

CHAPTER VII

COMMUNICATIONS

AT the close of the eighteenth century, when the district came **Early history** into the possession of the East India Company, it is stated that there were only a few roads as distinguished from cart-tracks. Carts with wheels, either formed of solid pieces of timber or cut from a single block of stone, were used. These carts were drawn sometimes by several pairs of bullocks and carried only about a ton of load. They were not used for distant journeys. Even some streets of the towns were not practicable for wheels. The well-to-do class used light carriages, which, however, rarely left the precincts of the town or village.

The mountain passes were used in the later wars for the passage of artillery, but they too had been very much damaged by the monsoon rains. A proof of attention given to the important roads was to be seen in the fine avenues of trees, which measured several miles in length. But care had not been taken to keep the pathways in good condition always, and in many cases they had been worn down by traffic and washed by the rains of the monsoon and they had become the drain for the rain water; the entire length of the road looked very rugged. The backwaters of the west coast and the rivers near the sea were made use of, but the boats in use were canoes carved out of tree trunks. Generally these were not well-suited for carrying cargo. Considerable traffic was carried on by means of coastal craft, but that was expensive, slow and risky unlike the 'donies' of the east coast; the *pattamars* had a better form of sail, but the indolent manner in which they worked, the number of men required to manage the huge sails, the time lost in waiting for favourable winds and the difficulties of shipping or landing goods rendered this form of conveyance both risky and costly.

The position in the district early in the nineteenth century **Mountain** underwent a change. The mountain passes were used for the **passes**

passage of artillery and troops by the Rajas, but after the war, they were no longer kept in order and became again very rugged. Later, a corps of pioneers was employed in laying out the more important roads and in opening the passes of the Nilgiris and the Western Ghats; among the most laborious undertakings of the time were the Bisle, the Higgelah and the 'Periah' Ghats, which had been abandoned except as local passes for Manjarabad, Sampaje and Periambody respectively.

In the course of the years from 1837 to 1843, some important lines were opened or improved and one of such lines was the road from the western boundary of the then Mysore State through Coorg to Mangalore, the object being to facilitate the movement of troops and stores between Madras and Mangalore and the stations on the west coast, for there was at the time a revolt against the Government in Kanara and the road was intended to enable troops to go with ease through some of the taluks. The Sampaje line to Mangalore was completed with success, though more money was spent on it than was anticipated owing to incomplete previous enquiries. This Sampaje Ghat was the first of the great western passes opened on an easy slope for travellers and is a standing monument for the genius of Lieutenant Fast.

The chief roads then were the coast road from Baidoor to Kavoy 216 kms. long (135 miles), the Calicut-Panemangalore road traversing the Kasaragod taluk (which is at present in the Kerala State) passing through Hosdurg and Vittal; the roads from Mangalore to the then Mysore frontier by the Sampaje and Agumbe Ghats, the latter passing through the taluks of Mangalore, Karkal and Udipi; and the Kodkal Ghat road *via* Charmadi to Buntwal and from there to Mangalore, running through Belthangady, Buntwal and Puttur and Mangalore taluks.

In 1936, there were 1,467 miles (2,372 kms.) of road, *i.e.*, for every 2.74 square miles, there was one mile of road in the district. Of the 869 miles (1,390.4 kms.) of motorable road, only 698 miles (1,116.8 kms.) of road were metalled and it is easy to imagine the condition of the rest of the motorable roads with laterite surface on which every passing motor vehicle raised clouds of dust which were a danger to the people using these roads and to public health of the villages. There was lack of good road communication between this district and Malabar on the south and North Kanara on the north. The want of through communication from Calicut to Coondapur and from there to the then Bombay Presidency, *via* Bevinje, Buntwal and Karkal, was keenly felt.

The peculiar geographical situation of South Kanara, lying as it does between the Western Ghats and the Arabian Sea, cut up by a large number of streams, big and small, flowing from east to west and bounded on the north by the North Kanara

district and on the east, Shimoga, Chikmagalur, Hassan and Coorg districts and cut off from the rest of the State by the steep ghats, and the difficulties of terrain have proved unremunerative to the transport trade in the district. The roads available for vehicular traffic within the district have been very limited. The maximum mileage range from any point in the district is about 65 miles (104.6 kms.) as against 321.9 to 482.8 kms. (200 to 300 miles) in other districts. Over a hundred roads are prohibited for traffic of goods vehicles and only about 25 roads are usable by these vehicles during the fair weather season and that too, with restrictions on the laden weight. Five roads alone are open for all weather traffic which is also subject to the maximum laden weight of $5\frac{1}{2}$ tons.

The mountain passes on the Western Ghats have been utilised to open up communications from the old Mysore area and Coorg with South Kanara. Among the major roads laid through the picturesque valleys are Hulikal Ghat Road, Shiradi Ghat Road, Bisle Ghat Road, Agumbe Ghat Road, Nagodi Ghat Road and Sampaje Ghat Road. The last named road passes through Coorg and then on to Mysore district. Ghat roads

Originally these roads were *kutchra* roads with a lot of laterite dust emanating from the surface during winter months and slushy during monsoon months. As a result of progressive policies, the State set about in its task of black-topping all these through-communications and a number of new bridges have been constructed. All the mountain-pass roads except Hulikal Ghat Road have been black-topped. Of the many ghat roads running east and south-east, the Sampaje Ghat Road running through Puttur and Sullia offers an easy passage up the ghats. The ghat portion of this road in the Coorg district area is only nine miles (14.5 kms.), but the most difficult road is the Agumbe Ghat Road from Someshwar. The precipice with a drop of nearly 2,000 feet from the Agumbe Sunset Platform down to Someshwar village was a non-metalled road for a number of years. This occasioned frequent land slides during monsoon months. Now, the Shimoga district portion has been concreted preventing land slides and the lower portion in South Kanara has been black-topped.

In spite of constant attention and hard surfacing of roads, the many unbridged roads with brooks and streams running across present a formidable problem. Wherever possible, bridges have been constructed, but very much is still to be done. Udipi, the noted pilgrim centre, was inaccessible from the Shimoga side due to many unbridged rivers, but the Puttige bridge constructed recently has afforded easy movement. Till about two decades ago, vehicles, old and modern, were transported across the rivers and streams with the help of floating rafters built on small boats

like *theppas* rowed from one end to the other. Ferries have been a unique characteristic of the traffic in South and North Kanara districts. In many places, causeways have been put up and even here, traffic becomes difficult in rainy months. Many small bridges and culverts have become rather weak and caution boards have been put up for vehicles to go slow. The road through the Charmadi Ghat and then on to Mudigere in Chikmagalur district contains sharp hairpin bends and passes through a deep valley with Kudremukh on one side and Kumara Parvatha on the other.

The Mangalore-Hassan Road *via* Shiradi and Sakleshpur, which was declared as a National Highway recently, is the shortest route between the State headquarters and Mangalore. This road has been widened and most of the curves have been straightened recently. This is an easily trafficable road next to the Sampaje Road.

The Hulikal Pass Road from Kandlur up the ghats has several weak bridges. This road is also difficult to negotiate. Several of the through-communication roads are very narrow, barely 20 feet in width with little or no bundings on either side. These were constructed when there was only bullock cart traffic. But, now, when lorries and buses ply in great numbers, widening of roads has become an urgent necessity. There have been a number of bridle paths for reaching the peaks, but these are in a bad condition. Renovation of these paths and their widening could transform them into branch roads for passage of vehicles. Any amount of stone embankment work will not solve the problem as the area receives very heavy downpours of rains.

In addition to the principal through-communication roads, a number of branch roads shoot off from various taluk centres linking one town with another. All these are gravelled with wavy surfaces which necessitate constant repairs. Except on the coastal strip, roads in South Kanara are winding and full of curves and the motorist has to be very careful, *e.g.*, the road between Mangalore and Karkal *via* Moodabidri is negotiated up and down through the Gurpur valley having many curves. Some of the through-roads pass through towns with heavy traffic like Moodabidri and Karkal. Roads passing through Mulki and Karkal run into blind curves.

There was no through-highway along the southern coast to Kerala State *via* Kasaragod taluk. A bridge constructed across the Netravati river close to Mangalore city removed this grave difficulty. Formerly, buses and lorries had to take the Mangalore-Puttur Road and deviate at Kalladka near Puttur to go to Kasaragod. In respect of the coastal road north of Mangalore city, the problem of through communication has been also solved by bridging the rivers at Pavanje, Mulki and Udyavar.

Before the construction of these bridges, all types of vehicles had to be ferried across the rivers cutting along the coastal road and sometimes buses and lorries had to take a deviation route of 99.8 kms. (62 miles) *via* Karkal. The coastal road from Mangalore to Udipi is only 61.2 kms. (38 miles). Now this is a part of National Highway.

Communications are indeed a problem in South Kanara because of the rugged and mountain-ridden nature of portions of the district. Even small streams assume river-like proportions during the monsoon months. Bridge construction is a costly problem. Because of the nature of the terrain bus traffic from South Kanara to North Kanara is often interrupted. For a length of 60 miles (96.5 kms.) from Coondapur in South Kanara to Kunta in North Kanara, it used to take nine long hours because of rivers and streams cutting across the road. For several roads, ferries are there even now and they take an inordinately long time.

The roads in South Kanara district were formerly under the control of the District Board before the formation of the Highways Department in 1946. Maintenance of these roads was attended to by the engineering establishment of the District Board. The condition of these roads under the District Board was not satisfactory due to the limited financial resources and therefore, the important roads were taken over from the District Board by the Government when the Highway Department was formed in 1946. Gradually, these roads were taken up for improvement according to their importance to suit the present-day intensity of traffic.

With a view to opening up uninterrupted and straight road communication from Bombay to Cape Comorin, the successive

West Coast Road

Five-Year Plans envisaged the early implementation of the scheme for construction of the much-needed highway passing along the western coast. This National Highway (No. 17) along the west coast was developed at a cost of Rs. 3.94 crores. Its total length is (90 miles and one furlong) in South Kanara. Emerging out of North Kanara, this road enters the Panchagangavali area in Coondapur taluk in South Kanara district and passes through Udipi and Mangalore taluks and then on to Kerala near Ullal in the south of Mangalore. In laying the new highway, the existing *katcha* roads were renovated with new bridges and culverts. Bridges at Udyavara, Mulki and Pavanje were completed and opened for vehicular traffic. A bridge across the Netravathi river near Ullal was also constructed at a cost of Rs. 54 lakhs. The Bombay-Poona-Kollhapur-Belgaum-Dharwar-Harihar-Tumkur-Bangalore - Hosur - Salem - Nammakkal - Trichy-Dindigal-Madurai-Tirunelveli - Cape Comorin Road being a circuitous one, the new coastal road has cut short the distance to a very large extent from north to south.

Now the roads are classified as National Highways, State Highways, Major District Roads, Other District Roads and Village Roads, according to the Nagpur Plan. National Highways are the main highways running through the country connecting other high ways. The State Highways connect the district head-quarter towns and other important towns and the National Highways serve as main channels of traffic to and from the district roads within the State. The Major District Roads link important marketing centres with the railways and State Highways. The Other District Roads connect important market places. Approach roads from the main roads to the villages, generally with unmetalled surfaces, form the village roads.

Road-lengths

The percentage of the area of the South Kanara district to the total area of the State is 4.4 and in 1961, it had 6.33 per cent of the population of the State. In that year, the district's percentage of road-length to the total road-length of the State was 4.68; if we take into consideration the road-length per square kilometre, it was 0.25 for this district, whereas the average for the State was only 0.23; further the district had 13.66 kilometres of road-length for a population of 10,000, whereas the State average was 19.2. As on 31st March 1961, the district had a total road length of 2,140 kilometres, out of which 1,965 kilometres were in-charge of the Public Works Department and 175 kilometres under the control of the Forest Department.

As on 31st March 1971, the total road-length under the Public Works Department was 2,353 kilometres, which was 4.8 per cent of the total road-length of 48,932 kms. in the State. The road-length under the Taluk Development Boards was 1,120 kms. in 1971 and the extent of roads under Forest Department was 172 kms. The tempo of progress achieved in the district from 1956 to 1971, the taluk-wise break-up as in 1971 and the particulars of category-wise and surface-wise break-ups of road-length under the Public Works Department are indicated at the end of the Chapter (Tables I, II and III).

An amount of Rs. 1,108.12 lakhs was spent on Public Works Department Roads in the district during the ten years from 1961-62 to 1970-71 and the year-wise figures are as follows :—

Year	(Rupees in lakhs)		
	Original works	Repair works	Total
1961-62	82.58	19.89	102.47
1962-63	124.53	24.00	148.53
1963-64	150.91	25.79	176.70
1964-65	132.60	18.65	151.25
1965-66	85.57	18.11	103.68

Year	Original works	Repair works	Total
1966-67	59.81	18.18	77.99
1967-68	38.47	19.82	58.29
1968-69	48.82	23.62	72.44
1969-70	47.68	26.98	74.66
1970-71	101.66	40.45	142.11
Total	872.63	235.49	1,108.12

Out of the total road-length of 1,120 kms. maintained by the Taluk Development Boards, eight kms. were of black-topped and 55 kms. were of water-bound macadam forming a total surfaced length of 63 kms. Out of the 1,057 kms. 930 kms. were motorable and 127 kms. non-motorable. The total road-length maintained by the Forest Department as in 1971 was 172 kms. of which a length of six kms. was of water bound macadam, 86 kms. motorable and 80 kms. non-motorable. The road-length per lakh of population stood at 188 kms. in the district as on 31st March 1971.

There was, in 1971, a total road-length of 1,118 kms. under the municipalities, 1,241 kms. under the Community Development Blocks and National Extension Service and 3,449 kms. under the Village Panchayats. This meant that the district has had the highest percentage of road-length under local bodies in the State, the total of such road-length for the State being 18,472 kms. In addition to these roads, there are also roads completed under the Rural Communication Programme. The total road-length completed upto 1971, under this programme, was 1,295 kms. in South Kanara district, the total for the State being 21,256.9 kms.

In respect of easy accessibility of villages, the position in the district is good. In 1970, out of a total number of villages, 476 villages were at a distance of five kms., 146 villages at a distance of above five kms. but below ten kms., two villages at distance of above ten but below 20 kms., 45 villages at a distance of above 20 kms. of metalled roads; 476 villages were at a distance of five kms. and 193 villages at a distance of above five kms., from any type of roads.

The village roads in 1971 were 111 in number including 32 Fisheries Roads, with a total road-length of 708 kms., of which 102.3 kms. were black-topped, 126.7 kilometres were water-bound macadam and the rest un-surfaced. Out of the un-surfaced road-length of 479.0 kms., 317.2 kms. were motorable.

With the object of providing the villages with a net-work of fair-weather roads, a Rural Communication Programme was launched in the State during the year 1959-60. The programme

**Village
roads**

**Rural
Communication
Programme**

consists of (a) construction of rural roads, (b) linking of existing rural roads and (c) construction of bridges with linear waterway of more than 20 feet on those roads which are not under the Public Works Department. The standard of these roads is of only gravel or earth surface and they are meant mainly for cart traffic. These roads connect the villages to the nearest important roads, market places and railheads. In South Kanara district, considerable progress has been made in this respect also. The total road-length tackled up to the end of March 1971 was 1,311 kms., while the road-length completed was 1,295.5 kms. The year-wise achievement from 1961 to 1971 was as follows :—

(Length in kilometres and Rs. in lakhs)

Year as on 31st March	Road-length tackled	Road length completed	Outlay
1961	1,169.8	..	5.09
1966	1,311.0	1,258.7	67.19
1969	1,311.0	1,282.8	79.85
1970	1,311.0	1,284.4	83.63
1971	1,311.0	1,295.5	86.79

The progress in respect of construction of cross drainages for these roads was as follows :—

Year as on 31st March	No. of works tackled	No. of works completed	No. of works in progress
1961	17	..	..
1966	407	390	17
1969	490	476	14
1970	490	476	14
1971	490	476	14

The following are the details of the taluk-wise road-lengths tackled and completed under this programme from 1961 to 1971 :—

Sl. No.	Name of taluk	(Length in Kms. as on 31st March)					
		1961	1966	1969	1970	1971	
1	2	3	4	5	6	7	
1.	Mangalore ..	T	199.5	225.3	225.3	225.3	225.3
		C	..	223.7	225.3	225.3	225.3
2.	Puttur ..	T	244.6	270.4	143.2	143.2	143.2
		C	..	268.8	143.2	143.2	143.2
3.	Sullia ..	T	..	..	127.2	127.2	127.2
		C	..	..	127.2	127.2	127.2

1	2	3	4	5	6	7	
4.	Buntwal ..	T	..	..	196.3	196.3	196.3
		C	..	..	196.2	196.3	196.3
5.	Belthangady	T	315.3	315.3	119.0	119.0	113.0
		C	..	315.3	119.0	119.0	119.0
6.	Udipi ..	T	67.6	91.8	91.8	91.8	91.8
		C	..	90.2	90.2	90.2	90.2
7.	Karkal ..	T	222.1	261.5	261.5	261.5	261.5
		C	..	225.5	246.4	248.0	259.1
8.	Coondapur ..	T	120.7	146.7	146.7	146.7	146.7
		C	..	135.2	135.2	135.2	145.2
	Total ..	T	1,169.8	1,311.0	1,311.0	1,311.0	1,311.0
		C	..	1,258.7	1,282.8	1,284.4	1,295.5

(N.B.—T— Tackled; C— Completed).

The rivers Netravati, Gurpur, Haladi, Gangolli, and a good number of small streams flow in the district. The district ranks first in the State as far as bridges are concerned (in the road development programme.) As on 31st March 1956, there were 19 major bridges in the district, one of them having a linear waterway of 304.80 metres and above, seven with 152.40 metres and above but less than 304.80 metres, four with 91.44 metres and above but less than 152.40 metres and the remaining seven with a linear waterway of 30.48 metres and above but less than 91.44 metres. By the year 1961, the number of major bridges increased to 35 and; during the last decade, the progress in the construction of major bridges being rapid, the number rose to 76 as on 31st March 1971. The particulars of these 76 major bridges having different linear water ways were as follows :—

Range in metres	Number
304.80 and above	5
152.40 and 304.80	14
91.44 and 152.40	14
30.48 and 91.44	43
Total :	76

The total linear waterway of all these bridges was 8,862.21 metres occupying the first place in the State, Kolar having the last place with only a total linear waterway of 584.50 metres. The oldest bridge in the district is the one built in 1818 across the Netravati river on the Mangalore-Mercara Road. Besides these major bridges, there were 157 minor bridges in the district as on 31st March 1971.

Public
transport

The introduction of a direct bus service by the Mysore State Road Transport Corporation on 18th April 1957 from Bangalore to Mangalore was an important landmark in the field of public transport. Besides this service, private buses were also allowed to ply their services on this route. In accordance with the declared policy of the State Government, the bus transport in the Mangalore Sector was partially nationalised in the year 1968; two depots, one each at Mangalore and Puttur, were started on the 1st July 1968 under the jurisdiction of the Hassan Division. A workshop is also attached to each of these two depots, where repairs and maintenance of vehicles are attended to. As in 1970-71, from these two depots, in all, 76 buses were running on 58 routes, covering, on an average, route kilometres of 4,917, carrying 48,926 passengers every day. The operational data for the period from 1968-69 to 1970-71, pertaining to Mangalore as well as Puttur Depots, were as follows :—

Sl. No.	Operational data	1968—69		1969—70		1970—71	
		Mangalore	Puttur	Mangalore	Puttur	Mangalore	Puttur
1.	Average No. of vehicles.	37	25	44	30	45	31
2.	No. of routes	27	22	32	25	32	26
3.	Average route kilometres.	2,420	1,235	3,234	1,352	3,234	1,683
5.	Average No. of passengers carried per day.	9,880	4,680	12,754	6,307	12,655	6,271
4.	Revenue per day per Km. (paise).	95.8	74.8	106.7	1.9	101.9	85.3
6.	Revenue per seat in Rs. and paise	3.36	2.37	4.75	3.45	4.96	3.35

Besides the services operated from Mangalore and Puttur Depots, a number of M.S.R.T.C. bus services operating from Hassan, Bangalore and Mysore Divisions either touch Puttur or Mangalore or pass through these and other places in the district.

Besides the M.S.R.T.C. services, several private bus companies have been also operating their buses on many of these routes. As in 1972, fifteen private bus companies were running their buses on 208 routes covering a good road-length each. The following statement shows the particulars of the important bus services,

number of routes operated and total road-length covered by each of them as in 1971-72 :—

<i>Sl. No</i>	<i>Name of the service</i>	<i>No of routes operated</i>	<i>Road-length covered (in Kms.)</i>
1.	The Canara Public Conveyance Co. Ltd., Mangalore	51	5 690.4
2.	The Shanker Vittal Motor Co. Ltd., Mangalore ..	28	3 887.9
3.	The Hanuman Transport Co. (P) Ltd., Udipi ..	37	7,098.8
4.	The Bharath Motor Service, Mangalore ..	10	944.7
5.	The S.C.S. Motor Service, Mangalore ..	11	1 097.5
6.	The United Trading Corporation and Workshop (P) Ltd., Mangalore.	9	199.5
7.	The Canara Motor Transport Co., Mangalore ..	5	824.0
8.	Mrs. Meenakshi Rama Bai Manjunatha Motor Service, Udipi.	15	2,169.4
9.	The P. V. Motor Service, Mangalore ..	5	667.9
10.	The Ballal Motor Service, Moodabidri ..	11	1,322.9
11.	The Varma Motor Service, Moodabidri ..	3	157.7
12.	The B.N.S. Motor Service, Mangalore ..	4	408.8
13.	The Misquith Motor Service, Mangalore ..	7	569.7
15.	Sri Durga Parameshwari Motor Service, Mangalore	7	798.2
14.	The West Coast Industrial and Commercial Syndicate Ltd., Mangalore.	5	387.8
Total ..		208	26,225.2

Recently, new bus services have been started from Mangalore to Bombay. The M.S.R.T.C. runs one luxury and two semi-luxury buses to Bombay every day. The Maharashtra State Transport also runs three buses from Bombay to Mangalore. These services touch Udipi, Coondapur, Bhatkal, Kumta, Sirsi, Hubli, Dharwar, Belgaum and Nippani in Mysore State and Kolhapur, Satara and Poona in Maharashtra State before reaching Bombay. There are also several other day and night luxury bus services from Mangalore to important places both in and outside the Mysore State.

Bus stands.—A great deal of earnest thought and attention has been bestowed by Municipalities and Major Pancahayats to construct bus stands. The bus stand in Mangalore is in the heart of the city behind the Hampanakatta bazaar and by the side of the Karnad Sadashiva Rao Road. The open space behind the bus stand is used for parking town buses and the sideways

have been thrown open for motor traffic. In the first floor of the building, the Municipality maintains 14 well-ventilated rooms for the use of passengers who alight for a short stay. The booking offices of various bus companies are located in the main bus stand providing also advance booking. Likewise, at Udipi and in the Major Panchayat towns of Puttur, Karkal, Coondapur, etc., good bus stands have been built. Passengers have the advantage of having rest in waiting halls of these bus stands which are provided with drinking water amenity, left-luggage facility, etc.

Town buses.—The Mangalore and Udipi cities have city bus services operated by private owners with a regulated fare schedule. In Mangalore, the bus routes radiate from Hampanakatta. The city buses in Mangalore go as far as Guntakal, a distance of 16 kms. (10 miles). Udipi has about 15 routes. Communication facilities in this respect in these two places are ample. The M.S.R.T.C. has provided the services of two buses at Mangalore and of one bus at Puttur exclusively for students.

Taxis ply in and between all principal towns and big villages in the district; they are metred and their charges are regulated. In recent years, autorickshaws have come into use for local conveyance in the towns. The hire charges of autorickshaws are much less than those of taxis.

Vehicles and conveyances

As on 31st March 1971, there were 4,330 motor cycles and scooters, 4,229 motor cars, 45 jeeps, 621 autorickshaws, 453 taxi cars, 412 stage carriage, 2,507 goods vehicles and 753 other vehicles (in all 13,350 vehicles) in the district which in this respect, ranked next only to Bangalore district which had a total number of 51,465 vehicles in 1971. The figures of various types of vehicles registered in the South Kanara district during the years from 1964 to 1971 were as follows:—

Year (as in March)	Motor Cycles and Scooters	Motor Cars	Jeeps	Auto- Rich- shaws	Taxi- cars	Stage carria- ges	Goods vehicles	Others	Total
1964	556	1,932	112	100	155	237	1,355	103	45,64
								+14	Omni buses
1966	1,203	2,392	174	173	150	316	2,017	133	6,580
								+22	Omni buses
1968	2,263	2,980	261	300	181	394	1,830	240	8,481
								+32	Omni buses
1970	3,618	3,778	352	562	327	460	2,273	622	11,992
1971	4,330	4,229	45	621	453	412	2,507	753	13,350

It can be noticed that the district registered an increase of nearly three times in the total number of vehicles from 1964 to 1971. The bullock carts are still playing a role in the economy of the district. As in 1968, there were 3,100 bullock carts in the district. There were 22,000 cycles in the district, which also form an important means of conveyance for the general public.

The following are the figures pertaining to road accidents that occurred in the district during 1968-69, 1969-70 and 1970-71 :—

<i>Year</i>	<i>No. of accidents</i>	<i>No. of persons killed</i>	<i>No. of persons injured</i>	<i>No. of persons injured and killed</i>
1968-69	352	69	383	452
1969-70	445	83	424	507
1970-71	414	76	410	486
Total	1,211	228	1,217	1,445

All motor vehicles in the district come under the Motor Vehicles Regulation Act. All vehicles driven by internal combustion like petrol and diesel have to be registered according to the vehicle's horse-power, seating capacity, capacity for laden weights, etc., and vehicle taxes have to be paid to the Government. Lorries and trucks are increasingly coming into use for carrying merchandise, since they provide a quick means of transport. The Regional Transport Inspectors have to inspect the vehicles and determine how far they conform to the Motor Vehicles Regulations. Private carriers are those lorries owned by persons for their private use and public carriers are lorries meant to be hired out to customers. Motor vehicles include motor cycles, scooters, trucks, jeeps, etc.

The South Kanara district has been a bee-hive of tourists, drawn from all ranks-pilgrims, sight-seers, big-game hunters, and lovers of fauna and flora. However, tourism, in the modern sense has not developed to the desirable extent. The various places of interest in the district (see Chapter XIX) are now easily accessible. There are now (1972) 18 travellers' and inspection bungalows maintained by the Public Works Department. A list of such bungalows is appended at the end of the Chapter. In addition, many rest houses are being maintained by the Taluk Development Boards and Municipalities. In 1973, a new rest house with modern facilities, called the Sharadadevi Birla Dharmashala, was built at Udipi for the benefit of pilgrims visiting the place.

Tourist facilities

In the old days, when communications were not well developed as at present, people, mostly pilgrims, trekked along

the dust-ridden roads halting at the wayside villages partaking of the hospitality of the rural folk. Udipi, Subramanya, Dharmasthala and Kollur were reached on foot by those coming from Mysore side or from places in the north. Unmindful of various difficulties of travel in the conditions of those days and possible dangers from wild beasts, these pilgrims fulfilled their heart's desire of visiting holy shrines. Villagers received them hospitably and gave them accommodation with provision of utensils and foodstuffs.

In almost all the pilgrim centres unfurnished *dharmashalas* maintained by the philanthropic public and also by the authorities of the temples, and *mathas* provided lodging for those who desired to stay for a few days. No advance notice or intimation was necessary to stay in these places. In addition to these traditional *dharmashalas*, priests, who conducted rituals, also took pilgrims as paying guests. Those, who congregated at these places on festival days, had to elbow themselves in on a priority basis.

The district at one time abounded with *chhatras* for the accommodation of the pilgrims. Nagappa Holla's *chhatra* at Baindoor, Yadatare Duggappa Shetty's *chhatra* at Jalkal and Shirur Patil Shena Shetty's *chhatra* at Kollur were well-known. The *chhatras*, were also located in Uppinangady area at Kabuka Kadikar, Kukke, etc. In some of the *chhatras*, persons of the priestly class had a free meal a day and others had the choice of getting food-stuffs for one free meal a day.

Now there are a good number of travellers and there are many boarding and lodging houses, some of them located even in small places. They can find accommodation in furnished rest houses also and order for food at reasonable notice. Places like Mangalore, Udipi, Coondapur, Puttur and Karkal have good hotels with modern amenities. In the last two decades, boarding and lodging homes have sprung up profusely. In a few hotels at Mangalore, air-conditioned comfort is also available. Well-ventilated rooms with attached conveniences are a feature in modern hotel industry. Lakhs of rupees have been invested to raise palatial hotel buildings with a spacious courtyards for parking of cars and the like. Shower-baths, hot and cold water basins, and luxurious lounges are also provided in some of the hotels.

Hotel comforts and conveniences noted above are a particular feature of Mangalore, because of its importance from several points of view. In the taluk headquarters, there are lodging and boarding houses which provide ordinary comforts at cheap rates. A number of enterprising persons have migrated from Udipi and other parts of the district to other parts of this State and other regions of the country and have been pioneering hoteliers. Some of them have a flourishing business of large proportions. The

restaurants and lodging and boarding houses run by them at many places are popularly known as "Udipi hotels" (See also Chapter VIII).

Travel agents and travel bureaux in Mangalore are few, though several individuals have taken up the profession of booking seats in buses. They are called bus agents and canvass intending passengers to take a particular bus. The private owners of bus services engage these agents on a commission basis. Some of them also guide the people to proper places and as to where to stay and what to see, etc. Though there are many attractive sight-seeing places in the district, guides have not been properly organised. Old men in villages, forest guards, etc., sometimes help the tourists to find the nearest route. The State Government have established a Tourism Development Corporation to help the growth of tourism in the State on modern lines.

**Travel agents
and guides**

Private travel agencies have of late introduced new methods of attracting visitors for conducted tours. Short trips are arranged in buses to visit sight-seeing places in the district. They provide the necessary facilities that a traveller or a sight-seer needs for visiting places of religious or historical interest. Tourist buses are run with a party of 50 or 60 travellers for a trip.

WATERWAYS

Ports in the district :—There are six recognised ports in the district, namely, Mangalore, Hangarkatta, Coondapur, Malpe, Baindoor and Mulki; the last two are open only to the 'pattamars' or country-crafts which sail up and down the coast while the others are frequently visited by steamships, except, of course, during the stormy and monsoon months. Mangalore is the most important port among them.

Mangalore is situated between Marmugoa and Cochin, being 302.5 kms. (188 miles) distant from the former and 321.8 kms. (200 miles) from the latter. On the western coast, south of Bombay and north of Malabar, it is the most populous town as also the most advanced one in trade, industry, education, etc. It has better communications with the rest of India, and more particularly with its hinterland, than any other port south of Marmugoa and north of Cochin. In regard to the site of the harbour proper, few ports in India are better placed. Nature has provided two rivers which, in addition to acting as arteries of trade, meet at Mangalore at right angles to one another and form a lagoon or backwater 5.6 kms. (3½ miles) long and 2,000 feet wide. This backwater is separated from the sea by a sand spit which is over 300 feet wide at its narrowest and averages about 1,000 feet in width. As a consequence, the backwater provides a basin of

**Mangalore
Port**

perfectly smooth water which, if dredged to the required depth, would give absolutely safe anchorage to sailing ships and small steamers in all weathers.

A glance at the map of South India will show that Madras on the East Coast, Bangalore in the centre of the land mass, and Mangalore on the West Coast lie in a direct line which divides the southern half of the peninsula into two almost equal parts. The existing Mangalore port is in a fair stage of development with a comparatively larger volume of traffic in comparison with other ports in the south of the West Coast. Most of the facilities needed for sea-borne trade, such as reclaimed wharves with proper electrification, godowns, tug and motor launch for towing loaded boats from shore to ship and *vice versa*, cranes, etc., are provided at Mangalore by the Port Trust, which is the administrative authority of the port.

The question of development of Mangalore port had been under the active consideration of Government for a very considerable time and the Government of India, in the year 1950, on the recommendations of the West Coast Major Port Development Committee, decided to conduct model experiments at the Central Water and Power Research Station, Poona, with a view to establishing the feasibility or otherwise of maintaining a dredged channel at Mangalore. Both the Government of India and the Government of Madras had pronounced from time to time that the development of Mangalore port would be taken up after the result of experiments became available.

The model experiments carried out at the Central Water and Power Research Station established the fact that the port could be developed into an "All-Weather Port" to admit steamships with draft upto 24 feet by providing two break waters 2,000 feet long, placed 1,250 feet apart. The question was then examined by the technical officers of the Union Ministry of Transport and the Ministry evolved a new design which would provide a new all-weather deep-water port at Panambur, situated 8 kms. (5 miles) to the north of the existing port. A detailed plan was prepared for the purpose and the work was begun soon after. Considerable progress has been achieved in the execution of this project which is highly important for the district and the State. It is being carried out by the Ministry of Transport and Shipping, Government of India. (See elsewhere in the Chapter for particulars of this project).

Malpe Port

The Port of Malpe is situated at the confluence of the Udyavara river in Kodavoor village, Malpe. It is 64 kms. to the north of Mangalore and five kms. to the west of Udipi. The port has a great natural advantage of being sheltered from the sea by a string of granite islands running parallel to the coast at a distance

of about one and a half kms. The northern most island, called Daria Bahadurgarh Island, is 53' (16 m.) high, while the southern-most island, called Kare-Illada Kalloo, is 47' (14 m.) high. The island in between is called Daria Gadora Kalloo. The port light house is situated on the summit of the northern most island. Between Daria Bahadurgarh and Daria Gadora Kalloo, there is a wide channel rendering a safe place for anchorage of vessels during stormy winds and adverse weather conditions. At the port light-house, an oil lamp is exhibited at an elevation of 4.8 m. (16') from a tower constructed in 1888.

There are four declared wharves at the port. Most of the sailing vessels load or unload cargo in stream with small lighters. A cargo shed is also available for the storage of cargo. The nearest railway station is Mangalore, 64 kms. south, connected by the West Coast National Highway. The nearest airport is Bajpe about 75 kms. by road. The West Coast Road passes at a distance of three kms. from the port and is connected by a good motorable road. A regular bus service from Malpe to Udipi connects different bus routes to various important places.

The Udipi and Karkal taluks and parts of Mangalore and Coondapur taluks form the hinterland of Malpe. Agumbe, which is outside the district, also serves as the hinterland of Malpe. Prior to 1969, passengers-cum-cargo steamers of M/s. Scindia Steam Navigation Co. were plying regularly once a week between Bombay and Cochin *via* the coastal ports of South Kanara including Malpe. Since 1969, they have, however, ceased operating.

It is proposed to develop Malpe into an efficient fair-weather minor port for handling about 25,000 tons of general cargo. During the II and III Five-Year Plans, port facilities such as dry stone masonry wharf, wooden jethies, departmental quarters, etc., were provided. Navigational aids have also been improved.

The State Government intend developing Malpe Port as a Fisheries Harbour. The development schemes included in the IV Five-Year Plan for the Malpe port are : (1) Improvement of existing leading light house at a cost of Rs. 0.8 lakhs ; (2) Construction of staff quarters at a cost of Rs. 0.3 lakh and ; (3) Improvement of the existing light house at a cost of Rs. 0.8 lakh, the total cost being Rs. 1.9 lakhs.

Mulki port, located in a remote locality about five kms. to the south-west of the Mulki town, has been, however, closed for the traffic since 1960. **Mulki Port**

The Hangarkatta port, situated at the confluence of the rivers Sitanadi and Swarnanadi at Balakudru village, is 77 kms. north of Mangalore and 23 kms. south of Coondapur. It is a **Hangarkatta Port**

riverine port and closed for traffic during the south-west monsoon. There are three declared wharves at the port and most of the sailing vessels load or unload their cargo in stream by lighters. The nearest air-port is at Bajpe near Mangalore, 97 kms. by road. The West Coast National Highway, which is at a short distance of 1.5 kms. from the port, is connected with a good motorable road. There is a regular bus service from Hangarakatta to Udipi, connecting different bus routes to various important places in and outside the district. Parts of Udipi and Coondapur taluks form the hinterland of this port. No development schemes have been envisaged for this port because of meagre traffic.

**Coondapur
port**

The Coondapur port is situated at the confluence and on the northern bank of the rivers Haladi and Chakranadi at Gangolli village. The port is 18 kms. north of Coondapur town and 97 kms. north of Mangalore city by road. This port is a riverine port and is closed for traffic during the south-west monsoon. It is well protected against winds and waves by a chain of rocks extending for 1.75 metres west-south-west at the western edge and a stretch of rocks roughly 5 kms. north of entrance, rendering shelter for anchorage of vessels during stormy winds and adverse weather conditions.

There are four declared Government wharves and five private ones for loading and unloading operations. Most of the vessels load or unload cargo directly from the wharves and a few in stream by lighters. Foreign steamers call at the port for lifting iron or manganese ore and anchor at a distance of two to four kms. depending upon their draft in a holding ground of sand and mud.

There are two light houses, one at Tipu Sultan Gudda and the other at Kodi to the south of the Port. At the former, an 'Aga' light is exhibited since September 1965 and at the latter a white kerosene light is fixed. There is a twin screw diesel tug and a pilot launch owned by the Department, based at the port for providing towage service. They are also available for special trips on requisition. The nearest railway stations are Mangalore (114 kms.) south and Sagar (113 kms.) north-east of the port. Bajpe, near Mangalore, is the nearest air-port, at a distance of 117 kms. The West Coast National Highway, which is at a distance of five kms. from the port, is connected by a good motorable road. The whole of Coondapur taluk in South Kanara and Shimoga, Siddapur, Bhadravati, Koppa, Sagar, Talaguppa and Hosanagar outside South Kanara form the hinterland of this port.

The State Government intend developing the Coondapur port into a fair-weather minor port for handling about 60,000 tons of general cargo and about 1.75 lakh tons of iron and manganese ore per year. During the II and III Five-Year Plans, facilities such as 300 feet long lighterage wharf, 1,000 feet long sheet-piled

wharf with sufficient stacking area for 50,000 tons of bulk cargo, one tug and one pilot launch for harbour service, departmental office and quarters, labour amenities, improvement of navigational aids, etc., were provided. It is proposed to develop this port as a Fisheries Harbour with facilities to cater to off-shore fisheries with about 49,100 tonnes of fish catch per year. The development schemes included in the IV Five-Year Plan were as follows :—

<i>Sl. No.</i>	<i>Scheme</i>	<i>Estimated cost (Rupees in lakhs)</i>
(1)	Construction of a Beacon Light at Tipu Sultan Gudda	0.8
(2)	Construction of staff quarters	0.3
(3)	Construction of mechanised cargo-handling equipment	5.0
(4)	Formation of a new approach road to the wharf	1.0
(5)	Construction of a transit shed	1.0
(6)	Provision of river training work	30.0
(7)	Improvement to the existing light at Kodi	3.0
	Total	41.1

The Baindoor port is situated on the bank of the Baindoor river at Paduvaru village in Coondapur taluk. It is 29 kms. north of Coondapur and 122 kms. north of Mangalore. The port has a sub-port called Shiroor about 12 kms. to the north. The Baindoor port is a riverine port and is closed for the traffic during the south-west monsoon. There are two declared Government wharves for handling cargo. Mangalore is the nearest railway station to the south and is 122 kms. by road and the nearest air-port is Bajpe, near Mangalore. The West Coast National Highway, which passes at a distance of four kms. from the port, is connected by a good motorable road. Because of meagre traffic no development schemes have been envisaged for this port. (See also Chapter VI).

Baindoor Port

The existing port of Mangalore is open only for a period of eight months in a year from 16th September to 15th May. It is closed during the south-west monsoon when the bar at the mouth of the combined confluence of the two rivers Netravati and Gurpur with sea becomes too rough for any boat or lighter to cross. Therefore, a new all-weather port for Mangalore is considered necessary for the economic development of the hinterland.

Mangalore Harbour Project

The hinterland of Mangalore is rich in mineral deposits such as iron and manganese ore. Large deposits of iron ore have been located at Kudremukh in Chikmagalur district, for which the Mangalore port is the only natural outlet. There are also rich forests in the hinterland. The Mysore Iron and Steel Works at Bhadravati lies within the hinterland of Mangalore. Besides there

are a number of factories in the region producing sugar, paper, cement, Mangalore tiles, super-phosphate, etc. The hinterland also comprises rich coffee and cashew-nut plantations. In the absence of an all-weather port, the import and export traffic from the hinterland is at present routed through Madras, Cochin and Marmagoa ports. In addition to the expansion of the existing industries, the region has potentialities for developing a number of new industries. The Mysore Iron and Steel works has begun to produce finished alloy and special steel in place of common steel. The work connected with the Mangalore Chemicals and Fertilisers Ltd. has already been started. The commodities concerned with the export and import trades are manganese ore, ferro silicon and ferro chrome, tiles, haematite iron ore, salt, forest products and pulses, coffee, fisheries products, cashew-nuts, cashew kernels, copra, arecanut, fertilisers, raw materials for fertiliser plants, coal and coke, cement, petroleum products, foodgrains hardware, cutlery, etc.

Mangalore is connected by a broad gauge railway line to Madras *via* Calicut. The work on Hassan—Mangalore railway line is in progress and is expected to be completed by the time the new port is commissioned. Recently, the 25 kilometre Mangalore-Panambur broad gauge railway line, constructed at a cost of Rs. 2.6 crores, has been commissioned. The West Coast National Highway passes adjacent to the harbour project site.

**Scope of the
new port**

After detailed investigations, the site for the new all-weather port was selected about nine kms. north of the existing port of Mangalore. The new port as conceived now will provide for three alongside berths to cater to (1) general cargo, (2) iron ore and manganese ore and (3) raw-material imports for fertiliser factory; one shallow draft berth for export of finished fertilisers; one mooring berth for general cargo and one mooring berth for naphtha and petroleum products. An additional alongside berth will be provided to cater to the increased traffic expected by 1975-76. The port will cater to 9-15 metres (30 ft.) draft loaded ships. The project is estimated to cost Rs. 24.30 crores involving foreign exchange component of Rs. 2.065 crores. The port when completed is expected to cater to a traffic of 29.60 lakh tonnes annually which is expected to increase to 30.24 lakh tonnes by 1975-76 in the first phase. In the second phase, the harbour will be expanded to cater to 60,000 D.W.T. bulk ore carriers of 12.20 metres (40 ft.) draft, handling large quantities of iron ore export when needed. A separate ore berth with mechanised loading facilities of capacity of 4,000 tonnes per hour will be provided at that time. Space has been provided in the master plan layout of the port for additional berths to cater to general cargo, bulk cargo, petroleum products, containerised cargo and fisheries dock. The layout plan for the port has been prepared in such a way

as to create facilities at the port to cater to 1,00,000 tonnes at a future date.

Detailed foundation and subsoil investigations, studies on winds, waves, currents, littoral drift, model studies on various layouts of harbour, etc., were completed. Further, model studies relating to a deeper draft have been taken up in the Central Water and Power Research Station, Poona. Lands, private and Government, to an extent of 2,341 acres, required for the project, have been acquired. A first class meteorological observatory, a full-fledged quality control laboratory with a soil section, concrete section, chemical section and photographic section and a shore-based wave recorder have been established.

Keeping in view the requirements of the port during its operation stage, 299 permanent quarters of various types have been constructed for occupation by the staff. A separate building for bachelor employees of the project has been constructed. A permanent administrative office building for use as a port office has also been built. Three godowns, four store sheds, buildings for temporary workshop, market, police station, primary school, health centre, nursery school-cum-ladies community centre, steel yard, canteen and two sight offices have been constructed. Construction of a permanent workshop has also been completed. The market building was extended at a cost of Rs. 45,300 and the new shop-stalls have been allotted to various shop-keepers.

Approach roads to quarries, internal roads in the staff colony and a few roads in the harbour estate required for immediate use have been laid. Two shallow wells of 30 feet diameter each have been dug in the harbour area. Two overhead reservoirs (one of 50,000 and another of 20,000 gallons capacity) have been constructed and the distribution lines have been laid. An R.C.C. overhead tank of 2,00,000 gallons capacity has also been constructed. For port operations it is estimated that initially a quantity of five lakh gallons of water is required per day. This is expected to increase to 30 million gallons in 15 to 20 years. The construction of an underground reservoir of 50,000 gallons capacity near the overhead tank has been completed. The Mysore Electricity Board has been supplying the required power for harbour works and the staff colony. Transmission lines with transformers have been laid wherever necessary.

Regulator arrangements for prevention of floods have been completed. Installation of a sewerage treatment plant at an estimated cost of Rs. 2.30 lakhs has been taken up and the work is nearing completion. The work on excavation of high grounds within the harbour estate upto +3.66 m. level and utilising the excavated material for raising the low-lying areas in the harbour estate to the level of +3.66 m. has been completed.

Dredging and reclamation works are also in progress. As in August 1972, the net expenditure incurred on the project since inception was Rs. 41.32 crores.

Ferries

Due to the denudation of forests, the rivers in the district of South Kanara are becoming more and more difficult for navigation, owing to sand beds and islands being formed in the river mouths. Fresh openings have not been possible. There has not been proper channel maintenance so as to help open up waterways connecting the coast to the interior.

It has been recorded in chronicles of the old-time travellers that during the Portuguese rule, foreign boats used to go up the stream upto Barakur and Basrur which are 4.8 kms. (three miles) inland. These waterways have now been silted up. Unless dredging is done with proper protective embankments, these waterways will not be useful for traffic. Unlike places in the far south of the western sea coast where backwaters have been made use of for long distance traffic, the estuaries and river mouths in South Kanara have only a limited use. The waterways worth mentioning and through which communication exist even to-day are the two important routes from Mangalore to Panemangalore and then on to Buntwal, a distance of 29 kms. (18 miles). The other route is the Mangalore-Gurpur route along the Gurpur river upto a distance of 16 kms. (10 miles). On these two routes, small country boats laden with rice and other consumer articles are taken from the interior villages to Mangalore.

The Buntwal-Panemangalore waterway of 29 kms. (18 miles) along the Netravati river follows the Sampaje Ghat Road and the Kodekal Ghat Road on the Puttur-Mangalore trunk road. The Gurpur Waterway follows the Agumbe Ghat Road. During the south-west monsoon downpours, these waterways are seldom used because of the floods in the rivers. Except in those rainy months, boat traffic is quite heavy on these two waterways.

The Netravati and Gurpur rivers discharge a large volume of their combined waters into the backwater, forming a common estuary with a large spit of sand intervening between it and the Arabian Sea for a distance of six kms. ($3\frac{1}{2}$ miles). The width and form of the sand spit varies after each monsoon. Since the closing of the Gurpur river entrance in 1887, the sand spit has, on the whole, increased in width and is now about 300 feet wide at its narrowest point. The backwater is at present only connected with the sea at the mouth of the Netravati river. At various times, there have been one, two or three entrances to the sea, but since 1887 when the Gurpur river entrance was closed, the entrance opposite to the Netravati river has been the only one open. About May, *i.e.*, before the south-west monsoon breaks, the entrance is at its narrowest and then the bar is at its worst. The depth of

the water is four to six feet at the bar at low tide. For a number of years until 1909 there was considerable erosion of the foreshore on the sea side to the north of the sand spit, but after that year, erosion has stopped allowing boats to ply freely.

The backwater traffic along the coast from Mangalore to Panambur, a distance of 8 kms. (five miles), is also considerable. The rivers flowing from east to west across the coastal strip offer good scope to open up water communications upto a distance of 24 to 29 kms. (15 to 20 miles) inland. Further up, the rivers do not allow of any traffic because of the ascent up the mountains with rocky beds and cataracts. The rivers Netravati, Gurpur, Halady, Gangolli and other small streams provide easy waterways. In addition to these river waterways, the coast from Mangalore to Coondapur is used for small laden country crafts for transporting consumer articles. Except during monsoon months, there is abundant coastal traffic all the year round. It is easy for boats to go up to Coondapur, a distance of about 96.6 kms. (60 miles) in 25 to 30 hours.

Ferry service along the coast road from Mangalore to Coondapur and across most rivers inland has been a common feature in this district. Where the construction of a bridge across rivers, big and small, is too expensive, a good and efficient ferry service helps the people to get across and also allows easy transport of goods. In 1957-58, there were 78 ferries under the management of the District Board. Nine ferries, namely, Koteyar, Mannur, Kudige, Adekal, Gundhari, Bajre, Hebri, Mudukodi and Varahi were temporarily closed for want of bidders. The total amount realised from the ferries during 1957-58 was Rs. 21,265. The Coondapur Panchayat was managing two ferries. Along with this, the Highways Department was managing one and also private agencies two. The classifications of the ferries under the management of the District Board during 1957-58 was as given below:—

Taluk	Number of ferries				Total
	Ist Class	II Class	III Class	III Class	
			(a)	(b)	
Mangalore	..	1	3	12	16
Belthangady	1	13	14
Puttur	..	1	5	10	16
Udipi	..	5	4	4	13
Coondapur	..	2	4	6	12
Karkal	2	5	7
Total	..	9	19	50	78

Now, the use of ferries is gradually on the decline as the river crossings are being bridged. Some ferries are out of use for want of bidders. After the abolition of the District Board, the ferries have been taken over by the Taluk Development Boards. During the year 1972-73, there were 62 ferries in existence as against 78 during the year 1957-58. The taluk-wise figures showing the number of ferries and annual income as in 1972-73 were given below :—

<i>Taluk</i>	<i>No. of ferries</i>	<i>Annual income</i>
		<i>Rs.</i>
1. Coondapur	12	751
2. Mangalore	7	2,546
3. Buntwal	13	1,075
4. Udipi	10	2,357
5. Karkal	5	75
6. Puttur	6	1,753
7. Belthangady	4	62
8. Sullia	5	3,400
Total	62	12,019

Only a few ferries are being maintained by the Public Works Department. One ferry from Kallianpur to Bhadravari in Udipi taluk, a ferry from Coondapur to Gangolli linking the Gangolli village to Coondapur in Coondapur taluk, another across the Ennehole stream in Karkal taluk (used only in the rainy season) and three ferries across the Neria river in Belthangady taluk were under the control of the Public Works Department. Most of the ferries are across the Kumaradhara, Netravati and Gurpur rivers.

Mangalore is surrounded by the Gurpur river on the northern and western side and by the Netravati river on the southern side. There are two ferries under the control of the Mangalore Municipality, one at Jeppu on the Netravati and the other at Bolar on the Gurpur river. Boats and launches are used to carry passengers and goods. When the tide and the wind are favourable, these ferries work quite efficiently on the coastal strip. Away from the coast, the ferries are small ones. There are tiny canoes or dugouts plying across the Kumaradhara river near Subramanya and across the Netravati near Dharmasthala. The passengers, who are carried by these dugouts, have to keep their balance while being ferried across. The canoes are very popular among the local inhabitants.

RAILWAY COMMUNICATION

When compared to the length of roadways, railway communication in the district of South Kanara is indeed very poor. The

only route passing through the district is the broad gauge line from the south terminating at Mangalore. Before the States' Reorganisation, the railway line in the district was for a distance of 46.7 kms. (29 miles), but after the Kasaragod taluk was separated from the district and merged with Kerala, there is at present (1972) only a very small length of 12.87 kms. (eight miles) in the district. In the south of the district, Ullal is the last railway station.

The coast south of Mangalore affords no great facility for road traffic, as it is cut across by wide rivers and streams flowing westwards to the Arabian Sea. Contact between South Kanara and places in Kerala and Tamil Nadu is largely through the Southern Railway route between Mangalore and Kozhikode and thereon through Shoranur, Podanur, Coimbatore, Salem, Jalarpet and Madras. People wishing to travel to places in further south have to change either at Shoranur to go to Trivandrum, or at Erode to go to places in Tiruchirapalli, Madurai and Ramanathapuram districts.

The history of the railway along the coast dates back to 1906-07 when the Calicut-Azzhikal section of the broad gauge was extended up to Kanhangad and then by stages to Kasaragod, Kumbala and Mangalore. People in Mangalore saw their first train coming from Calicut in 1907 when the link was established. Extension of the railway up north to places like Udipi and Coondapur was not taken up due to wide rivers and estuaries on the Mangalore-Mulki-Udipi route.

When the first railway link was established in South Kanara, the South Indian Railway, an incorporated company registered in England, was functioning. It laid the new route from Azzhikal to link the headquarters of South Kanara with the rest of South India. This company was taken over by the Government of India along with the Madras and Southern Maratha Railway Company. The Southern Railway, which is vested with the management of the railways in South India, has now the charge of the railway route in the district.

The Palghat gap has been a blessing to people in Malabar and South Kanara. The mighty Nilgiris and the Western Ghats, which join near Palghat, allow a gap of about 24 kms. (15 miles) in width and this natural opening was made use of to lay the railway from Madras to Mangalore. But for this, a railway line across the mountains would have been very difficult. The railway line from Kasaragod enters Mangalore from the south-east after crossing the wide Netravati river by a fine bridge of 16 spans of 150 feet each. The railway line in the vicinity of Mangalore passes along Cantonment, Fort and Jeppu wards. The line

crosses the roads in the Jeppu Ward through a cutting, and runs over an embankment across the agricultural fields.

A good line branching westwards with a curve along the south of the Cantonment Ward and west of Fort Ward to Bunder has been laid. This line crosses the Mangaladevi Temple Road and the Rosario Church Road at level-crossings. These level-crossings are closed to road traffic at frequent intervals for purposes of public safety. The Mangalore railway station is situated along the road south of the taluk office and to the east of the Wenlock Hospital.

**Mangalore—
Hassan railway
line**

Ever since 1870, there has been a persistent demand for a railway link between Mangalore Port and the Mysore Plateau, for opening up the vast potentialities of the hinterland. The public of South Kanara submitted several representations to the Government of India, requesting to examine the possibilities of such a line. In response to this demand, the Madras Government was asked in 1882 to conduct a reconnaissance survey of four separate routes, *viz.*, from (1) Mangalore via the Shiradi Ghat to Hassan and Arsikere, (2) Mangalore to Mysore city *via* Coorg, (3) Tellicherry to Mysore *via* Coorg and (4) Cannanore to Mysore *via* Coorg. Finally, it was recommended to explore the possibilities of the two routes, *viz.*, Mangalore to Arsikere *via* Hassan or Mysore to Tellicherry *via* Coorg. This survey was conducted under the direction of Mr. Groves during the years 1893 and 1894. The Government of India, after going through the survey report, ordered a more detailed survey of the distance of 240.5 kms. (144 miles) from Mangalore to Arsikere. The construction of this line was then estimated to cost Rs. 1,69,62,253. This detailed survey was conducted by Mr. Gilchrist. A location survey was also conducted by him during the years from 1895 to 1899. This location survey envisaged a metre gauge line from Mangalore to Arsikere *via* the Shiradi Ghat and Hassan, having a distance of 231.7 kms. (137.29 miles) at an estimated cost of Rs. 1,86,88,646. Again in 1899, the Government of India ordered a reconnaissance survey to assess the potentialities of the line and this was carried out by Mr. Groves. But the whole idea of a railway link between the west coast and the Mysore plateau was shelved till 1914, when the Railway Board ordered a fresh survey entrusting the work to Mr. Richards. The latter concurred with the opinion of the earlier surveyors. But again, no further action was taken in the matter for a long time. Later the popular Government having a fresh look at the possibility of a railway link between Mangalore and Hassan, ordered a detailed engineering and traffic survey in August 1953, which was conducted during 1954-55. The Railway Board, after scrutinising the survey reports, responded to the wishes of the people of both the areas by sanctioning the construction of the new line, on 2nd November 1964. The total cost for the entire length of 189 kms. (117.57

miles) was then estimated at Rs. 23.70 crores and the year 1971 was fixed as the target date for the completion of the work.

The actual work on the new line began in 1965. The work on the line was divided into three convenient and viable units. While the 45 kilometres (28 miles) long Hassan—Sakleshpur line is in the plateau section and the 49.9 kilometres (34 miles) long Sakleshpur—Subramanya line lies in the formidable ghat section, the 93.3 kilometres (58 miles) long Puttur—Mangalore line is in the plain section. Works on all these three sections have been going on briskly and simultaneously involving about 20,000 labourers.

As in April 1970, rails were laid upto a distance of 11.265 kms. (7 miles) from Hassan and the construction of the first railway station building was almost complete. On 2nd October 1970, Hassan-Alur line was brought into use when the first departmental material train left the Hassan railway station for Alur. The construction programme on the plateau section has been comparatively easy.

After Sakleshpur, the terrain drops down from 3,000 feet above sea level (Sakleshpur) to 370 feet (Subramanya Road) registering a fall of 100 feet per every mile. This descent is negotiated through a track embedded with as many as 40 rock-cut tunnels, tall viaducts, high embankments and deep cuttings in the rocky strata. The alignment has to be fixed to a great degree of accuracy and a set of delicate instruments have to be employed to achieve refinement through a series of connections in successive stages. The members of the railway staff and the contractors in charge of this work have been specially trained to carry out this risky job. The cost of the explosives for the blasting operations was estimated to be Rs. 1.5 crores. The longest tunnel in the ghat section, which is 1,850 feet long, has been completed at a cost of Rs. 21 lakhs. The work in the plain section, *i.e.*, on the Puttur—Mangalore track was easy. The longest bridge (1,314 feet) is across the river Netravati at Buntwal.

**Special
features**

As in August 1972, 67 per cent of the work had been completed at a cost of about Rs. 23 crores. The anticipated cost of the project was revised in 1970 to Rs. 28.34 crores. As per the report of the Railway authorities, the total cost of the project would exceed the revised estimate also due to increase in cost of materials and labour and the work would be completed by the middle of 1974.

Out of the total length of 189 kms. (117.57 miles) of this new line, a length of 112.53 kms. (70.07 miles) is within the confines of the South Kanara district. When the construction is

completed, South Kanara will have, in all, a length of 202 kilometres (175.57 miles) of railways including the old broad gauge line. Although the new railway line is a metre gauge line, it has been so planned that it can easily be converted into a broad gauge at any time. For a total length of 189 kms. (117.57 miles) of railway line, there will be 118 major bridges including the longest one across the Netravati river and 573 minor bridges along the route. In the ghat section, there will be 43 tunnels, the longest one being 1,850 feet long. In all, there will be 186 level crossings, 17 over-bridges and nine under-bridges.

**Importance
of the line**

This railway line, which is to be completed shortly, would be a great monument to the engineering skill of Indian engineers. The route will serve as a key to the development of the *malnad* area which has rich natural resources and can help to transform the area and to usher in an era of prosperity. This will help transport huge quantities of iron ore from Chikmagalur district and also to industrialise the area.

The western ghats, rich in flora and fauna and noted for enchanting scenic beauty, would see a boom in tourist traffic when convenient passenger trains run on this line. A nature lover can undertake a delightful journey through the thick and picturesque jungle ranges on this new track. The line will touch 22 railway stations of which Mangalore, Buntwal, Puttur, Subramanya Road, Sakleshpur, Alur and Hassan are more important ones. The completion of this marvellous project will mark the realisation of the long-cherished dream of the people of both coastal and plateau regions.

**Proposed
Apta-
Mangalore
Railway line**

A broad-gauge railway line is proposed between Apta (near Kalyan in Bombay) and Mangalore along the west coast. The survey work of the line which began in June 1970 was completed in June 1971. The preparation of plans and estimates of this long route is in progress. This proposed Apta—Mangalore line would greatly help the development of the backward areas along the west coast. It would serve as an alternative to the coastal shipping service between Mangalore and Bombay. It would give direct connection to Gujarat also. It would be a welcome facility to trade and industry of South Kanara. Heavy passenger and goods traffic can be anticipated on the proposed line in view of the existing great scope for development of various industries and fisheries.

Airways

Ever since South Kanara became a part of the new Mysore State, the need for a regular air service linking Mangalore especially with the administrative capital was greatly felt and the Kanara Chamber of Commerce took up this question with those who had a say in the matter. Other public bodies too represented to the authorities about the need to provide an air link. Before

the reorganisation of States, Mangalore was served by a dakota passenger service once in a week, rather irregularly. Due to repeated representations by the public, a non-scheduled air service for operating once a week between Bombay and Mangalore *via* Bangalore was introduced from the 29th of December 1957. The need to increase the frequency was felt and was strenuously urged, with the result that a bi-weekly service between Bombay and Mangalore *via* Bangalore was introduced. This arrangement also proved inadequate and the public of Mangalore wanted an uninterrupted daily service.

Now (1972), there is a daily flight operating from Mangalore to Bangalore, Belgaum and Bombay. From these centres connections are available to major cities of India such as Madras, Delhi, Calcutta, Nagpur, Hyderabad and Poona. There are also daily flights from Bombay to Madras *via* Belgaum, Mangalore and Bangalore and *vice versa*. On an average, 30 passengers to Bombay and 10 passengers to Bangalore are being carried from Mangalore.

In all, there are fourteen arrivals and departures in a week. These are scheduled services operated by the Indain Airlines with HS-748 Aircraft. Since there is good response from air passengers travelling from Mangalore to Bombay and *vice-versa* there is likelihood of increasing the frequency of service to and from Bombay in future. About 7,500 kgs. of goods and 4,500 kgs. of mails are handled at Mangalore air port per month. There is a canteen at the Air port providing refreshment facilities to air passengers. The Indian Airlines provides transport facilities also between the air port and the booking office in Mangalore city.

The Civil Aviation Department of the Government of India maintains a civil aerodrome, 25.75 kms. (16 miles) away from Mangalore town on the Mangalore—Karkal Road very near the Bajpe village. This air strip is located amidst picturesque surroundings with ridges and valleys abutting all around. The aerodrome is constructed not far off from the main Karkal highway on a natural sloping maidan. The control tower and the administrative offices have been housed in suitable buildings. The runway is fit for light aircrafts. But Boeing can also land safely except during the rainy season.

The existing airport at Bajpe was constructed in 1951 and in the beginning it had facilities for landing only Dakotas. Subsequently, it was expanded to provide landing facilities for Avros in the early 1960. The air port is located on a 140-acre plot at a hill top which has deep valleys on three sides. Its further expansion to provide landing facilities for jets is stated to be not feasible. The execution of several development projects is necessitating a better air port for Mangalore. A suitable site (200-acre plot) in the area is to be found for building a new air port of international

standard with landing facilities for jets and supersonics. Survey work in this behalf is in progress.

Postal facilities

The Indian Posts and Telegraphs Department maintains a postal division in South Kanara. Formerly, this division comprised the whole of South Kanara district and a portion of Cannanore district in Kerala State. As in 1972, it included the whole of South Kanara and a village in Coorg district and is administered by a Superintendent of Post Offices with his headquarters at Mangalore. Whereas, previously, there were only three sub-divisions *viz.*, Mangalore, Udipi and Moodabidri, but in 1972, there were eight sub-divisions, namely, (1) Mangalore, (2) Puttur, (3) Buntwal, (4) Belthangady, (5) Karkal, (6) Mulki, (7) Coondapur and (8) Udipi, each under the administrative control of an Inspector of Post Offices.

In 1972 as many as 666 villages had daily postal service facilities and three villages had services thrice a week. The average area served by a post office in the district was 4.56 sq. miles and the average population served was 2,128 during the year 1971-72. As in 1972, there were four Head Offices situated at Mangalore, Puttur, Udipi and Coondapur. The taluk-wise figures indicating the number of category-wise Post Offices in the district as on 31st March 1972 were as given below:—

<i>Name of taluk</i>	<i>No. of Head Offices</i>	<i>No. of Sub-Offices</i>	<i>No. of extra Departmental sub-offices</i>	<i>Extra Departmental branch offices</i>	<i>Total</i>
1. Mangalore ..	1	38	1	80	120
2. Buntwal ..	..	9	..	71	80
3. Puttur ..	1	10	..	49	60
4. Belthangady ..	..	8	1	48	57
5. Karkal ..	..	18	.	70	88
6. Udipi ..	1	36	..	103	140
7. Coondapur ..	1	19	.	91	111
8. Sullia ..	.	6	.	41	48
Total ..	4	144	2	554*	704*

*41 includes a branch office in Coorg District).

Money Orders are accepted and issued at all post offices. Savings bank facilities are provided at the head offices and at sub-offices and branch offices. Post cards, covers and stamps are available for sale at all offices. Mails from Mangalore are also lifted by air to Bangalore, Belgaum and Bombay.

As in 1971, there was one Central Telegraph Office at Mangalore. As many as 150 combined post and telegraph offices were working under either morse or phonocom system all over the district. There were 33 telephone exchanges with 7,130 telephones in use as in 1971, Mangalore City alone having 4,200 phones. There were 139 public call offices and 42 long-distance call offices.

**Telegraphs and
Telephones**

During the year 1971-72, 37,417 radio sets were licensed against 17,832 during 1966-67. The All India Radio has started the construction work of a studio at Mangalore and a transmitting station at Brahmavara in the district. The work is proposed to be completed by the end of 1975-76.

Radio sets

As in 1971, the staff of the Posts and Telegraphs Division of South Kanara consisted of 810 class III officers, 115 class IV officials and 1,384 extra departmental staff, besides the Superintendent and the Inspectors of Post offices.

TABLE I

Particulars of road-lengths in South Kanara district from 1956 to 1971 (as on 31st March each year)

(Length in kilometres)

Year	Total road-length in charge of				Surfaced	Un-surfaced	Total road-length per square kilometre		
	P.W.D.	T.B.	F.D.	Total			Surfaced	Un-surfaced	Total
1	2	3	4	5	6	7	8	9	10
1956	1956	..	153	2,109	1,287	822	0.16	0.09	0.25
1961	1965	..	175	2,140	1,335	805	0.16	0.09	0.25
1966	1923	491	175	2,589	1,648	941	0.19	0.11	0.30
1969	2205	595	172	2,972	1,660	1,312	0.19	0.16	0.35
1970	2209	660	172	3,041	1,674	1,367	0.19	0.16	0.35
1971	2353	1,120	172	3,645	1,833	1,812	0.22	0.21	0.43

P.W.D.—Public Works Department.

T.B.—Taluk Development Board.

F.D.—Forest Department.

TABLE II

Taluk-wise and surface-wise particulars of road-lengths in South Kanara District as on 31st March 1971

(Length in kilometres)

Sl. No.	Name of taluk	Total for the district	Surfaced road-length				Un-surfaced road-length		
			Cement concrete	Black-topped	Water-bound macadam	Total	Motorable	Non-motorable	Total
1	2	3	4	5	6	7	8	9	10
1.	Udipi ..	494.0	1.0	192.0	138.0	331.0	137.0	26.0	163.0
2.	Coondapur ..	595.0	..	196.0	113.0	309.0	239.0	47.0	286.0
3.	Karkal ..	522.0	..	228.0	54.0	282.0	196.0	44.0	240.0
4.	Belthangady ..	344.0	..	127.0	43.0	170.0	104.0	70.0	174.0
5.	Mangalore ..	505.0	..	189.0	33.0	222.0	212.0	71.0	283.0
6.	Buntwal ..	397.0	..	124.0	41.0	165.0	232.0	..	232.0
7.	Puttur ..	448.0	..	201.0	23.0	224.0	185.0	39.0	224.0
8.	Sullia ..	340.0	..	107.0	23.0	130.0	107.0	103.0	210.0

TABLE III

Category-wise and surface-wise break-ups of the road-lengths (in kilometres) under the Public Works Department as on 31st March 1971

Sl. No.	Category	Surfaced			Un-surfaced		Total for the district	State total
		cement concrete	black topped	water-bound macadam	motorable	non-motorable		
1	2	3	4	5	6	7	8	9
1.	National Highways				Nil			1,269.0
2.	State Highways	1.0	622.1	39.9	..	..	663.0*	6,724.0
3.	Major District Roads .. ..	..	450.0	22.0	..	..	472.0	14,220.0
4.	Other District Roads .. ..	..	181.6	218.4	78.8	31.2	510.0	9,522.0
5.	Village Roads .. ..	..	102.3	126.7	317.2	161.8	708.0	17,197.0
	Total	1.0	1,356.0	407.0	396.0	193.0	2,353.0	48,932.0

* Out of the road-length of 663 Kms. 135.8 kms. of road-length was declared as the National Highway recently.

TABLE IV

Particulars of Inspection and Travellers' Bungalows in South Kanara as in 1972

Sl. No.	Name of Bungalow and place	Class	Taluk	Approach road and distance from nearest main road	Distance from Mangalore Railway Station in kms.	Point where approach road branches off	Facilities available like cook, utensils, furniture, water light, etc.	Number of suites available	Places of interest nearby and distance
1	2	3	4	5	6	7	8	9	10
1.	Circuit House, Kadri Hills, Mangalore.	I	Mangalore	60 feet from Vivekananda Road.	4.8	4.8 kms. of Mangalore—Agumbe Road.	Provided with all facilities.	8	Panambur beach 4.8 kms.
2.	Inspection Bungalow, Mangalore.	I and II	Mangalore	Just on the side of Mangalore—Agumbe Road.	3.0	4.1 kms. of Mysore—Agumbe Road.	do	8	do
3.	Inspection Bungalow, Buntwal.	II	Buntwal	0.2 km. from Mangalore—Mysore Road.	25.2	25.9 kms. of Mangalore—Mysore Road.	do except cook.	4	Nil
4.	Inspection Bungalow, Puttur.	II	Puttur	0.3 km. from Mangalore—Mercara Road.	51.0	51.6 kms. of Mangalore—Mercara Road.	Provided with all facilities.	4	(1) Subramanya temple 56 kms. (2) Koila Cattle Farm 20.8 kms.

1	2	3	4	5	6	7	8	9	10
5.	Inspection Bungalow, Kollur.	II	Coondapur	0.8 km. from Baindoor Hosanagar Road.	155	27 kms. of Baindoor—Nagod Road.	do except cook.	1	(1) Mukambika temple—0.4 km. (2) Kodachadri—32 kms.
6.	Traveller's Bungalow, Kollur.	II	do	do	155	do	do	1	
7.	Major Inspection Bungalow, Coondapur.	II	do	1.8 kms. from M.B.C. Road.	96	94.2 kms. of Mangalore—Baindoor Road.	Provided with all facilities except cook.	4	
8.	Minor Inspection Bungalow, Coondapur.	II	do	do	96	do	do		
9.	Traveller's Bungalow, Coondapur.	II	do	do	96	do	do	2	
10.	Pentland Inspection Bungalow, (Circuit House), Udipi.	I	Udipi	1 km. from Udipi Municipal Bus Stand.		4 kms. of Malpe Udipi Road.	Provided with all facilities.	1	(1) Malpe Sea Beach. (2) Fisheries Centre—4 km. (3) Minor Port (4) Manipal Educational Centre—5 kms. (5) Sri Krishna temple and Ashta Mutt—1 km.
11.	Major Inspection Bungalow, Udipi.	I	do	0.2 km. from Malpe—Udipi—Karkal Road.		do	do	2	

1	2	3	4	5	6	7	8	9	10
12.	Minor Inspection Bungalow, Brahmavara	I	do	1 km. from the 56.8th km. of Mangalore—Baindoor Road.	..	4 kms. of Malpe-Udipi Road.	Provided with all facilities.	4	
13.	Travellers' Bungalow, Manipal.	II	Udipi	10 kms. from Malpe-Udipi Road and 2 kms. from Malpe-Udyavara Road.	...	10 kms. of Malpe-Udipi-Karkal Road.	Provided with water supply, electricity and furniture.	2	Udipi—5 kms.
14.	Inspection Bungalow, Karkal.	II	Karkal	1 km. from Mangalore-Agumbe Road.	54	53.3 kms. of Mangalore-Agumbe Road.	Provided with all facilities except cook.	1	(1) Gommateshwara statue—1 km. (2) Ramasamudra lake 0-75 km. 3) Chaturmukha Basadi—0.6 km.
15.	Travellers' Bungalow, Karkal.	II	do	do	54	do	do	2	
16.	Inspection Bungalow, Mooda-bidri.	II	Karkal	0.2 km. from Mangalore-Agumbe Road.	35	35.6 kms. of Mangalore-Agumbe Road.	do	Major 2 suites	(1) Jaina temple (2) Savirakamba Basadi. } 1 km.
17.	Inspection Bungalow, Belthangady.	II	Belthangady	500 kms from Mangalore-Mysore Road.	60	8 kms. of Mangalore-Mysore Road.	do	Minor 1 suite.	(3) Other Jaina temples. }
18.	Travellers' Bungalow, Belthangady.	II	do	do	60	do	do	1 } 1 }	Dharmasthala 12.8 kms.