997.

The FSFC also recommended that such undisputed electricity bills which became payable on or after 1-4-1997 and the payment of which the concerned local body had failed to make to the UPSEB, would be deducted from the devolution amount earmarked for such ULBs and would be paid to the UPSEB. Accordingly, certain deductions have been made from the devolution amounts of ULBs and paid to the UPSEB towards electricity dues. But, such deductions have been made on an adhoc basis and are not based on actual/verified outstanding bills.

It has been reported that, in the case of Nagar Nigams, an excess amount of Rs.49.68 crore has been deducted and paid to the UPPCL. Therefore, the liability of electricity bills of Nagar Nigams amounting to Rs.33.48 crore reported as outstanding on 31.3.1999 should be treated as discharged. In fact they would be having a plus balance on that date.

The Nagar Palika Parishads (NPPs) and Nagar Panchayats (NPs) owed liability of electricity bills amounting to Rs.105.62 crore and Rs.22.36 crore respectively on March 31, 1999. According to the information made available to the Commission by the UPPCL, they received payment of Rs.43.15 crore in respect of electricity dues of NPPs and Rs.6.00 crore in respect of NPs during the years 1997-98 and 1998-99. It can thus be roughly assumed that an amount of Rs.62.47 crore in respect of NPPs and Rs.16.36 crore in case of NPs remained outstanding on March 31, 1999 which was due to be paid to the UPPCL for electricity charges. Thus the liability of ULBs on account of electricity bills can be roughly and dimensionally put at around Rs.80 crore as on 31.3.1999. The authenticity of these figures needs to be properly verified.

In view of the poor financial position of ULBs this Commission recommends that after actual verification of the outstanding electricity bills of NPPs/NPs as on 31.3.1999 and after making adjustments of dues which the UPPCL owes to ULBs on account of house tax, water tax/charges, land rents etc. the net outstanding amount thus arrived at may be converted into a grant by the U.P.Government and paid to the UPPCL. This would be a one time arrangement.

It may be added here that the Commission has not recommended any devolution at a higher rate than 7% suggested by the FSFC to ULBs during the year 2001-02. It has also not recommended any debt relief to the ULBs as was done by the FSFC. The responsibility for the payment of electricity dues after 31.3.1999 will, however, remain with the ULBs. For ensuring regular payment of electricity bills in future a separate and specific procedure is being suggested by the Commission below.

The Commission has been informed that, under the present system as prescribed, for payment of electricity bills of Nagar Nigams (NN), electricity bills are to be verified at the Commissioner's level in a meeting consisting of the representatives of UPPCL and the concerned NN. The Finance Department, in U.P. Government, will deduct the amount of verified electricity bills from the devolution amount of the concerned NN and will pay the same to the UPPCL.

The electricity bills of NPPs and NPs are to be verified in each district at the level of the concerned District Magistrate and will be paid to the UPPCL directly by the local body concerned.

Past experience shows that deduction of electricity bills on adhoc basis from the devolution amounts of ULBs has posed serious problems of adjustment of dues in the account books of the urban local bodies and as well as the UPPCL. Large amounts of such dues remain unpaid and many ULBs advance the precariousness of their financial position as the reason for this. The Commission, therefore, recommends that a **Dedicated and Undivertable Bank Account** should be created in every ULB and 15 per cent of devolution amount to the ULB should be deposited in this Account, which should be utilised **only** for clearance of electricity dues by these bodies. The Dept. of Urban Development and, Commissioners in case of NNs and the District Magistrates in case of NPPs/NPs, would have to ensure that this Dedicated Fund is utilised only for payment of electricity bills. ULBs should, however, be allowed to withdraw surplus, if there is any left, from the Fund after meeting electricity dues. This system may come into effect from 1-4-2002.

It needs to be added here that while verifying electricity bills of ULBs, the dues, which UPPCL owes to ULBs, must be adjusted in the electricity bills of the concerned local body by the Committee created for this purpose at the Commissioner/District Magistrate levels.

III Liabilities of Salary, Pension, P.Fund and Group Insurance Dues

In view of its TOR, the Second State Finance Commission had sent a questionnaire to all 623 urban local bodies to furnish information regarding their outstanding liabilities in respect of salary, pension, PF and Group Insurance dues payable as on March 31, 1999. In response to it, 607 ULBs furnished the required information. Data compiled from information received show that ULBs had a total liability of Rs.213.10 crore on March 31, 1999, in respect of these items. The tier-wise break-up of this category of liabilities is given in Table 7.5 below :-

Table 7.5
Liabilities of Salary, Pension, P.F. and Group Insurance Dues

(Rs.crore)

Local body(Category)	No. Reporting	Liability
1	2	3
1. Nagar Nigams	11 (out of 11)	86.57
2. Nagar Palika Parishads	192 (out of 195)	106.26
3. Nagar Panchayats	404 (out of 417)	20.27
Total	607 (out of 623)	213.10

Source : Information provided by ULBs.

It is a known fact that the financial position of urban local bodies is by no means sound. Many of them are not even able to pay salaries to their employees in time. With the implementation of the Fifth Finance Commission recommendations the salary burden on ULBs has increased sharply.

The following details in Table 7.6 reveal that, on an average, about two-third of the total income of urban local bodies is spent on payment of salaries, pensions etc. to its employees. This ratio is much higher in case of Nagar Palika Parishads.

Table 7.6
Expenditure on Salary, Pension etc. as percent of Total Income

(Rs.crore)

Local Body	Revenue Income in 1999-2000	Exp.on salary, pension etc.in 1999-2000	Salary etc. exp. as % of total Income
1	2	3	4
1. Nagar Nigams	411.39	254.90	61.96
2. Nagar Palika Parishads	319.69	217.31	67.98
3. Nagar Panchayats	89.04	45.26	50.83
Total	820.12	517.47	63.10

Source : Information provided by ULBs.

Non-payment of salaries has a crippling effect on the performance of employees and their willingness to work which, in turn, adversely affects the efficiency of local bodies. Whatever be the

reasons for accumulation of arrears it will just not be realistic to expect local bodies to be able to liquidate these as well as meet the current enhanced payment obligations on this account.

On basis of recommendations of the Fifth Pay Commission, the State Government sanctioned replacement scales, with effect from January 1, 1996, for employees of urban local bodies. Keeping in view the limited financial resources of the urban local bodies the State Government decided (as per para 1(4) of Resolution dated 21-7-98) to share fifty per cent of the additional burden on account of pay revision till the year 2000-01.

In compliance of the above decision, the State Government has reportedly paid Rs.33.53 crore in 1999-2000 and Rs.21.29 crore in 2000-01 i.e. total Rs.54.82 crore only to those local bodies who submitted their claims to State Government. This shows that a big part of the 50% of the additional financial impact of pay revision is still pending for payment to urban local bodies for want of required information or because the claim have not be submitted by many ULBs.

In view of the poor financial position of ULBs the Commission recommends that proper verification of the outstanding amount of liabilities of ULBs on account of pay, pension, gratuity, provident fund and insurance as on 31-3-1999 should be made and, thereafter, the amount, equal to the liability, may be paid to the concerned local bodies as additional earmarked grant over and above the devolution amount, after adjusting payments made, if any, on account of 50 per cent sharing of the additional burden that arose as a result of pay revision for the period upto 31.3.1999. While issuing sanction order in this behalf it should be clearly mentioned therein that the amount shall be used only for payment of outstanding liabilities of pay of the employees.

It may be added here that the Commission has not recommended any additional devolution to local bodies for the year 2001-02. Neither is the Commission recommending any debt relief to the local bodies against their outstanding loans. It is in this light that this recommendation of relief to ULBs for meeting liabilities of salary, pension, PF and Insurance is being made. The Commission would also like to clarify here that the government will share 50 percent of the additional burden on account of pay revision till the year 2000-01 as per its earlier decision and the ULBs will be responsible for meeting their salary obligations in full after 31.3.2001.

Chapter 8

Other Financial Issues of ULBs in Uttar Pradesh

8 (i) Financial Management, Accounts And Audit System

ULBs are facing severe resource crunch. They are unable to meet expenditures required for providing even core services, viz., potable water, sewerage/sanitation, solid waste disposal, drainage, street lighting, roads, etc. There is urgent need on their part to make all-out efforts towards mobilisation of resources through tax, non-tax, institutional and other sources. Alongwith the process of raising finances, it is imperative to undertake effective and innovative reforms in their financial management. The Municipal Budgetary Reforms Committee, appointed by the Central Government as far back as in 1974, made a number of suggestions for improvements in ULB financial management. Two of its major recommendations pertained to the adoption of performance budgeting and reorientation of the municipal accounting system. These suggestions yet remain, by and large, to be implemented in U.P.

It is unfortunate, but true that, at present financial management in ULBs is rather a low-order function. What is being done generally is elementary book-keeping which is cash based, inefficient and not subject to regular audit and evaluatory / corrective action. More often than not financial functions are carried out by non-professionals or by those who are generally exposed to government accounting systems.

It is, important that ULBs, whose functions will expand and become more complex in gamut as well as dimensions, should be enabled to evolve and adopt effective financial management systems to perform their tasks in cost-effective and accountable ways. The needs to be addressed in this context would include fiscal analysis and forecasting, short and long term financial management, tax/non-tax assessment and collections, management of working capital, inventory and cash, institutional borrowings, audit, etc. Then again, there would be need for capital investment and control systems. Often capital expenditures incurred by ULBs create assets that may or may not be commercial in nature. Many of such projects are of social nature. For preparing new projects and putting these up for approval to funding bodies, project formulation capacities would have to be developed so that institutional resources can be tapped.

While adopting a modernised financial management ULBs, need to move away from the existing incremental budgeting approach to introducing performance budgeting systems. There is need to introduce subsidiary departmental budgets (for example taxation, drinking water, waste disposal, sewerage and drainage, road construction, maintenance, etc.) in decentralised and enabling modes. Such budgets would require to justify the demands and provide detailed calculations based on quantities, unit costs, maintenance costs, etc.

ULBs should gear up their machinery for better tax collection and resource mobilisation. Campaigns for identification of assesees of property and other taxes, licence fees, etc., should be undertaken on a regular basis to widen and deepen the resource base and identify defaulting assesees. The process of billing and collection should be computerised so that daily cash balance situation is available. At the same time, proper cost consciousness should be inculcated so that the scarce resources are put to optimum use and leakages and wasteful expenditures are curtailed. GOI, in its budget 2002-03, has announced the setting up of a City Challenge Fund of Rs.2000 crore for ULBs which opt for undertaking programmes of the reform of their finances. Recourse to this Fund must be encouraged. Training in urban financial management should be a priority area in the training modules evolved both for elected members/office bearers and officials of ULBs.

There are many good examples of improved financial management as adopted by municipal bodies in Chennai, Mumbai, Vadodra, Bhopal, Rajkot, Ahmedabad and Surat. In these cities financial management systems have been improved to the advantage of their development and quality of urban services provided to their citizens. ULBs in U.P., too, have to move ahead fast in that direction.

Accounting System

Municipal accounting has, unfortunately, not received the attention it deserves. It is based on the age old system of revenue accounting which is just not adequate enough to reflect the correct financial position of these bodies. It is often limited to making payments for works executed, establishment costs, maintenance expenditure, overheads, etc. The system obtaining at present has not succeeded in providing correct and meaningful information about the financial performance of ULBs. It lacks completeness and accuracy in both stock and flow contexts. Good financial practices and procedures are essential for proper planning, for sound management and for providing efficient, cost-effective public services. That would certainly need the adoption of well-recognized accounting standards and practices, reform in present methods of accounting and financial management and effective audit arrangements.

While realising the importance and relevance of financial management in ULBs, it is essential to visualise, in its varied contexts, the municipal functional domain and then look for methods of proper accounting as well as accountability. The present accounting system is deficient and inadequate. It neither provides information on the status of well recognised financial ratios, norms and indicators nor their true financial position in temporal terms. Well established accounting standards which are in consonance with recognised practices are not available to these bodies as yet. It seems that a model accounting system relevant for these bodies at all levels is the need of the hour. For improving the quality of accounts what is required is standard, transparent accounting systems and effective financial management if ULBs are to become institutions which can command credibility with people, institutions and markets.

Most ULBs in U.P. have in use the system of cash-based accounting as against the accrual system followed by businesses and industrial enterprises. In cash-based accounting, receipts and payments are entered into account books when cash is actually received or disposed. It has been said that this system often leads to "off-buget", "book liability" being incurred but not recorded. Besides, the position of assets and liabilities, bills receivable and payable, taxes and dues receivable and payable, depreciation/replacement provisions, etc., do not get properly reflected in the books. In the case of accrual-based accounting, the financial effects of transactions are recognised and incorporated in the periods in which these occur, irrespective of whether cash is received or paid. It is often argued that municipalities follow the cash-based accounting system because of the fact that their main objective is to maintain budgetary control over activities. This argument does not seem to hold water if analysed carefully.

The EFC went into some of these issues. In the chapter of its report relating to local bodies, it has observed:

> **"Articles 243 J and 243Z of the Constitution expect the States to make provisions by way of legislation for maintenance of accounts by the panchayats and the municipalities and for the audit of such accounts. Following this, most State legislations do make general provisions for these purposes, but detailed guidelines or rules have not been laid down, in several cases. In many States, the formats and procedures, for maintenance of accounts by these bodies prescribed decades ago, are continued without making any improvements to take into account the manifold increase in their powers, resources and responsiblities. Therefore, there is a need to evolve a system of maintenance of accounts by the local bodies that could be adopted by all the States".**

The Institute of Chartered Accountants of India has recently developed a Technical Guide on Accounting and Financial Reporting by ULBs. It has listed sixteen standards formulated by the Accounting Standards Board, which may be either mandatory or recommendatory, and, then,

identified the ways in which these standards could be made applicable to ULBs. It has also developed formats of financial statements like balance sheets and income and expenditure statements for these bodies. Many specialised organisations like the Tata Consultancy Services are reported to have developed model accounting manuals. Recognising the need for accounting reforms, initiatives have been taken in this regard in different States with the financial assistance of international institutions. For example, in 1990, the World Bank provided support to six cities, (Ahmedabad, Baroda, Surat, Rajkot, Bhavnagar and Jamnagar) to improve their accounting systems. Recently, the Municipal Corporation of Ludhiana engaged private consultants with technical support from FIRE in moving towards accounting reforms. Tamil Nadu has taken lead in preparing a revised accounting manual for its ULBs, which is, to a considerable extent, based on a modified and computerised double-entry accrual accounting system. The new system was introduced in all its ULBs from 1.4.2000. The Government entered into contract with 25 Chartered Accountant firms to assist ULBs in introducing the new accounting system. These firms are providing on the job training, trouble shooting, and helping ULBs to prepare financial statements based on the new system. A new accounting software for ULBs is also being developed to implement the municipal accounting reforms. The lesson drawn from Tamil Nadu's programme of municipal accounting reforms are highlighted in Box No.17.1.

Box 8.1

Key Steps to Introducing Improved Municipal Accounting System

The process of introducing municipal accounting reforms will vary by State. There are certain lessons, however, that one can take from the Tamil Nadu experience. The FIRE (D) project staff summarizes the key steps as follows:

- Asses the present accounting system, including the current methods of recording revenues and expenses;
- Structure the new municipal accounting system in accord with ICAI's technical guide on accounting and financial reporting for urban local bodies in India.
- Collect information on municipal properties including dimensions, usage and value, in order to prepare an opening balance sheet;
- Propose appropriate legislation required to change the municipal accounting system;
- Undertake the following tasks (often these can be done by consultants);
    - Prepare a manual detailing the new accounting system and procedures, charts of accounts and forms/formats;
    - Develop norms for recognition of assets and revenue in accord with ICAI's national accounting standards;
    - Conduct both classroom and on-the-job training of municipal staff; and
    - Provide professional support to the municipal staff for at least the first 18 months of implementation of the new accounting system;
- Computerize the accounting system to increase capacity of local staff to maintain the new system;
- Implement the new system together with the old one for at least eighteen months to allow time for phased transition to the new system and for officials to gain confidence and experience in operating it.

Source : Urban Finance, Quarterly Journal of NIUA, Vol.4, No.3, September 2001

The above discussion is a pointer to the fact that the accounting and audit systems in ULBs need a drastic reform with a view to enhancing expenditure efficiency and public accountability. In other words the budgeting and accounting systems have to provide meaningful linkages between the ends and means and these should provide for financial reporting, accounting and auditing procedures. There has to be better expenditure planning and control, a transparent financial management information system and openness in transactions.

All this is necessary but, at the same time, one has to remember that the accounting / audit systems have to be designed according to the needs of these bodies at different levels, their human resource capabilities and the extent of complexity that obtains at each of these levels. In other words, one might-say that, while NNs and large NPPs can afford to a sophisticated financial management and accounting system, for smaller municipalities and NPs the system will have to be simplified and made less costly and easy of administration. It must be designed to suit the administrative and accounting capacities that can be reasonably generated and placed on the ground at these levels. It is suggested that the State Government should utilize the services of an expert body of knowledgeable consultants to develop suitable accounting models, budgeting formats and financial management systems for ULBs at different levels which can move to the accrual mode and be adopted to advantage. Similarly, the auditing system needs to be strengthened in the light of the observations made by the EFC so that accountability, in financial terms, is ensured. Wherever possible accounts should be computerized and linked to the data and information system which has been suggested by the EFC for all local bodies in the country.

At present accounts of the ULBs are maintained in accordance with the provisions of the "Nagar Mahapalika Lekha Niyamawali" and the "Municipal Accounts Code', prepared by the U.P.Government under respective municipal law. Accounts are being maintained in NNs under Rule 6 to 36 for 'Receipts of money and its deposit' and Rule nos. 37 to 57 for payments under Nagar Mahapalika Niyamawali. Tallying of cash book and its closure are governed by Rule 58. Similarly, under the Municipal Account Code, which is meant for NPPs/NPs, 'receipt and crediting of money' is governed under Rules 2, 3 and 4. The procedure for 'payment of money' has been described in Rules 5 to 10 of the Code. The Cash Accounting System is being followed in UP in all ULBs. If the system is to be changed to 'Modified Accrual Accounting System' as suggested above, then suitable changes need be made in the aforementioned rules of Nagar Mahapalika Niyamawali and Municipal Account Code. Arrangements will also have to be made for training of ULB officers and staff in the new accounting system to be adopted.

Audit Needs

Audit is another related area of our concern. Presently, Director, Local Fund Audit is responsible for the audit of the accounts of LBs. A.G., U.P. also carries out audit of the accounts of ULBs. The former organization is not able to cope with the enormous task of auditing more than 600 ULBs of the State. The Director, Local Fund Audit, has informed us that, till April 2002, audit of the accounts of 6 NNs for 2000-01 had been completed and that of 5 NNs was in progress. Audit of the accounts of 170 NPPs (out of 195) and 245 NPs (out of 417) for the year 2000-01 has been completed and that of 11 NPPs and 32 NPs was said to be in progress. Audit of the remaining 10 NPPs and 133 NPs is pending for varying number of years as shown in Table 8.1 below.

Table 8.1
Details of NPPs and NPs for which Audit is Incomplete

NUMBER OF LBS		Latest year for which audit is complete
NPPs	NPs	
6	75	1999-2000
1	29	1998-99
1	15	1997-98
2	5	1996-97
-	5	1995-96
-	1	1993-94
-	1	1990-91
-	1	1988-89
-	1	1986-87
10	133	

Source : Director, Local Fund Audit, U.P.

We have already referred, in the sub-chapter dealing with 'Accounting and Audit System of PRIs', to the recommendations of the EFC regarding audit system for LBs and the follow-up action by GOI and GOUP on them. To recapitulate, the EFC has emphasised the need for streamlining the audit system of LBs and has recommended that C&AG should be entrusted with the responsibility of exercising control and supervision over the proper maintenance of accounts by LBs and their audit. The GOI has accepted these recommendations and initiated steps in this direction. The C&AG is also understood to have developed detailed formats for maintenance of accounts of local bodies. We have been informed that GOUP has agreed to get the audit of local bodies done under the supervision of C&AG. The audit of ULBs will be done directly by C&AG. The State Government's audit staff would work under his technical guidance. We also understand that C&AG has agreed that no audit fee would be charged. AG, U.P. would be responsible for preparing the consolidated audit report to be submitted to the State Legislature. These measures, we believe, will, contribute to the effectiveness of audit system of ULBs.

As already recommended in the sub-chapter dealing with 'Accounting and Audit System of PRIs', it should be mandatory to table a consolidated annual report on the audit and accounts of local bodies before the State Legislature every year and the report should be discussed in a specifically designated Committee of the Legislature which should function on the lines of the Public Accounts Committee. We also recommend that the present machinery of Anti-Corruption and Vigilance Departments at the State and district levels needs to be strengthened to keep a watchful eye on the mal-practices in ULBs. An Anti Corruption and Vigilance Cell may also be set up in the Directorate of Urban Local Bodies on the same line as we have recommended in the case of the Directorate of Panchayati Raj. These arrangements, it is expected, would strengthen the audit system of ULBs and help curb misuse, misappropriation and leakage of funds.

17(ii) Data Base and MIS

Information Technology (IT) is a broad term covering many aspects of managing and processing information. The critical role of IT, as instrument for progress and development, has been acknowledged all around. It is rightly expected to bring concrete and fast social and economic benefits to people and accelerate the process of development. It is now realised greater impacts can be achieved through electronic governance, modernizing of office environment and working methods.

One of the major applications of IT for providing better quality of services to citizens is what is now termed as "Electronic Governance". In simple terms, it means providing a secure, reliable, participative and friendly interface between the government/ULBs and citizens through electronic networks.

ULBs should adopt IT and electronic governance for providing high standards of information, administration and service to people. Public access to various types of services/facilities provided by ULBs is usually difficult, complicated and often surrounded by mystery and palms in search of "grease". The problems get complicated and compounded by the way the officials of ULB administration deal with people. In such a situation, IT deploymet coupled with one-window systems, flat structures, transparence and simplicity of procedures would certainly help and address the grievances of citizens and promote responsive administration and faster decision making. By using IT in local bodies, the quality of services improves, costs get reduced and better efficiency is achieved.

The application of IT implies uses of communication networks like NIC, INTERNET, etc. access to various networks, convergence of telecommunication services, development of software and of IT professionals. In urban local bodies the level of skills available is very low. There is, thus, an urgent need for adopting IT to provide in ULBs provide opportunities for not only upgrading skills but acquiring of new skills as well.

There are many areas, where IT can play a vital role in efficient functioning of ULBs. These could, for example, be :

(a) Public interface/grievance removal/easing of public access to information
(b) Use of G.I.S.for planning, property census, etc.
(c) Computerization of information, records, human resource data, accounts, financial management systems including tax/non-tax assessment, billing, recovery, etc.

Every citizen has the right to obtain information of his/her interest from ULBs. Such information would have to be made available widely, transparently and easily.

For networking ULBs, it would be of advantage to establish coordination with the National Informatic Centre (NIC) and other networks. NIC is committed to provide to the State inputs/information. Then there is INTERNET facility which is one of fastest growing systems of inter-communication that can be used to great advantage by ULBs, as also by people.

The present availability of infotech equipment in ULBs of U.P. is given below:

Availability of Infotech Equipment in ULBs *

Sl.No.	Item	Nagar Nigam	Nagar Palika Parishad	Nagar Panchayat
1	2	3	4	5
1	Telephone	11	194	100
2	Fax	10	-	-
3	E-mail	-	1	-
4	Internet	-	1	-
5	Computer	11	1	-

*** Source : Directorate, Urban Local Bodies, U.P. Lucknow**

It would, be seen from the above data that infotech facilities are hardly in place in ULBs. This is evident from the fact that none of the Nagar Palika Parishads have the fax facility. Even more discouraging is the fact that as many as 318 Nagar Panchayats, out of 418, i.e. 76.1%, do not have even a telephone facility.

Website

Uttar Pradesh Government is committed to providing easy access to information over Web, which will help eliminate the need of approaching the officials / clerks concerned for every single requirement. Nagar Nigams and large sized Nagar Palika Parishads can launch websites to boost the information-access environment. This will go a long way in substantially reducing inconvenience caused to citizens and expenditure that has to be incurred by them for frequently visiting offices of ULBs. Besides saving time and money, the system will promote transparency in the citizen - ULB interface and improve both responsiveness and accountability of ULB personnel.

Geographical Information System

Geographical Information System (GIS) is a vital component of Information Technology (I.T.). It is suggested that GIS be used by Nagar Nigams and large sized Nagar Palika Parishads for complete enumeration of houses (residential as well as non-residential) and, thus, bring in Property Tax net all those buildings which have so far remained uncovered. Through this

process, the income of ULBs can be considerably increased. Mirzapur is a striking example in this respect, where the income through property tax receipts has increased more than four times through the application of G.I.S. Besides increasing revenue from P.T., the use of G.I.S. will be very helpful in urban planning.

Computerization

We have entered the age of information which can, and is being, utilized world over for improving systems, offices and organisations. In collecting, storing, collating, retrieving and utilizing informatuion, the use of computerization is well recognised. Computerization needs to be phased introduced in ULBs. This suggestion is in conformity with the recommendation of the Eleventh Finance Commission (EFC) regarding creation of a nation-wide data base relating to finance of both urban and rural local bodies for which an amount of Rs.54.56 lakhs has been earmarked for the ULBs of U.P. and Rs.47.55 crores for RLBs in the State. The areas of work-suitable for computerization for local bodies may include:

(a) Integrated data in municipal government.
(b) Data banks which may include information against host of items like income, expenditure, assets, liabilities and should incorporates time series data.
(c) Creation and retrieval (including conditional retrieval) of data for planning, project execution and operation as also for maintenance of urban services.
(d) Time series data for taxes (especially Property tax), non-taxes (as fees, duties cess, etc.) and other financial resources of income as well as for expenditure. This may include revenue assessment and collection also.
(e) Data relating to personnel and HRD needs.
(f) Data safety
(g) Networking in respect of those ULBs which are large sized. These would be local area networks.
(h) Project monitoring in terms of time and costs. Monitoring of service costs, efficiency and grievance removal.
(i) Training of staff and officers at various levels.
(j) Financial Management,budget preparation, and Accounting, etc.
(k) Central and State Finance Commissions' release of funds and their utilization.
(l) Core series time series data pertaining to norms, yearwise achievement, level of achievement, per unit cost, yearwise physical targets, requirement of funds, utilization of funds, etc.
(m) Birth and death records
(n) Inventories
(o) Pending legal matters
(p) Questions raised in State legislature or Parliament
(q) Follow-up of petitions and representations, access to information by public at all levels, grievance removal.
(r) Audit paras and their follow-up
(s) Inspections
(t) Establishing LAN/WAN network where necessary to improve communications and rapid access to and exchange of information.

The above list is only suggestive. There can be more areas, which could to be specifically identified. There is urgent need to train staff and officers of local bodies about information technology and its uses. For, new incumbents, knowledge of computer operation should be made an essential qualification. This will raise the level of new staff inducted and smoothen the introduction of computerization and modernization.

Data Base Improvement

It is a sad situation that hardly any data, whether district-wise or for the State as a whole, with respect to urban land use, is a available. This has to be viewed in the light of the fact that district-wise land utilization statistics for each year are maintained for rural areas in the office of Board of Revenue of the State. it is difficult to visualize formulation of short term or perspective plans for cities and towns and their effective implementation in the absence of reliable time series data of land utilization, future needs and optimal land use.

The devolution of net revenues of the State to local bodies, including ULBs, is one of the primary tasks assigned to the State Finance Commission. For devolution purposes, there is an imperative need of time series data of ULBs regarding financial resources, tax and non-tax revenues, assets on the one hand and revenue, capital expenditure and liabilities on the other. But these are sadly not available. For developing, storing and using such information the use of IT and computerization in very essential.

Recommendations

Introduction of computerization in all ULBs is urgently required not only for preparing a data base on physical, administrative and financial aspects of their working but also as an effective tool of monitoring and management with a view to improving efficiency and reducing costs. The SSFC, therefore, recommends that a comprehensive and time bound programme of computerization of ULBs in the State should be taken up on a priority basis. This would include equipping every ULB with computers, development of appropriate softwares and training of the staff in use of computers. The Nagar Nigams should adopt computerization of all their activities, for which, if required private companies can also be used on a contract basis. The Directorate of Urban Bodies should similarly adopt computerization on a comprehensive basis. ULBs should be linked with the Directorate. The funds provided by the Eleventh Finance Commission for improving the data base could also be utilized for this purpose.

17(iii) Public Private Partnerships

Municipal bodies provide essential and important services and conveniences to people living in cities and towns. There are persisting and widening gaps between needs of cities in these contexts and resources available with ULBs in terms of finances, organisational strengths and technical capacities. Recent years have witnessed noticeable and important changes in the policy focus on urban infrastructure in terms of its role in "productivity, human health, equity, quality of life and access to basic services". The gap between the needs of infrastructure and services and availability in ULBs is glaringly wide. It is, therefore, being increasingly realized that in municipal contexts there should be public-private partnerships for improving services and infrastructure. This would, in all likelihood, imply greater supply of funds, pooling together managerial resources and technical capacities and a strong orientation towards cost consciousness and customer satisfaction.

There is, admittedly, urgent need to upgrade and expand urban infrastructure and services. It is well known that financial, managerial and technical capacities available with ULBs are low. The country is at present passing through the phases of economic liberalization and reforms. That should point to more and more public-private partnerships in improving civic services. Evidently, pooling of resources and capacities appears to be the need of the time. Such partnerships have begun to emerge as innovative, feasible and less costly arrangements in cities across the country. There are many examples where such arrangements have worked well. A few illustrations may be briefly listed here :

(a) Rajkot Municipal Corporation has contracted out maintenance of street lights, solid waste removal, cleaning of public toilets, park maintenance, afforestation, etc. In doing so it has improved civic services and facilities and even made some money for itself in the process.

(b) Pali Municipality in Rajasthan has contracted out street light maintenance. The cost is reported to have been reduced nearly by four-fifth of what it spent earlier.

(c) CIDCO in Maharashtra has farmed out maintenance of water and sewerage pumps, meter reading and billing, maintenance of parks and gardens, collection of dues, etc. to private parties to advantage.

(d) In Gujarat private sector firms are reportedly being involved in implementation and/or maintenance of water supply projects. Sometime ago the Gujarat Infrastructural Board engaged TERI (Tata Energy Research Institute) for developing a model regulatory framework for water supply services privatization in the State. The suggested arrangement that has been emerged as a result is what is called the BOT (Build, Operate and Transfer) system. The Gujarat Infrastructure Development Law provides a framework for private sector participation in financing, construction, maintenance and operation of infrastructural projects in the State.

Many types of private-public partnership (PPP) arrangements in cities have evolved over time. We have, thus, for example, the BOOT (Build, Own, Operate & Transfer) system, the BOO (Build, Own and Operate) system, the BOLT (Build, Operate, Lease and Transfer) system and the BOT (Build, Own and Transfer) system, to mention a few. Large sized infrastructure and service providing projects in cities involve high costs, long gestation periods and low returns. Urban projects like water supply and sanitation facilities, construction of roads, bypasses, fly-overs and commercial centers, recreational facilities, public conveniences, community centers, etc., can be taken up under PPP arrangements. However, for this purpose, appropriate policies, legal framework, tarrif regulation arrangements and incentive systems are necessary. While BOT/BOOT type of arrangements may be appropriate in cases where the economic life of assets created exceeds the period required for recoupment of private investment with a reasonable return, different types of arrangements would be required for other cases. Careful risk allocation exercises would have to be undertaken for such projects while determining debt-equity structures, regimes of leviable fees, tolls or charges, service standards, maintenance needs, etc. to bring such projects to satisfactory financial closures. The bid documents would have to be very carefully prepared so as to bring about clarity and transparency in the process of inviting, evaluating and awarding bids.

The public private partnerships (PPPs) would, in a way, also cover efforts made by voluntary organizations and NGOs in areas like garbage removal and collection, solid waste disposal, tree plantation, park maintenance, etc. Already there are examples like that of EXNORA, SRISTHI, etc. which have been discussed elsewhere in this report.

Public-private projects if executed carefully can, in our view, achieve many objectives like, for example, increased financial resources, upgrading of technologies, better management, reduction in costs, better user satisfaction and higher levels of efficiency. Such arrangements may be of different types. There could be corporate or joint investments, maintenance contracts or VA/NGO associational initiatives. In evolving such arrangements it is the quality of services of facilities created or handed for operation/maintenance and their costs on the one hand, and levels of citizen satisfaction on the other, that should be the cardinal determining factors on which such policies and decisions can be based. For doing so, some action steps are indicated :

(a) Assess partnership potentials citywise.

(b) Identify projects and examine/analyse these for unbundling.

(c) Select appropriate modes of partnership (e.g. BOT, BOO, BOOT or BOLT, contracts or stake-holder agreements.

(d) Initiate transparent and criteria-based bidding and selections processes.

(e) Evolve clear regulatory/legal frameworks in which such arrangements would operate. The tariff/charges regimes would need to be evolved by independent set-ups.

(f) Careful contract designing, bidding systems, monitoring and compliance.

17 (iv) Privatisation of Municipal Services

Due to their poor financial State ULBs are unable to provide quality civic services on the requisite scale. Privatisation of municipal services offers one way out of this situation. Such privatisation was introduced in many countries across the world during the last two decades including USA, Canada, U.K., Argentina, etc. In our country also we have a number of examples of privatisation of municipal services (see Box 8.3). Rajkot Municipal Corporation in Gujarat has contracted out a number of services like maintenance of street lights, solid waste removal, transportation, cleaning of public toilets, maintenance of gardens, etc. Pali Municipality in Rajasthan has given maintenance of street lights to private sector. CIDCO in New Mumbai has privatised maintenance of sewerage and water pumps, meter reading and billing, maintenance of parks and gardens, collection of service charges, etc. In Surat private sector has been involved in solid waste collection and transportation, maintenance of street lighting, construction of roads, tree planting and operation of water treatment plants. Several cities in the country have privatised solid waste collection and disposal. Some ULBs have also entrusted collection of tolls and octroi to private contractors. NGOs, community groups and cooperatives have been involved in many cities in the maintenance of parks, squares, crossings, gardens, garbage disposal, etc. Nearer home, Kanpur Nagar Nigam, in 1987, involved private contractors in garbage disposal. In 1994 Jaunpur NPP also contracted out sweeping and cleaning and collection of garbage in a single ward.

Privatisation of municipal services can open up the possibility of inflow of private capital into urban infrastructure projects. It helps in easing the financial pressure on ULBs and results in efficiency gains through cost reduction and better quality of service.

The Commission, feels that privatization should not supplement the present work force of ULBs or cause any retrenchments of permanent staff. At the same time it recommends that steps should be taken to encourage privatisation of municipal services in this State on the lines attempted in other parts of the country. The services which are suitable for privatisation include, among others, solid waste disposal, cleaning of roads, maintenance of parks, street lights, etc. Priority should be given to suitable NGOs, Citizen Groups and Cooperatives in awarding contracts for such services. A strong regulatory mechanism and oversight system at the local level is an essential pre-requisite of effective privatisation. Appropriate institutional and legal changes will have to be introduced to regulate the process of privatisation and keep a strict watch on the private providers of civic services. The Govemment may prepare model bye laws and guidelines for contracting out of municipal services. The managerial capacity of ULBs also needs to be strengthened from this point of view. The quality aspects of provision of services and user charges for them will have to be kept in mind while privatizing civic services.

Box 8.2
Management Contracts for Services in Indian Cities, 1993

Service/tasks	Cities
Sanitation and public health:	
• Conservancy/drain cleaning/ Sanitation/maintenance of STP	Guwahati, Bangalore, Jodhpur, New Bombay, Ludhiana
• Construction and Maintenance of Toilets	Faridabad, Delhi, Hubli-Dharwad, Aurangabad, Kalyan, Jaipur
• Mosquito control	Cochin
Solid waste management:	
• Garbage collection disposal/street Cleaning	Guwahati, Ahmedabad, Rajkot, Baroda, Bangalore, Cochin Bombay, Pune, Jalandhar, Amritsar, Ludhiana, Jaipur, Baorda, Kalyan
Roads and streets related:	
• Road construction	Ahmedabad, Cochin
• Road maintenance	Bangalore, Cochin, Jaipur
• Street lighting	Ranchi, Rajkot, Faridabad, Jodhpur
Tax Collection:	
• Collection of entry tax, other Local taxes/charges	Guwahati, New Bombay
• Parking lots collection of charges Gardens and parks, etc.	Guwahati, Pune
• Development and Maintenance of garden parks/playgrounds/sports Complex/swimming pool/ Planetarium/traffic islands	Rajkot, Baroda, Bombay, Faridabad, Hubli-Dharwad, Bangalore, Cochin Kalyan, Pune, Amritsar, Ludhiana Jalandhar, Jaipur
• Social forestry, tree planting along streets	Baroda, Rajkot
Others:	
• Bus terminus/shelters	Ranchi, Cochin
• Ward security	Ahmedabad, Rajkot
• Market development	Ahmedabad, Kalyan
• Maintenance of vehicles	Rajkot
• Land development	Faridabad
• Maintenance of libraries etc.	Faridabad
• Milk market	Hubli-Dharwad

Source : Reproduced from O.P.Mathur (ed.), **India: The Challenge of Urban Governance,** NIPFP, New Delhi, 1999, p. 210.

17 (v) Citizens' Participation

Recent decades have witnessed a reassertion of civil society as a participatory mode of governance the world over. This is based on the understanding that the formal representative democracy fails to ensure effective community participation and service delivery especially for the poor in the urban areas. The role of civil society assumes varied forms of community or group efforts ranging from neighbourhood groups and community based organizations (CBOs) to different forms of citizen or consumer forums to voluntary associations (VAs) and non-government organizations (NGOs) of various types and sizes. These may be functioning independently locally or in a federative mode at the regional, national and even international levels.

Participation supposes a commitment to change and development. It should emanate from citizen's willingness, desires and entitlements for development. Participation is not automatic and given. It has to be promoted, sparked and sustained. Ensuring participation is a question of infusing skills, development of knowledge, social engineering, confidence building, and mainstreaming shared values.

Citizen participation is a pre-requisite for sustaining people-friendly and environment-friendly development. It is, thus, a key element in the development process. Community participation is being increasingly recognized not only as a means of participative democracy and empowerment of the poor, but also as an instrument of improving the quality and efficiency of delivery of services including municipal services.

The involvement of user groups right from the stage of project design and planning to its execution and operation can help in reducing cost of construction as well as delivery of services. Communities can be encouraged on local benefit-accruing basis to meet part of capital cost through contribution of money or labour. Operation and maintenance of facilities like hand pumps, community parks, street lights, etc., can be handed over to the user groups/neighbourhood societies.

Examples of voluntary social work and citizens' participation in urban development abound. EXNORA is a worth emulating example of citizen participation in community works. It is a community based NGO engaged in activities related to make cities environment pollution free. EXNORA did commendable work in Chennai by forming neighbourhood clubs, which, for a small monthly fee helped in primary collection of solid waste. The EXNORA concept has since been adopted by many cities in different parts of the country. A branch of EXNORA was set up in Lucknow in 1996. It is said to have motivated citizens in different localities of the city to collect and dispose garbage in an environment-friendly manner. In Delhi, Srishti an NGO, is promoting participation of Residents Associations in solid waste disposal. Mythri Sarva Seva Samithi has undertaken similar work in Bangalore. Express Group of newspapers has similarly taken steps to mobilize citizens' participation through dialogue between informal groups of citizens and officers of Pune Municipal Corporation for provision of urban services and other issues. Sulabh International has done commendable work in constructing and maintaining public toilets throughout the country. Several other municipal bodies have involved local communities/business houses in the maintenance of public parks, rounds, crossings, etc.

Hyderabad Urban Community Development Project initiated by Hyderabad Municipal Corporation in slum areas of the city with assistance from international agencies is said to be a very successful project of its type. The Urban Basic Services programme of GOI is based to a large extent on this experience. The Community Development Services (CDS) and Resident Volunteer Schemes (RVS) were launched in 1997 by DUDA in slum areas of Lucknow city. These schemes have helped in promoting citizen's participation in community works, particularly by mobilizing women residents.

The Department of Environment, GOUP is understood to have recently developed the blue print of a scheme for involving people in making Lucknow city green. The scheme aims at motivating citizens to take up the habitats of their respective localities and transform these into pleasant, habitable areas. It is planned to constitute Citizens' Committees, comprising residents of the area, so that people can finally have a say in areas like maintenance of parks, and roads, clearing of clogged up drains, better street lighting and proper collection of garbage. The Department would provide financial assistance and back-up required. This is a laudable scheme, which needs to be extended to other cities of the State as well.

Only a few illustrative examples have been cited here pointing to immense possibilities of enlisting community participation and community support for better urban life. In U.P. the movement of community participation is in a comparatively nascent stage as compared to many other States. The reach and coverage of CBOs and NGOs is as yet inadequate and uneven. The Commission feels that this is undoubtedly an area of high priority in terms of both policy and action. What is needed is the adoption of such initiatives as policy measure and their replication, multiplication and encouragement on a much larger scale through systematic efforts and institutionalization of arrangements.

17(vi) CITIZENS' CHARTER

The 74th Constitution Amendment Act has provided constitutional status, to ULBs and flagged the direction of further decentralization of their financial as well as functional powers. The functions which can be allocated to ULBs by State Governments are listed in the Twelfth Schedule which, inter-alia, include information dissemination and communication to bring in more transparency and awareness, to generate effective participation, involvement and support from the citizens. This process would be instrumental in speeding up the disposal of requests as well as effective redressal of citizens grievances.

The instrument of Citizens' Charter has become popular in recent past as a means for providing responsive administration. Several Government Departments and organizations in the country have announced and publicised charters appropriate to their functions and activities. Such charters need to be adopted by the ULBs in the State on a wide scale to make their working transparent, responsive and people friendly. A Citizens' Charter, is a documented commitment on the description and standards of services that are provided and, more so, about grievance redressal arrangements and solving the problems of citizens in a time bound manner. The principles, objectives and format of Citizens' Charter are briefly outlined below:

Principles of Citizens' Charter

The concept of Citizens' Charter is based on the following principles:

(a) Norm : ULBs are expected to provide services/facilities as per laid down norms. In case a citizen is not receiving services, he/she can take steps as indicated in the Charter for quick redressal.

(b) Responsibility: Through the Charter specific responsibility is fixed for providing different services in terms of costs, time and accessibility.

(c) Transparency : To bring transparency and enlist citizens' participation through dissemination of information regarding various services provided.

(d) Feedback : Citizens can offer valuable suggestions on action taken by ULBs on their complaints.

Objectives :

The objectives of a Citizens' Charter broadly are :

(i) To provide information to citizens regarding the departments of ULBs, which are responsible for providing different type of service facilities to citizens;
(ii)To make the citizens aware about the procedure as to how and where their complaints are to be registered;
(iii)To provide quick redressal of grievances; and
(iv)To fix responsibility of employees for attending promptly to public grievances and award punishment to those who fail to do so.

Format of a Citizens' Charter

The standard format of a Citizens' Charter should contain :

(i) The context

(ii) The objectives

(iii) Mission statement

(iv) Main activities and achievements

(v) Type of services available

(vi) Cost (if any) involved in grievance removal

(vii) Service/quality and assurances offered with standards of performance along with prices or rates

(viii)Citizen assistance and complaint resolution processes including listing of grievances removal time-frames/names of officials/addresses/phone nos.to be contacted.

It is gratifying to note that the Urban Development Department of U.P. Government has recently developed outlines for Citizens' Charters to be adopted by Nagar Nigams. The SSFC, however, feels that such Charters should also be designed for Nagar Palika Parishads and Nagar Panchayats keeping in view their organizational pattern and functional domains. Adoption of such Charters should be made an essential duty of ULBs. The Charter should be made available in simple leaflet forms, which should be publicized and widely distributed and published in newspapers, etc., so that people can become aware of facilities and services available and they can know how their grievances and complaints can be attended to effectively and with speed. These charters should be invariably displayed on ULB notice boards in a prominent manner. A special "Reception Counter" may be set up in larger ULBs for attending to the grievances of citizens who should be clearly given a feel that they are being given friendly treatment and their problems are being attended to with transparency, quickness and politeness.

Procedure of Redressal of Grievances

The procedure for receiving complaints in Nagar Nigams laid down by the Government consists of three stages. Firstly, a complaint may be lodged in the Zonal office to the incharge/officers nominated for different works. If the grievances is not redressed at the first stage, the complaint will be made to the Zonal Officer. If the complainant does not get relief from the Zonal Officer, then at the third stage, the complaint would be made to Additional MNA/Chief Engineer/Nagar Swasthya Adhikari. Provision is to be made for receipt of complaints at each of the three stages. There is an imperative need for computerization of complaints, so that department-wise list of complaints received each day may be available and monitoring of redressal can be effectively ensured.

The guidelines of the Urban Development Department also lay down that for grievance removal and for bringing transparency in work system, NGOs may be actively associated in this process. In selection of NGOs, priority should be accorded to those who are reputed and have previous

experience of this type of work. In case the redressal of grievance is not done even at the third stage then the complainant will submit its complaint to the NGO alongwith the details of the previous complaints on the prescribed proforma of the Citizens' Charter. Thereafter, the NGO, alongwith some respected citizens, can be instrumental in disposal of complaints by arranging a meeting with high officers.

Similar guidelines suitably modified and simplified for procedures of grievance redressal should also be issued for Nagar Palika Parishads and Nagar Panchayats.

17 (vii) TRAINING AND HUMAN RESOURCE DEVELOPMENT

Training Needs

The 74th Constitutional Amendment has indicated 18 functions for ULBs which, inter-alia, include the providing of core civic services, urban planning and developmental aspects. Capacity building of ULBs for discharging these responsibilities in a people- friendly, efficient and professional manner is an urgent need. According to Census 2001, 3.45 crore people live in the urban areas of U.P. and their number is growing at around 3% (or 10 lakhs) per year. There are, at present, 623 ULBs in U.P. including 11 Nagar Nigams, 195 Nagar Palika Parishads and 417 Nagar Panchayats. Over 85,000 employees are working in these bodies including around 250 senior, 550 middle and 26000 junior level officials. In addition there are 623 elected presidents and nearly 16, 000 elected members of ULBs, who need to be trained, reoriented and motivated in their areas of responsibility. In addition officials of parastatals like the Housing Board, Jal Nigam, Jal Sansthan, Development Authorities, SUDA, DUDA, etc. who are directly or indirectly concerned with the providing or maintenance of civic infrastructure and services also need to be trained.

Training such large numbers of municipal and parastatal officials and elected representatives poses a major challenge. At present there are only sporadic and scattered arrangements for different types of short term training programmes. These arrangements, in view of the Commission, are highly inadequate and wholly lack the needed institutional, organizational and technical strengths required to address the human resource development and training needs for urban management and development in the State. It is high time to move in the direction of evolving comprehensive HRD and training policy and institutional arrangements for decentralized urban planning and create training infrastructure of appropriate capacity and competence for the purpose in the State.

Training Strategies

The **State Training Policy** adopted in 1999 by the U.P. Government emphasizes the need of training for developing knowledge, skills and motivation among officials, employees, elected representatives and NGOs for a responsive, democratically oriented and participatory system of governance. It advocates a strategy of strengthening training infrastructure through institutional training, on-the-job training as well as training through distance learning packages. Every department / organization of the State Government was required to develop annual training programmes and make a provision of 1.5% of its salary budget for this purpose.

The Global Plan of Action in HABITAT-II resolved that "governments should promote comprehensive training, education and human resource development policies and programmes which are gender sensitive and involve local authorities and their associations as well as academic research, training and educational institutions, community based organizations and the private sector." The resolution also required governments to focus on development of core capacities in training institutions through training of trainers. It also called for the development of capacity to define the needs and undertake research in social and environment impact

assessment, age and gender sensitive analysis, shelter strategy formulation, local economic development, poverty alleviation and participative management.

The strategies for capacity building in ULBs should be based on a realistic assessment of the functions indicated for municipal bodies by the 74th Constitutional Amendment Act. Training and capacity building efforts must aim at making delivery of services quick, cost effective and responsive to people's requirements. These should focus on a wide range of target groups including senior level officials (policy makers), middle level officials (managerial and technical staff) and, junior level staff (technical staff), elected representatives and NGOs / CBOs. The strategy should be related to the demand driven needs of U.L.Bs, agencies, parastatals and NGOs engaged in urban management. For this purpose an apex State level mechanism linked to a decentralized net work of training institutions needs to be developed.

Training Modules and Components

Suitable training modules of short, medium and long duration have to be developed keeping in mind the requirements of different targets groups. The objective should be to develop specific project/ programme level skill. The training programme will cover different areas to enable ULBs to perform their present and new tasks of governance and service delivery and future planning and will cover, among others, the following areas: spatial planning, providing of core services, housing and infrastructure development, environmental improvements, financial management, and municipal administration (See Box 8.3). Training in computers for MIS and E-governance should be an important component of the programmes.

Training Infrastructure

A large well equipped and layered infrastructure manned by competent professionals and experts both at the apex and the decentralised levels is needed to meet the training requirements of the large number of functionaries and elected representatives of ULBs. Such arrangements exist in many other States either as special wings of the administrative academies as in Maharashtra or as separate institutions as in Kerala. In Gujarat municipal bodies have jointly supported the establishment of an institution for training. In U.P. also the need of a State level Urban Training Academy has been expressed in various seminars, workshops and other fora. In discussions which the Commission held with officials and elected representatives of ULBs on different occasions, the need for such an Institution was frequently voiced and stressed. The Commission finds this suggestion highly relevant and urgent. The Commission, therefore, recommends that a **State level Urban Management, Training and Research Academy** should be set up in the State at the earliest, on the lines suggested below.

The proposed **Urban Management, Training and Research Academy** should be constituted as an autonomous professional body under Registration of Societies Act. The Management Board of the Academy should be compact and should include in addition to a few nominees of the State Government, eminent experts in the field of urban management and finance as well as representatives of the three tiers of ULBs in the State. The Academy should be manned by a whole time Director and specialists in various areas, apart from the needed support staff.

The **objectives** of the Academy will, inter-alia, include the following :

(i) to promote the development of transparent and responsive urban institutions which contribute to economically dynamic, socially transforming and environmentally sustainable urbanization.

(ii) to undertake research, including action research, on issues of legal, regulatory, financial and administrative aspects of ULBs with a view to improving their

functioning and recommending measures based on such studies to the State Government.

(iii) to function as a research, training, documentation and expert centre for different aspects of urban management.

(iv) to assess the training needs for urban development and management with a view to making the training programmes demand driven and target oriented.

(v) to develop the required inter-personal institutional skills and attitudes amongst elected representative and functionaries of ULBs at all levels.

(vi) to promote capacity building in ULBs with respect to policies and programmes and project formulation, implementation and monitoring.

(vii) to develop training modules and course material for various types of training needs.

(viii) To evolve Training of Trainers programmes needed for ULBs, etc. at different levels.

(ix) to organise training programmes, workshops, seminars, etc. on different aspects of urban development and management.

(x) to establish networks with national, state and field level institutions engaged in the ULB development and management.

An amount of Rs. ten crore may be sufficient in our opinion to meet the capital cost of establishing the proposed Academy including the cost of land, building, furniture and equipment. The Commission recommends that this amount may be deducted from the recommended SFC devolution to ULBs in two or three annual instalments, when the decision to set up such an Academy is taken by the State Government. For annual recurring expenditure of the Academy also the required amount may be deducted from SFC recommended devolution for ULBs. Initially this requirement can be broadly placed at Rs. one crore per year to begin with.

U.P. had a centrally funded urban center located at the Academy of Administration, Nainital. That center has now been earmarked for Uttaranchal. We learn that such a Centre for U.P. is proposed to be set up soon. This center could be advantageously located in the suggested State level Training and Research Academy for Urban Management.

Given the large number of ULBs and the vast size of the State it would be appropriate that institutional arrangements for training are made at decentralized level also. Atleast one Regional Training Centre may be set up in each of the four Economic Regions of the State. Concerned Nagar Nigams can be designated as Nodal Agencies for this purpose. Funds for running the Regional Training Centres may be provided out of the contributions made by the ULBs falling in the respective region for running paid training programmes. Individual ULBs should also be encouraged and persuaded to identify their own training needs and allocate 1% of their salary expenditure for this purpose.

Box 8.3
Critical Functional Areas For Training in ULBs

1-	**Municipal Administration:**	- Municipal management techniques - Personnel management - Laws for municipal management - Management of public offices - Management of municipal assets - Management of information systems
2-	**Municipal Services:**	- Planning and management of municipal services - Urban water supply management - Urban transport planning and management - Sewerage - Sanitation - Solid waste management - City cleansing services - Street lighting - Operation and maintenance services
3-	**Urban Programme & Projects:**	- Poverty alleviation and Slum Improvements programmes - Development of small and medium towns - Urban basic services - Low cost sanitation and settlement programmes - Public sector housing - Town planning - Urban infrastructure - Mega cities programmes
4-	**Municipal Finance:**	- Municipal financial management - Cost recovery for urban programmes / services - Municipal audit and account - Valuation and assessment of property taxes - Municipal financial resource mobilization/Project Formulation - Investment planning - Urban Infrastructure financing
5-	**Urban Economic and Development Initiatives:**	- Urban economic development - Promotion and regulation of industries, commerce and servoce sectors, and licensing - Planning for employment and income generation - Promotion of public private partnerships
6-	**Urban Environment:**	- Pollution monitoring and control - Pollution abatement - Environmental impact assessment - Management of environmental improvement
7-	**Urban Land Management:**	- Land use planning-land management - Building safety, control and inspection - Cadastral management - Supply of buildable land
8-	**Urban Planning:**	- Public housing schemes - Building control - Control of encroachment - Urban re-development – inner city renewal - Urban heritage rehabilitation - Community participation and participation of NGOs.

Source : Based upon National Strategy For Urban Development and Urban Management: Towards Decentralization, Human Settlements Management Institute, New Delhi, 1997

17 (viii) Administrative Reforms

After the 74th amendment, Urban Local Bodies (ULBs) have been accorded constitutional status. Schedule XII of the Constitution indicates 18 functions that can be assigned to them by the State Government. A number of administrative reforms are needed to enable ULBs to perform their functions in an effective and efficient manner. These reforms may broadly be categorized under three heads:

(A) Personnel Administration
(B) Urban Management
(C) Financial Administration

(A) Personnel Administration

The measures that need broadly to be taken for vitalising personnel administration in ULBs are outlined below :

Urban local bodies should be made effective institutions of self- governance. This is possible by progressively expanding their domain of functions and powers in accordance with the listing in the Twelfth Schedule of the Constitution on the one hand and improving their capacities on the other. The Wards Committee need to be activated to play their expected role in this regard.

Services and regulation are the backbone of shaping the image of ULBs. For this purpose there is need for efficient, skilled, qualified and motivated personnel at all levels. Such personnel need, therefore, to be recruited by adopting proper norms and procedures. As things obtain, a number of persons are appointed without observing the laid down procedures and objective ways of selection with evident adverse impacts on work culture, discipline and output. The recruitment process needs to be institutionalised and insulated from any extraneuous influence or interference. Such institutionalisation should take place at all levels.

As recommended by the FSFC of U.P., the power of appointment of all non-centralised staff should vest in Executive Officers and Mukhya Nagar Adhikaris, with provision of appeal to the Divisional Commissioner. For doing so the relevant sections of the U.P.Municipalities Act 1916 and U.P Municipal Corporation Act 1959 need to be suitably amended.

Non-centralised staff of ULBs should be transferable in similar categories of these bodies within a Division, on the recommendations of concerned Executive officers / Mukhya Nagar Adhikaris. The Divisional Commissioner may be the transferring authority. At present some members of non-centralised staff develop vested interests and use political influence, thus, creating hurdles in municipal administration. This gives rise to indiscipline among workers, particularly 'safai karmacharis'. This suggestion will involve changes in relevant rules and procedures.

Provision for transfer of non-centralised employees after three years or so should be made under rules. In case where circumstances so warrant even earlier transfer on administrative grounds should become possible.

Decentralisation of administrative and financial powers is both desirable and necessary. The number of levels of decision making must be reduced to two.

Selection Committees should be set up in each district for recruitment of non-centralised staff of ULBs.

There is an an urgent need for strengthening and upgrading the Directorate of ULBs for effective monitoring, inspection and ensuring timely compliance of the instructions of the State

Govt./Directorate at the field level and maintenance of uptodate information and data bank on financial and physical situation of the local bodies. In this connection it is suggested that the Directorate may be strengthened by inducting three Joint/Deputy Director level officers at the head-quarters, who together with the Director, ULBs would look after the local bodies located in the four recognised regions of the State, namely, Western Region, Central Region, Eastern Region and Bundelkhand.

For improving efficiency and skill of personnel, emphasis must be laid on regular training of officers and employees. In training, subjects like urban management , financial rules, accounting, information technology and use of computers should be included. For providing incentives to officers and employees, provision should be made for recognition of good work in the form of awards, merit certificates, prizes, medals, etc. For improved personnel performance sound career planning is a must.

Irregular payments of salaries has become a common feature in ULBs, specially in the case of Nagar Palika Parishads and Nagar Panchayats. It is reported that in several ULBs, salaries of employees have not been disbursed for months, resulting in economic hardships for employees. This, obviously, has adverse effect on the working of ULBs, and the morale of the staff. With better resource mobilisation by ULBs and increasing level of devolution, it should certainly become possible to ensure timely salary disbursements.

For improving efficiency, use of information technology needs to be widened. Local bodies should be connected by computers and local/wide area networks. Computerization in all local bodies should be introduced in a time bound manner and employees should be trained in use of computers. Standard packages should be developed for use of the three levels of local bodies at the State level.

It has come to notice that, time and again, newly elected heads of Nagar Palika Parishads / Nagar Panchayats appoint, on adhoc basis, a number of class III and IV employees, even if there are no vacancies. When the services of such people are terminated, (since they are appointed on an adhoc basis against non- vacant posts) they often file suits in the courts of law with the plea that they had continuously worked for more than 180 days and hence their sevices can not be terminated under rules. This often gives rise to piquant situations and ULBs are forced to retain them, though financial crunch does not allow that at all. This problem needs to be addressed with firmness. In some States like, for example, Andhra Pradesh, a law has been passed making such unauthorized appointments an offence. Some way has to be found to make unauthorized, adhoc appointments just not possible.

(B) Urban Management

Cities and towns are usually centres of commerce, trade, education, industry, government organisations, research institutions, etc. Naturally, therefore, in comparative terms, the service infrastructure is more intense. The growing demand for services has been and continues to be in areas like housing, roads, sanitation, water supply, street lighting, sewerage, drainage and similar other essential services. It is true that cities are hard pressed for resources, skills and institutional capacities. In these contexts, growing challenges are faced by them.

We have dealt with problems of city administration in general terms in the foregoing paragraphs. The question now arises as to what are city management issues that need to be addressed. City management essentially involves mobilisation, planning and control of scarce resources of land, finances, manpower and materials. It implies, importantly, sound physical planning, providing of healthy city environment, reliable and cost effective facilities, services and increasing citizens' participation. For achieving these ends, the essential managerial processes have to be put in place.

In managing cities and towns the problems often encountered are rising population, encroachments on the roads and public lands, illegal constructions, growth of slums, inadequate disposal of garbage, drainage and sewerage problems, poor street lighting, sanitation, illegal digging and cutting of roads and environmental problems related to different forms of pollution. The most important managerial functions of ULB include ensuring that core services are provided efficiently and economically, that cities are kept clean, that citizen grievances are attended to with openness and speed and the providing of services to citizens is based on transparency, openness and polite behaviour. In city management collection of taxes and non-tax dues is a vital issue. Increasing people's participation is yet another way in which city management can be improved. Also, in certain selected areas, public-private partnerships can be encouraged and even some services privatised which would reduce costs on the one hand and create a competitive atmosphere for better services performance. In city management modern technologies can be utilised for construction, repairs, waste disposal, water treatment, etc. These can be used for developing reliable data bases and statistical information, for billing and for providing quick and citizen-friendly grievance removal systems. ULBs need full support of district administration and police authorities in activities like removal of encroachments, traffic regulation, recovery of dues and similar other activities. In order to create an atmosphere of treating citizens as customers are treated by businesses, ULBs should be required to come out with Citizen Charters which should be widely publicised. Such charters should contain information about services available, costs payable, the system of grievance removal and contact points for citizens where they can obtain rapid redress. Better ways have to be found for waste collection and disposal, and, in this activity participation of citizens/non-governmental organisations needs to be encouraged. Such experiments have been successfully carried out in cities like Chennai, Bangalore and Mumbai. Similar efforts are necessary in our State as well. This is an area where not much has been done in U.P. as yet. One of the critical areas in city management that needs to be addressed is that related to environmental conditions obtaining therein. It is important to monitor city environments, particularly in respect of air, water and noise pollution. ULBs should be given a role in monitoring city environments and in this context, they should receive full cooperation and support from the State Department of Environment and the State Pollution Control Board.

(C) Financial Administration

Financial administration includes :

(a) Accounts and audit, and
(b) Financial Management.

(a) Accounts and Audit

An analytical note on accounts and audit needs of ULBs has already been incorporated in the sub chapter on 'Accounts and Audit Needs'.

(b) Financial Management:

Some of the important areas covered by Financial Management are :

(a) Proper accounting and budgeting system ;
(b) Tools of financial analysis and forecasting; and
(c) Short and long term financial management.

It is unfortunate, but true that, at present in ULBs financial management is rather a low-order function. What is being done generally at present is elementary book-keeping which is cash based, inefficient and not subject to regular audit and evaluatory / corrective action. More often

than not financial functions are carried out by non-professionals or by those who are generally exposed to government accounting systems.

It is, therefore, important that ULBs, whose functions will keep on expanding fast, in gamut as well as dimensions, should be enabled to evolve and adopt effective financial management systems to perform their tasks in cost-effective, and accountable ways. The areas to be addressed in this context could include financial analysis and forecasting, short and long term financial management, tax / non-tax assessment and collections, working capital management, inventory management, cash management and audit. Then again, there would be need for capital investment and control systems. Often capital expenditures incurred by ULBs create assets that may or may not be commercial in nature. Many of such projects are of social nature. For preparing new projects and putting these up for approval to funding bodies, project formulation capacities would have to be developed, so that institutional resources can be tapped. Similarly, the incremental budgeting approach has to be given up by introducing performance budgeting systems. What, perhaps, is required is the introduction of subsidiary departmental budgets (for example taxation, drinking water, waste disposal, sewerage and drainage, road construction, maintenance, etc.) in decentralised and enabling modes. Such budgets would require to justify the demand and provide detailed calculations based on quantities, units costs, maintenance costs, etc.

The need for improving financial management is one of great importance in ULBs. Already there are many good examples of improved financial management as adopted by municipal bodies in Mumbai, Vadodra, Bhopal, Rajkot, Bangalore, Ahmedabad and Surat. In these cities financial management systems have been improved to the advantage of their development and quality of urban services provided.

Last but not the least, is the important aspect of training in Financial Management to officers and staff of ULBs. For this purpose the Commission has separately recommended the setting up of a Training Academy for Urban Development, which should be an autonomous body with an independent board of governors.

Strengthening of the Directorate of Local Bodies and District Urban Task Forces

After the 74th CAA responsibilities of the Directorate of Urban Local Bodies have also increased. SFC devolutions are also being routed through the Directorate. It is expected to provide technical support and guidance to ULBs, monitor their performance and help in their capacity building. It is also required to put in place a system of collection of detailed data of income and expenditure related to ULBs on a regular basis.

In view of this Commission there is clear need for raising the status of the Directorate and equip it in terms of manpower, IT support, MIS capacities, etc. The Director, ULBs should be a senior officer in the rank of a Secretary to the Government. The Directorate also needs to be upgraded in terms of IT equipment.

In thier Memorandum submitted to the SSFC the Urban Development Department has included a proposal for strengthening the Directorate through recurring and non-recurring funds. We have suggested elsewhere in this Report that Urban Task Forces may be set up in all districts of the State for better coordination between ULBs and other departments/agencies undertaking city development works of complementing nature. These have also to be equipped with facilities like computers, copiers, fax machine, scanners. etc. We therefore, recommend that a one time non-recurring grant of Rs. 1.5 crore may be provided for IT equipment and MIS needs of the Directorate of Local Bodies and the Task Force to be set up in all districts. The break up of Rs.One crore and fifty lakh would be Rs.1.05 crore for 70 District Urban Task Forces at Rs.1.5 lakh per unit and Rs.45 lakh for the Directorate. This amount would be utilizeable only on non-

recurring expenditure on IT equipment and should be released in two equal annual instalments of Rs.75 lakh each in the year 2002-03 and 2003-04. This amount should, be made available from the SSFC devolution for ULBs. We would like to make it clear here that provision for any additional staff/officers and recurring expenditure for strengthening the Directorate would have to be made by the State Government itself.

17(ix) Wards Committees

In Article 243-S, of the Constitution there is a provision for the constitution of Wards Committees in those ULBs which have a population of 3 lakhs or more. The amended municipal laws in U.P. provide for the constitution of Wards Committees consisting of not less than 10 Wards in the case of NNs and 5 Wards in the case of NPPs. The State Government of U.P., through a notification dated September 28, 1995, framed rules for Constitution of Wards Committees in NNs.

The objectives behind the setting up of Wards Committees are to make ULBs more responsive to people's location-based needs, enlist constructive community participation and involvement in execution of works and collection of dues, improve maintenance and help in grievance removal.

The functions of Wards Committees spelt out in the rules are :

(1) to serve as a fora for residents to express their grievances;

(2) to ensure implementation of the plans of the Municipal Corporation for construction, re-construction, repairs, maintenance, renovation of roads, streets, lanes, drains, sewers, water-connections, street-light, sweeping, city cleaning, parks, play-grounds, and open spaces, within the area;

(3) to ensure watering, scavenging and proper cleansing of the roads, streets, lanes, drains, sewers and all the public places and play grounds; collection and removal of sewage, offensive matter, and rubbish; guarding from pollution water used for human consumption or preventing polluted water from being so used in the area;

(4) to ensure that property and other taxes, charges, and fees are being realized as per demands of the Municipal Corporation within its area and also to suggest measures necessary for the collection of taxes and fees being made up to the maximum percentage of demands;

(5) to ensure the house numbering within each Ward and the naming or re-naming of roads, streets, lanes and the localities and also to conduct a time-to time checking thereof;

(6) to ensure that the licences granted by the Municipal Corporation are not being misused;

(7) to get the encroachments removed and to ensure that no further encroachments take place within the area;

(8) to ensure the up-keep of fire hydrants.

The Constitution provides for the establishment of Wards Committees in those ULBs which have a population of 3 lakhs or more. However, in U.P., the Rule for Constitution of Wards Committees cover only NNs. Some NPPs, e.g., Saharanpur and Muzaffarnagar now have population of 4.53 lakh and 3.16 lakh (Census, 2001), respectively. Even these are not covered by the existing rules regarding Wards Committees. It is necessary that such rules be extended to all NPPs.

The functions of Wards Committees, as enlisted in the Government notification dated September 28, 1995, appear to be beyond their capacities at present. The role of Wards Committees with respect to the functions entrusted to them needs to be clearly spelled out. Their empowerment should match their responsibilities. The objective of setting up these Committees was not to use them mainly as instruments of execution and supervision, but to elicit community participation in the functioning of ULBs, provide a mechanism for redressal of grievances and make these bodies more responsive to the needs and aspirations of the residents of the Ward. These Committees need to be strengthened and made effectively operational. The records of the proceedings of Ward Committees should be properly maintained. NNs/NPPs should take into consideration the feed-back from the suggestions of Wards Committees while taking decisions.

It is further suggested that for each Ward, a Committee should be constituted comprising one representative each from every **mohalla/locality** in the ward with the concerned Councilor as the chairperson. This will ensure active participation of citizens in civic affairs at the tool-meets-object level and bring about quicker redressal of their grievances.

17(x) Parastatals in Urban Areas

The Twelfth Schedule of the Constitution indicates the functional domain of ULBs. However, a reality check shows that decentralization has not still taken root in effective and meaningful ways for these bodies in U.P. The ground situation is that their powers have, and continue to be, curbed and, in some ways, even negated by the creation of a number of development agencies/organizations called parastatals which often arrogate to themselves or duplicate the assigned functions of municipal bodies. Over years many types of parastatals have grown up. A few may be mentioned here just for illustation : (a) Development Authorities, (b) House Board, (c) Jal Nigam, (d) Jal Sansthans, (e) State/District Urban Development Authorities. This is only a small listing. There are many more. The fact of the matter is that an enormous range of semi-autonomous agencies for performance of local government functions and providing services have been created over time.

The arguments often advanced in favour of parastatals are that large organizations can be economically administered, can construct large-sized urban projects, can attract capable and highly skilled people, can mobilize institutional finance or external assistance and can provide more focused results through high level managerial and technical skills and better financial resources. In fact there are many other reasons for the creation of parastatals that can be identified. It is claimed that such bodies are protected from political interference, that they can harness better talents, resources, etc. What is, however, lacking is proper coordination between such bodies and ULBs and clear demarcation of administrative and legal jurisdictions. There are evidently many inter-institutional dimensions to the interfaces between local bodies and parastatals. Adhoc authorities have come into being. These have become some kind of single or special purpose vehicles and, generally, they are not democratically accountable. Moreover, the parastatals agencies, which complement, in an important way, the network of municipal institutions have not made any significant impact on the governance of cities. It would, perhaps, not be going too far if it is said that these agencies have not been able to improve the required measure the delivery of services or their maintenance. Sivaramakrishnan's following observations with regards to the functioning of parastatals are worth noting here:

> **"Whatever the rationale for divesting the municipalities of some of their functions and entrusting them to other authorities, it has been considerably diluted by subsequent experience. Initially it was urged that such special purpose authorities were *necessary for reasons of sound financial and technical management*, but it reality these special purpose bodies have also been as prone to indiscipline, and inefficiency and financial problems as the municipalities which they sought to replace. The special purpose bodies do not come under any significant public control and are usually an extension of the State bureaucracies. The absence of**

public participation and lack of public accountability are also cited as reasons for resisting attempts of cost recovery and the continuation of subsidies, hidden or overt." (K.C.Sivaramakrishnan, 1992, Urban Governance in India, New Delhi, Centre for Policy Research)

Most large scale funding for infrastructure and other capital intensive works are routed Through parastatal agencies. These institutions often define the kind of projects funded under such allocations and the terms of borrowings. However, the burden of repayment of both capital and interest falls on to ULBs. Since ULBs have little role in defining the projects, it is not even clear if the proposed projects actually address the needs and situations faced locally. Just as ULBs have little say in the matter, there is little public process involved in decision making. It has been rightly said that "parastatals reinforce each other's presence to institutionally crowd out ULBs". All this means that, while ULBs are hard pressed to respond to livelihood needs of urban people, they have to also contend with these non-representative extramural bodies which are not ultimately accountable for the quality of the specific infrastructure created or projects constructed or the long term maintenance of a facility or service thus created. The proliferating regime of parastatals obstructs the growth of ULBs as capable institutions of self-governance in those functional domains that are constitutionally indicated for them. If increases the dependence of local bodies on exogenous institutions and on higher levels of government.

This is one side of the picture. The fact also remains that ULBs generally have limited capabilities. They do not have the technical and managerial competence, skills and resources of the order required for large-sized projects. Then again, economies of scale are not available at these levels. Thus, parastatals or special purpose vehicles become an unavoidable necessity. Be that as it may, the difficulties created by the dilemma of disjunction between authority and accountability needs to be resolved. After all it is ULBs who have, in the final analysis, to 'hold the baby'. It is important that a balance is struck. Even if such bodies (parastatals) are entrusted with the task of constructing large sized projects there is no reason why, for such projects, the consent and approval should not be obtained from the concerned ULB before a project is undertaken for it or why such projects should not be handed over on completion to concerned ULB within whose functional domain they fall for operation and maintenance.

Parastatals are special purpose organizations. They are often promoted by Central/State Governments on grounds of efficiency, high level of skills and focused responsibilities in designated areas or for specified purposes. There may be some justification for this approach but the stark fact remains that, legally, the functional assignment of ULBs covers activities like providing water, waste disposal, sanitation, street lighting, building of roads, infrastructure, etc. For such activities which are assigned to them, surely, the right of approving a project and its monitoring and, thereafter, its operation and maintenance should rightfully belong to them.

To overcome this difficulty in the State of U.P. a Task Force approach has been adopted to bring about a degree of coordination amongst ULBs and various parastatals as well as Government Departments/organizations concerned with urban development. The constitution, objectives, functions and other aspects of the Task Forces have been dealt in the following section.

In the meeting organized by this Commission with the Mayors and MNAs, a strong plea was made by the Mayors of all NNs for merging the UD in NNs. During the divisional level meetings of the Commission also the issues related to lack of coordination between the municipal bodies and UDAs and other parastatals were raised by the representatives of ULBs. They were particularly vocal that the Development Authorities have encroached on their resource base. Specifically issues regarding sharing of fees for passing building plans and **malba shulk** were raised. Similar problems were also raised in case of some GPs, which have been brought under the notified area of the municipal bodies, which still remain undeveloped and where GPs continue to function, possibly due to administrative oversight. Representatives of such GPs complained that while the Development Authority is not providing any service it is collecting **tahbazari** from

rural markets, which were formerly under the jurisdiction of the GPs. This question needs to be examined by State Government from legal and administrative points of view and sorted out.

The existence of Development Authorities has important financial implications for ULBs. Their resource base is affected by the fact that they are deprived of any share in the surplus generated by DAs on account of increase in the land values in newly developed areas, whereas the liability of maintenance of localities, once these are developed, is that of ULBs. This also undermines their capacity to become creditworthy for taking loans or seeking institutional finance for infrastructural projects. If a legitimate share can be given to ULBs in the surplus generated by the rise in price of land their resource position would substantially improve and their dependence on outside sources can be reduced to that extent.

There is a clear need to take a fresh look at the role of parastatals, specially DAs, after the 74th CAA. In the long run the functional and fiscal domains of ULBs should be restored to them. As their technical and managerial capabilities improve they should be able to undurable mediumsized and even some large sized infrastructural projects. During the intervening period there is a need to ensure proper coordination between ULBs and parastatals. Parastatal agencies need to be reconstituted on the basis of increased local representation. These bodies should learn to act in a competitive environment and develop proper cost consciousness. FSFC has also gone into this question and had made the following observations: **"Development Authorities and Jal Sansthans operating in a municipal area should be brought under the control of the elected urban local bodies. Also the power to sanction building plans in the areas falling in the jurisdiction of local body should vest in the local bodies and not in the Development Authorities so that local bodies are able to administer in a better way the levy and collection of property tax".**

It also suggested that one way of bringing about co-ordination would be, **"to make the elected Mayor/Chairman of the Nagar Nigam/Municipality to head the Development Authority as well".**

The Government has agreed to transfer Jal Sansthans to concerned ULBs. It is understood that follow up action in this respect has been initiated, but the process is still not complete. With respect to the Development Authorities the Government felt that decision would be taken after further examining this issue. In our knowledge no final decision in this regard has been taken so far.

The above discussion makes it amply clear that a large number of administrative and legal issues arise in the context of the working of parastatals in the post 74th CAA era, which need to be addressed and resolved. We recommend that GOUP may appoint a High Power Committee, which may also include outside experts, to go into the whole gamut of above issues, and take considered view on them in consonance with the letter an spirit of the 74th Constitutional Amendment in a reasonable time frame.

17(xi) Urban Task Force

For improving infrastructure facilities of various types in cities and towns a variety of programmes and projects are taken up in hand by different Departments of the Government and its agencies or by ULBs themselves. It was being increasingly realised that, even after spending very substantial financial resources on the planning and development of urban infrastructure, the desired results were not forthcoming in time, cost and quality contexts. Such projects are being implemented through different ULBs, parastatals and the Departments of the Government. It was felt that the deficiencies in time and cost-bound implementation of such projects were rooted in the lack of coordination amongst different Departments/Bodies or Agencies. To overcome this shortcoming and achieve coordination in better planning, implementation and monitoring of infrastructure development projects in urban areas, a task force approach has been adopted by the State Government since 2000. The objective of this approach is essentially to bring the

concerned Departments, ULBs and other agencies connected with urban infrastructure programmes under single effective umbrellas at the State as well as ULB levels for coordinated action, monitoring and speedy implementation. Two committees in a task force mode were constituted, one at the State level under the Chairmanship of the Chief Secretary, and the other at the ULB level under the Chairmanship of Commissioner/D.M./VC Development Authority to oversee and monitor the planning and development of urban infrastructure programmes as well as their timely implementation. These Committees were also assigned the task of preparing blueprints for consideration and implementation in future.

The main task assigned to the State Level Committee was the planning and development of infrastructural facilities in the urban areas in U.P. and their regular monitoring at this highest administrative level.

The second Committee was set up at the ULB level. This Committee is headed by either the Commissioner (at the Divisional Headquarter district) or by the concerned DM/VC of the Development Authority. The main functions of this Committee include the fixing of priorities for urban infrastructure projects for integrated city development, planning and development of PWD roads within the city, dovetailing of SUDA projects with those of the concerned ULBs/Development Authorities and coordinating, at the city level, the programmes of all concerned State and Central Government Departments which relate to urban infrastructure. The Committee is also expected to look into areas like ULB training needs, adoption of best practices obtaining in other parts of the country and co-option of specialists and experts in its deliberations.

There is no doubt that the Task Force approach is pragmatic as well as effective. It improves project formulation, monitoring, implementation and helps in the timely completion of various projects in a coordinated manner. The tradition that has developed is that the peoples' representatives are informed about the Task Force guided programmes/projects, public display boards are set up where information about projects taken are clearly exhibited and costs incurred are also prominently shown. All this improves transparency and public knowledge. We are informed that during 2000-2001 more than 3000 urban projects were launched costing about Rs.1117 crore and, in the subsequent year, i.e. 2001-2002, nearly 3900 projects, involving a cost of about Rs.1143 crore, were identified for implementation through the Task Force mechanism.

The Task Force strategy adopted is correct and appropriate but certain improvements need to be brought about in the system. In this context the following suggestions are being made :

(a) The Task Force arrangements need to be institutionalized both at the State as well as ULB levels. At the State level the Task Force receives secretarial support from the Department of Housing & Urban Development. However, at the ULB level, a dedicated, continuous and sustained institutional arrangement is perhaps not available. The suggestion being made is that both at the State and ULB levels, Task Force Cells should be established with specific responsibilities of providing full secretarial and staff support to the respective Committees. At the ULB level, such Cells can be located in the Nagar Nigam or Nagarpalika Parishad concerned. Such Cells can be manned by say two technical staff and a computer support system. At the State level also a separate Cell needs to be set up in the Housing & Urban Development Department with some dedicated staff and computer support.

(b) The other suggestion is that this arrangement should be extended to all district headquarters ULBs where need for improving infrastructure facilities has been pressing. The District Level Cells, when set up, can also oversee the implementation of infrastructure projects of this type in other ULBs in the district as required.

17 (xii) Environmental Issues

Urban development and urban expansion have been occurring steadily in U.P. and, if anything, this process will speed up in the coming years. In other words both the pace and intensity of urbanisation are going up in cities/towns, and at the same time, the scale of poverty is also increasing due to rapid population growth and persistent immigration. There is acute housing shortage. As a result accessibility of people to basic services, specially of the poor, gets severely affected. These are some of the causes of urban decay which demand that both infrastructural and environmental issues need to be addressed in a holistic manner with speed and determination. On the one hand we have serious shortages in services; on the other there are ever mounting environmental problems caused by increasing incidence of pollution hazards. The services that get affected in the process are water supply, sanitation, drainage, solid waste management, traffic, etc. There is all round shortage of drinking water. Also, its quality leaves much to be desired. Sewerage disposal facilities exist only in a limited number of towns/cities. The result is often sewerage gets drained into water courses. Even sewage and sullage from domestic, commercial and industrial sources many a time get discharged into the drainage system. Solid waste management poses serious problems. There are inadequate arrangements for collection and disposal of solid and liquid wastes. The very collection efficiency is low. According to a research study carried out by ORG sometime ago collection efficiency was only 70% in Kanpur and around 83% in Lucknow. Considerable part of household energy still comes from coal, firewood, kerosene and bio-mas fuels which cause pollution. There is indoor pollution from cooking stoves which are not gas based. Coal fired power stations often located near cities cause pollution. Where there is concentration of industry the levels of air and water pollution as also of noise are high. Then, we have pollution from urban transport systems. Vehicular intensity has sharply gone up in recent years. Most of the vehicles are still not environmentally safe in terms of technologies that are being used. The two-stroke wheelers are particularly environmentally risky. In other words many urban environmental factors have adverse impacts such as on water, on air quality , on the ecology of land, on public health and even cause loss of cultural/heritage properties. Urban areas in U.P. are facing serious and mounting environmental problems. Some of the issues that need to be addressed are discussed below.

Pollution Caused by Industrial Units

Dangerous effluents and emissions discharged from industrial units located in cities like Kanpur, Ghaziabad, Agra, Varanasi,Noida, Ferozabad, Modinagar, Shaktinagar, etc. and their peripheries are big sources of pollution. Many units discharge their wastes without proper treatment.

Air Pollution

Air pollution is a severe environmental hazard in cities and towns. Many cities face pollution caused by industrial units and automobiles with defective engines, that release smoke and fumes which are toxic and very damaging to public health. The implementation of air pollution laws and regulations is rather poor. This situation needs to be corrected quickly. During winter, smoke remains suspended in air, producing smog, which is dangerous for lungs.

Table 8.2 below gives the criteria for low, moderate, high and critical levels, in terms of annual mean concentration ranges, as laid down by the State Pollution Control Board :

Table 8.2

Standard of Pollution Levels in Terms of Annual Mean Concentration Range

Pollution level / Criteria	Annual Mean Concentration Range (mg/m3)			
	Industrial		Residential	
	SO2&NO2	SPM	SO2&NO2	SPM
Low (L)	0-40	0-180	0-30	0-70
Moderate (M)	40-80	180-360	30-60	70-140
High (H)	80-120	360-540	60-90	140-210
Critical (C)	> 120	> 540	> 90	> 210

Source: Uttar Pradesh Pollution Control Board, Lucknow,

The ambient air quality of seven major cities of Uttar Pradesh is given in Table 8.3 below :-

Table 8.3

Ambient Air Quality Status of Major Cities in Uttar Pradesh in The Year 1999-2000

S.N.	City / State	Sulphur Dioxide		Nitrogen Dioxide		Suspended Particle Matter (SPM)	
	Area\Class	I	R	I	R	I	R
1-	Agra	-	L	-	L	-	H
2-	Anpara	M	-	M	-	M	H
3-	Ghaziabad	M	-	M	-	M	-
4-	Kanpur	L	L	L	L	-	C
5-	Varanasi	-	-	-	-	-	C
6-	Lucknow	L	M	L	M	H	C
7-	Noida	-	-	-	-	-	H

Note: (i) I - Industrial, R- Residential
(ii) L- Low, M - Moderate, H- High, C- Critical

Source: Uttar Pradesh Pollution Control Board, Lucknow.

Numerically ambient air quality status of above seven major cities for the year 2000 is given in Table 8.4 below.

Table 8.4

Ambient Air Quality Status of Seven Major Cities in The Year 2000

SL.N.	Cities	Status	SPM (Mg/m3)	SO2 (Mg/m3)	NO2 (Mg/m3)	RSPM (Mg/m3)
1-	Agra	C				
	Tajmahal		502.92	10.45	09.38	-
	Bothala		535.32	07.30	06.74	-
	Noonhai		749.10	15.00	12.50	-
2-	Anpara					
	Anpara Colony	R	203.63	61.85	65.18	80.83
	Renusagar Colony	R	269.35	60.74	64.17	84.06
3-	Ghaziabad					
	Sahibabad	I	496.34	33.67	31.42	-
	Bulandshahr	I	514.28	32.86	30.11	-
4-	Kanpur Kidawai					
	Nagar Fazalganj	R	461.28	21.54	17.82	212.42
	Deputy Ka Padav	I	502.76	20.85	17.77	205.59
		I	421.95	19.54	17.19	226.55
5-	Varanasi					
	Jawahar Nagar	Com	466.96	14.73	13.66	49.36
6-	Lucknow					
	Mahanagar	R	353.65	28.60	30.34	194.59
	Hazratganj	Com	320.63	28.06	29.84	176.06
	Tal Katora	I	499.79	31.18	33.30	253.75
7-	Noida	I				
	Dinson India		428.51	-	-	-
	Standard (Annual)	**R/Com**	**140**	**60**	**60**	**60**
		I	**360**	**80**	**80**	**120**
		C	**70**	**15**	**15**	**50**

Note : Com : Commercial RSPM : Respirable Suspended Particle Matter C : Critical : Residential : Industrial

Source : U.P. Pollution Control Board

From Tables 8.3 & 8.4 above it is clear that suspended particle matter (SPM) in air is creating hazards in practically all residential areas in most of the cities listed. Its incidence ranges from high to critical. The levels of Sulphur Dioxide (SO2) and Nitrogen Dioxide (NO2) in industrial areas of Anpara, Ghaziabad, Kanpur and Lucknow range from low to moderate.

Air pollution has shown an alarming rise in Lucknow city. According to the 'Premonsoon Assessment of Environment Status of Lucknow' conducted by the Environment Monitoring Division of the Industrial Toxicology Research Centre (ITRC), Lucknow, air pollution has shown a trend of 'critical' increase when compared to previous years.

According to the report around 42,590 vehicles (10 percent of the total vehicles already plying) were added to the city roads during the last one year. As a result the Respirable Suspended Particulate Matter (RSPM) in the air was found to be more than the permissible limit of 100 microgram/cubic meter set by the National Ambient Air Quality Standards.

With the withdrawal of Vikram tempos, other pollutants viz., sulphur dioxide, oxides of nitrogen, formaldehyde and lead were found to be under CPCB limits.

The position of criticaly polluted areas in Lucknow city during 2001 is depicted below :

LOCATION	RSPM
Residential areas	
Aliganj	216.31
Vikasnagar	204.73
Indiranagar	195.80
Gomtinagar	147.57
Commercial areas	
Charbagh	224.96
Hussainganj	216.37
Hazratganj	178.21
Chowk	284.72
Aminabad	275.27
Alambagh	229.53
Industrial areas	
Amausi	180.29
Talkatora	206.71

N.B. (a) Air pollutants (microgram / cubic metre)
(b) RSPM permissible limit 100 microgram / cubic metre

Among the four residential areas, Aliganj and Gomtinagar showed higher values of oxides of nitrogen (Nox) in the air, while Indiranagar showed a lesser value. However, all commercial locations showed the Nox concentration higher than that of previous years, whereas industrial areas showed more or less same values. The report recommends immediate measures to check the pollution menace. It has also suggested use of battery operated and CNG vehicles and removal of old and ill maintained vehicles from the roads.

Noise Pollution

With increasing demographic pressure and growing commercial and industrial activities there is a greater noise pollution in cities. Noise pollution is defined as "noise" usually of higher pitch than perceptible to the ear. It creates discomfort, unhealthy atmosphere and tension for citizens. Various reports have indicated that it causes hearing damage, raising of blood pressure, cardiovascular diseases, annoyance. It also affects sleep.

The noise pollution standards as prescribed in the Noise Pollution (Regulation & Control) Rules, 2000 are given in Table 8.5 below :-

Table 8.5
Standards for Noise Pollution

S.N.	Area Code	Zone/ Category of Area	Limits in db day time	Limit in db night time
1-	(A)	Industrial area	75	70
2-	(B)	Commercial area	65	55
3-	(C)	Residential area	55	45
4-	(D)	Silence Zone	50	40

Note: Day time 6 AM to 10 PM db=decibels
Night time 10 PM to 6 AM
Source: U.P.Pollution Control Board, Lucknow.

A monitoring report has found that the level of noise pollution in silence zones such as hospitals, courts, schools and cantonments in cities like Kanpur, Lucknow, Allahabad, Bareilly, Agra, Gorakhpur, Varanasi and Meerut was 30 to 60 percent higher than standards indicated in the above table, which is indeed a matter of concern. It is disappointing to find that, even at night, noise level is 30 to 40 percent higher than the prescribed standards. In Lucknow, as against 50 db standard mentioned for silence zone during day, the noise level is 78 db, while in Meerut it is 82 db, in Allahabad 75 db, in Gorakhpur, 74db, in Agra, 72 db, in Varanasi, 68 db, in Kanpur , 67 db and, in Bareilly, 65 db.

Effective measures have to be taken for abatement of noise including noise emanating from vehicular movements, generators , loudspeakers and industrial units so that levels do not exceed standards prescribed.

All Development Authorities, local bodies or other parastatals, while planning developmental activities, should take into account the noise factor. Loud speakers or public address systems should not be used without taking written permission from the concerned authority. Heavy fines need to be imposed on people who violate noise pollution rules.

The ITRC study referred to earlier included assessment of noise pollution also. Like air pollution, noise pollution in Lucknow city has shown a trend of increase. The existing status of noise pollution is shown below :

Table 8.6
Status of Noise Pollution in Lucknow City, 2001

Location	Present Status of Noise Pollution in decibals	
	Day	Night
A. Residential areas		
1- Aliganj	70.5	57.8
2- Vikasnagar	69.2	53.8
3- Indiranagar	73.5	65.8
4- Gomtinagar	65.9	54.6
B. Commercial areas		
1- Charbagh	77.9	68.7
2- Hussainganj	74.2	66.4
3- Hazratganj	73.2	65.8
4- Chowk	70.6	63.8
5- Aminabad	68.9	60.5
6- Alambagh	69.8	68.5
C. Industrial areas		
1- Amausi	65.6	63.8
2- Talkatora	73.2	58.2
Permissible noise Level		
A. Residential areas	55.0	45.0
B. Commercial areas	65.0	55.0
C. Industrial areas	75.0	70.0

Source : U.P. Pollution Control Board, Lucknow.

The Report has recommended ban on pressure horns and unnecessary blowing of horns during traffic jams. Loud speakers use would also need to be regulated.

Water Pollution

Water pollution leads to serious environmental impacts in cities and towns. Increase in population, speedy urbanisation, caused partly by exodus from rural / semi urban areas, and increasing commercial and industrial activities give rise to water pollution. Lack of treatment or disposal facilities for solid and liquid wastes is another factor that contributes to it.

The water quality of Gomti river in Lucknow was monitored from Sitapur to Lucknow under the Monitoring of Indian National Aquatic Resources (MINARS) programme, The average time series yearly data in this regard (1997 to 1999) are shown in Table 8.7 below :-

Table 8.7
Indicators of Water Quality of River Gomti at Lucknow

S. N	Sampling Point / Year	1997			1998			1999		
		D.O (Mg/l)	B.O.D (Mg/l)	Total Coll. MPN/ 100ML	D.O (Mg/l)	B.O.D (Mg/l)	Total Coll. MPN/ 100ML	D.O (Mg/l)	B.O.D (Mg/l)	Total Coli. MPN/ 100ML
1.	Gomti (Dandnamau ghat) Sitapur	8.62	2.41	2700	7.6	2.4	3500	8.7	2.1	2925
2-	Gomti U/S Lucknow	8.48	2.2	3500	7.5	2.5	4500	8.6	2.3	3442
3-	Gomti D/s (LKO) Barrage	2.9	6.6	332000	3.8	6.6	350000	4.2	6.9	445833

Note-D.O(Dissolved Oxygen);B.O.D.(Biochemical Oxygen Demand);ML: Mililitre):Coli - (Coliform Bacteria): U/S:-(Up tream); D/S:- (Down Stream): (Miligram); MPN=Most Probable Number
Source : U.P.Pollution Control Board, Lucknow,

To assess water quality of river Gomti in a meaningful manner, organic pollution level of the river at different locations is computed in terms of Dissolved Oxygen (D.O.) Biochemical Oxygen Demand (B.O.D.) and total Coliform Bacteria. Table 7 shows that the river water at Dandnamau Ghat is fit for drinking purpose after conventional treatment and proper disinfection and remains so till it enters Lucknow city at Gaughat.

The standard permissible levels of D.O., B.O.D and Total Coli for different uses of water are given in Table 8.8 below:-

Table 8.8
Standard Permissible Limit for DO, BOD and Total Coli for Different Categories of Water

S.N.	Category/ Level	D.O.(mg/l)	B.O.D.(mg/l)	Total Coli (MPN/100ml)
1-	Drinking water without conventional treatment but after disinfection	6.0	2.0	50.0
2-	Bathing	5.0	3.0	500.0
3-	Drinking water after conventional treatment and disinfection	4.0	3.0	5000.0
4-	Fisheries	4.0	-	-

Source: U.P.Pollution Control Board, Lucknow.

At Dandnamau ghat and up stream of Lucknow (Gaughat) dissolved oxygen content remained above 6.0 mg/l, whereas BOD content remained below 3.0 mg/l. The total coliform bacteria count was found to be above 2700 MPN/100ml in all the three years. Thus, water is fit for drinking purposes only after conventional treatment and proper disinfection.

In between Gaughat and up-stream of the Gomti Barrage 27 drains carrying domestic sewage directly drain into the river and cause deterioration in water quality. At Gomti D/S Lucknow (Down stream barrage) D.O contents remained between 2.9 and 4.2 between 1997 and 1999 and the BOD values were throughout above 6.0 mg/l. The total coliform count increased from 332000

MPN/ 100 ml in 1997 to 445833 MPN/100ml in 1999. At this point water quality is fit only for irrigation purposes.

Roughly, 25 major nullahs directly discharge around 320 million litres of sewerage and house hold wastes (MLD) each day into Gomti. The problem is further compounded by the release of pollutants by various industrial units situated along its course. This renders the river water unfit for drinking. The result is increasing incidence of water-borne diseases. Although water is supplied after treatment by the Jal Sansthan, its consumption is reportedly said to be not safe. This is because the up stream discharge of sewage and house waste is very high.

The Gomti Action Plan needs to be activated and reinforced and extended upto Sultanpur and Jaunpur districts in a phased manner over the next few years. The plan envisages diversion of nullahs, development of crematoria and river-front afforestation along the riversides and construction of toilets. There is need for treatment plants which can mitigate the upstream sewage discharge problem to a great extent.

The pollution levels of Ganga river at different cities in upstream (u/s) and downstream (d/s) ranges are given in Table 8.9 below :-

Table 8.9

Position of Water Pollution of Ganga River at Different Cities

S.N.	Cities / Level	D.O(mg/l)	B.O.D.(mg/l)	Total Coli. (MPN/100ml)
1-	Kanpur city (u/s)	7.4	2.6	E
2-	Kanpur city (d/s)	6.6	3.2	E
3-	Dalmau	8.74	2.4	5420
4-	Allahabad (u/s)	8.19	2.7	E
5-	Allahabad (d/s)	8.0	3.2	E

Note : E- In excess of the prescribed standard.

Source: U.P.Pollution Control Board, Lucknow,

From the above table it is clear that DO as well as BOD levels in Allahabad and Kanpur in up-stream and down-stream ranges exceed the prescribed standards. Since there is no treatment plant at Kanpur, sewerage is drained into Ganga with the result that the total coliform bacteria count is much higher than the prescribed standard. In Kanpur, Allahabad, Varanasi and Ghazipur the water of Ganga can be utilized after conventional treatment and disinfection, otherwise it is usable only for fishery and irrigation.

The pollution position of river Yamuna at Allahabad, Sai at Hardoi, Hindan at Saharanpur, Saryu at Faizabad, Ghaghra at Deoria, Rapti at Gorakhpur and Ramgarh jheel at Gorakhpur is given in Table 8.10 below :-

Table 8.10

Position of Water Quality of Different Rivers in Different Cities In The Year 1999

S.N	Cities / Level	D.O.(mg/l)	B.O.D.(mg/l)	Total Coli (MPN/100ML)
1-	Allahabad (Yamuna river)	8.3	2.3	1425.0
2-	Hardoi (Sai river)	7.62	3.10	5750
3-	Saharanpur (Hindan river)	1.8	30.70	16000
4-	Ghaziabad (at Kulshara Bridge)	4.3	6.8	E
5-	Faizabad (Saryu river)	9.0	2.4	4025
6-	Deoria (Ghaghra)	7.85	2.1	95.0
7-	Gorakhpur (Rapti)	7.94	2.3	190

Note: E- Excess than Standard
Source: U.P.Pollution Control Board, Lucknow,

From the above table it is clear that D.O.,B.O.D. as well as total coliform bacteria levels in the above mentioned rivers are higher than standards given in Table 8.8

Sanitation

Accumulation of solid wastes is a major cause of insanitation in cities. In turn, it leads to environmental pollution. In many ULBs it is a commom sight that there are heaps of garbage on roads and in narrow lanes, which are breeding grounds for mosquitoes and germs, giving rise to several communicable and other diseases. According to the Health Manual , there should be a dustbin for every 100 houses. Infact there is one for every 400 houses in Nagar Nigams and for 1100 houses in Nagar Palika Parishads. Evidently , the existing provision of dustbins is far too inadequate.

Power Generation from Solid Waste

To ease environmental pollution caused by solid wastes, U.P.. Government has directed Lucknow Nagar Nigam to prepare a time bound programme for the setting up of a municipal solid waste (MSW) power plant. This project , it is understood, is located in the private sector. After completion it is expected to generate five megawatts of power and produce 71 tonnes of bio-fertilizer daily. It would assist in quick removal of solid waste in the city .The plant would utilize 300 tonnes of garbage everyday and bio-methanation technology would be adopted in power generation. A capital investment of Rs.76 crore would be made in the project, in which IDFC would provide a loan of Rs.20 crore and Rs.2.5 crore as share capital. Rs. 15 crore would be provided by Union Government as subsidy. The project construction has actually yet to begin. Similar projects in other medium and large cities would be needed to tackle the problem. While power generation may be a possibility (some experts think this technology is yet to be proved in terms of efficiency and cost effectiveness), the use of solid waste for compost is quite feasible.

Urban Environmental Management Indicators

In 2001, U.P reached the population level of 16.6 crores of which one fifth are living in cities and towns. Urban growth will continue to be high and pressures on cities and towns will increase creating multiple pressures. The critical issues that arise in the context of urban environments in the State are :

1- Difficulties in accessing sufficiently and equitably basic environmental infrastructure and services;
2- Water supply, both surface and ground water, its quality, quantity and timely supply ;
3- Sanitation with sewerage facilities ;
4- Drainage and poorly drained waste water which creates conditions for spread of diseases
5- Solid waste management in which inadequate collection and disposal of household , Commercial, institutional and industrial wastes are tremedous problem. This would specially apply to hospital wastes ;
6- Pollution from urban wastes and emissions from firewood, coal or biomass fuel,which is adversely affecting forest wealth ;
7- Energy use in urban areas in coal-fired power stations and industrial effluents & emissions cause pollution ;
8- Urban transportation systems are creating severe pollution ,specially two stroke two wheeler engines ; and
9- There are natural hazards like floods, fires, storms and earthquakes as well as man-made ones like chemical contaminations, industrial accidents, etc.

Since many authorities/departments/ institutions and regulating bodies are involved, there is imperative need for coordinating mechanisms at the district level for monitoring environmental situations and ensuring coordinated action so that it is evaluated from time to time and integrated corrective measures are taken. It is suggested that an empowered Co-ordinating Committee for this purpose may be set up in each district under chairmanship of the District Officer .

In sum,the different aspects of environmental management would comprise:

a- Ensuring infrastructure services in qualitative and quantitative terms;
b- Regulation and control of activities ; and
c- Integrating economic tools with regulatory systems based on principles such as " pollutor pay" or "consumer pay".

Greening of Cities / Towns and Greening of River Banks

For improving urban environment both in terms of reduced pollution levels and aesthetic factors it is very important to undertake greening of cities and towns through plantation of urban forests, roadside plantation, river bank plantation and by setting up parks. Greening of urban areas should be an essential component of their development plans. Similarly, where cities or towns are located on river banks it is vital that such water courses are not allowed to be contaminated. All such rivers need to be cleaned and, simultaneously, action plans would be -*necessary for ensuring that urban wastes, sewerage and effluents of all types are not allowed to enter the rivers before treatment.

Public Participation in Handling Environmental Problems

Problems of pollution cannot be solved merely by regulation and adoption of technological solutions. Local stake -holders, who would include both public authorities and the civil society groups (like NGOs, business associations, voluntary groups, mohalla/ward committees and other associational entities) have to be taken on board with a view to ensure concerted action to tackle environmental problems. Such groups need to be constructively involved in addressing these problems using small/medium scale actions with full doses of local participation.

The questions, which are to be answered urgently are:

a- How cities can become environment and people-friendly engines of sustainable economic growth?
b- How will cities provide livelihoods, incomes, and quality of life, equitably and sustainably?
c- How can U- governance (urban-governance) be streamlined and made effective, autonomous and performing?
d- How can environmental security and growth be balanced in a constructive complementarity?

Strategy for Eco-Cities in U.P.

Eco-cities ensure environmentally compatible and energy efficient development providing clean, pollution free surroundings and conservation of natural resources for a higher quality living. The expectations of eco-cities are : quality of environment, safety from hazards, sustainable use of resources, protection of heritage, employment to youths and social concerns.

The salient features of a strategy for eco-cities are :

(A) THRUST : Economically vibrant and environmentally safe cities have to be developed.
(B) ACTIONS : The main components of action will be :

a. Participatory planning and implementation. This will include, inter-alia, participation of various departments, agencies, institutions and stake-holders.

b. Metropolitan Regional Planning approach has to be taken into consideration for very large cities for which, development of peripheral cities, in addition to the metropolis, within the metropolitan region, has to be undertaken to accommodate migrant population, provide jobs and good quality of life.

c. Green belts have to be developed.

d. Technology inputs have to be optimally utilized.

e. R&D training has to be imparted.

Action has to be taken at two levels viz. (a) City level, and (b) Regional level These are, illustratively, listed below :-

1. **At City Level :**

   a. Formulation of Environmental Management Plans.

   b. Development of appropriate traffic & transportation system.

   c. Development of commercial, core and congested areas.

   d. Protection of heritage areas, monuments, etc.

2. **At Regional Level :**

   a. Identification of Regional System of Settlements.

   b. Sorting out functional specialization of cities.

   c. Identification and location of hazardous industries, wholesale/commercial areas and solid/hazardous waste disposal sites.

Need For Environmental Status Reports

In view of the deteriorating environmental situation in our large cities, continuous minitoring of the situation is needed to initiate timely corrective action. Pune Municipal Corporation has taken welcome steps in this direction by commission an NGO to prepare environmental status report for PMC and making it a public document. A Pune based NGO, Maharashtra Social Housing and Action League (MASHAL), has been preparing the Environmental Status report for PMC since 1996 with the sole exception of 2000. For this MASHAL carried out extensive survey, collecting information from the elected members of PMC as well as the ward officers and sanitary inspectors of the corporation. This data, along with maps prepared for extended area of PMC formed the basis of the report. The all encompassing document states the status of population, growth, area of city, water, air and noise pollution, growth of vehicles, status of hills, rivers and drains in the city. The latest report points to a rapidly deteriorating environmental situation in the city. To contain this deteriorating environmental situation, the report presents a basic set of recommendations.

SSFC recommends that Annual Environmental Status Reports should be got prepared by outside expert agencies and put up for discussions in the elected houses of these bodies for appropriate

and prompt corrective action in the State, at least in NNs and large municipalities of the State. These reports should be made public.

17 (xiii) Problems of Slums

Slums are among one of the most severe fallouts of rapid urbanisation. A slum is a thickly populated, squalid part of a city of the poorest class of the people. Their dwellers are migrants from neighbouring rural areas who are generally agricultural landless poor or unskilled labour looking for work. Slums generally come up in vacant spaces of towns/cities where no municipal services/facilities like water, electricity, sanitation, health, drainage, road, transport, etc. are available. People build their own dwellings with the help of materials easily available locally like mud, wood, bamboo, tin or unclaimed scrap from the old dilapidated buildings. These dwellings are generally unhygienic, devoid of toilets, bathrooms, water supply, electricity, etc. The living conditions often are not at all fit for human habitation.

Persistent expansion of slums in urban areas is a problem of national dimensions. Expanding slums have caused serious distortions in urban life. Slum population is emerging as a significant proportion of urban population. It is true that urban poor contribute substantially to the economics of cities both directly and indirectly. Yet, their economic, social and living conditions are indeed most unsatisfactory.

The more critical problems faced in slums are those relating to shelter, water, health, educational facilities and poor environmental conditions. Social and physical infrastructure is, by and large, beyond the reach of slum dwellers. Slum people are very poor, face difficulties in obtaining food, have little shelter and no worthwhile sanitation. They face acute shortage of potable drinking water. There is absence of proper toilets and health facilities are a distant dream. Poverty remains entrenched. Slum development policies and programmes are characterised by indifferent implementation, want of co-ordination and unconscionable resource leakages. The result is that slum dwellers are often not only exposed to bad living conditions but also to crime, violence and exploitation.

Magnitude Of The Problem

There are substantial variations in the figures of slum population reported by different sources, because of variation in definition and coverage. According to information furnished by the State Government and published by Central Statistical Organisation, Government of India, in their publication 'Compendium of Environment Statistics, 1997'. , slum population in U.P., in the year 1991, was estimated out around 5.84 million and was projected to reach at 7.71 million in 2001. The projected slum population in the year 2001 would constitute 21.1% of the State's urban population, which was almost the same as that of the all-India average (21.3%). Inter-State comparison has revealed that, in the year 2001, Maharashtra had the highest slum population (10.74 million) followed by Uttar Pradesh (7.71 million), West Bengal (6.58 million) and Andhra Pradesh (6.02 million). SUDA had conducted a survey of slum areas in 1996-97 in which slum population was reported to be 11.78 million in the State, which estimate appears to be on a high side.

Programmes Launched For Improvement Of Slums

In consonance with the spirit of the 74th Constitutional Amendment and the national policy, a programme of National Slum Development was launched in 1996. Basic physical amenities like water supply, sewerage, construction of nallahs, widening of roads and lanes, public sanitary latrines/toilets/bathrooms and electrification etc. are main planks of this programme. Further, pre-primary, non-formal and adult education and recreational facilities are also being provided. Medical and health facilities, maternity and child welfare services and immunisation / vaccination services are being made available through community / primary health centres. Improvement in

dwelling units and provision of E.W.S/L.I.G. houses, with ownership of land, is also envisaged under the scheme.

The National Slum Policy drafted in 1998-99 recognises the nature of problem such as serious distortion in the land market, low-affordability, red-tapism, over-congestion in slum settlements and multiple ownership entitlements of the squatted lands. A two pronged strategy has been suggested, namely, (a) improving the living conditions of slum dwellers and (b) work towards their economic upliftment. The basic needs of slum dwellers need to be provided in terms of shelter, water, sanitation, education, access and employment opportunities. The National Policy Document is framed within the contexts of the 74th Constitutional Amendment with ULBs/Ward Committees playing key roles.

State Urban Development Agency (SUDA) And Slum Improvement

SUDA, in U.P., is charged with the responsibility of implementing schemes of urban employment and poverty eradication. Emphasis is on setting up participative structures like neighbourhood groups or Committees. These schemes include (i) Swarn Jayanti Shahri Rozgar Yojna (ii) National Slum Development Programme and (iii) Low Cost Sanitation. There is also a Housing Upgradation Scheme which is HUDCO funded.

Involvement Of ULBs In Slum Improvement

To tackle slum problems in U.P., there is SUDA at the State level, and, at the district level, there are DUDAs. However, these are separate bodies which are some kind of parastatals in nature. According to the Section 7 of the amended Municipalities Act of U.P., slum improvement and upgradation and urban poverty alleviation are the duties of municipal bodies. In many other States slum development and urban poverty alleviation programmes are carried out through ULBs. Here, in U.P., we have a separate organisation. The moot point is how ULBs can be fully involved in these programmes and how to fully dovetail and co-ordinate slum improvement and urban poverty removal programmes with other programmes of urban development which are important for addressing the problems of slums also in cities.

Considering the magnitude of the problems of slum areas the Commission recommends that an integrated development programme for slums in the urban areas of the State should be formulated by dovetailing the activities of different departments, urban local bodies and agencies concerned with slum improvements. ULBs have to play a much more vital and pro-active role in improving the conditions of slum dwellers. These bodies should have a major role and responsibility for implementing slum related programmes in the context of integrated urban development. The Commission recommends that DUDAs should be merged with ULBs, and if, because of any constraints that is not feasible, these parastals must work through ULBs. Ultimately it is ULBs who would be responsible for providing and maintaining services in slum areas. So, the needed degree of integration between over-all sustainable city growth and slum development is not only desireable but essential.

17 (xiv) Solid Waste Management

Solid Waste Management is an obligatory function of ULBs. At present this service falls woefully short of needs. The consequence is that various problems of health, sanitation and environmental degradation are being created. It is estimated that per capita solid waste generation in India, ranges from 200 to 500 gms. per day depending on the size of urban agglomerations. Solid waste generation of urban areas in the country is estimated to be around 40 million tonnes in 2001. Such wastes largely constitute compostables and inert materials. Also, there is a percentage of recyclable materials like plastics, glass, metals, etc., to be found in them.

Taking into account the seriousness of the matter, a PIL was filed before the Hon'ble Supreme Court of India, which appointed a high level Committee under the Chairmanship of Asim Burman, Municipal Commissioner, Calcutta, to go into the connected problems. This Committee submitted a detailed report in March, 1999. The Report has been approved by the Apex Court. Burman Committee has said that conversion of organic solid waste into compost and fertiliser should be the preferred option adopted for the present. It has cautioned ULBs not to adopt expensive technologies of power generation, incineration and pelletisation until these are proved to be suitable for Indian conditions and are cost-effective. The recommendations of the Report are placed at Appendix 17.1

MOEF, GOI has prepared draft Municipal Solid Wastes (Management and Handling) Rules, 1999.

The highlights of these rules are :

(a) Every Municipal Authority shall be responsible for the implementation of the rules and for providing infrastructure required for collection, storage, segregation, transportation, processing and disposal of solid wastes.

(b) ULBs are to set up suitable composting facilities to make use of waste. Existing landfill sites have to be improved and future ones identified. There should be monitoring of disposal facilities set up to meet laid down standards.

(c) The ULB shall furnish its annual report to the DM, who shall forward it to the State Pollution Control Board.

(d) Any municipal solid waste generated in a city or town, shall be managed in accordance with compliance criteria laid down for collection, segregation, storage, transportation, processing and disposal of Municipal Solid Wastes. (Schedule II of the Rules)

(e) The disposal of Municipal Solid Wastes of the specified categories shall be through landfill anangement as per specifications and standards laid down. (Schedule III of the Rules)

(f) The standards for compost and disposal of treated leachate to be followed by the Municipal Authorities would be as laid down (Schedule IV of the Rules)

The GOI has also issued a Manual on Solid Waste Management in the year 2000.

Problem of Solid Waste Management In U.P.

Most cities in U.P. have failed in meeting the challenge of the disposal of vast quantities of garbage that are being generated every day. Disposal arrangements are faulty, inadequate, and non-scientific. As per information supplied to us by ULBs only around 80 per cent of waste generated was collected in NNs, while the figure was as low as 44 per cent and 37 per cent in NPPs and NPs respectively (Table 8.1). Wastes get dumped at unsanitary landfill sites. Often such sites are saturated or over-loaded. Many landfill areas are actually open dump yards that make surrounding areas unhygienic and cause serious adverse environmental impacts such as water pollution, methane emissions and soil degradation, apart from foul stench.

Table 8.11
Position of Waste Generated and Collected Per Day By Type of ULBs in U.P., 1999-2000

					Per Person per day (Kg.)	
Sl.No.	Type of ULBs	Total Waste Generated per day (metric tonnes)	Total waste collected per day (metric tonnes)	% waste collected per day	Waste generated	Waste collected
1	2	3	4	5	6	7
1.	Nagar Nigams	9244	7552	81.70	0.72	0.59
2.	Nagar Palika Parishads	3026	1334	44.08	0.22	0.10
3.	Nagar Panchayats	1643	613	37.31	0.27	0.10

Source : Information provided by ULBs.

Accumulation of solid wastes is a major cause of insanitation and consequent incidence of diseases in cities. In many ULBs heaps of garbage on roads and in narrow lanes are a common sight, which are breeding grounds for mosquitoes and germs, giving rise to several communicable and other diseases. According to the Health Manual, there should be a dustbin for every 100 houses, against the existing level of one for every 400 houses in NNs and for 1100 houses in NPPs. Evidently, the existing number of dustbins is far too inadequate.

SSFC would like to make the following suggestions regarding solid waste management:-

1. Specific and time-bound steps are called for solid waste management and, especially, for location and management of landfill areas. For example, no landfill should be allowed within city limits. There is need to launch awareness campaigns for segregating organic and non organic wastes. In this context duties of citizens as well as ULBs have to be clearly spelt out and, where necessary, rules laid down for their observation. Garbage dumping bins should be placed at short distances to avoid spillage and recycling of wastes should be a clear policy priority. Community participation is most vital to the preparation and successful implementation of scientific, sustainable and viable solid waste management programmes in the cities of U.P.

2. Urban solid wastes include various types of wastes, such as, household, commercial, bio-medical, industrial, animal, construction/demolition material wastes, etc. All these and other types of solid wastes have to be taken care of while setting up/improving an urban solid waste management system.

3. The use of solid waste for composting is quite feasible and should be practiced extensively.

NNs and large municipalities in our State should examine for adoption garbage segregation schemes on the lines proposed by the New Delhi Municipal Corporation. NDMC is planning to set up a number of new garbage stations at various locations in the capital. These stations will be maintained by private operators and have facilities for recycling solid wastes. The 'caretakers' would be required to be present at these stations for 8-10 hours each day. The garbage will be segregated by the 'caretaker' into different cans. There will be separate cans for metal, glass, bio-degradable wastes, plastics and mixed garbage. Mixed garbage will be sent to land-fill sites; biodegradable waste will be sent for recycling. Plastic, metal and glass garbage would be sold in the market.

5. Community participation in collection of wastes should be encouraged. EXNORA and SRISHTI are NGOs that are reported to have made important contributions in mobilising local urban communities for sanitation and garbage removal activities. EXNORA is taking up cleanness of streets, garbage removal and tree plantation through "Residents Welfare

Association Service Clubs". ULBs of U.P. can also adopt the EXNORA concept for solid waste management.

6. Solid waste management is mainly looked after by the Health Wing of ULBs. It is time that environmental engineers are inducted for such tasks.

7. There is need to spell out performance measurement indicators for Solid Waste Management Systems which should relate to matters like generation of solid wastes, collection, segregation, transportation, treatment, disposal and recycling. The indicators would also cover issues in terms of qualitative and quantative dimensions, disposal arrangements, operational efficiencies, customer satisfaction and financial costs.

To ease environmental pollution caused by solid wastes, U.P.Government had directed the Lucknow Nagar Nigam to prepare a time bound programme for the setting up of a municipal solid waste (MSW) power plant. This project, it is understood, is be in the private sector. After completion it is expected to generate five megawatts of power and produce 71 tonnes of bio-fertilizer daily. It hopes to assist in quick removal of solid wastes in the city. The plant would utilize 300 tonnes of garbage everyday and bio-methanation technology would be adopted in power generation. A capital investment of Rs.76 crore would be made on the project, in which IDFC would provide a loan of Rs.20 crore and Rs.2.5 crore as share capital. Rs.15 crore would be provided by Union Government as subsidy. In Allahabad city a similar initiative is under way. Similar projects in other medium and large cities would be needed to tackle the problem. While power generation may be a possibility some experts are of the view that this technology is yet to be proved in terms of efficiency and cost-effectiveness.

17 (xv) Bio – Medical Waste

Bio-medical waste is generated by health care industry and medical institutions which include clinics, hospitals, blood banks, research institutions, long-term healthcare facilities, etc. In terms of quantity, hospitals contribute a major share (around 80%) of such waste.

There is a large variation in the properties of bio-medical waste. A sample of it can contain paper, plastics, food waste, pathological waste, animal carcasses, blood soaked bandages, intravenous injection bags, medicines and other types of materials. If segregated, about 10-15% of this type of waste can be classified as infectious.

The best waste management method for medical institutions is to minimize its generation. Various technologies are used in advanced countries for disposal of medical waste such as autoclaving, microwave treatment, chemical disinfection, irradiation, incineration and disposal in a sanitary landfill with or without prior treatment. Incineration has been the most widely used treatment technology due to advantage of significant size reduction, distribution of pathogens and hazardous organic materials, and converting the waste to ash.

In exercise of the powers conferred by sections 6, 8 and 25 of the Environment (Protection) Act, 1986, rules for the management and handling of bio-medical wastes were notified on 20th July, 1998 and, subsequently, amended on 6th March, 2000 and, again, on 2nd June 2000. According to the rules it shall be the duty of every occupier of an institution generating bio-medical waste to take all steps to ensure that such waste is handled without any adverse effect to human health and environment. Such wastes are to be treated and disposed of in accordance with procedure laid down and in compliance of the prescribed standards. Every occupier, where required, shall have to set up requisite waste-treatment facilities like incinerators or ensure requisite treatment at common or any other waste-treatment facility.

Every occupier of an institution generating, collecting, recovering, storing, transporting, treating, disposing and or handling bio-medical waste in any other manner, excepting those who treat 1000 patients per month, is required to obtain proper authorization from the prescribed authority.

The U.P. Pollution Control Board (UPPCB) has been given the responsibility of overseeing the implementation of the rule. A number of steps have been taken by UPPCB. It published the rules in newspapers for information of public. Seminars and workshops were and are organized to provide information to doctors/nurses, ward boys, hospitals/ nursing homes, etc.

UPPCB has identified 1913 hospitals/nursing homes in the State and notices have been served to all of them to follow the rules. Of 1913 hospitals/nursing homes, 280 are said to have made necessary arrangements for disposal of bio-medical wastes. In densely populated 50 Community Health Centres, action is being taken to install incinerators of 10 kg/hour capacity or auto clave shredders.

This is an area of urban environmental management that needs to be organised and implemented with vigour and strictness in the interest of public health and public well-being. Very little has been done as of now and much remains to be done.

The awareness about the need for proper disposal of hospital waste needs to be enhanced through publicity campaigns, seminars, workshops, etc. on a larger scale. Monitoring, inspection and regulation should be extended to all hospitals in a time bound manner. SSFC also suggests that ULBs should be involved by UPPCB in the task of regulating disposal of bio-medical waste, so that they can monitor the functioning of such institutions located in their respective areas and report to the Board for punitive action where called for.

8 (xvi) Management Of Ground Water Level In Cities

One of the critical problems faced in urban areas is the going down of water table levels in many parts of the State. Reports often appear that ground water level is depleting alarmingly in various cities and towns of the State, creating problems of water scarcity, specially during summer months, and sometimes leading to law and order problems. Reports say that against the demand of 702 MLD of water during summers in Lucknow, Jal Sansthan is able to supply only around 450 MLD. The balance demand has been met by mushrooming of hand-pumps and private tube-wells. Over-exploitation in Lucknow is reported to have lowered the ground water level from 0.80 metres to 3.08 metres in one year alone, i.e., 1999-2000 (Table 8.12). Similar reports are often come across about other cities in the State. It seems reliable data are scarce to come by. There is probably no machinery at present to collect this vital information on a regular and time-series basis.

Table 8.12
Status Of Ground Water Level And Decline Trend In Lucknow City (1999-2000)

Sl.No.	Localities	Water level below the ground surface (In metres)		Decline during 1999-2000 (in metres)
		April1999	April 2000	
1	2	3	4	5
1	Indira Nagar	19.82	22.90	3.08
2	Charbagh	29.00	31.10	2.10
3	Katara Makbul Ganj	30.50	32.30	1.80
4	Aliganj	24.50	25.90	1.40
5	Rajajipuram	21.40	22.90	1.50
6	Gokhale Marg	13.70	15.20	1.50
7	Hussain Ganj	29.50	30.50	1.00
8	Ganesh Ganj	29.70	30.50	0.80

Source : U.P. Jal Nigam

In many countries fiscal incentives and disincentives are used to promote water conservation and its judicious use. For instance, it is learnt that in Germany households are taxed according to the quantity of storm water they discharge into the municipal system. This provides incentive to residents to store rain water so as to minimize tax liability. In some other countries, property taxes are modified to give the water harvesters an advantage. Some such measures would have to be thought of in our country and State for promoting urban water harvesting.

Due to continuous depletion of ground water table in cities, experts have been laying stress on the need for regulation of ground water uses and artificial recharge of ground water acquifers. Some initiatives in this direction have begun in U.P., but the coverage and speed of the programme needs to be stepped up in all affected urban areas.

Box 8.4

The Andhra Pradesh Water, Land and Tree Act

The Act which came into force on June 1, 2002, is meant to promote water conservation and prevent over-exploitation of water resources in the State. An authority chaired by Minister of Panchayati Raj has been constituted under the Act to implement the rules and provide technical guidance. Under the Act district and block levels Committees can also be formed. The Act requires all owners to register their wells (including those not fitted with power-driven pumps) and water bodies with the authority. It also bans sinking wells within 250 metres of a drinking water source except for irrigation and drinking purposes. Also, on the advice of technical experts, the state authority can declare a particular groundwater basin as over-exploited. It can ask for closure of existing wells and prevent sinking of wells except of drinking water purposes for a stretch of at least six months in such regions. According to the Act local bodies can now approve the construction of buildings with not less than an area of 200 sq.meter only if the plan has appropriated roof top or rain water harvesting structures.

Source : Down To Earth, May 15, 2002

The Needed Approach

Awareness about the need for proper regulation, management and conservation of ground water levels has increased of late. A number of interactions have been organized which have thrown up useful suggestions. We would like to emphasize the following measures in particular for regulation and management of ground water levels in cities and towns:

(1) In some States in the country, (for instance A.P. and Delhi) laws have been passed for regulating tapping of ground water through private tube-wells and pumps. In some others water harvesting has been made obligatory. In U.P. also the State Government must address this important problem and enact a law to regulate tapping of ground water. The building laws/rules must also be amended suitably to incorporate water harvesting needs.

(2) Proper arrangements must be made for collection and maintenance of data and monitoring of ground water levels and its quality and the various types of ground water structures existing/needed in cities and towns by ULBs for their respective areas in collaboration with State Ground Water Organisation.

(3) There should be incentives and dis-incentives for effective implementation of water-harvesting schemes/installations. These may be in the form of fiscal measures or concessions, which provide support to households to store rain water with dis-incentive in the form of pricing of water or tax adjustments.

(4) Areas having different ground water levels should be delineated for different ground water structures. In areas feasible for shallow ground water structures, deep tube wells may not be allowed to be constructed. Inter-spacing norms should be laid down.

(5) Deep tube wells for urban water supply should be constructed in the periphery of city areas, specially in the areas of critical and semi-critical water-logged zones, and should be carried to city areas by pipelines. Such work plans will help to control water level decline and also reclamation of water logged areas.

(6) Rain water in city areas should be harvested and conserved as ground water with citizen participation following the concept of "*Shahar Ka Pani Shahar Mein*". Ponds, dug wells, depression zones, parks, soak pits and soak trenches should be utilized for optimisation of ground water recharge. Campaigns should be undertaken for raising public awareness about the need for and methods of rain water harvesting.

(7) Recycling and reuse of water by industrial, commercial and domestic users should be encouraged.

Some thinking on above mentioned issues is already going on at the policy making levels. What is required is to convert it into time bound action plans supported by necessary legal and administrative measures.

8 (xvii) Problems Of Vendors And Hawkers

According to 50th Round of NSS (1993-94), the number of street vendors was about 36 lakhs in the country. The corresponding number in U.P.would be around 6 lakhs.

Vendors and hawkers are somehow perceived by many as a "public nuisance". The fact is that they are a necessity and perform very important economic tasks in urban areas. For common citizen they are both facilities as well as causes of many difficulties. It is true that they obstruct streets, create traffic problems and give rise to encroachments as well as pollution, but, it is also true, at the same time, that they are service providers and offer great convenience to citizens in terms of easy market accessibility, nearness and competitiveness in prices. Often, drives are launched to remove them from the places in which they squat from congested areas, road margins, open spaces or other spaces earmarked for specific purposes.

The Supreme Court of the country has conferred a legal status on these people and recognised hawking as a fundamental right subject to reasonable restrictions (Sodan Singh Vs. NDMC, SC 1998). It is incumbent upon city planners and managers to factor in vending and hawking "as an integral part of the cityscape". This would need a meaningful and recurrent dialogue between various stakeholders in cities such as civic authorities, vendors/hawkers, associations of residents, trade groups, health officials, traffic authorities, concerned NGOs, etc. The problem is fraught with complexity and has to be sorted out with a slew of solutions such as, for example, registration, regulation, relocation, rehabilitation, prevention of unauthorised and illegal vending or encroachments, planning of vendor-based markets with minimal levels of infrastructure, removal of harassment, etc.

Vendors and hawkers create employment. They provide important services and they are the part of the culture and tradition of the city. As such vending and hawking has to be made a part of city planning in ways as would ensure environmental friendly and healthy growth of urban areas.

It is reported that, at the highest level in the GOI, an alternate regime for street hawkers has been envisaged for the national capital of which the highlights are :-

(a) Existing licensing system with quantitative restrictions be scrapped forthwith.

(b) The Metropolis may be divided into "green, red and amber" zone signifying free access, fee-based access and prohibited access, respectively.

(c) The zones be formally notified and clearly demarcated. The division into the three categories may vary with time of the day, the day of the week and the week of the month. The divisions would be made by the ULB concerned in consultation with the elected representatives, NGOs and resident associations.

(d) A hawker or a cycle rickshaw puller would have just to register himself on payment of a small fee to cover costs of registration card for identification (no licence fees).

(e) Registration would be done on spot; it would be renewable once a year. There would be no limits on registration.

(f) A registered hawker would have unrestricted access to "green" areas. Penalties be restricted to surcharge on fees but impounding or destruction of goods would stand prohibited.

(g) A registered hawker who wishes to ply in an "amber" zone would be able to do so by paying a fee, upon which a sticker may be affixed on the registration ID. The number of hawkers in such zones may be regulated by adjustment of fees periodically. Fees may be scaled to different categories of street hawkers, peddlars on foot or those using pedalised vehicles.

(h) NGOs working for hawker/vendor welfare may be authorised to interface between them and the concerned ULB.

It has been felt that the restrictive licensing system enables rents to be collected by the officials who process, issue and enforce licenses.

In Uttar Pradesh, too, a suitably modified switch over to the registration system and regulation for hawking is necessary as an urgent step of policy reform in urban governance.

Few Financial Indicators of Agra Nagar Nigam

Particulars	1998-99	1999-00	2000-01 Till Feb	2001-02	CAGR	Own resources composition 1998-99	1999-00	2000-01
Taxes			ProvideD actual figures for 2000-01 and 2001-02 in red (bold) above					
Property Tax	25.04	30.30	35.27	37.85	23%	20%	31%	14%
Vehicles Tax	0.53	0.50	0.62	0.64	10%	0%	1%	0%
Advertisement tax	2.09	1.70	2.23	3.73	34%	2%	2%	1%
Prekshagrah tax	0.70	0.69	0.58	0.63	-5%	1%	1%	0%
Tax on immovable property (Sale Deed)	17.94		0.00	44.56	58%	15%	0%	17%
	46.30	33.19	38.70	87.41				
Non-tax revenue, including from own property								
Land rent	1.36	2.65	4.20	2.35	31%	1%	3%	1%
Property rent	1.44	1.45	3.34	1.97	17%	1%	2%	1%
Carts/Tehbazari	1.63	2.39	3.97	5.44	83%	1%	2%	2%
Rent from machinery/equipment	0.03	0.03	0.03	0.03	0%	0%	0%	0%
Sale of shops/property			7.61	6.82	#DIV/0!	0%	0%	3%
Fee from educational institutions	0.01	0.01	0.00	0.00	-45%	0%	0%	0%
Fee from medical institutions	0.06	0.07	0.06	0.05	-9%	0%	0%	0%
Fee from slaughterhouse	0.24	0.25	2.70	1.88	180%	0%	0%	1%
Anugyapti fee	0.37	0.34	0.21	0.21	-25%	0%	0%	0%
Anugyapti fee (commercial)	0.21		0.48	0.70	83%	0%	0%	0%
Copying fee	0.06	0.06	0.07	0.06	0%	0%	0%	0%
Other fees and stacking charge	0.07	0.06	2.05	2.03	439%	0%	0%	1%
Sale of store items	0.99	0.23	0.60	0.63	-20%	1%	0%	0%
Road cutting surcharge	23.33	22.54	46.64	70.00	73%	19%	23%	26%
	29.80	30.08	71.95	92.17				
Income from Nazul (Government) properties								
Cleanliness tax	0.02	0.03	0.03	0.02	0%			
Other receipts for cleanliness	0.05	0.03	0.03	0.09	34%			
Sale of blood & manure	0.32		0.00	0.00	-90%			
Income from Qazi House	0.01		0.03	0.00	81%			
Polar license	0.03	0.02	0.03	0.03	2%			
Interest from Vinlyojan	0.10	0.10	0.00	0.00	-83%			
Interest from Bank accounts	0.52	1.56	0.59	0.65	12%			
	1.05	1.74	0.71	0.79				
Revenue Grants	1.05	1.74	0.71	0.79				
Family Welfare	0.48		0.00	3.72	178%			
Census			6.36	0.00	#DIV/0!			
Under SFC recommendations	228.80	225.28	264.16	278.88	10%			
Receipts from ADA	1.81	1.83	3.86	3.50	39%			
Receipts from UPJN			0.33	1.36	#DIV/0!			
Other receipts	1.91	0.43	0.35	0.38	-55%			
State Government Grants								
For construction of roads	10.31		2.50	0.00	-98%			
For environment (Malin Bustee)	4.23		0.00	0.00	-97%			
For Sulabh Shauchalaya	0.66	0.66	0.00	0.00	-93%			
For repairs of drains		9.46	0.00	0.00	#DIV/0!			
Under Tenth/eleventh Finance Commission	12.66	12.66	12.66	4.65	-39%			
For slaughterhouse	16.45	4.44	0.00	0.00	-99%			
For improvement of road/drains	4.42	2.00	2.50	0.00	-97%			
For TTZ	30.00		10.70	0.00	-99%			
From Revolving Fund			16.86	15.50	#DIV/0!			
	312.78	258.50	321.00	308.81				
Others/Suspense								
Pratibhooti from contractors		0.01	0.01	0.00	#DIV/0!			
Recovery of house construction loans	0.13	0.11	0.09	0.06	-32%			
Claims from Group Insurance	0.17	0.76	0.19	0.74	109%			
Receipt/Deductions from PF		7.92	0.00	0.00	#DIV/0!			
Grant for M.P & MLA. Fund	6.82	10.73	6.67	12.07	33%			
Other receipts			3.39	3.70	#DIV/0!			
	7.12	19.53	10.37	16.58				

77.15	65.01	111.37	5.56
312.78	258.5	321	308.81
7.12	19.53	10.37	16.58
397.05	343.04	442.74	330.95
32.46	46.61	18.68	20.98
6.31	8.32	6.78	7.48

Particulars	1998-99	1999-00	2000-01	2001-02	CAGR	Own resources composition		
				TIII #4th		1998-99	1999-00	2000-01
General Administration & Supervision salaries	6.01	8.65	8.66	9.45	25%			
Tax Collection - salaries & other expenses	16.23	22.72	20.73	22.62	18%			
Repairs of drains	0.51	0.89	0.79	0.87	30%			
Health & Solid Waste Management								
Salaries & establishment	114.43	172.89	172.10	187.75	28%			
Payment to contractors	5.79	3.32	4.95	5.40	-3%			
Workshop establishment	2.70	3.72	3.74	4.08	23%			
Tools & equipment	10.48	9.97	15.81	17.25	28%			
Construction of new toilets	0.23	0.17	0.00	0.00	-88%			
Repairs & maintenance of toilets	0.30	0.07	0.06	0.06	-54%			
Public health expenditure								
Salaries & establishment	9.86	14.74	12.99	14.17	20%			
Purchase of items/medicines	0.32	0.29	0.38	0.42	14%			
Laboratories	-	0.02	0.01	0.02	#DIV/0!			
Public safety & lighting								
Salaries & establishment	5.69	8.57	4.49	4.90	-7%			
Purchase of items	1.66	2.44	1.50	1.63	-1%			
Payment for electricity	2.32	4.06	0.20	0.22	-69%			
New construction works (poles & fittings)	2.09	0.59	0.10	0.11	-78%			
Repairs expenditure (including road cutting)	0.34	0.34	0.44	0.48	19%			
Public Works								
Salaries & establishment	4.55	9.27	10.66	11.63	60%			
Repairs & modernisation of roads	1.58	2.35	2.51	2.74	32%			
Construction of new roads	0.97	1.74	0.00	0.00	-94%			
Grants & Anshdan	7.38	7.41	8.90	9.71	15%			
Stores	0.33	1.43	1.46	1.60	120%			
Education & libraries								
Salaries & establishment	0.25	0.33	0.24	0.26	2%			
Repairs & maintenance	0.02	0.01	0.06	0.07	85%			
Sports & cultural programms	0.11	0.09	0.10	0.11	0%			
Return of deposited items against Octroi	0.08	0.01	2.68	2.93	506%			
Miscellaneous Expenditure								
Stationery	0.24	0.06	0.13	0.14	-24%			
Printing expenses	0.37	0.28	0.28	0.31	-9%			
Law section salaries & establishment	0.79	1.33	1.13	1.23	25%			
Pension	31.77	41.89	47.35	51.66	28%			
Group insurance	0.67	0.86	0.79	0.86	13%			
Cost of water to Jal Sansthan	21.38	20.90	45.81	49.98	53%			
Census expenditure	-	-	5.52	6.02	#DIV/0!			
Cantonment Council expenditure	-	0.88	0.00	0.00	#DIV/0!			
Telephone	0.40	0.28	0.58	0.64	26%			
Uniforms	1.04	1.10	1.19	1.30	12%			
Meeting expenses	0.03	0.03	0.04	0.04	21%			
Payment to Secretarial staff	0.04	0.07	0.06	0.07	28%			
Typewriter	-	0.01	0.00	0.00	#DIV/0!			
Capital Account Expenditures								
Slum improvement	18.37	0.43	0.19	0.21	-89%			
Sulabh toilets	0.56	0.29	0.86	0.94	30%			
Solid Waste Management (TTZ) - World Bank	-	43.58	17.91	19.54	#DIV/0!			
Drainage (Tenth Finance Commission)	9.08	17.22	24.89	27.15	73%			
Equipment for solid waste management (ADA)	3.26	-	2.17	2.36	-15%			
Roads & fencing	22.14	3.08	4.46	4.87	-53%			
Slaughterhouse construction	30.61	8.75	12.04	13.14	-34%			
Revolving Fund	-	-	8.07	8.81	#DIV/0!			
Suspense/other Expenditure								
House construction advance to employees	0.02	0.18	0.16	0.17	193%			
Group insurance	0.46	0.74	0.32	0.35	-13%			
Members' Fund	6.64	4.02	2.17	2.37	-40%			
Vidhayak Fund		4.84	0.01	11.67	#DIV/0!			

CATEGORIZATION OF THE EXPENSES OF FINANCIAL YEAR 2001-2002 HAS STILL NOT BEEN DON

(TENTATIVE VALUES ARE ALSO NOT AVAILABLE)

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Particulars	1998-99	1999-00	2000-01 Till Feb	2001-02	CAGR	Own resources composition 1998-99	1999-00	2000-01
Agra Jal Sansthan								
(STILL TO BE COLLECTED)								
Operational Income								
Water Tax	13.46	41.94	23.20	0.48	-81%	11%	27%	0%
Water charge	97.56	105.84	130.57	127.18	14%	83%	68%	89%
Meter rent	0.67				-100%	1%	0%	0%
Sewer Tax and charge	3.91	5.44	5.62	6.08	25%	3%	3%	4%
Sale of sullage	0.09	0.03			-100%	0%	0%	0%
Development fee	0.61	0.60	9.26	7.45	249%	1%	0%	5%
Service charge	0.10	0.15			-100%	0%	0%	0%
Other receipts	1.46	1.74	1.71	2.15	21%	1%	1%	2%
Grants for operations								
For general O&M	0.35				-100%			
For power payment			19.60	21.38	#DIV/0!			
Capital receipts								
Refund of advance	0.03	0.04	0.04	0.03	0%			
Receipt of deposit for works	2.82	4.93	4.26	1.66	-23%			
State grant for special works/programs		0.30			#DIV/0!			
World Bank loan	3.08	2.03			-100%			
Fee for regularisation of illegal connections	0.31	0.83	0.47	0.37	10%			
Miscellaneous (including interest)	0.51	0.15	0.21	0.22	-35%			
Receipt from Group Insurance		0.19	0.15	0.20	#DIV/0!			
Operational Expenses								
Salaries and establishment	67.85	77.07	83.49	87.95				
Electricity expenditure	1.13	24.43	21.61	6.17				
Chemicals	23.33	30.99	29.99	28.78				
General repairs	4.39	3.60	4.42	6.62				
Other expenses	23.35	22.77	47.22	56.90				
Capital expenses								
Expansion of pipelines	0.04	0.48	0.31	0.23				
Purchase of machinery & equipment	-	0.35	0.54	0.59				
Furnitures & fixtures	0.07	0.29	0.08	0.10				
Construction of buildings	0.11	0.06	0.01	0.01				
Extension of sewerage network	-	0.03	0.02	0.01				
Repairs of PSPs	0.08	-	0.20	0.22				
Other expenses	0.25	0.23	0.29	0.64				
Deposit works	2.38	1.47	1.39	0.75				
Payment for life insurance claims	-	0.12	0.08	0.35				
Expenditure on World Bank funded works	0.79	1.05	0.50	0.18				

Agra Nagar Nigam.

Computation of debt servicing liability & costs

		2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
Capital Cost																		
Agra Water Treatment		-	74.27	134.52	441.51	289.90	75.42	-										1,015.62
Agra Drainage		-	-	92.00	138.00	-	-	-										230.00
Agra Sludge Treatment		-	-	21.19	85.07	5.18	-											111.44
Total Agra Water Supply		-	74.27	247.71	664.58	295.07	75.42	-	-	-	-	-	-	-	-	-		1,357.06
Agra Solid Waste Mgt.		-	-	49.08	145.00	43.07	-											237.15
Agra Sewerage		-	173.69	145.31	508.77	662.28	170.96											1,661.01
Total for Agra		-	247.97	442.10	1,318.35	1,000.43	246.37	-	-	-	-	-	-	-	-	-		3,255.22
O&M at	6%																	
Agra Water Treatment								60.94	60.94	60.94	60.94	60.94	60.94	60.94	60.94	60.94	60.94	
Agra Drainage							13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	13.80	
Agra Sludge Treatment							6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	6.69	
Total Agra Water Supply		-	-	-	-	13.80	20.49	81.42	81.42	81.42	81.42	81.42	81.42	81.42	81.42	81.42	81.42	
Agra Solid Waste Mgt.							14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23	14.23	
Agra Sewerage								99.66	99.66	99.66	99.66	99.66	99.66	99.66	99.66	99.66	99.66	
Total for Agra		-	-	-	-	13.80	34.72	195.31	195.31	195.31	195.31	195.31	195.31	195.31	195.31	195.31	195.31	
O&M at	10%																	
Agra Water Treatment								101.56	101.56	101.56	101.56	101.56	101.56	101.56	101.56	101.56	101.56	
Agra Drainage							23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	23.00	
Agra Sludge Treatment							11.14	11.14	11.14	11.14	11.14	11.14	11.14	11.14	11.14	11.14	11.14	
Total Agra Water Supply		-	-	-	-	23.00	34.14	135.71	135.71	135.71	135.71	135.71	135.71	135.71	135.71	135.71	135.71	
Agra Solid Waste Mgt.							23.72	23.72	23.72	23.72	23.72	23.72	23.72	23.72	23.72	23.72	23.72	
Agra Sewerage								166.10	166.10	166.10	166.10	166.10	166.10	166.10	166.10	166.10	166.10	
Total for Agra		-	-	-	-	23.00	57.86	325.52	325.52	325.52	325.52	325.52	325.52	325.52	325.52	325.52	325.52	
Debt servicing for	70%																	
Loan opening balance		-	-	173.58	483.05	1,405.89	2,106.19	2,719.83	2,682.08	2,639.80	2,592.45	2,539.42	2,480.02	2,413.50	2,338.99	2,255.54	2,162.08	
Equated annual instalmen		-	-	-	-	-	-	364.13	364.13	364.13	364.13	364.13	364.13	364.13	364.13	364.13	364.13	20 years
Principal closing balance		-	173.58	483.05	1,405.89	2,106.19	2,278.65	2,682.08	2,639.80	2,592.45	2,539.42	2,480.02	2,413.50	2,338.99	2,255.54	2,162.08	2,057.40	
Interest payment		-	-	-	-	-	-	326.38	321.85	316.78	311.09	304.73	297.60	289.62	280.68	270.66	259.45	12% interest
Interest during construction			10.41	28.98	84.35	126.37	136.72											386.84
Total Loan including IDC							2,719.83											

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	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	
Capital Cost																	
Agra Water Supply	-	104.30	141.52	410.18	-	-	-										656.00
Agra Drainage	-	-	-	-	-	-	-										-
Agra Sludge Treatment	-	-	-	-	-	-											-
Total Agra Water Supply	-	104.30	141.52	410.18	-	-	-	-	-	-	-	-	-	-	-		656.00
Agra Solid Waste Mgt.	-	-	-	-	-	-											-
Agra Sewerage	-	-	-	-	-	-											-
Total for Agra	-	104.30	141.52	410.18	-	-	-	-	-	-	-	-	-	-	-		656.00

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Agra Solid Waste Management - Financial Internal Rate of Return										
					Net revenue					
Year	Capital Costs	O&M costs	Total Costs	Incremental Revenue	Base Case	Capital Costs + 10 %	O & M costs + 10%	Benefit - 10%	Benefit delay by 1 year	Worst Case
2002-03	-	-	-	5.90	5.90	5.90	5.90	5.31	-	-
2003-04	49.08	-	49.08	6.25	(42.83)	(47.74)	(42.83)	(43.45)	(43.18)	(48.68)
2004-05	145.00	-	145.00	8.78	(136.22)	(150.72)	(136.22)	(137.10)	(138.76)	(153.88)
2005-06	43.07	-	43.07	13.35	(29.72)	(34.03)	(29.72)	(31.05)	(34.29)	(39.47)
2006-07	-	14.23	14.23	16.99	2.76	2.76	1.34	1.07	(0.88)	(3.63)
2007-08	-	14.23	14.23	20.04	5.81	5.81	4.39	3.80	2.76	(0.36)
2008-09		14.23	14.23	21.58	7.35	7.35	5.93	5.19	5.81	2.38
2009-10		14.23	14.23	22.75	8.52	8.52	7.10	6.25	7.35	3.77
2010-11		14.23	14.23	23.84	9.61	9.61	8.19	7.23	8.52	4.82
2011-12		14.23	14.23	24.94	10.72	10.72	9.29	8.22	9.61	5.81
2012-13		14.23	14.23	26.08	11.86	11.86	10.43	9.25	10.72	6.80
2013-14		14.23	14.23	27.27	13.04	13.04	11.62	10.32	11.86	7.82
2014-15		14.23	14.23	28.51	14.29	14.29	12.86	11.43	13.04	8.89
2015-16		14.23	14.23	29.81	15.58	15.58	14.16	12.60	14.29	10.01
2016-17	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2017-18	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2018-19	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2019-20	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2020-21	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2021-22	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2022-23	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2023-24	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2024-25	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2025-26	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
2026-27	-	14.23	14.23	29.81	15.58	15.58	14.16	12.60	15.58	11.18
		NPV			10.77	(11.73)	(12.28)	(35.86)	(16.23)	(105.71)
		FIRR			#DIV/0!	956.43%	869.70%	966.06%	#DIV/0!	-2.34%
		SI				#DIV/0!	#DIV/0!	#DIV/0!	NA	(108.15)
		SV							NA	(0.01)

Weighted Avg. Cost of Capital		
	Loan	Grant
%	70%	30%
Cost	12%	0%
Multiples	8.40%	0.00%
Thus, WACC =		8.40%
Real WACC =		1.78%

Agramail7May
Agra_SWM_FIRR6%

Agra - All Components - Financial Internal Rate of Return										
					Net revenue					
Year	Capital Costs	O&M costs	Total Costs	Incremental Revenue	Base Case	Capital Costs + 10 %	O & M costs + 10%	Benefit - 10%	Benefit delay by 1 year	Worst Case
2002-03	247.97	-	247.97	(15.79)	(263.76)	(288.55)	(263.76)	(262.18)	(247.97)	(272.76)
2003-04	442.10	-	442.10	20.14	(421.96)	(466.17)	(421.96)	(423.98)	(457.89)	(500.52)
2004-05	1,318.35	-	1,318.35	144.80	(1,173.54)	(1,305.38)	(1,173.54)	(1,188.02)	(1,298.21)	(1,432.06)
2005-06	1,000.43	13.80	1,014.23	248.45	(765.78)	(865.82)	(767.16)	(790.63)	(869.43)	(985.33)
2006-07	246.37	34.72	281.09	370.90	89.81	65.17	86.34	52.72	(32.64)	(85.59)
2007-08	-	195.31	195.31	429.16	233.85	233.85	214.32	190.93	175.59	118.97
2008-09		195.31	195.31	457.51	262.19	262.19	242.66	216.44	233.85	171.40
2009-10		195.31	195.31	480.30	284.99	284.99	265.45	236.96	262.19	196.91
2010-11		195.31	195.31	501.94	306.63	306.63	287.09	256.43	284.99	217.42
2011-12		195.31	195.31	523.77	328.45	328.45	308.92	276.08	306.63	236.90
2012-13		195.31	195.31	546.21	350.89	350.89	331.36	296.27	328.45	256.54
2013-14		195.31	195.31	569.41	374.10	374.10	354.56	317.15	350.89	276.74
2014-15		195.31	195.31	593.44	398.13	398.13	378.60	338.78	374.10	297.62
2015-16		195.31	195.31	618.35	423.04	423.04	403.50	361.20	398.13	319.25
2016-17	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2017-18	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2018-19	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2019-20	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2020-21	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2021-22	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2022-23	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2023-24	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2024-25	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2025-26	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
2026-27	-	195.31	195.31	618.35	423.04	423.04	403.50	361.20	423.04	341.67
NPV					3,325.86	3,018.04	3,022.87	2,382.46	2,770.06	1,271.43
FIRR					9.52%	8.34%	8.93%	7.60%	7.75%	4.56%
SI of NPV						1.24	0.62	2.01	NA	5.21
SV						80.95	161.67	49.63	NA	19.19

Weighted Avg. Cost of Capital		
	Loan	Grant
%	70%	30%
Cost	12%	0%
Multiples	8.40%	0.00%
Thus, WACC =		8.40%
Real WACC =		1.78%

Agramail7May
Agra_ALL_FIRR6%

Agra - All Components - Financial Internal Rate of Return										
					Net revenue					
Year	Capital Costs	O&M costs	Total Costs	Incremental Revenue	Base Case	Capital Costs + 10 %	O & M costs + 10%	Benefit - 10%	Benefit delay by 1 year	Worst Case
2002-03	247.97	-	247.97	(15.79)	(263.76)	(288.55)	(263.76)	(262.18)	(247.97)	(272.76)
2003-04	442.10	-	442.10	20.14	(421.96)	(466.17)	(421.96)	(423.98)	(457.89)	(500.52)
2004-05	1,318.35	-	1,318.35	144.80	(1,173.54)	(1,305.38)	(1,173.54)	(1,188.02)	(1,298.21)	(1,432.06)
2005-06	1,000.43	23.00	1,023.43	248.45	(774.98)	(875.02)	(777.28)	(799.83)	(878.63)	(995.45)
2006-07	246.37	57.86	304.23	370.90	66.67	42.03	60.88	29.58	(55.78)	(111.05)
2007-08	-	325.52	325.52	429.16	103.64	103.64	71.09	60.72	45.38	(24.26)
2008-09		325.52	325.52	457.51	131.99	131.99	99.43	86.23	103.64	28.17
2009-10		325.52	325.52	480.30	154.78	154.78	122.23	106.75	131.99	53.68
2010-11		325.52	325.52	501.94	176.42	176.42	143.86	126.22	154.78	74.20
2011-12		325.52	325.52	523.77	198.24	198.24	165.69	145.87	176.42	93.67
2012-13		325.52	325.52	546.21	220.68	220.68	188.13	166.06	198.24	113.32
2013-14		325.52	325.52	569.41	243.89	243.89	211.33	186.95	220.68	133.51
2014-15		325.52	325.52	593.44	267.92	267.92	235.37	208.58	243.89	154.39
2015-16		325.52	325.52	618.35	292.83	292.83	260.27	230.99	267.92	176.02
2016-17	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2017-18	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2018-19	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2019-20	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2020-21	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2021-22	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2022-23	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2023-24	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2024-25	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2025-26	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
2026-27	-	325.52	325.52	618.35	292.83	292.83	260.27	230.99	292.83	198.44
NPV					1,305.93	998.11	800.95	362.54	750.13	(950.49)
FIRR					5.23%	4.24%	3.98%	#DIV/0!	#DIV/0!	-0.70%
SI of NPV						(2.36)	(3.87)	(7.22)	NA	(17.28)
SV						(0.42)	(0.26)	(0.14)	NA	(0.06)

Weighted Avg. Cost of Capital		
	Loan	Grant
%	70%	30%
Cost	12%	0%
Multiples	8.40%	0.00%
Thus, WACC =		8.40%
Real WACC =		1.78%

Agramail7May
Agra_ALL_FIRR10%

Projected increase in water & sewerage revenues

Particulars	Actuals 1999-00	Est. 2000-01	2001-02	Projected 2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Water Tax		update these with actual																
Current demand	30.00	29.70	27.19	28.43	37.20	59.43	96.67	125.16	137.49	143.75	150.29	157.13	164.28	171.75	179.57	187.74	196.28	205.21
Current collection	14.56	17.53	22.01	16.19	24.18	41.60	72.50	93.87	103.12	107.81	112.72	117.85	123.21	128.81	134.67	140.80	147.21	153.91
% collected	49%	59%	81%	55%	65%	70%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Arrear demand	72.00	29.50	33.51	36.00	34.85	30.44	30.01	33.17	41.24	46.75	49.96	52.56	55.05	57.58	60.21	62.96	65.82	68.82
Arrear collection	27.36	5.67	26.08	14.40	17.42	18.27	21.00	23.22	28.87	32.72	34.97	36.79	38.54	40.31	42.15	44.07	46.07	48.17
% collected	38%	19%	78%	40%	50%	60%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Water Charge																		
Current demand	122.50	121.28	132.19	137.23	173.45	277.07	324.99	389.99	448.49	459.70	471.19	482.97	495.05	507.42	520.11	533.11	546.44	560.10
Current collection	95.45	83.99	90.14	109.78	121.42	193.95	227.49	292.49	336.37	344.78	353.40	362.23	371.29	380.57	390.08	399.83	409.83	420.08
% collected	78%	69%	68%	80%	70%	70%	70%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Arrear demand	90.47	51.80	46.01	42.51	61.45	95.05	130.65	149.76	142.42	154.85	161.38	166.21	170.61	174.94	179.34	183.83	188.43	193.14
Arrear collection	10.39	46.57	37.05	8.50	18.44	47.53	78.39	104.83	99.70	108.39	112.97	116.35	119.43	122.46	125.54	128.68	131.90	135.20
% collected	11%	90%	81%	20%	30%	50%	60%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Sewer Tax																		
Current demand	4.50	5.36	1.41	2.03	3.16	8.56	13.54	22.37	29.02	31.20	33.53	36.01	38.64	41.43	44.40	47.56	50.91	54.46
Current collection	1.93	4.76	5.10	1.01	1.90	4.59	9.48	16.78	21.76	23.40	25.15	27.00	28.98	31.07	33.30	35.67	38.18	40.85
% collected	43%	89%	361%	50%	60%	70%	70%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Arrear demand	9.20	4.73	4.56	4.26	4.42	4.36	4.15	5.72	7.31	9.45	10.64	11.57	12.47	13.40	14.38	15.41	16.51	17.68
Arrear collection	1.01	1.06	0.98	0.85	1.33	2.18	2.49	4.01	5.12	6.61	7.44	8.10	8.73	9.38	10.06	10.79	11.56	12.38
% collected	11%	22%	22%	20%	30%	50%	60%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Other charges																		
Current demand	7.90	4.77	2.15	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77	4.77
Current collection	5.54	11.43	4.12	3.34	3.34	3.34	3.34	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58	3.58
% collected	70%	240%	192%	70%	70%	70%	70%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Arrear demand	3.90	19.85	2.59	13.04	13.16	11.30	8.21	4.72	2.61	1.97	1.78	1.73	1.71	1.71	1.70	1.70	1.70	1.70
Arrear collection	0.03	0.15	5.85	1.30	3.29	4.52	4.93	3.30	1.83	1.38	1.25	1.21	1.20	1.19	1.19	1.19	1.19	1.19
% collected	1%	1%	226%	10%	25%	40%	60%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%	70%
Total demand	238.47	249.12	249.84	203.83	260.42	399.12	486.31	577.33	634.62	661.95	683.30	703.26	723.25	743.88	764.70	786.39	808.76	831.86
Total collection	114.35	171.02	191.30	124.79	149.71	256.11	326.12	424.96	468.34	488.15	503.78	518.47	533.20	548.26	563.76	579.74	596.24	613.27
% collected	48%	69%	77%	61%	57%	64%	67%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%	74%

		2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Properties		150,000	150,000	154,500	162,225	178,448	198,540	204,496	209,608	214,849	220,220	225,725	231,368	237,153	243,081	249,158	255,387	261,772
% increase				3%	5%	10%	15%	7.00%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
PT per house		310	310	334	402	584	826	1,000	1,071	1,093	1,115	1,137	1,160	1,183	1,208	1,230	1,255	1,280
% increase				8%	20%	45%	41%	21%	7.18%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Total increase (PT)				11%	26%	60%	83%	29%	10%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Water connections		103,200	103,200	108,360	113,778	125,156	143,929	172,715	198,822	203,588	208,678	213,894	219,242	224,723	230,341	236,099	242,002	248,052
Max. coverage (% of assessed houses)				100%														
% increase				5%	5%	10%	15%	20%	15%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Total increase (water)				13%	26%	60%	83%	45%	23%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Max. slab of water charge per connection				2,258														
New sewg connectns	50%		0	2,580	2,709	5,689	9,387	14,393	12,954	2,483	2,545	2,608	2,674	2,741	2,809	2,879	2,951	3,025
Additional revenue			-	0.46	0.60	1.51	2.87	4.84	4.44	0.87	0.91	0.95	0.99	1.04	1.08	1.13	1.19	1.24

Incremental water revenue	21.51	(4.89)	27.69	147.58	245.62	360.65	414.29	439.94	460.29	479.45	498.69	518.39	538.68	559.62	581.25	603.59
Incremental Sewg revenue	(1.35)	(10.90)	(7.55)	(2.77)	2.83	10.25	14.87	17.57	20.01	22.49	25.08	27.82	30.73	33.82	37.10	40.58
Total	20.15	(15.79)	20.14	144.80	248.45	370.90	429.16	457.51	480.30	501.94	523.77	546.21	569.41	593.44	618.35	644.17

Computation of debt servicing liability & costs

		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Capital Cost																	
Agra Water Treatment		-	121.28	164.56	476.97	322.69	104.42										
Agra Drainage		-	-	92.51	138.76	-	-										
Agra Sludge Treatment		-	25.32	18.68	64.89	2.65	-										
Total Agra Water Supply		-	146.61	275.75	680.62	325.33	104.42	-	-	-	-	-	-	-	-	-	
Agra Solid Waste Mgt.		-	-	49.61	145.69	43.52	-										
Agra Sewerage		-	280.43	147.50	516.43	672.26	173.53										
Total for Agra		-	427.03	472.86	1,342.73	1,041.11	277.95	-	-	-	-	-	-	-	-	-	
Debt servicing for	70%																
Loan opening balance		-	-	298.92	629.93	1,569.84	2,298.61	2,996.71	2,955.12	2,908.54	2,856.37	2,797.94	2,732.49	2,659.20	2,577.10	2,485.16	2,382.18
Equated annual instalment		-	-	-	-	-	-	401.20	401.20	401.20	401.20	401.20	401.20	401.20	401.20	401.20	401.20
Principal closing balance		-	298.92	629.93	1,569.84	2,298.61	2,493.18	2,955.12	2,908.54	2,856.37	2,797.94	2,732.49	2,659.20	2,577.10	2,485.16	2,382.18	2,266.85
Interest payment		-	-	-	-	-	-	359.61	354.61	349.02	342.76	335.75	327.90	319.10	309.25	298.22	285.86
Interest during construction			17.94	37.80	94.19	137.92	149.59										
Total Loan including IDC							2,996.71										