

CHAPTER 13

ULBs : Infrastructure and Service Delivery

Status of Services :

13.1 Delivery of basic services is a core function of the ULBs. There are, however, wide variations among the ULBs in the State in the actual delivery of services. The 13th FC, recognizing the wide gap in service delivery, underpinned that M.Corps. and MCs should notify every year the present status of service delivery and the standards proposed to be achieved by the end of the next fiscal year, in the state gazette in five core services viz., water supply, sewerage, toilets, drainage and solid waste management. This chapter covers the status of infrastructure and service delivery in these five sectors as well as status on roads and street lights. Further, estimates of resources required to achieve the benchmarks prescribed by the Ministry of Urban Development is examined.

13.2: Data on services have been collected from three sources viz., Census 2011, service level benchmarks notified by the GoC, DUAD and from the ULBs. Each of these sources has both strengths and limitations. Census 2011 provides data for all urban areas including non-municipal as well. Secondly, census data is available only on water supply, toilets and drainage. The notification of service level benchmarks on water supply, sewerage and toilets, solid waste management and drainage cover all 42 M.Corps and MCs and exclude NPs. This is a major limitation. Another limitation is that roads and streetlights are not covered under the notification and for these services data is compiled from the draft CDPs of M.Corps and MCs. As data is collected from different sources there may be variations.

Water Supply

13.3 As per the Census 2011, 44.2 percent urban population has access to treated water supply and another 18.2 percent to un-treated water supply in their premises. The remaining 37.5 percent depend on other sources like tube wells, bore wells, etc. Of the total urban population only 27.7 percent have treated water supply within the premises, 13.6 percent near the premises i.e., within 100 meters and the remaining 2.9 percent have to bring water from long distances, as can be seen from table 13.1. It is evident from the table that about 3.3 million urban population constituting about 56 percent depend on un-safe water. Though, 18.2 percent have access to water supply within their premises, the water is un-treated and

therefore amenable to water born diseases. There may be wide variations between cities in terms of access to water. As city/town-wise census data is not available, it is difficult to make any analysis.

Table 13.1: Access to Water Supply

		Chhattisgarh	
		Population	Percent
Treated tap water	Total	26,22,990	44.21
	Within premises	16,42,223	27.68
	Near premises	8,09,285	13.64
	Away	1,71,482	2.89
Un-treated tap water	Total	10,82,593	18.25
	Within premises	4,26,114	7.18
	Near premises	5,46,429	9.21
	Away	1,10,050	1.85
Other from Sources	Total	22,27,973	37.55
	Within premises	87,9,075	14.82
	Near premises	8,64,811	14.57
	Away	4,84,087	8.16

Source: Census of India, 2011

13.4 As per the State Govt. notification under SLB, 31.6 percent of population in M.Corps. and MCs have access to water supply in their premises. In the M.Corps access is 33.3 percent while in MCs it is 30.4 percent. However, there are wide variations, ULBs. The maximum access is in Jagdalpur M. Corp with 64.2 percent and the minimum less than one percent in Birgaon MC. This compares broadly with census data where about 34 percent of urban population has access to tap water supply in their premises. The SLB notification also brings out several disturbing features of water supply delivery in M.Corps and MCs, can be seen from the table 13.2. From table it is clear that there is a wide gap between the benchmarks and actual performance of ULBs on different indicators. This underpins the need

Table 13.2: Water Supply - Service Levels: 2012

Indicators	Benchmark	Unit	Current Level	Deficit
Per capita water supply	135	LPCD	70.9	29.1
Metering	100	percent	0.7	99.3
Non-revenue water	20	percent	50.8	49.2
Hours of supply	24X7	Hrs	3.0	21.0
Quality	100	percent	84.9	15.1
Cost recovery	100	percent	50.3	49.7
Collection efficiency	100	percent	59.6	41.4

Source: SLB Notification by the Government of Chhattisgarh.

for substantial performance improvement to provide efficient and sustainable water supply. The current levels indicated in table 13.2 are averages of all ULBs and there are significant variations between ULBs – M.Corps and MCs.

Sewerage

13.5 The sewerage coverage is very insignificant in the state and only seven ULBs have a modicum of 9.3 percent coverage as per SLB notification, in five M.Corps the coverage is 7.5 percent and in two MCs 13.8 percent. There are wide variations in coverage among the ULBs. The waste water, however, is not treated and there is no reuse and recycling and cost recovery is insignificant with a mere 1.4 percent. The table 13.3 gives the status in sewerage sector on different indicators against benchmarks.

Table 13.3: Status on Sewerage -2012

Indicators	Benchmark	Unit	Current Levels	Deficit
Coverage of network	100	percent	9.3	90.7
Efficiency in collection of waste water	100	percent	0.0	100.0
Adequacy of treatment	100	percent	0.0	100.0
Quality	100	percent	0.0	100.0
Reuse and Recycle	20	percent	0.0	100.0
Redressal	80	percent	73.9	26.1
Cost recovery	100	percent	1.4	98.6

Source: SLB Notification by the Government of Chhattisgarh.

Sanitation

13.6 Access to toilets is a basic necessity and is an important component of safe sanitation and public health. In urban Chhattisgarh only 60.2 percent of households have access to toilet facility within their premises and another 5.4 percent depend on public or community latrines as per Census 2011. The remaining 34.4 percent do not have access to toilets and obviously resort to open defecation with all attendant socio-economic, cultural and health hazards. At the national level 81 percent have toilet in their premises. Of the 60.2 percent households in Chhattisgarh who have access to latrine facility within the premises, about 59 percent have safe disposal mechanism of the human excreta i.e., connected either to sewerage system or to septic tank. The remaining HHs practice un-safe disposable mechanisms contributing to poor public health. This also compares unfavorably with national trends where 72 percent have

safe disposal practices. Of the 35 percent of the urban population with latrine facilities in premises, only 9.1 percent are connected to sewerage system.

13.7 As per the SLB notification, coverage of toilets is 74.8 percent, 82 percent in M.Corps and 72.7 percent in MCs with wide variations between them. According to Census data, however, only 60.2 percent households have toilets in their premises and another 5.4 percent use public toilets. Both put together works out to 65 percent while the SLB notification it is about 75 percent coverage, probably the toilet coverage would be higher in NPs data on which is not included in SLB notification, and is not available.

Drainage

13.8 According to the Census 2011, in urban Chhattisgarh only 17.5 percent households have closed drainage system, 51.4 percent HHs are connected to open drains and the remaining 31 percent discharge waster waters on to the streets or open places with all its attendant public health hazards. As per SLB notification, about 55 percent households in the cities have storm water drainage network about 58 percent M.Corps and 55 percent MCs- thereby signifying a wide gap. As per the census data both closed and open drains cover 69 percent HHs.

Solid Waste Management (SWM)

13.9 Effective SWM – collection, segregation, transport and disposal – is a very important function of ULBs, but they fail to undertake this satisfactorily despite incurring a large part of municipal finances. As per SLB notification door-door collection of wastes is only 15.1 percent. On other parameters the performance of the ULBs do not seem to be any better, as can be seen from the table 13.4. The notification clearly brings out that SWM is fairly good with over 86 percent; but segregation is practically non-existent; scientific disposal do not exist, and cost recovery on waste management is less than one third of the expenditure. There are wide variations between ULBs on all indicators.

Table 13.4: Solid Waste Management -2012

Indicator	Benchmark	Units	Current Level	Deficit
Household coverage	100	percent	15.1	84.9
Efficiency of MSW collection	100	percent	86.1	14.9
Extent of Segregation	100	percent	0.2	99.8
Extent of MWS recovered	80	percent	0.4	99.6
Scientific Disposal	100	percent	0.0	100.0
Cost recovery	100	percent	30.8	69.2

Source: SLB Notification by GoC.

The ULBs performance against the benchmarks is far below and in some cases practically nil. This is an area of concern indicating the need for immediate interventions.

Roads and Streetlights

13.10 Data on road and streetlights have been collected from the draft CDPs prepared by the M.Corps and MCs; as noted earlier. As per data, in nine M.Corps there is a total 4,218 kms length of road – municipal, state and national highways. Of this 3,208 kms are pucca roads constituting over 80.6 percent and the remaining 19.4 percent are either kutcha or WBM roads requiring upgradation. In M.Corps, pucca roads constitute 80.7 percent and in 25 MCs they constitute 80.6 percent. In these ULBs, over 1,144 kms roads needs to be upgraded as can be seen from table 13.5. Data on NPs is not available.

Table 13.5: Status of Roads

#	ULB Category	Road Length	Pucca Road				Kutcha Roads	Deficit Pucca Road
			Municipal	National Highway	State Highway	Total		
1	M.Corps	4218.02	3208.74	49.7	145.79	3404.23	813.79	813.79
2	MCs	1709.38	1186.08	65.2	127.48	1378.76	330.62	330.62
	Total	5927.4	4394.82	114.9	273.27	4782.99	1144.41	1144.41

Source: Compiled from Draft CDPs of M.Corps and MCs, 2012

13.11 There is a need for 1,95,610 street lights as per norm of 33 street lights per kilo meter. But at present there are only 1,26,952 with a deficit of over 35 percent as can be seen from table 13.6. If the infrastructure deficit in M.Corps and MCs, which are relatively better endowed with resources is high, in NPs the deficit may be substantially higher.

Table 13.6: Status on Street Lights

#	ULBs	Road Length (Km)	Street Lights Required	Number of Street Lights at Present	Deficit
1	M.Corps	4218.02	1,39,201	95,360	43,841
2	MCs	1709.38	56,409	31,592	24,817
	Total	5927.4	1,95,610	1,26,952	68,658

Source: Compiled from Draft CDPs of M.Corps and MCs, 2012

Infrastructure in Raipur City Corporation

13.12 Raipur, the capital city of Chhattisgarh and the only million plus city in the State, has a significant place both as a political and administrative centre. Based on the gazette notification by the GoC, a comparative analysis of the infrastructure status on select indicators has been made with state averages of other State capitals in the country for 2010-11 to gain an understanding of the criticality of infrastructure in the ULBs in the state.

13.13 Water supply connections in RMC in 2010-11 is 31 percent i.e., less than a third of its million plus population have water connection in their premises. The access is little more than the state average and is less than half of other state capitals in 2010-11. The status of service delivery on other parameters can be seen from table 13.7. As can be seen from the table, Raipur has a long way to go before it equals other state capitals in the provision of civic services. In some of the very essential services like sewerage, SWM and storm water drain, the status is very poor.

Table 13.7: Infrastructure in RMC on Select Indicators

Indicator	Benchmark	Raipur	State	Other State Capitals
Water supply				
Coverage connections	100 percent	26	25	59.7
Per capita supply	135 lpcd	57	45	109.4
Metering of connections	100 percent	0	1	34.3
NRW	20 percent	61	65	40.9
Continuity of supply	24 Hours	3	3	4.4
Cost recovery	100 percent	41	25	54.7
Collection efficiency	90 percent	38	42	70.0
Sewerage				
Coverage of toilets	100 percent	71	69	81.6
Coverage of sewage network	100 percent	2	2	37.3
Reuse and recycling	20 percent	0	0	21.3
Collection efficiency	90 percent	0	0	32.3
Solid waste management				
Door to door Collection	100 percent	19	7	49.7
Collection efficiency	100 percent	81	76	80.6
Extent of segregation	100 percent	0	0	13.5
Extent of MSW recovered	80 percent	0	0	17.9
Extent of scientific disposal	100 percent	0	0	14.0
Cost recovery	100 percent	0.2	14	18.7
Collection efficiency	90 percent	66	31	50.6
Storm Water Drains				
Coverage	100percent	6	25	37.0

Source: SLB Notification by GoC and other states.

13.14 For a better understanding of the status of infrastructure in different M. Corps and MCs in the state, they are ranked into four groups viz., A, B, C, and D, where A indicates better status and D indicates poor status which require immediate attention and B and C are intermediate levels and also require improvement. The criteria for categorisation are given in Annexure 13.1 and the number of ULBs under each category is given in Annexure 13.2. An analysis of the performance of M.Corps. and M.Cs brings out the following:

- (i) In water supply coverage no ULB is in A category and three M.Corps and 15 MCs are in D category,
- (ii) Coverage of toilets is little better as none of the ULBs are in D category, while a majority of nine M.Corps and 19 MCs are in B category and one M.Corp. is in A category,
- (iii) A large number of ULBs in the state do not have underground sewerage system; and hence they are in D category,
- (iv) One M.Corp. is in A category in door to door collection of solid wastes, 9 in B, 19 in C and 13 in D category indicating huge service gap in SWM.
- (v) No ULB is in A category in storm water drainage, two each of M.Corps and M.Cs are in B category and six M.Corps and 15 MCs are in D category in coverage indicating high deficiency.

A large number of M.Corps and M.Cs are in C and D category on several indicators signifying a infrastructure deficiency as well as problems in service delivery, which is a matter of concern.

Investments in Urban Infrastructure

13.15 The foregoing analysis brings out the low levels of infrastructure in core sectors. The HPEC formulated per capita cost norms for different size-class cities for different sectors for estimating the investment requirements to meet the infrastructure gaps over a twenty-year period – 2012 to 2031, as given in Annexure 13.3. The per capita standards prescribed include the likely demand over the next twenty years based on population projections as also the backlog of infrastructure for the current population as well as the costs of replacement of infrastructure as required. For each sector, HPEC made assumptions for different components of infrastructure provision and accordingly prescribed the standards. For example, in water sector they took into the consideration water production, storage, metering, and extension of distribution network as well as upgradation of distribution network to introduce continuous water supply in the cities, etc. Similar assumptions have been made in other sectors to arrive at per capita costs. Table 13.8 gives details of population and number of ULBs in each size-class population and number of ULBs in the state.

Table 13.8: HPEC City Size Classification and Population

City Size Class	Population Range	Population	No. of Cities
Class-I A	> 5 million	-	-
Class-I, B	1 to 5 million	10,10,087	1
Class-I, C	1,00,000 to 1 million	21,27,831	8
Class-II	50,000 to 1,00,000	3,85,076	5
Class-III	20,000 to 50,000	8,11,431	29
Class-IV, V and VI	< 20,000	14,47,299	126
	Total	57,81,724	169

13.16 Based on the HPEC norms, the total investment requirements for provision of infrastructure in the core sectors of water supply, sewerage, storm water drainage, roads, street lights and solid waste management is estimated at Rs. 23,160.04 crore as can be seen from table 13.9. The investments exclude provision of toilets. For computing the investment requirements for provision of toilets, the Commission has taken Rs. 10,000 as unit cost. As per Census 2011, there are 4,26,637 HHs requiring toilets and investments needed to meet the backlog works out to Rs. 426.63 crore. Cumulatively the total capital investments required for all six core sectors works out to about Rs. 23,587 crore for the State. Similarly, the annual requirement for O&M works out to Rs. 776 crore.

Table 13.9: Investments required (Rs. in Crore)

Class wise		1B	1C	II	III	IV	Total
Water supply	Capital	443.93	1260.53	190.88	478.83	854.05	3228.22
	O&M	61.92	104.48	18.91	29.86	35.46	250.62
Sewerage	Capital	387.97	725.8	204.71	458.38	962.16	2739.03
	O&M	37.68	61.71	11.17	16.8	20.99	148.33
Storm water drainage	Capital	418.18	1101.15	80.87	227.2	405.24	2232.64
	O&M	6.26	16.6	1.23	3.41	6.08	33.58
Roads	Capital	2369.66	6239.86	646.93	1817.61	3241.95	14316.01
	O&M	42.52	112.14	10.63	29.86	53.26	248.41
Street lights	Capital	162.22	267.68	7.97	8.68	15.49	462.04
	O&M	5.56	11.49	0.15	0.24	0.43	17.88
Solid waste management	Capital	39.7	87.24	9.09	16.55	29.52	182.1
	O&M	19.09	28.73	4.35	9.17	16.35	77.69
Total	Capital	3821.66	9682.26	1140.45	3007.25	5508.41	23160.04
	O&M	173.03	335.15	46.44	89.34	132.57	776.51

Note: Computed based on HPEC norms.

Phasing of Investments

13.17 The investment projections at 2009-10 prices cover a period of two decades i.e. from 12th to 15th Five Year Plans. The HPEC suggested a 15 percent growth rate during 12th Plan, 12 percent during 13th Plan and 8 percent during 14th and 15th Plans. Such a tapering of growth rates was proposed as O&M costs would increase from 13th to 15th Plans as capital investments would be made on infrastructure provision which necessitates increased O&M expenditure. Therefore, from 13th to 15th Plans low capital investments were proposed.

13.18 Investment requirements during 2012-13 to 2031-32 are given in Annexure 13.4. During the 12th Plan, 2nd SFC estimates 11 percent growth rate as at present but this would not meet the required investments. Therefore, the projections are made at 15 percent growth rate, proposed by the HPEC for capital expenditure with a phase wise investment of 12 percent during 13th Plan and 8 percent during 14th and 15th Plan periods. These projections indicate a capital investment requirement of Rs 35,006.43 crore which would meet the infrastructure requirements as per the HPEC norms. In case of O&M expenditure, the HPEC did not specifically indicate expected growth rates but only indicated broad figures. Therefore, the Commission projected at 8.8 percent growth rate per annum at constant prices through the two decade period i.e. from 2012-13 to 2031-32 which works out to about Rs. 54,514.50 crore. Since these estimated figures are at constant prices of 2011-12, adjustments need to be made for estimating the figures at current prices. Accordingly, an inflation of 8 percent per annum is assumed for projecting the figures at current prices and based on this, Rs 37,806.94 crores are needed towards capital requirements and Rs 16,748.71 crore for O&M expenditure, with a total requirement of Rs 54,555.65 crore.