

CHAPTER - V

URBAN INFRASTRUCTURE

Introduction:

In this chapter the urban infrastructure of the state is discussed.

The high population growth rate of the urban centres demands for more essential urban services than the supply. The gap between the demand and the supply results to the breaking down of the urban system of an increasing number of urban centres. Such fragility includes an inequitable distribution and access to basic services among the different sections of the urban population leading to inter-urban disparities.

In the above context, adequate urban infrastructural system is a must to enhance equal facilities to all sections of the population and thus ensure proper functioning of the urban local government (*National institute of urban Affairs- 1988, pp. 58-59*).

1. Road and Transport:

Road and bridges are important infrastructures that help the smooth functioning of transport and communication. The physical link between the urban centres with other sectors and with the outside world as well is out of question without proper road (*Ibid. p. 62*).

Urban centres cannot function without a good road for transport and communication system. It has been a prime factor for the location and growth of urban centres. Urban transport in many respects has a great role

in determining urban patterns both physically and socially. As such, improvement in the road and transport infrastructures will lead to improvement of the urban structure, productivity and reducing urban poverty

The development of urban road, transport and communication leads to the development of the urban sectors in many dimensions. Road and transport is complementary with a large number of other urban services. Moreover it provides employment though in varying proportions of the population. (*World- Bank- 1979, pp. 147-148*).

Road and Transport in Manipur:

In Manipur, being land-locked and isolated even from neighbouring states by hills and mountains on all sides, surface transport plays a major role both physically and socially. It also constitutes one of the most important infrastructural facilities for supplying productive activities and distribution system and plays a vital role in ensuring sustained economic growth.

The modes of transport facilities in Manipur are roads and railways. The National highway No. 39, connecting Imphal with Dimapur railways line in the neighbouring state of Nagaland, is the lifeline of the State of Manipur. Another road of considerable economic importance is the 224 kms. long National highway No. 53 viz. New Cachar Road, connecting Imphal with Jirighat in Manipur - Assam border.

In Manipur the total road length including National Highways, State Highways and other categories increased from 959.8 km. in 1956 to

Road Lengths of Manipur in Km.

Table 5.4

classification of Roads	Years					
	1956	1961	1971	1981	1990	
1. National Highways.	216.4	216.4	208.8	434.3	434.3	
2. State Highways.		849.5	8.8	510.0	547.0	
3. Major District Roads.		336.3	498.8	611.0	624.0	
4. Other District Roads.	743.4	7.1	750.0	309.0	440.0	
5. Municipal Roads.			226.0	193.8	193.8	
6. Inter Village Roads		293.1	1132.2	1864.0	2,515.0	
Total	959.8	1,705.4	2,864.6	3,922.1	4,754.1	
Surfaced	959.8	588.1	1,099.4	N.A.	3,377.1	
Unsurfaced.		1,117.3	1,765.2	N.A.	1,377.0	

N.A. = Not Available.

Source. - Directorate of Economics and Statistics, Govt. of Manipur.

Table 5.2
Length of Extra Municipal Roads in the Districts (1987-88) in Km.

Districts	National Highways	States Highways	Major District Roads	Other District Roads	Inter village Roads	Total
Bishenpur	0.00	3.00	21.00	35.90	196.00	283.90
Imphal	48.37	143.80	44.75	126.00	572.00	935.12
Thoubal	35.00	35.00	30.00	31.90	381.00	519.90
Chandel	64.40	17.60	32.00	2.35	308.00	424.35
Churchandpur	0.00	50.00	63.00	2.60	233.60	348.60
Senapati	93.83	141.20	7.25	79.25	207.00	528.53
Tamenglong	192.50	70.80	181.00	30.00	209.00	683.30
Ukhrul	0.00	57.60	245.00	97.00	289.00	688.60
State total	434.30	547.00	624.00	405.00	2395.00	4405.30

Source : Directorate of Economics - Statistics - Statistical Abstract of Manipur - 1989 - Imphal 1990.

In Manipur the total road length including National Highways, State Highways and other categories increased from 959.8 km. in 1956 to 4754.1 kms. in 1990 and to 5,409 km. in 1991. Thus in 1991 the density is about 24 kms. per sq km. and 3.80 kms. per 1000 population (*Economic Review- 1990-91, p.130*).

The road lengths in the districts where the urban centres are located are as given in table 5:1. But it is surprising to note that the municipal road length is only 193.8 kms. (Table 5:2). Also a number of sub-divisional headquarters are not still connected with the state and district headquarters with proper roads.

In the major towns of the state the road and transport infrastructures seem to be inadequate and a failure to keep pace with the increasing traffic requirements of fast urbanisation (*National Institute of Urban Affairs- 1988, p .66*).

2. Water Supply

Adequate and safe water supply is a basic need for human settlement. Proper water supply infrastructure is an essential part to meet such basic need (*National Institute of Urban Affairs- 1988, p. 60*). In urban centres where human settlement and activities are more, adequate water supply is a must to meet the required amount of water and thus to enable the urban centres to function. To serve the requirements, infrastructures of water supply with the required capacity is necessary.

In the state's urban centres the water supply facilities are from taps and tanks. Water supply from river infiltration galleries are available only

Table 5.3-A watersupply in the towns cont.

Districts	Towns	Sources of water				System of Storage			Capacity in Lits.
		Tape	Tank	River Infiltration gally	Service Reservior	Overhead Tank			
Bishenpur	Oinam	Yes	Yes	No	No	Yes	45,460		
	Bishenpur	Yes	Yes	No	Yes	No	190864		
	Ningthoukhem g	Yes	Yes	No	Yes	No	181,840		
Imphal	Moirang	Yes	Yes	No	Yes	No	750,000		
	KUmbi	Yes	Yes	No	Yes	No	136,380		
	Kwakta	NA	NA	NA	NA	NA	NA		
	Nambol	Yes	Yes	No	Yes	No	750,000		
	Andro	NA	NA	NA	NA	NA	NA		
	Lamlai	Yes	Yes	No	No	Yes	68,190		
	Sekmai	NA	NA	NA	NA	NA	NA		
	Lamsang	Yes	Yes	No	Yes	No	1,000,000		
	Lamjao Tongba	NA	NA	NA	NA	NA	NA		
	Lalong	Yes	Yes	No	Yes	No	360,000		
Wangoi	NA	NA	NA	NA	NA	NA			
Thangkhong Laxmi Bazar	NA	NA	NA	NA	NA	NA			
Mayang Imphal	Yes	Yes	No	Yes	No	100,000			
Jiribam	Yes	Yes	No	Yes	No	315,000			
Imphal	Yes	Yes	No	Yes	No	7,000,000			
Thoubal	NA	NA	NA	NA	NA	NA			
Yairipok	NA	NA	NA	NA	NA	NA			
Sikhong Sekmai	NA	NA	NA	NA	NA	NA			
wangjing	NA	NA	NA	NA	NA	NA			

Table 5:3-B
Watersupply in the Towns 1981.

Districts	Towns	Sources of Water				System of Storage			
		Tape	Tank	River Infiltration Galary	Service Reservoir	Overhead Tank	Capacity in lits.		
3. Thoubal	Heitrow	No	Yes	Yes					
	Kakching	Yes	Yes	No	Yes	No	450,000		
	Sugnu	NA	NA	NA	NA	NA	NA		
	Samurou	NA	NA	NA	NA	NA	NA		
	Kakching Khunou	NA	NA	NA	NA	NA	NA		
4. Chandel	Moreh	Yes	No	Yes					
5. Churachandpur	Churachandpur	Yes	Yes						

* Lilong part of Thoubal is included in Imphal. Nambol part of Imphal is included in Bishenpur. (N.A. = Not available.) Samurou part of Imphal is included in Thoubal.

Source: - Census of India- 1981, Series-13, Part-X-A. Manipur Town Directory.

in the two towns of Heirok in Thoubal district and Moreh in Chandel district. The system of water storage for the towns are either service reservoirs or overhead tanks. Out of the thirty-two towns in 1981 eleven towns get water from service reservoirs and only two towns of Lamlai and Oinam were from overhead tanks (Table 5:3).

The capacity of the storage system is highest in Imphal city with 7,000,000 lits. Next to Imphal Lamsang in Imphal district with 1,000,000 lits. capacity is the highest. In the other districts, Moirang and Nambol (both in Bishenpur district having 750,000 lits each), were the highest. Kakching with 450,000 lits. capacity is the highest in Thoubal district.

Of all the urban centres, Imphal is the most deficient despite the highest storage capacity. The water supply deficit in Imphal in per capita terms was 25.07 gallon per capita demand (GPCD) in 1981. Also according to the field report by the National Institute of Urban Affairs (NIUA), it was revealed that over 50 per cent of the urban population in the state do not have access to safe drinking water supply (*National Institute of Urban Affairs- 1988, pp. 61-62*).

3. Urban Housing.

The fast population growth and higher population density in the urban areas affect health and environment in towns and cities. So when referring to the importance of urban housing it concerns not only the sheltering structure but also the lot on which the shelter stands. The lot includes the services which are provided to the lot such as energy supply. (*World Bank- 1979, pp. 200-205*).

Residential houses :

In Imphal which was the only one town in Manipur in 1961 the total number of census houses were 19,991 out of which 774 were vacant and 10910 houses were occupied residential houses. It has been further noted that out of every 1000 census houses 640 were occupied residential houses (*Census of India - 1961*).

In 1971 the number of occupied residential houses increased to 21,588. In Imphal district alone the number of houses were 15,618. In the other two valley districts of Bishenpur and Thoubal the number of occupied residential houses were 2,325 and 2,272 respectively. In the hill district of Churachandpur where a single urban town was classified in 1971, the number of urban occupied residential houses was 1,373.

In 1981 the number of urban houses reached 55,157 out of which 26,878 (48.73 per cent) were in Imphal district, 7,343 (13.37 per cent) in Bishenpur district and 11,762 (21.32 per cent) in Thoubal district. Among the hill districts, Churachandpur with 4,148 (7.52 per cent) houses was the highest followed by Senapati with 1,787 (3.24 per cent) houses and Chandel with 1,505 (2.73 per cent) houses. Though the number of residential houses in Bishenpur was higher than that of Thoubal in 1971, yet Thoubal district ranked second in the state in the 1981 census.

In 1991 the number of total occupied residential houses in the state increased to 77,545 of which as many as 45,326 (58.45 per cent) in Imphal district alone. Thoubal district ranked second with 17,279 (22.28 per cent) houses followed by Bishenpur with 9817 (12.66 per cent) urban houses. In

the hill districts the number of urban residential houses was only 7,334 of which 5,379 were in Churachandpur and 1,955 were in Moreh.

Urban Households:

In Imphal town, the only urban area in Manipur in 1961, out of every 1000 households, 95 households had one room each and 162 households had two rooms each. Another 353 households had three rooms each, 258 four rooms each and 132 households five rooms and more each. In 1961, Manipur had two minimum number of one room households at the all Indian level (*Census of India - 1961*).

In 1971 the total number of urban households was 22,406. The highest number of households was in Imphal district with 16,227 households. In Thoubal and Bishenpur districts where urban centres came into existence for the first time in 1971, the number of urban households were 2,357 and 2,351 respectively. In Churachandpur where urbanisation was new like Thoubal and Bishenpur, the urban households were 1,467 in number.

In 1981 census, with the introduction of other urban areas in all the eight districts of Manipur, the total number of urban households increased to 59,621 . Out of the total number of household 51.12 per cent were in Impinal district, 12.79 per cent in Bishenpur district and 19.94 per cent in Thoubal district. Among the hill districts, Churachandpur with 7.5 per cent was the highest and followed by Senapati district with 3.0 per cent and Chandel district with 2.6 per cent . The other two hill district of Ukhrul

Number of Houses and Households in the Districts (1971-1991)

Table 5.4

Districts	1971				1981				1991			
	Total		Urban and P.C. to the total.		Total		Urban and P.C. to the total.		Total		Urban and P.C. to the total.	
	1	2	1	2	1	2	1	2	1	2	1	2
1. Bishempur	17285	18485	2325	2351	22513	23108	7343	7627	27299	29726	9817	10457
			13.45	12.72			32.62	33.0			35.96	35.18
2. Imphal	70410	72943	15618	16227	82108	87315	26878	30478	109334	113409	43115	45326
			22.18	22.25			32.73	34.91			39.43	39.97
3. Thoubal	31399	31619	2272	2359	38085	38372	11762	11891	47761	48934	17279	17620
			7.24	7.46			30.88	30.99			36.18	36.01
4. Chandul	6665	6863			10055	10187	1505	1552	13087	13245	1955	1997
							14.97	15.24			14.94	15.08
5. C.C.Pur	15051	15290	1373	1469	21403	21758	4148	4469	2593	27995	5379	5499
			9.12	9.61			19.38	20.54			19.49	19.64
6. Senapati	18986	19564			26317	26470	1787	1792	32065	32827		
							6.79	6.7				
7. Tamenglong	6686	6725			9505	9871	677	727	12166	12608		
							7.12	7.37				
8. Ukhrul	11053	11104			13919	14042	1057	1085	16870	17945		
							7.59	7.73				
Total	177535	182593	21588	22406	223905	231123	55157	59621	286175	296689	77545	80899
			12.16	12.27			24.63	25.8			27.1	27.27

1. No. of occupied Residential Houses.

2. No. of Households.

Sources:- Census of India- 1971, 1981, 1991

and Tamenglong Shared only 1.8 per cent and 1.21 per cent respectively of the state's urban households.

Among the hill districts, Churachandpur with 4,469 urban households was the highest followed by Senapati with 1,792 and Chandel with 1,552. In Ukhrul and Tamenglong the urban households numbered 1,085 and 727 respectively.

In 1991 the total number of urban households increased to 80,899; Out of this Imphal district alone shared 45,326 (56.02 per cent). Thoubal and Bishenpur shared 17,620 (21.78 per cent) and 10,457 (12.14 per cent) respectively. It is noted that in this census the two hill districts of Chandel and Churachandpur shared 2.47 per cent and 6.8 per cent respectively of the urban households in the state.

Household Size:

Regarding the household size and family nuclei, Manipur is above the average of the all India level. According to the N.S.S. record (Sarvekshana - 1992) it is 5.50 in the rural areas and 5.03 in the urban areas. The average number of family nuclei is 1.23 in rural India and 1.09 in urban India.

In Manipur the average household size in the urban areas is 6.28 which is the biggest in the country. The rural average household size with 6.19 is equal to the rural areas of Delhi and second highest in North-Eastern India after 6.23 of Assam.

The average number of family nuclei of Manipur is 1.17 in the rural areas of Manipur and 1.12 in the urban areas. Among the north east states the rural family nuclei of Manipur is the biggest but below the all India level of 1.23. In the urban areas the family nuclei in Mizoram with 1.27 is the biggest and Meghalaya with 0.93 is the lowest.

Types of Houses:

According to the National sample survey (N.S.S.) organisation of India, dwelling houses can be classified into three categories viz. Katcha, Pucca and Semi-Pucca. Houses with roofs and walls of grass, leaves, reeds, thatch, wool or bamboo are in the Katcha category and houses with tile, slate, single, corrugated iron, zinc or other metal sheets and asbestos cement sheet are categorised as pucca. Structures that cannot be treated as wholly pucca or wholly Katcha are classified as semi-pucca (*Sarvekshana-1993*).

Types of Urban Houses in Manipur:

Urbanisation being in its infant stage, rural conditions prevail even in urban areas of Manipur. Moreover, with rich forest products and rice as principal crops in the plain, grass, leaves, reeds, bamboo and timber etc. are predominant materials for walls and roofs (*Census Atlas - 1961*).

In urban areas of Manipur, in 1961, based on 20 per cent sample, out of 2,453 households, of 2,184 households (89.03 per cent) lived in houses with walls of grass, leaves, reeds or bamboo, 0.90 per cent with walls of timber, 0.20 per cent of need. 8.85 per cent houses with brick wall, 0.78 with G.I. sheet or other metal sheet and 0.08 per cent with cement and

concrete. A small percentage of 0.16 lived in houses with walls of other materials (Census of India-1961).

The number of pucca residential houses increased in 1971 and 1981, but the improvement was mostly in Imphal district (census of India-1971).

According to the N.S.S. report (Sarvekshana Jan-March-1992) the number of households of Manipur living in pucca houses reach 8.99 per cent against 1.95 per cent in 1961 census. Among the north- Easter states it is the lowest. The highest is Meghalaya with 65.62 per cent.

The percentage of dwellers in the semi- pucca type of houses in Manipur reach 49.30 per cent against 30.58 per cent in 1961 census. It is more than the all India average of 18.00 per cent but amongst the North-Eastern states, Mizoram with 68.30 per cent is the highest and Meghalaya with only 24.15 per cent is the lowest.

Regarding the katcha houses, 41.71 per cent of the urban households in Manipur live in such houses and out of it 34.98 per cent are in bad conditions. The highest is in Tripura with 47.56 per cent out of which 35.86 per cent of the households are in houses of bad conditions (Table 5:5).

Table 5:5 Average Household size and Average of Family Nuclei in urban sectors of N-E States.

States.	Average size of the Household.		Average No. of family nuclei.	
	Rural	Urban	Rural	Urban
1. Assam	5.50	5.03	1.23	1.09
2. Arunachan Pradesh	6.023	4.77	1.15	1.05
3. Manipur	6019	6.28	1.17	1.12
4. Maghalaya	5059	4.45	1.02	0.93
5. Mizoram		4.57		1.04
6. Nagaland	5.06	4.57	1.08	0.19
7. Tripura	4.92	4.57	1.09	1.52
All India	5.92	5.71	1.07	1.27

Source : Sarvekshana 1992.

Table 5.6 Distribution of Urban Households by Predominant Wall Materials-1961 (based on 20% sample.)

Total / Urban	Total No. of Houses	Grass,Leave s. Reeds or Bamboo	Timber	Mud	Unburnt bricks	Bufrnt bricks	C.I. Shect,other metal sheet	Stone	Cement concrete	All other materials
Manipur Total	29458	25723	2247	632	3	265	62	13	23	490
Urban	2453	2184	22	5		217	19		2	4
Imhal West Total	6702	6330	20	116		200	18	4	2	12
Urban	1874	1645	17	4		186	17		1	4
Imphal East Total	4669	4608	5		239	3	2		1	
Urban	579	539	5	1		31	2		1	

* Imphal being the only district with Urban area, only the Imphal district data is given.
Source:- *Census of India (Manipur) - 1961. Vol. XXVII, Delhi - 1967.*

Table 5.7 Distribution of Urban Households by Predominant Materials for Roof - 1961. (Based on 20% samples)

Manipur / District / Urban	Grass. Leaves reeds. thatck. wood or bambo	Tile, Slate, single	Corrugated iron Zinc as other metal sheets	Asbestos cement sheet	Brick and Lime	Concrete and Stone slabs	All other materials
Total	27399	30	1908	15	10	44	52
Manipur							
Urban	1650	1	737	12	5	43	5
Total Imphal West	5752	1	893	1	6	43	6
Urban	1204	1	617	1	4	43	4
Total Imphal East	4347		307	12	1	1	1
Urban	446		120	11	1		1

* Imphal being the only district with Urban area, only the Imphal district data is given.
Source:- *Census of India (Manipur) - 1961, Vol. - XVI, Delhi - 1969.*

Table 5.8

Distribution of 1,000 Cessus Houses by Predominant Wall Materials 1971.

	Total	Grass, Leaves or Bamboo	Mud	Woods	Burnt bricks	C.I. Sheets or other metal sheets	Stone	Cement concrete	All other Materials not stated.
Total	1000	565	308	92	23	2	2	3	5
Rural	1000	575	307	100	8	1	2	2	5
Urban	1000	497	314	33	133	5	2	10	6

Source: - Census of India - 1971, series -12 Govt. of India press (Simla) - 1980.

Table 5:9

Distribution of 1000 Census Houses by Predominant Materials of Roof - 1971

Total final urban	Total	Grass, Leaves, Reeds, Thatch, Wood and Bamboo(1)	Tile, slate and single (2)	Corrugated iron, Zinc or other metal sheets (3)	Aabestose, Cement sheets (4)	Brick and Lime (5)	Concrete and stone slade. (6)	All other Materials. (7)
Total	1000	843		143	1	3	8	2
Rural	1000	889		107			2	2
Urban	1000	520		402	2	22	48	5

Source: - Census of India - 1971, (Manipur), Series 12, Govt. of India press (Simla) 1980.
 (According to N.S.S. Classification (1992) (1) is categories as Katcha , 2, 3,4,5, and 6 - as Pucca and 7 as Semi - Pucca.

Table 5:10 Percentage Distribution of Urban Dwelling by Type of Structure with the Proportion of Units in Bad Condition with Each Type in North-Eastern States.

N-E States	Pucca		Semi Pucca		Katcha	
	P.C. of Dwelling	Proportionate P.C. in Bad Condition	P.C. of Dwelling	Proportionate P.C. in Bad Condition	P.C. of Dwelling	Proportionate P.C. in Bad Condition
1. Assam	36.68	0.14	27.39	10.49	33.93	58.33
2. Arunachal Pradesh	42.76	0.00	25.39	0.00	31.85	18.75
3. Manipur	8.99	0.00	49.30	1.70	41.71	34.98
4. Meghalaya	65.62	0.97	24.15	7.48	10.23	21.54
5. Mizoram	26.65	0.00	68.30	1.15	5.05	7.69
6. Nagaland	55.74	3.62	34.8	6.33	9.43	42.86
7. Tripura	26.50	3.05	25.94	2.31	47.56	35.86
All India	71.08	4.60	18.00	22.99	10.92	55.71

Source:- Sarvekshana, 1992.