

Chapter 13

Transport, Roads, Railways, Ports and Airways

13.1: Road Transport

1. In Karnataka, there are three separate public sector corporations that have been serving the districts, urban and rural areas of the state, apart from another corporation to service Bangalore city. NWKRTC covers the districts of Belgaum, Dharwad, Gadag, Haveri, Bijapur, Bagalkot, U. Kannada (since 1997). NEKRTC covers the Hyderabad-Karnatak region. BMTC covers mainly the Bangalore city and upto 25 kms around. KSRTC covers the rest of the state. As of 2000-01, KSRTC, which services Bangalore and Mysore Divisions has a total fleet of 4212; NWKRTC has 3587; NEKRTC has 2078, and BMTC has 2508 buses. The over all fleet utilization has been quite high (over 95%) in all the corporations.

2. The Official Committee to study the Development of North and South Karnataka in its report in 1999 noted that:

- The share of effective Kms run by KSRTC etc., in North Karnataka was 55.11% of the total run.
- In terms of scheduled operations, North Karnataka had a share of 57.61%. In variably, the Belgaum Division has higher shares in both Kms run and scheduled operations. Gulbarga Division has the least of these.
- It was then noted that as far as transport facilities are concerned, North Karnataka was not behind, but certainly Gulbarga region was so.

3. On the whole, one does not see any significant disparity in the deployment of public transport system in the state. However, in terms of number of bus stations, passenger trips, and kilometers covered, the Hyderabad –Karnataka need some additional transport facilities. Table 13.1 highlights some of the major indicators of road transport in the state.

Table 13.1:Regional Characteristics of Public Transport Facilities

		Bangalore+ Div. (excluding City) Mysore Division (KSRTC)	Belgaum Division (NWKRTC)	Gulbarga Division (NEKRTC)	Bangalore City (BMTC)
No of Buses	Per lakh population	13.944	27.517	21.887	40.294
	Per lakh hectares of geographical area	45.60	65.70	47.73	1531.13
	Per 1000 km road length	54.80	105.23	99.20	335.97
% Villages covered		59.70	95.91	96.91	32.16
Average villages covered by one bus per year		2.83	1.45	2.04	0.50
Passenger Km (lakh) per bus per year		49.28	47.73	56.32	26.34
No. of bus stations per taluk		1.05	2.96	2.39	9.33
No. of passenger trips (000) per taluk per year		80.42	203.10	130.03	3631.33

Note: All data pertain to the year 2000-01; Source Respective Corporations

4. At the individual taluka and divisions of the respective corporations levels, some additional observations can be made.

- Division of Road Transport Corporation like Bagalkot, Uttar Kannada, Gadag, Chikodi, Yadgir, Tumkur, and Haveri require additional bus fleet, as their present coverages are lower.
- There is a need to introduce wayside bus-shelters in districts like Bagalkot, Haveri, Gadag, Koppal, Yadgir, Davangere, Bidar, Tumkur, Kolar, Hasan and Nangalore.

5. The availability of transport facilities has to be viewed from the point of people (say facility per population, per village, hamlet and so on), and not by road length covered or number of fleet. In this report, for want of such detailed data, it has not been possible to recommend any such norms for redressal of regional disparity in respect of this vital sector. However, the people have voiced in several of HPC meetings about the problems, some of the major ones are highlighted here.

- Improve town bus services to Chamarajanagar;
- In D. Kannada district, KSRTC buses do not ply to villages, as the roads are very bad; allow more private buses;
- In Haveri, need for KSRTC bus depots at Shiggaon and Savanur; bus stand at Savanur; But transport to Hangal taluka.

13.2 :Road Development

6. Roads play a decisive role in initiating and accelerating the process of development in any given region. Total road length comprising national high ways, State high ways, important district roads, other district roads and village roads, is not evenly distributed among the regions, divisions, districts and taluks of the State. The total length of road in Karnataka at present is of the order of 132 thousand kilometers, of which about 88 thousand kilometers is surfaced roads. On an average, about 69 kilometers of road exists per every 100 sq km of geographical area, 250 kms for every lakh of population. However, the distribution of the roads between the districts, and within the districts is not at all balanced. This is causing considerable amount of hardship in areas not accessible easily.

7. As far as the development of the roads is concerned, the PWD has the major responsibility (followed by NABARD etc.). During the period 1993-96, PWD had spent about 46% of its outlays in North Karnataka, the rest in South Karnataka. Once again, the share of this expenditure in Gulbarga Division has been low (22%), as against a high of 28% in Mysore Division.

8. The total road length including panchayat and municipality roads in the state is of the order of 142801 kilometers. The breakups of these by districts are shown in Table 13.2.

Table 13.2: Spread of Different Types (in Kms) of Roads in Karnataka (2001)

District	National High Way	State High Way	Major District Roads	Other District Roads	Village Roads	TDB Roads	Irr. Dept. Roads	Forest Dept Roads	Total
Bangalore Division	1223	2619	8035	625	10950	11170	3090	338	38050
Bangalore (U)	153	193	381	6	978	940	10	18	2679
Bangalore (R)	273	374	1045	50	1431	1473	140	0	4786
Chitradurga	167	482	888	26	1439	1297	218	14	4531
Davangere	85	263	992	86	1172	761	1225	0	4584
Kolar	129	433	1598	58	2367	1535	72	24	6216
Shimoga	221	402	1229	251	1362	1651	916	203	6235
Tumkur	195	472	1902	148	2201	3513	509	79	9019
Mysore Division	911	2418	8239	560	14070	8646	2272	1624	38740
C. R. Nagar	160	102	658	0	927	337	333	449	2966
C. Magalore	113	326	1251	213	1335	2521	196	232	6187
D. Kannada	177	297	792	0	1269	368	0	93	2996
Hassan	167	480	1668	10	2049	2022	399	47	6842
Kodagu	0	311	804	0	1167	622	29	278	3211
Mandya	73	244	1340	120	4549	1108	569	0	8003
Mysore	79	336	1038	209	2074	1400	741	375	6252
Udipi	142	322	688	8	700	268	5	150	2283
Belgaum Division	1008	2836	7390	190	12779	7602	1684	596	34086
Bagalkot	60	396	1052	77	891	947	193	0	3616
Belgaum	201	732	2331	53	2360	1767	602	30	8076
Bijapur	127	476	1202	10	1349	650	222	0	4036
Dharwad	142	163	599	2	2788	235	189	32	4151
Gadag	46	203	663	0	941	889	118	0	2860
Haveri	103	197	742	20	2080	1681	292	13	5128
U.Kannada	329	669	801	28	2370	1433	68	521	6219
Gulbarga Division	381	2148	4583	259	7210	3963	2371	24	20939
Bellary	181	300	1135	108	1688	754	424	15	4605
Bidar	75	276	763	48	753	907	51	4	2877
Gulbarga	0	797	1510	63	2805	1454	930	5	7564
Koppal	125	270	537	36	968	507	228	0	2671
Raichur	0	505	638	4	996	341	738	0	3222
N. Karnataka	1390	4984	11973	449	19989	11565	4055	620	55025
S. Karnataka	2134	5037	16274	1185	25020	19816	5362	1962	76790
State Level	3524	10021	28247	1634	45009	31381	9417	2582	131815

Source: C.R. Ramesh: Sectoral Paper on Development of Roads in Karnataka ; and Karnataka at a Glance (GoK).

Table 13.3: Roads under ZP Organisations (Kms)

	Panchayat Roads	Municipality Roads
Bangalore Division	788	3269
Bangalore (U)	409	1535
Bangalore(R)	N.A	N.A
Chitradurga	195	498
Davangere	N.A	N.A
Kolar	-	356
Shimoga	184	281
Tumkur	-	599
Mysore Division	2740	2459
C.R. Nagar	72	951
C. Magalore	935	113
D. Kannada	1414	752
Hasan	179	417
Kodagu	-	60
Mandya	140	166
Mysore	N.A	N.A
Udipi	N.A	N.A
Belgaum Division	1135	1821
Bagalkote	39	321
Belgaum	503	550
Bijapur	N.A	N.A
Dharwad	N.A	N.A
Gadag	20	746
Haveri	N.A	N.A
U. Kannada	573	204
Gulbarga Division	2	817
Bellary	-	415
Bidar	-	64
Gulbarga	2	57
Koppal	-	281
Raichur	N.A	N.A
N. Karnataka	1137	2638
S. Karnataka	3528	5728
State level	4665	8366

Source: Karnataka at a Glance, GoK.

13.3: Extent of Shortage

10. Using the above indicators, the districts have been grouped into four categories, as shown in Table 13.5. The districts which are critically below the state average in terms of both the length per geographical area as well as per population requires very special attention in terms of development of roads immediately. More specifically, they require Panchayat, village and TDB roads substantially.

Table 13.4: Indicators of Road Infrastructure (at the District Level)

District	Total Road Length (Kms)	Road Length per 100 sq. kms	Road Length (Kms)per lakh of population
Bangalore Division			
Bangalore (U)	2679	122.33	41.07
Bangalore (R)	4786	82.30	254.98
Chitradurga	4531	54.02	300
Davangere	4584	76.17	256.09
Kolar	6216	75.59	246.37
Shimoga	6235	73.66	380.18
Tumkur	9019	85.10	349.57
Mysore Division			
C. R. Nagar	2966	52.17	307.68
C. Magalore	6187	58.92	543.20
D. Kannada	2996	61.86	158.02
Hassan	6842	100.41	397.56
Kodagu	3211	78.28	589.17
Mandya	8003	161.32	454.20
Mysore	6252	99.73	238.17
Udipi	2283	63.45	205.86
Belgaum Division			
Bagalkote	3616	54.84	218.89
Belgaum	8076	30.20	191.97
Bijapur	4036	38.53	223.11
Dharwad	4151	98.13	258.79
Gadag	2860	61.41	294.24
Haveri	5128	105.71	356.61
U.Kannada	6219	60.43	459.65
Gulbarga Division			
Bellary	4605	54.70	227.41
Bidar	2877	52.81	191.61
Gulbarga	7564	46.62	242.05
Koppal	2671	31.58	223.89
Raichur	3222	57.96	195.51
State Level	131815	68.73	250.00

Source: C.R. Ramesh: Sectoral Paper on Development of Roads in Karnataka.

Table 13.5: Disparity Range of Road Infrastructure in Karnataka

		Road Length per Lakh Population.	
		Below State Average	Above State Average
Road Length per 100 sq km	Below State Average	D. Kannada, Udipi, Gulbarga, Bidar, Bellary, Raichur, Koppal, Belgaum, Bagalkot, Bijapur	Chitradurga, C.R. Nagar, U.Kannada, Gadag,
	Above State Average	Bangalore (U), Kolar, Mysore,	Bangalore (R), Tumkur, Mandya, Davangere, Shimoga, Hasan, C. Magalore, Kodagu, Dharwad, Haveri,

10. The average road length (State average) in Karnataka is 68.73 kms. per 100 sq. kms. of geographical area. When one compares the actual road length of the talukas with the State average quite a few talukas turn out to be backward ; 90 out of 175 talukas have road lengths less than the State average of 68 kms. per 100 sq. kms. of geographical area. Further, the backward talukas are at different distances from the State average, suffering different degrees of deprivation in road length. With a view to capturing the taluka-wise differentials in the distribution of road length among the backward talukas, they are classified into 'more backward' and 'less backward'. The details of talukas and the extent of shortage they suffer are presented in Tables 13.6 and 13.7.

Table : 13.6: Extent of Shortage in Road Length in Karnataka by Taluks (1999): More Backward Taluks

Sl. No.	Name of the Taluks	Extent of Shortage/deprivation (Kms)	Rank
1.	Kollegala	1054.48	1
2.	Bijapura	879.25	2
3.	Sindgi	738.95	3
4.	Indi	665.66	4
5.	Kodagu	578.38	5
6.	Jevargi	560.96	6
7.	Lingasugur	552.70	7
8.	Challakere	544.77	8
9.	Shahapura	528.92	9
10.	Basavana Bagewadi	521.25	10
11.	Yadgiri	507.92	11
12.	Manvi	503.15	12
13.	Devadurga	495.50	13
14.	Yelburga	484.20	14
15.	Sindhur	477.84	15

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Sl. No.	Name of the Taluks	Extent of Shortage/deprivation (Kms)	Rank
16.	Chittapur	459.20	16
17.	Raichur	451.94	17
18.	Joida	450.20	18
19.	Khanapur	435.19	19
20.	Belthangadi	401.00	20
21.	Basaya Kalyan	393.01	21
22.	Sedam	360.00	22
23.	Kanakapura	342.04	23
24.	Aland	330.80	24
25.	Sagar	330.20	25
26.	Muddebihal	323.22	26
27.	Navalgund	318.94	27
28.	Hosadurga	315.15	28
29.	Gulbarga	311.40	29
30.	Sandur	297.21	30
31.	Koppal	288.16	31
32.	Ankola	283.92	32
33.	Athani	281.28	33
34.	Gadag	273.23	34
35.	Hiriyur	271.95	35
36.	Kundapur	265.12	36
37.	Soundatti	243.01	37
38.	Bellary	239.38	38
39.	Kudlagi	239.20	39
40.	Kushtagi	237.88	40
41.	Humanabad	237.00	41
42.	Harapanahalli	235.63	42
43.	Chincholi	234.92	43
44.	Jamakhandi	211.90	44
45.	Mudhol	204.20	45
46.	Karkala	179.56	46
47.	Holalkere	179.46	47
48.	Hungund	176.85	48
49.	Shimoga	166.44	49
50.	Bilgi	164.62	50
	Total	19227.14	

**Table: 13.7:Extent of Shortage in Road Length in Karnataka by Taluks
(1999): Less Backward Taluks**

Sl. No.	Name of the Talukas	Extent of Shortage/deprivation (Kms)	Rank
1.	N. R. Pura	159.72	51
2.	Pavagada	159.44	52
3.	Molakalmuru	155.82	53
4.	Hosanagara	151.64	54
5.	Bagepalli	151.44	55
6.	Gundlupet	148.08	56
7.	Siruguppa	133.88	57
8.	Gubbi	124.34	58
9.	H. B. Halli	119.25	59
10.	Ramadurga	113.67	60
11.	Gangavathi	106.76	61
12.	Shorapur	94.60	62
13.	Karwar	92.76	63
14.	Yellapura	91.68	64
15.	H.D. Kote	87.24	65
16.	Hospet	81.25	66
17.	Aurad	71.59	67
18.	Jagalur	70.86	68
19.	Gokak	69.13	69
20.	Honnavar	67.40	70
21.	Kalghatgi	65.30	70
22.	Sulya	61.68	72
23.	Mulbagal	61.32	73
24.	Nelamangala	59.39	74
25.	Bagalkot	58.00	75
26.	Afzalpur	52.40	76
27.	Badami	48.09	77
28.	Belgaum	42.16	78
29.	Sirsi	36.60	79
30.	Kundagol	30.98	80
31.	Chikkanayakanahalli	30.84	81
32.	Srinivasapura	28.80	82
33.	Shiggaon	25.24	83
34.	Haliyal	23.96	84
35.	Virajpet	23.51	85
36.	Bhalki	13.76	86
37.	Hadagali	9.57	87
38.	Puttur	5.00	88
39.	Naragund	4.20	89
40.	Rona	0.88	90
	Total	2932.23	

12. From the data presented in Tables 13.6 and 13.7, the important inferences that emerge are as follows :

- (a) The deviation from the State average on the negative side ranges from a high of 1054 kms. in Kollegala (Mysore Division) to a low of less than one km. In Rona (Belgaum Division)
- In the more backward category (50) the distance from the State average ranges from a high of 1054 kms. in Kollegala (Mysore Division) to a low of 165 kms. in Bilgi (Belgaum Division).
 - In the less backward taluks (40), the distance ranges from a high of 160 kms. in N. R. Pura (Mysore Division) to a low of less than 1 km. in Rona (Belgaum Division)
- (b) Regionally speaking, of the 90 backward talukas, 61 are in NKR (30 in Belgaum division and 31 in Gulbarga Division) and 29 are in SKR (19 in Bangalore Division and 10 in Mysore Division)
- (c) Category-wise, of the 50 more backward talukas, 37 are in NKR (15 in Belgaum division and 22 in Gulbarga division) and 13 are in SKR (5 in Mysore division and 8 in Bangalore division)
- Of the 40 less backward talukas, 24 are in NKR (15 in Belgaum division and 9 in Gulbarga division) and 16 are in SKR (11 in Bangalore division and 5 in Mysore division)

The region wise and division wise distribution of backward talukas in respect of roads by category is presented in Table 13.8.

TABLE 13.8: DISTRIBUTION OF BACKWARD TALUKS BY REGIONS

Sl.No.	Category	Divisions				Regions		Total Taluks
		Belgaum	Gulbarga	Mysore	Bangalore	NKR	SKR	
1	2	3	4	5	6	7	8	9
1	More Backward Taluks	15	22	5	8	37	13	50
2	Less Bakward Taluks	15	9	5	11	24	16	40
	TOTAL	30	31	10	19	61	29	90

13.4 :People's Voice

11. Even the analysis of road length (per geographical area or per population) does not provide a complete picture of deprivation and disparity. The people have voiced in several of the meetings with HPC about their specific problems. Some the major ones are listed in Table 13.9.

Table 13.9: People's Voices about roads and deprivation

District	All about roads etc.
Bangalore Division	
Chitradurga	Link roads from Chitradurga to Kurumandi, Jagimatti; Bevanahalli Nandihalli; Vishwanathnahalli to Kalghatta (via Kadur and Chikkajajur; Dadiganahallit to Andanur; Hullehal to Gollarahalli and Ajjappanahalli; Malenahalli to Chikkabbigere; Somerahalli Tanda to Hukiyaru; Nagasamudra to Huchangidurga; Chitrahalli to Kolalu;Kurbanahalli to Thirumapura; and Obalapura to Challakere.
Kolar	New roads near border villages
Shimoga	A high way connection Shimoga and Harihar, connecting to NH4; A bridge on Tungabhadra near Holalkere village
Tumkur	Link road from Huliurdurga to Magadi; from Tumkur to Aagumber
Mysore Division	
C. R. Nagar	Improve 600 kms of district road; construction of Mekedatu bridge; Improve NH209 from Kollegal to Coimbatore
Chikmagalur	Malnad areas require all weather roads (using rubber mix, as done in Kerala); BH road declared as NH 206, but does not have the standard;
D. Kannada	More bridges required (7 in Sulya, 16 in Beltangadi, in Bantwal, Mangalore (R) etc.; Inter state high way between Madikeri and Sulya-Mulleriya (150 km); Concrete the roads, as all weather roads; Road maintenance allowances be increased
Hassan	All weather roads required; Village roads are very badly maintained.
Kodagu	More bridges are required; Because of heavy rains, road maintenance allowances be raised.
Mandya	Better roads to connect to the sugar mills
Mysore	All weather roads to the 327 villages (because of heavy rains).
Udipi	All weather roads because of heavy rains; Special maintenance allowances for roads in heavy rain fall regions.
Belgaum Division	
Bagalkote	Hyderabad-Goa road (via Bagalkot) be upgraded; Badami taluka requires f bridges at Hanumgore, Neera budhihal,Konkankoppa and Hulkeri.
Belgaum	Belgaum-Raichur road is needed;
Bijapur	Poor maintenance of roads

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District	All about roads etc.
Dharwad	Because of black soil, village and taluka roads are very bad; Dharwad-Goa, Kumta-Hubli, Hubli-Bijapur, Kalghatgi-Dharwad are to be improved and connectd to NH4;NH4, NH63 be linked; Hubli-Dharwad road be made parallel road; Ring road service between Hubli and Dharwad; Flyover in Hubli; Chitrdurga-Belgaum stretch be a four lane road; Karwad-Gutti (NH63) be improved; Sankeshwar-Jeevargi-Srirangpatna Highway; Hubli-Bijapur-Humnabad be linked to Mumbai-Hyderabad;
Gadag	A bridge at Mundargi; NH\$ and state high way be connected; Village approach roads are missing; Nanegal-Hossah road; Bairapur-Jigarivadegod road
Haveri	Road development in Savanur taluka
U.Kannada	Another bridge on Sharavati river at Kudige; All weather roads needed due to heavy rain
Gulbarga Division	
Bellary	Bad roads in general
Bidar	There is a need to pass a national highway linking Zahirbad-Bidar and Nanded.
Gulbarga	Bridges in Bhima river be expedited
Koppal	Several villages in the district are not connected by roads, specially in Yalburga taluka;
Raichur	Bad roads in general

13. Most of the views expressed by the people can be grouped in to two categories. First, are the general views about the quality of the roads. HPC has already identified the extent of rural and other roads to be converted in to black bituminous top roads. Second, in Maland and forest regions, the people have made demands on all weather roads. HPC is of the opinion that this is a very legitimate demand. Third, the people have voiced about the new highways to shorten the travel hardship (particularly to Bangalore), district roads and village roads. HPC has prepared a map showing all these major demands. For want of detailed costs, the financial implications are not worked out in any detail. Rough estimate is that in addition to the Rs. 1300 crores identified to clear the backlog for the backward taluks, a sum of Rs. 1000 crores may have to be earmarked for new roads and improvements in maintenances.

13.5 : Towards Redressal of Road Deficiencies

14. The Task Force of PWD has already estimated a total cost of Rs 9087 crores to deal with 35,627 kms of roads (both for maintenance and upgradation) in Karnataka. These of course, include a wide charter of upgradation of state roads, road widening, paving and surfacing etc. On the basis of this Committees identified backwardness and deprivation of road facilities, the total cost of meeting the requirements of 50 talukas in less backward category and 40 talukas in more backward category amounts to Rs. 999 crores. To this, an additional requirement of about Rs. 290 crores is added to cover upgradation of rural roads (about 4956 kms) converting them to 'pucca' roads, and improving unsurfaced roads of about 1200 kms. With black bituminous tar, the total additional requirements just required for redressal of regional disparity works out to about Rs. 1300 crores.

15. Secondly, some special attention needs to be given on the development of national highways within the state. Development of Gulbarga, substantially depends upon the access to a national highway. The Bombay-Hyderabad National Highway is just about 70 Kms away from Gulbarga. HPC FRRI is of the opinion that a link national highway be constructed connecting Gulbarga to the existing Bombay-Hyderabad National Highway.

13.6: Port Development

16. Karnataka has one major port at Mangalore and nine minor ports in the districts of Uttara and Dakshina Kannada and Udipi. There are as many as 378 ferries along the coast. The major cargo handled by these ports are furnace oil, food grains, rock phosphate, iron ore, cement etc. In order to encourage fishery development in the state, it is also necessary to encourage minor ports, and also cold storage and handling facilities at the ports. Tadadi port is an important natural port, which can be developed as a major port. Its development can capture the entire hinterlands of North Karnataka. But its development is linked to the development of Ankola-Hubli railway line. While Karwar and New Mangalore are the state owned ports, Tadadi port can be developed in the private sector, with the necessary encouragement by the state government. Development of both Karwar and Tadadi ports should be undertaken on a priority basis.

17. There is also a need to look into the rising problems of sea erosion all along the coast. This has been affecting the life status of the people who are dependent upon fishing, boating etc. Our rough estimate is that about Rs. 150 crores may have to be earmarked for redressing these developments.

13.7: Development of Airports

18. There has been a major deficiency in North Karnataka region, in respect of air transportation. Though there are several airports which can cater to smaller passenger airplanes, no airlines are currently operating in the state, except through Bangalore and Mangalore airport. Given the length and breadth of the state, there is a need to develop shuttle air services between major cities and Bangalore or neighbouring states. Airports in Mysore, Hubli, Belgaum (existing) and (new) Gulbarga should be developed further, with encouraging private sector airlines with guarantee from the state on seat guarantee or assured minimum return basis, initially for about five years. Subsequently, the airlines will have developed their own marketing and tourist attractions to be on their own.

19. Given the length and breadth of the state, and with the growing importance and concern for value of time, there is going to be increasing demand for faster day trip facilities within the state. There is a need to connect all district headquarters to the Capital City Bangalore by air. This should be done in the next 10 year. New Airports at Gulbarga, Hassan, Hospet Bellary, Bijapur, Bagalkot Shimoga and Gadag should be constructed in the first phase (ie 3-5 years).

13.8: Railway Facilities

20. When it comes to the subject of railways, it is usually taken to be a central subject and the state has very minimal to do with this. Such an attitude has resulted in gross under development of railway network in the state. With a population share of 5%, and a GDP share in the country of 5.25%, the state has much lower share of railway network in the state. Most of the existing railway lines have been existing much before the state re-organisation.

21. HPC FRRI has carried out a detailed exercise to assess the need for additional railway network in the state. Much of these estimates have come from the people of the state, with whom the HPC FRRI had close interactions. On the basis of HPC's recommendations in the First Phase Report regarding meeting the long standing demand to set up South Western Railway Zonal Office at Hubli, the state has already made a move with budget allocations etc., though the matter is still pending the nod of the central government, though the Honorable Supreme Court has already given its verdict in favour of it.

22. Karnataka government has already established a Railway Development Corporation. They should prepare detailed railway development plans. HPC FRRI has already prepared a set of proposals on these lines through maps, appended to this report. The estimated investment cost on this score is given in chapter-30.

23. Some of the major demands on railway networks are summarised below:
Doubling railway line: This should be taken up as a general policy for all the existing railway tracks in the state. Otherwise, with the introduction of faster and super-faster trains, the goods traffic and ordinary passenger traffic would be greatly affected, bringing losses to the railways.

24. The immediate attention for doubling of tracks be given to the Bangalore-Mysore line, and also to establish an Express track between Hubli and Dharwad; Furthermore, a Bullet train should be introduced between Bangalore and Mysore, which not only take away the urban pressure in Bangalore, but also enable Mysore to develop as a satellite-feeder city for Bangalore.

25. ***Conversion of meter gauge to broad gauge:*** between Nanjangud and Chamarajnagar, Sakaleshpur to Mangalore; between Gadag and Bijapur is a Bagalkot ?
New Railway connection: to Mettupalyam; between Hasan and Bangalore; linking Kadur, Chikmagalur, Sakaleshpur and Hassan; linking Hubli with Ankola, and onward to Tadadi port, between Mysore and Merkera; between Bidar and Gulbarga; Between Gadag and Harapanahalli, on to Bangalore directly; between Belgaum and Gulbarga via Bagalkot; Between Davangere and Tumkur is a Chitradurga, Hiriya and Sira; linking Doddaballapur to Guntur via Madanapalli; between Talguppa and Honavar; between Shikaripur and Ranebennur; extension of Hospet Kottur line to Harihar; connect Hubli Guntakal line to Gulbarga. New line between Gadag and Raichur connecting Yelburga, Kushtagi, Gangavati, Sindhura and Manvi.

26. ***Upgradation of workshops:*** at Hubli

27. ***New trains to connect:*** Mumbai, Bangalore, Hubli, Gulbarga and Vasco.