

### **11.3.2 TRANSPORT SERVICES AND INFRASTRUCTURE**

A well-knit and coordinated system of transport plays an important role in the sustained economic growth of the country. An efficient, safe and sustainable transport system is fundamental to the well-being of every citizen. The present transport system of the country comprises several modes of transport including rail, road, coastal shipping, air transport etc. Passenger mobility in the country heavily relies on rail and road networks.

Tamil Nadu is in the forefront in the country in providing an efficient transport service to the people. Rail and Road are the dominant modes of transport in Tamil Nadu. Railways provide track services for bulk movement of certain essential commodities and passenger transport. Road transport provides long distance services for other commodities besides taking up the medium haul and short haul traffic including feeder and distribution activities. Road transport offers advantages of lower cost for short hauls as well as flexibility in operation.

#### **Road Transport**

Before Independence, bus transport was in the private sector. After independence, the nationalisation of passenger road transport in Tamil Nadu was taken up in stages starting with the take over of all routes in Chennai city in 1948. In 1959, a policy was adopted to take over all bus routes exceeding 120 miles. Later a policy to nationalise the stage carriages was formulated in 1967. The stage carriages of private operators who owned more than 50 permits were acquired under the Tamil Nadu Fleet Operators State Carriages (Acquisition) Act, 1971. The idea was that the monopoly of big private operators should be checked. By this, Pandiyan Roadways Corporation, Cheran Transport Corporation and Cholan Roadways Corporation were formed. In August 1972, the Government announced its policy to nationalise the entire passenger transport service within 5 years. Accordingly, the Tamil Nadu Stage Carriages and Contract Carriages (Acquisition) Act, 1973 was enacted. But, again there was a change in the policy in 1976 and by an amendment in 1984, small bus operators, i.e., those holding 5 or less stage carriage permits were exempted. Later, the Tamil Nadu Motor Vehicles (Special Provision) Act 1992 was enacted allowing private operators to operate on the already permitted routes, the route length operated by them being frozen and grant of new permits to private operator on the approved scheme routes banned. Presently (as on 1<sup>st</sup> January 2004) there are 6571 private stage-carriages in Tamil Nadu.

In 1997, the Government felt that the State owned Transport Corporations were unable to cater to the needs of the people living in remote villages and introduced the mini bus scheme to ply in unserved rural areas. Each mini bus can ply up to a route length of 20 km with a provision to overlap up to 4 km in served route. Around 4000 mini buses are now operated in the State.

The network of Government buses, private buses and mini buses covers almost every town and hamlet in Tamil Nadu. There is also an increase in other modes of transport such as auto rickshaws, taxis, motor cars and omni buses. Further, there is also phenomenal increase in personalised vehicles like car, motor cycles, scooters etc. reflecting a change in transport demand pattern. The details of the vehicle population and its growth has been given in subsequent pages of this chapter.

In order to provide better service to the public, reduce losses of the Corporations and improve operational efficiency by fostering healthy competition, the State Government was considering privatisation of certain selected routes, services and operations and a Committee was constituted to study all the aspects connected with this move.

Now, the Transport Department is having under its administrative purview 7 State Transport Undertakings, the Tamil Nadu Transport Development Finance Corporation Ltd., the Pallavan Transport Consultancy Services Ltd., the Institute of Road Transport, Chennai and the Motor Vehicles Maintenance Department. The functions and activities of the above departments / organisations are outlined below.

### **A. State Transport Undertakings**

Till 1971, transport operations in the State were under the control of Tamil Nadu Government. After 1971, this was entrusted to the various Transport Corporations registered under the Companies Act, 1956. The Pattabiraman Committee in 1976 and the Thillainayagam Committee in 1990 made various recommendations for the improvement of the State Transport Undertakings and they were implemented wherever possible.

#### *Amalgamation of State Transport Undertakings*

In order to reduce the administrative overheads and to avoid wasteful competition in the operation of services among the Corporations, the Government amalgamated in 2003-04 the 21 Transport Corporations which earlier existed into 7 Corporations. The Government of India notified the amalgamation of the State Transport Undertakings. The seven Corporations now are (1) Metropolitan Transport Corporation Ltd., (2) State Express Transport Corporation Ltd., (3) Tamil Nadu State Transport Corporation Ltd., Villupuram, (4) Tamil Nadu State Transport Corporation Ltd, Salem, (5) Tamil Nadu State Transport Corporation Ltd Coimbatore, (6) Tamil Nadu State Transport Corporation Ltd., Kumbakonam and (7) Tamil Nadu State Transport Corporation Ltd, Madurai.

#### *Performance of State Transport Undertakings*

The total fleet strength of stage carriages operated under public sector undertakings in the State was 16664 in 2003-04. The efficiency of public transport in terms of kilometre operated per day had increased from 61.25 lakh kms. in 2001-02 to 62.84 lakh kms, in 2002-03. The effective kms. operated in 2003-04 is estimated to be 23325 lakh kms. The revenue earned by the STUs has improved from Rs.2921.60 crores in 2001-02 to Rs.3281.32 crores in 2002-03. The revenue in 2002-03 covered the expenditure of Rs.3235.53 crores by 99%. In 2003-04, the revenue is provisionally estimated to be Rs.3358.57 crores and the expenditure Rs.3390.70 crores.

Due to increase in establishment and operation costs, the overall expenditure of the STUs has been continuously increasing. The accumulated loss upto March 2004 (provisional) is Rs.2166.39 crores, out of which the loss during the year 2003-04 is estimated to be Rs.32.13 crores (pre audit). The loss during 2002-03 was Rs.4.21 crores.

The Government of India periodically revises the price of the petroleum products depending upon the varying global prices. The expenditure on consumption of diesel for the buses of STUs has gone up from Rs.1060.27 crores in the year 2002- 2003 to Rs.1186.20 crores (provisional) in the year 2003 - 2004. The establishment cost accounts for nearly 38% to 53% of the traffic revenue. The establishment cost, which was of Rs.388 crores in the year 1991-92, has gone up to Rs.1367.17 crores in 2002-03 and to Rs.1395.45 crores (provisional) in 2003-2004. The STUs have heavy accumulated liabilities to the tune of Rs.492.84 crores (as on 31.3.2004) towards the supply of fuel, spares, statutory dues, accident claims, default to TDFC etc.

The performance of STUs during 2002-03 and 2003-04 may be seen at a glance from the Table below.

	2002-03	2003-04
Total Revenue (in Rs. in crores)	3231.32	3358.57
Exp. (in Rs.crores)	3235.53	3390.70
Extent of coverage of exp. by revenue	99.8%	99%
HSD Cost	1060.27	1186.20
Estt. Cost	1367.17	1395.45
Profit/ Loss (in Rs.crores)	-4.21	-32.13
Cash Loss/ Gen.	102.03	58.58
Fleet strength	16670	16664
Effective kms. in lakhs	22937	23325

The number of services operated as on 31<sup>st</sup> March 2003 are set out in the table below:

Chennai Metro – City services (Nos.)	2554
Town Services (in Districts) (Nos.)	5590
Mofussil services (Nos.)	5810
Express services	
Inside State (Nos.)	524
Outside State (Nos.)	278
Ghat services (Nos.)	523
Total (Nos.)	15279
Spare buses	1391
Total Fleet Strength	16670
2) Total Kilometre operated per day	62.84 (lakh Km.)
3) Total Passengers carried per day	156.28 (in lakhs)
4) % Fleet utilisation	91.73 %

It was proposed to purchase 1050 buses for the year 2003-2004 by availing of loan from TDFC Ltd., 500 chassis were purchased for the year 2003- 2004. The tender for purchase of 550 chassis is under process. The MTC Ltd., has introduced Euro. II buses and this has helped to reduce pollution in Chennai City. With a view to help the students, all students in all schools including Private Schools studying from Std.I. to Std. XII, are provided free travel Bus passes to travel from their residence to school and back on all days including holidays. Similarly the students studying in all Colleges including private colleges are given 50% concession in bus passes to travel from their residence to College, Polytechnics, I.T.Is and private Arts Colleges and back. During 2003-2004, 19,14,288 students were benefited and the number would go up to 24,83,196 from 1<sup>st</sup> June 2004.

The seven Tamil Nadu State Transport Corporations have entered into an agreement with I.O.C. for supply of High Speed diesel at a concession of Rs.700/- per kilo litre with effect from 1.10.2003 to 30.9.2004. In addition to this, the I.O.C. has also agreed to maintain and upgrade the fueling facilities at their cost with the best availing technology apart from upgrading the existing facilities of shelter and platform. Similar concession will also be extended by other oil companies like BPC, HPC and by this TNSTC. Ltd. would be able to save on fuel cost Rs.36 crores for one year.

#### **B. Tamilnadu Transport Development Finance Corporation Ltd. (TDFC)**

The Tamilnadu Transport Development Finance Corporation Ltd. (TDFC) has been playing a major role in the development of bus passenger transport industry and has been serving as a nodal agency to relieve the Government from the burden of providing State budgetary support to all State Transport Undertakings in Tamilnadu. TDFC has gained public confidence and has achieved a very good

growth in deposits. The deposits of TDFC which stood at Rs.1.31 crores in 1975 increased to Rs.912.36 crores on 31.03.2003. The financial assistance extended by TDFC, since its inception upto March 2003, amounted to Rs.4931.18 crores, which enabled the State Transport Undertakings to purchase 32,725 new buses. The financial requirements of all State Transport Undertakings have been fully met by TDFC Ltd. TDFC has been working on profit since its inception.

### **C. Pallavan Transport Consultancy Services Ltd., (PTCS)**

The Pallavan Transport Consultancy Services Ltd., (PTCS) was incorporated in 1984 as a wholly owned company of Government of Tamilnadu with a paid up capital of Rs.2 lakhs. The authorised share capital and paid up share capital of PTCS Ltd. are Rs.50 lakhs and Rs.10 lakhs respectively as on 31.03.02. PTCS Ltd offers consultancy assignments in the areas of Information Technology, Traffic, Transportation and Management.

### **D. Institute of Road Transport (IRT)**

The Institute of Road Transport is a registered Society under the Indian Societies Act 1860. The Institute has a capital fund of Rs.102 crores comprising of interest free loans from State Transport Undertaking employees invested in TDFC and the interest obtained is used for the operations of IRT. The main activities of IRT are transport research, training, testing of automobile components, etc. The Automobile Research Oriented Engineering College known as Institute of Road and Transport Technology was established in 1984 under the aegis of IRT. The Perundurai Medical College and Research Centre was established in 1986 and the three Polytechnics started by IRT are functioning at Chromepet, Bargur and Tirunelveli from 1992-93. IRT is also running Driver Training Centres at Gummidipoondi and 14 Regional Centres in Heavy vehicles driving and upto 2002-03, 36671 persons were trained as drivers and 1481 candidates were to be trained in the year 2003-04. The Institute is also imparting training for driving light vehicles. The Institute has identified a land in Suthumalli village in Tirunelveli district for starting a Driver-Training Centre for the benefit of Southern Districts. During 2004-2005, a new driving range at an estimated cost of Rs.50 lakhs is proposed to be established in Taramani campus of I.R.T. No budgetary support from the Government is provided to the Institute of Road Transport.

The Transport Department is also the nodal agency in the State Government in respect of projects implemented by the Southern Railway, Postal and Telecommunications Departments and the Civil Aviation Departments of the Government of India, within the State of Tamil Nadu.

### **Vehicle population**

The State is endowed with a well developed transport system. Vehicle population in the State has been increasing over the years because of increasing incomes, urbanisation, preference for personalised mode of transport and easy availability of credit for vehicle purchase. The registered motor vehicle population in the State increased by 5.51 lakh numbers from 56.58 lakhs in 2001-02 to 62.09 lakhs in 2002-03 registering a growth of 9.74 per cent. Out of 62.09 lakh vehicles, commercial vehicles accounted for only 7.37 per cent and non-commercial vehicles claimed the balance of 92.63 per cent.

The population of Tamil Nadu has increased from 30.12 million in 1951 to 62.11 million in 2001. Though the population has doubled, the vehicle population during the same period has increased nearly 200 times, i.e. from 27,325 numbers in 1951 to 56.58 lakhs in 2001-02. The road network has not kept pace with this increase, growing at only 4.39 times, from 32,307 km. to 1.57 lakh km.

## Registered Motor Vehicle Population

Type	2000-01	2001-02	2002-03
Commercial Vehicles	421365 (5.53)	432106 (2.55)	457448 (5.86)
Stage Carriages, Mini Buses and Omni Buses	26817 (12.19)	27497 (2.54)	27138 (-) 1.31
Auto Rickshaws	108090 (7.17)	111942 (3.56)	119719 (6.95)
Ordinary Tax, Motor Cab and Maxi Cab	61032 (8.56)	64036 (4.92)	69804 (9.01)
Lorry & Light Commercial Vehicles	177874 (2.42)	178231 (0.20)	185009 (3.81)
Miscellaneous: Private Sector Vehicles, School Bus, Ambulance, Fire Fighter, Articulated Vehicles and Tractor & Trailer	47552 (6.50)	50400 (5.99)	55778 (10.67)
<b>Non-commercial Vehicles:</b>	<b>4740717 (12.66)</b>	<b>5225991 (10.24)</b>	<b>5751589 (10.06)</b>
Motor Cycles, Scooters and Mopeds	4163002 (13.14)	4600565 (10.51)	5073643 (10.28)
Motor Cars, Station Wagons and Jeeps	484459 (8.88)	522822 (7.92)	564570 (7.99)
Miscellaneous: Tri-Cycle Auto, Tractors, Three Wheelers, Four Wheelers, Road Roller and others	93256 (11.75)	102604 (10.02)	113376 (10.50)
<b>Grand Total</b>	<b>5162082 (12.04)</b>	<b>5658097 (9.61)</b>	<b>6209037 (9.74)</b>
Density of Motor Vehicles per sq. km.	40	44	48
Motor Vehicles per lakh Population	8338	9065	9998

(Figs. in brackets indicate % change over the preceding year). Source: Commr. of Tpt., Chennai

The vehicular position as on 1<sup>st</sup> January 2004 is indicated in the table below.

Vehicular Position in Tamil Nadu as on 01.01.2004			
Transport		Non Transport	
<i>(a) State Carriages</i>		<i>(a) Two Wheelers</i>	
Public (STU)	16719	Motor Cycle	1797005
Private	6571	Scooter	887095
Mini bus	4006	Mopeds	2721480
Total	27296	Total	5405580
<i>(b) Contract Carriages</i>		<i>(b) Three &amp; Four Wheelers</i>	
Autorickshaw	120922	Motor Car	553129
(Chennai city: 39741)		Jeep	38972
Ordinary Taxi	776	Tricycle Auto	4054
Motor Cab (SP)	36569	Station Wagon	2389
Motor Cab (AIP)	4894	Tractor	75344
Maxi Cab (SP)	25569	Three Wheeler	21478
Maxi Cab (AIP)	803	Four Wheeler	5690
Omni Bus (SP)	324	Road Roller 494	
Omni Bus (AIP)	142	Others	15379
Total	189999	Total	15379
<i>(c) Others</i>			
Private Service Vehicles	4365		
School bus *	5805		
Ambulance	2717		
Fire fighter	767		
Total	13654		
<i>(d) Goods Carriages</i>		Transport & Non transport	
Lorries	107474	Transport	468715
National Permit Lorries	26376	Non Transport	6122509
Tractor & Trailer	36660	State Total	6591224
Light Commercial Vehicles	58100		
Articulated Vehicles	9156		
Total	237766		
Grand Total	468715		

**Growth of Vehicles on Roads in Tamilnadu**

Year (as on 31 <sup>st</sup> March)	Transport Vehicles	Non-Transport Vehicles		Total Vehicles
		Two Wheelers	Others	
1	2	3	4	5
1999	368922	3214068	487744	4070734
2000	399300	3679525	528403	4607228
2001	421365	4163002	577715	5162082
2002	432106	4600565	625426	5658097
2003	457448	5073643	677946	6209037
2004	468715	5405580	716929	6591224

The registration of motor vehicles, grant of permits to transport vehicles, issue of driving and conductor licenses, inspection of vehicles involved in accidents, collection of tax and fees, controlling vehicular pollution, promotion of road safety measures and other related issues connected with transport system in the State are administered by the Transport Department with reference to the provisions of Central Motor Vehicles Act 1988, Central Motor Vehicles Rules 1989, Tamil Nadu Motor Vehicles Rules, 1989, and Tamil Nadu Motor Vehicles Taxation Act and Rules, 1974.

**Growth of Transport Revenue in Tamil Nadu**

The Transport Department is a major revenue earning Department of the State Government. The total revenue earned by the Department in the past five years through taxes and fees and revenue anticipated during 2004 - 2005 are indicated in the table below.

**Growth of Revenue during the period from 1999-2000 to 2004-05**

Year	Rs. in crores
1999 - 00	581.45
2000 - 01	592.37
2001 - 02	648.43
2002 - 03	750.00
2003 - 04	931.24
2004-05 (anticipated)	1104.61

**Road Safety**

Overcrowded roads, poorly planned traffic circulation, imperfect geometry of roads, encroachments on footpaths and roads, inadequate enforcement of traffic rules and regulations etc., contribute to accidents, especially on city roads and on major highways.

*Road Safety Council* - Section 215 of the Motor Vehicles Act provides for the constitution of a Road Safety Council for the entire State to oversee all road safety programmes. The Tamil Nadu State Road Safety Council was set up in the year 1989. The Council is a high level body now under the Chairmanship of the Chief Minister to advise the Government on all policies and programmes relating to road safety. The Transport Commissioner was nominated as the Road Safety Commissioner to co-ordinate and monitor all functions connected with Road safety. Similarly, District Road Safety councils are functioning in each district under the chairmanship of respective District Collector. These councils oversee the road safety activities and solve all local problems.

A Road Safety Fund was created for implementing Road Safety activities. The Government is according considerable importance to road safety programmes, reduction / avoidance of accident measures etc. Compounding fees and spot fines collected by the Transport and Police departments will be allocated partly to this fund.

### Annual Plan 2004- 05

The ongoing programmes / schemes for the Annual Plan 2004-05 are outlined in the following paragraphs.

#### (1) Motor Vehicle Maintenance Department

Tamil Nadu Motor Vehicles Maintenance Department is a service department undertaking maintenance and repairs of all Government departmental vehicles. The number of such vehicles for which this department is responsible for the maintenance and upkeep is about 10,100 vehicles. There are 20 Government Automobile Workshops in various District Headquarters throughout the State and one Service Station inside the Secretariat Compound for this purpose. There are three Regional Deputy Directorates, one each at Chennai, Salem and Madurai for the effective supervision and functioning of the works at these workshops. This department is operating 10 consumer fuel bunks for the supply of fuel and other lubricants to the State Government Departmental vehicles. The Tenth Five Year Plan Outlay is Rs.10 crores (Rs.9 crores is for on-going schemes and Re.1 crore for new schemes). For the year 2002-03, an expenditure of Rs.197.89 lakhs was incurred by this department. As against the budget provision of Rs.235.78 lakhs for the year 2003-04, the expenditure anticipated is Rs.228.47 lakhs. An outlay of Rs.258.86 lakhs has been proposed for the year 2004-05.

This department has taken up the following measures for improvement in quality of services in the repairs and maintenance and also upkeep of the Government departmental vehicles. These have been introduced in Chennai city.

- i. Mobile team has been set up to attend preventive maintenance and minor repairs at the office premises of the vehicle owning officers.
- ii. The system of maintaining different types of Float assemblies has been introduced in order to reduce the down time of the Government Vehicles considerably.
- iii. Instead of opening new workshops in the remaining new District headquarters (numbering 10), Mobiles teams from the nearest Workshops can be sent to the required District headquarters periodically to attend the maintenance jobs of the other Government departmental vehicles and
- iv. The infrastructure facilities available in the existing unit workshops of the Motor Vehicles maintenance Department will be continued to be maintained at the optimum level and new era machineries and equipments may be procured as and when necessary to meet the future demand.

The outlay for the Part- II (New Schemes) for the year 2004-05 for Motor Vehicles Maintenance Department is shown in the table below.

Sl. No.	Name of the scheme	Outlay – 2004-05 (Rs. in lakhs)
1	Provision of Computers to Government Automobile Workshop at Udhagamandalam, Villupuram, Virudhunagar, Thoothukudi and Secretariat Service Station at Chennai	2.50
2.	Upgradation of existing computers in Motor Vehicles Maintenance Department	2.50
3.	Provision of Basic amenities (II Phase) to Government Central Automobile Workshop at Velachery, Chennai – 42.	5.00
	Total	10.00

**(2) Road Safety Fund**

The proceeds from compounding fees and spot finances collected by the Transport and the Police Department go to the Road Safety Fund which is then utilised for undertaking road safety schemes / measures.

**Road Safety Fund**

Year	Amount allocated to the Fund (Rs. in crores)
2000-01	2.00
2001-02	3.75
2002-03	5.00
2003-04	5.00
2004-05	5.00

For the year 2002-03, an expenditure of Rs.473.22 lakhs was incurred. As against the Budget Estimate of Rs.500 lakhs for the year 2003-04, the expenditure anticipated is the same.

An outlay of Rs.500 lakhs has been proposed for Road Safety Programme for the year 2004-'05.

**(3) Establishment charges for Project Management Group for implementation of Tamil Nadu Road Sector Project**

An outlay of Rs.270.95 lakhs has been proposed for the year 2004-05 towards establishment charges for Project Management Group for implementation of the Tamil Nadu Road Sector Project.

**(4) E-governance in Transport Department**

RTO's office provides various services like registration of vehicles, driving licence, permit for transport vehicles etc. The registration / licence done by one state is valid throughout India. Hence to maintain interoperability, common data structure has been prescribed and it is used by the proposed software given by NIC. This software has better workflow coverage for the office and full tracking of every process is maintained. It is now proposed to cover the full state under this project in a phased programme: (i) Converting existing offices (15 +STA) to the NIC pattern by strengthening the hardware/ software infrastructure. (ii) Provision of hardware/ software/ infrastructure for balance RTOs, (iii) Covering the link offices like zones, Government and STAT, (iv) Back log data entry (2001 to 2003), (v) Training and support services (Change Management), (vi) Introduction of Smart Card.

An outlay of Rs.500 lakhs has been proposed for the year 2004-05 towards implementation of e-governance in Transport Department.

**Rail Transport**

Railways are an extremely efficient form of transportation. For example, the energy consumption for freight movement on rail roads is 440 joules/ kg. km., about a quarter of 1,836 Joules/ Kg. Km. required for trucks. In addition, the railways generate less pollution and involve fewer accidents.

The network of Indian Railways (IR) is spread over 63,122 route Kilometre (Rkm), comprising broad gauge (46,622 Rkm), metre gauge (14,364 Rkm) and narrow gauge (3,136 Rkm). (Route length refers to distance between two points on a railway treating all lines on the section a single line). Roughly 26% of this network is electrified.

The freight loading performance of railways in 2003-04 stood at 557.4 million tonnes. The number of passengers carried by the Railways in 2003-04 was 5,112 million. Transportation services measured in passenger kms., which is the product of the number of passengers carried and the average distance traversed were 533 billion in 2003-04. The main index of rail safety, viz., train accidents per million passenger kms., was 0.44 in 2002-03.

A new institutional mechanism, the Rail Vikas Nigam Limited (RVNL), was set up in January 2003 for implementing railway projects through a blend of budgetary support and non-budgetary initiatives. It is implementing a part of the National Rail Vikas Yojana. An outlay of Rs.717 crores has been provided for RVNL during 2004-05 to execute 38 projects, which form part of the Golden Quadrilateral.

IR has entered into a range of MOU / MOAs with the State Governments of Tamil Nadu, AP, Karnataka, Maharashtra, West Bengal and Jharkhand and other agencies for the purpose of executing various projects and SPV may be formed for this purpose. (from *The Economic Survey 2003-04* of GOI)

Total length of railways in the State stood at 4176.63 kms. route during 2002-03, out of which, broad gauge accounted for 49.59 per cent. The railway network in the State has remained almost stagnant from 1998-99 onwards. The railways have enhanced the commercial value of agriculture and industrial products and help to establish various industries in different locations and facilitate expansion in volume of trade.

**Length of Railway Route in Tamil Nadu by Category (in route Kilometres)**

Sl.No.	Gauge	2001-02	2002-03
1.	Broad Gauge	2043.72 (48.88)	2071.02 (49.59)
2.	Metre Gauge	2137.16 (51.12)	2105.61 (50.41)
Total		4180.88 (100.00)	4176.63 (100.00)

(Figures in brackets indicate percentage share to total)

Source: Southern Railway, Chennai - 3.

**Railway Route Length - Tamil Nadu and All India**

Year	Total Route Length (Kms.)		% Share of Tamil Nadu	Route Length (Kms.) per '000' Sq. Km. of Area		Route Length per 100,000 population (Kms.)	
	Tamil Nadu	All India		Tamil Nadu	All India	Tamil Nadu	All India
2000-01	4180.88	63028	6.63	32.18	19.17	6.75	6.19
2001-02	4180.88	63140	6.62	32.18	19.21	6.70	6.09
2002-03	4176.63	63140	6.61	32.15	19.21	6.64	5.98

Source: (1) Southern Railway, Chennai - 3.

(2) Infrastructure, March 2004, CMIE, Mumbai.3. Economic Survey, 2002-03, CSO, New Delhi.

The State would be greatly benefited when the eleven ongoing gauge conversion projects covering about 1900 metres km. are completed.

**Gauge Conversion - Metre Gauge to Broad Gauge in Tamil Nadu (as of April, 2003)**  
(Rs. in crores)

Sl. No.	Name of Work (Conversion of MG to BG)	Length km	Year of sanction	Total cost	Exp. up to 3/2003	Budget outlay for 2003-04
1.	Tiruchirappalli -Thanjavur - Nagore - Karaikal	200	1995-96	213.35	84.88	12.00
2.	Kollam - Tirunelveli - Tiruchendur and Tenkasi - Virudhunagar	357 *	1997-98	577.61	79.89	25.00
3.	Villupuram - Pondichery	38	1996-97	43.83	18.82	11.20

4.	Thanjavur - Villupuram	192	1998-99	231.00	7.31	15.00
5.	Cuddalore - Salem	191	1999-00	198.68	32.07	10.00
6.	Madurai - Rameswaram	162	1997-98	243.00	6.34	10.00
7.	Villupuram = Katpadi	161	2000-01	240.00	0.10	1.00
8.	Tiruchirappalli - Manamadurai	150	2000-01	187.81	0.48	5.00
9.	Chennai - Beach - Tiruchirappalli (97.95% completed)	340	1992-93	730.42	709.69	1.00
10.	Tiruchirappalli - Dindigul (100% completed)	93	1992-93	133.93	137.35	0.01
11.	Chennai Beach - Tambaram- Chengalpattu	116	1998-99	622.52	171.28	34.00
	Total	2000		3422.15	1244.21	124.21

Source: Records of the Southern Railways, Chennai

Note: \* Out of 357 km, about 85 km length of railway line is in Kerala State.

Further, surveys are carried out by the Railways to undertake the following 13 projects, which mainly include projects related to laying new lines and gauge conversion of existing lines.

- (i) Survey for gauge conversion of Chengalpattu - Villupuram section.
- (ii) New BG line between Kumbakonam and Namakkal via Jayamkondan, Ariyalur, Perambalur and Thuraiyur.
- (iii) Gauge conversion of Virudhunagar - Manamadurai
- (iv) New line from Madurai to Thoothukudi via Parambupatti, Aruppukkottai, Vilattikulam with alternative via Virudhunagar, Aruppukkottai and Vilattikulam with alternative via Virudhunagar, Aruppukkottai and Vilattikulam.
- (v) Gauge conversion between Madurai - Coimbatore
- (vi) Updating of survey for 4<sup>th</sup> line between Pattabiram - Tiruvallur and 3<sup>rd</sup> and 4<sup>th</sup> lines between Tiruvallur - Arakkonam section
- (vii) Survey for a new BG line - Tharamani (Chennai) to Mahabalipuram.
- (viii) Survey for gauge conversion of Thanjavur - Tiruchirappalli MG line
- (ix) Chennai area - Optimisation and rationalisation of maintenance facilities and preparation of Master Plan for integrated development of rail infrastructure
- (x) New BG line between Madurai - Kottayam
- (xi) New BG line between Tindivanam - Cuddalore via Pondicherry.
- (xii) Preliminary Engineering cum Traffic survey for a new BG line from Attipattu to Tiruvallur with a link line to Puttur
- (xiii) Preliminary Engineering cum Traffic survey for restoration of rail link between Pamban and Danushkodi.

Further, the following five projects pertaining to doubling of lines (BG) are under implementation:

- i) Irugur - Coimbatore - 17.70 km
- ii) Attipattu - Korukkuppettai - 18.00 km
- iii) Pattabiram - Tiruvallur (4<sup>th</sup> line) 41.89 km and Tiruvallur - Arakkonam (3<sup>rd</sup> line)
- iv) Ambathurai - Kodaikanal Road - 14.56 km
- v) Chennai Beach - Korukkuppettai (3<sup>rd</sup> line - 4.10 km.

These projects when implemented, would greatly benefit the State in achieving faster economic development. It would be extremely useful to convert in a phased manner all the MG lines in the State to BG lines, as early as possible, to achieve faster and efficient movement of goods and passengers by the rail system.

When this is achieved, every railway station in the State could be directly accessible to all parts of India. Besides, it would be beneficial, if the major travel corridor of the State is brought under BG double lines on electric traction (Chennai - Villupuram - Tiruchirappalli - Madurai - Tirunelveli). Considering the present trend of development in various regions, surveys may be undertaken to re-establish the following lines which were functioning earlier and later abandoned: Salem - Mettur; Mayiladuthurai - Tharangambadi; Nidamangalam - Mannargudi. Considering the importance of promoting tourism in Udthagamandalam, it is highly desirable to improve the existing rail system between Mettupalayam and Udthagamandalam, enabling it to become operational in all seasons of the year.

**Mass Rapid Transit System (MRTS)** under operation between Chennai Beach and Thirumayilai would become more effective in serving the people of Chennai, when it is extended, as now proposed and executed, to Velachery and then to St. Thomas Mount to give direct connectivity to Tambaram - Chennai Beach sub-urban rail line.

#### *MRTS - Phase II and extension of Phase II*

The MRTS Phase-I from Beach to Tirumylai is in operation. The MRTS from Tirumylai to Velacherry under Phase-II for a length of 11.17 Kms. at an estimated cost of Rs.720 crores is being implemented through MTP (R). The project which commenced in January 1998 has been partially commissioned upto Tiruvanmiyur in January 2004 and is slated for commissioning upto Velacherry by December 2004. It has been decided to extend the MRTS from Velacherry to St. Thomas Mount covering a distance of 5 Kms. at an estimated cost of Rs.378 crores. Tamil Nadu is meeting 67% of the cost of the project and the remaining 33% is met by Government of India. The State Government has also appointed consultancy firm to commercially exploit the air space at the roof of the platform of all the Stations to augment the supply of urban built space and enhance the travel density for operation of the MRTS. The cumulative expenditure since the beginning of MRTS phase-II project has been Rs.525.44 crores (till April 2004) and the Government of Tamil Nadu has released Rs.414 crores for the project.

It is necessary to integrate and co-ordinate the functioning of the rail system in Chennai Metropolitan area with the bus system. Fare coordination among the various transport systems operating in Chennai need to be considered to improve their patronage by commuters.

#### **Ports**

Ports are a crucial part of transportation infrastructure of the country. Transportation by ship is highly energy efficient, can be increasingly used for intra - India traffic, and for international trade. Inland water transport today accounts for only 0.15% of domestic transportation. At an administrative level, ports are divided into "major ports" (where the Central Government plays policy and regulatory functions) and "minor ports" (which are guided by State Governments). As of today, the 12 major ports handle about 76% of the traffic. They are Chennai, Cochin, Ennore, Jawaharlal Nehru, Kandla, Kolkata, Marmagao, Mumbai, New Mangalore, Paradip, Tuticorin and Visakhapatnam. There are 185 minor and intermediate ports in the country. While container traffic has grown well in India, there is still a considerable lag when compared with the largest international airports. The largest port in the world is 2002, Hongkong processed 19.1 million TEUs while JNPT handled roughly only 2 million TEUs in 2002-03. Minor ports constitute an important competitive alternative to the centrally regulated "major ports".

[from GOIs *Economic Survey 2003-04*]

Tamil Nadu has a vast coast line of 992 Kms. with 3 Major ports and 15 Minor ports. While the 3 Major ports at Chennai, Ennore and Thoothukudi come under the

control of Government of India, the 15 minor ports are administered by the Tamil Nadu Maritime Board of the State Government.

### **Major Ports**

#### *Chennai Port*

Chennai port under the Chennai Port Trust has 21 alongside berths in three Docks (Bharathi Dock, Dr. Ambedkar Dock, Jawahar Dock) and a modern Container Terminal established in 1983. Chennai Port handles both Container and Bulk cargo. Car-ships visit Chennai regularly and it has become a major export hub for automobiles. Chennai Port is the most efficient port with ship turn-around time of less than 17 hours and the second largest in terms of container traffic in India. The other items handled in this port are POL, Iron ore, Coal and Containers. The port has planned to undertake the following major development schemes - extension of container terminal and modernisation of Quay berths.

#### *Ennore Port*

Ennore is situated on the Coromandel coast about 24 km. north of Chennai Port. It is located at a distance of 10 nautical miles from the Chennai Port. It is the 12<sup>th</sup> Major Port in India and the first corporatised major Port in India. The Asian Development Bank assisted Ennore Port came into operation in 2001. This port is specially designed to handle energy products and the port is managed by the Government and private sector through Ennore Port Limited. Coal, Iron ore and Petroleum products are to be handled at this port. Ennore Port handles thermal coal for supply to TNEB's power stations at Ennore, North Chennai and Mettur. The 220 hectare wide harbour basin was dredged to a depth of 15.5 m with 2 berths.

#### *Thoothukudi Port*

Thoothukudi is a major port since 1974, located in the South-East of Indian Peninsula and serving the southern region of the State. It is a modern and an efficient port that can handle both bulk & container cargo and is well connected with hinterland. Port facilities have been graded with the participation of Port of Singapore Authority (PSA) and SICAL. It handled a cargo traffic of 13.29 million tonnes in 2002-03. The harbour basin extends to about 400 hectares of protected water area. Container traffic through this port was 2,12,925 TEUs and the port handled 1458 ships in the same period. This will become an important port in the international scene, when the proposed Sethusamudram Canal Project is implemented.

#### *Minor Ports*

Tamilnadu Maritime Board constituted under the Tamil Nadu Maritime Board Act 1995 is administering, controlling, regulating and managing the minor ports in the State. This Board encourages setting up captive ports and allied facilities such as jetties, mooring systems etc. through active private sector participation. All the minor ports in Tamil Nadu are anchorage ports, where cargo is transhipped from the vessels at mid-stream to shore and vice-versa through lighters/ barges. Crude oil, edible oil, propylene gas, naphtha, liquid ammonia, crude oil and general cargo are handled in these ports.

Among the 15 minor ports, 8 (Kattupalli, Ennore-minor port, Thiruchopuram, PY3 oil field, Thirukkadaiyur, Punnakayal, Manappad and Kudankulam) have been declared as captive ports under private entrepreneurship where development of entire infrastructure facilities is the responsibility of the private company concerned. The remaining ports are Cuddalore, Nagapattinam, Rameswaram, Pamban, Valinokkam, Kanyakumari and Colachel. Of the eight captive ports, three ports

(Ennore minor port, PY3 oil field and Thirukkadiyur) are operational at present. The remaining captive ports are in various stages of development.

Kattupalli port was declared for the captive use of M/s. VOPAC Sical Terminal Limited for handling various petro-products, required for their petro-chemical park at Ennore. Ennore minor port was developed M/s. EID Parry (India) Ltd. for receiving Liquid Ammonia. This port is functioning since October 1986. Thiruchopuram Port was declared for the captive use of M/s. Nagarjuna Oil Corporation Ltd. to handle crude oil and refined oil products. This port would directly serve the proposed oil refinery at Thiruchopuram. PY3 oil field port, situated near Cuddalore is for the exclusive use of M/s. Hardy Exploration and Production (I) Ltd. The port is in operation since October 1997 and used for loading crude oil from the oil wells at PY3 oil field. Thirukkadaiyur port was declared for the captive use of M/s. PPN Power Generating Company to handle naphtha and natural gas required for the power project at Pillaiperumalnallur. Punnakkayal port is a captive port for the use of M/s. Dharangadara Chemical Works Ltd., Manappad port is for the captive use of M/s. Indian Gas Ltd. for handling LNG required for the proposed Gas Turbine Power Project. Cuddalore and Nagapattinam ports have been functioning well for a long time and they are to be developed through private participation, either wholly or partly. Nagapattinam used to have passenger traffic, serving passengers bound for Singapore and Malaysia, but later suspended in 1985. These two ports continue to serve for industrial development in respective regions. Pamban port is used to pilot the small drafted vessels of five feet, passing through Pamban Canal. Rameswaram port was catering to passenger service between Rameswaram and Thalaimannar operated by the Shipping Corporation of India up to 1985. Vallinokkam port was earmarked for ship-breaking activities. Kanyakumari port used to operate the ferry services to Vivekananda Rock Memorial and Thiruvalluvar statue.

Colachel port is to be developed as an International Transshipment Hub port for handling container ships. The Government of Malaysia has evinced interest in developing this port and has prepared a detailed feasibility report (DFR) to develop Colachel as a container hub port. The Government of Malaysia was requested to restructure the project to bring down the investment in capital works. Kudankulam Port was declared for the captive use of M/s. Nuclear Power Corporation of India for their proposed nuclear power project at Kudankulam. For the said project they have constructed off-shore infrastructure facilities to revive their over-dimensional cargo. The fiot vessel called at the port in January 2004. The minor ports in Tamil Nadu handled a total cargo of 6,02,616 MT during 2002-03.

The performance of these ports in terms of cargo handled is presented below.

#### *Cargo Traffic at Major Ports*

The total cargo traffic comprising of overseas and coastal by the three major ports in the state during 2002-03 had increased to 55466 thousand tonnes from 52533 thousand tonnes in 2001-02. Of the total cargo handled, overseas constituted a major portion of 59.06 per cent and coastal cargo 40.94 per cent. Chennai Port had handled 60.73 per cent of the total cargo. Tuticorin accounted for 23.97 per cent and Ennore 15.30 per cent.

## Overseas and Coastal Cargo Traffic at Major Ports in Tamil Nadu

Name of major port	(000' tonnes)					
	2001-02			2002-03		
	Overseas cargo	Coastal cargo	Total	Overseas cargo	Coastal cargo	Total
Chennai	24093 (-) 2.67	12022 (-) 26.99	36115 (-) 12.38	25121 (4.27)	8567 (-) 28.74	33688 (-) 6.72
Ennore	-	3401	3401	-	8485 (149.49)	8485 (149.49)
Tuticorin	7241 (18.82)	5776 (-) 6.69	13017 (5.97)	7639 (5.50)	5654 (-) 2.11	13293 (2.12)
Total	31334 (1.58)	21199 (-) 6.43	52533 (-) 1.81	32760 (4.55)	22706 (7.11)	55466 (5.58)
All Major Ports	206327 (15.19) *	81261 (26.09) *	287588 (18.27) *	229422 (14.28) *	84107 (27.00) *	313529 (17.69) *

Note: Figures in bracket indicate percentage change over the previous year

- Tamil Nadu's Major Ports share to All Major Ports.

Source: 1. Concerned Ports; 2. Infrastructure, March 2004, CMIE, Mumbai.

In 2003-04, the traffic handled at Chennai Port was 3,67,09,000 tonnes and Tuticorin Port 1,36,78,000 tonnes. The container traffic handled was 539265 TEUs and 253880 respectively by the two major ports.

*Imports and Exports of Major Ports*

The trading pattern had changed considerably. Notable changes could be observed both in direction and composition of trade. The present trade is directed towards strengthening the export base in order to take the advantage of globalisation.

Imports and Exports of Major Ports in Tamil Nadu  
(Excluding Transhipment) ('000' tonnes)

Sl.No.	Major Port	2000-01		2001-02		2002-03	
		Import	Export	Import	Export	Import	Export
1.	Chennai	28548 (17.79)	12300 (12.00)	23038 (14.34)	12975 (11.75)	19606 (11.67)	14082 (10.80)
2.	Ennore			3401 (2.12)		8485 (5.05)	
3.	Tuticorin	9839 (6.13)	2445 (2.39)	9811 (6.11)	3205 (2.90)	9564 (5.69)	3729 (2.86)
Total for Tamil Nadu		38387 (23.92)	14745 (14.39)	36250 (22.57)	16180 (14.65)	37655 (22.41)	17811 (13.66)
All Major Ports		160486	102486	160634	110445	168038	130355

Note: Figures in brackets indicate the percentage share to All Major Ports

Source: Concerned Ports

During 2002-03, 37655 thousand tonnes of goods were imported through the major ports and the export through the same ports was 17811 thousand tonnes. The increase in quantum of export from 16180 thousand tonnes in 2001-02 to 17811 in 2002-03 indicates a strengthening of export base in the State.

*Imports and Exports at Minor Ports*

Imports of naphtha, liquid ammonia, edible oils, propylene gas and crude oil and exports of crude oil and general cargo are major items handled by the minor ports in the State.

*Port Policy of Tamil Nadu*

The salient features of the Port Policy of Tamil Nadu are as indicated below:

- To promote port based Thermal Power Plants by providing exclusive port facilities for import of coal/naphtha/oil/ natural gas etc.

- To provide port facilities to promote export oriented industries and port based industries along the coastal districts of Tamil Nadu
- To decongest highways and railways by providing facilities for coastal traffic of passengers and cargo along the east coast
- To promote tourism by providing facilities for leisure and water sports activities along the coast line
- To provide facilities to encourage ship-repairing, ship-breaking and manufacture of cranes and floating crafts
- To increase the share of Tamil Nadu State in the export and import sector, in national and international trade and commerce in port- liberalisation and globalisation era
- To cater to the needs of increasing traffic of Southern states by providing efficient facilities and services and to support the country's domestic and international trade
- To decongest the major ports in Tamilnadu and to improve their productivity
- To create sufficient infrastructure facilities to handle 25% of India's total cargo in Tamil Nadu maritime waters

### **Tamil Nadu Maritime Board**

With a view to provide necessary infrastructure facilities to the minor ports, improve their cargo handling capacity, decongest the traffic at major ports so as to improve their productivity, create conducive atmosphere for export/ import facilities and in turn to facilitate industrial development in the State, the Tamil Nadu Government created a separate Board viz., the Tamil Nadu Maritime Board in the year 1997 under the Tamil Nadu Maritime Board Act 1995 and announced its Port Policy detailing the investment and opportunities available for the development of ports in Tamil Nadu. One of the major objectives of the Board is to develop captive ports and allied facilities such as jetties, mooring systems, etc. through active private sector participation for the dedicated use of industries. The natural depth for the sea, supportive industrial environment, conducive labour relations and policy support from the State Government make Tamil Nadu an ideal destination for setting up ports.

### **Tamil Nadu Maritime Academy (TNMA)**

Tamil Nadu was a pioneering State in sea-borne trade for several centuries and even today Tamil Nadu can boast of three major ports at Chennai, Ennore and Thoothukudi besides various minor ports like Cuddalore, Nagapattinam etc. Consistent with the policy of the Central Government to promote the Maritime Training Activities in India to international standards, Government of Tamil Nadu has established an institution of excellence viz., the Tamil Nadu Maritime Academy (TNMA) for imparting training to aspiring young men who desire to take up a career at sea in the year 1998. TNMA is located in the Pearl City of Thoothukudi which is one of the Major Ports in Tamil Nadu. The Academy is ideally located adjoining sea in a sprawling campus. It has well furnished classrooms with hostel specially designed for simulating ship living conditions of two-tier and three-tier berths. Laminated displays of different types of ships, machineries and nautical equipments including ship models are exhibited in the classrooms.

The TNMA offers two types of pre-sea training courses of 4 months duration in (a) Seaman Rating (Deck) and (b) Engine Room Rating (Engine) for a batch of 20 male candidates each in age group of 18 - 22 years with educational qualification of 10<sup>th</sup> Standard / S.S.L.C. M/s. Poompuhar Shipping Corporation Ltd. has its own and chartered vessels, which are continuously transporting coal to Thoothukudi Thermal Power Station and has also got well equipped marine workshop with all modern

amenities in Thoothukudi. This facilitates imparting of practical training on board the ships as well as comprehensive training ashore in the marine workshop.

A total amount of Rs.30 crores is proposed for the Tenth Five Year Plan for the development of Cuddalore Port, Nagapattinam Port and Colachel Port.

### **Waterways**

Waterways is another mode of transport system of the nation from time immemorial. Though inland navigation plays a vital role in the transport system, it lost its importance with the introduction of railways and all villages are connected through buses. It is noted that there is no worthwhile major inland waterways in the State. Even the Buckingham Canal starting from Andhra Pradesh and extending upto Marakkanam in Tamil Nadu which was used earlier for navigation connecting some lagoons was abandoned.

Mass Rapid Transit System (MRTS) developed along the Buckingham canal from Chindaripettai to Thiruvanniyur has also restricted the usage of the canal. Besides, slums have come up all along the canal on both sides within Chennai city and even beyond. The man-made canal, which was serving effectively the southern coastal districts of Andhra Pradesh and northern coastal districts of Tamil Nadu has become a non-functional system over the years. The canal, if improved, would also facilitate in carrying away flood waters in this region. The Government of Tamil Nadu is considering a proposal for reviving navigation activities in Buckingham canal from Sriharikota to Marakkanam and for which the canal is proposed to be improved at a cost of Rs.240 crores.

### **Sethusamudram Ship Canal Project**

India does not have, within her own territorial waters, a continuous navigable route around the peninsula due to the presence of a shallow (1.5 metre to 3.5 metre depth) ridge, called 'Adam's Bridge', between Pamban island on the south-eastern coast of India and Thalaimannar of Sri Lanka. While Rameshwaram is a major pilgrim centre on Pamban Island, Dhanushkodi marks the tip of the Island. Consequently, ships calling at ports on the East coast of India have to go around Sri Lanka, an additional distance of more than 400 nautical miles and 36 hours of ship time.

The Sethusamudram Ship Canal Project is a longstanding demand - nay dream - of the people of peninsular India. This project envisages excavation of an artificial ship canal across Rameswaram island to connect the Palk Bay and Gulf of Mannar providing thereby connectivity between the East Coast and the West Coast of India. This would reduce the sea distance between the East Coast and the West Coast of India by more than 400 nautical miles and 36 hours of ship time.

According to a report in the Business Line dated the 10th of July '04, the Sethusamudram Project envisages creating a ship canal to suit different drafts (9.15 metres, 10.7 metres and 12.8 metres) through dredging/ excavation in the Adams Bridge and ports of Palk Bay. In the 152 km project, dredging would be done for 78 km while the rest of the distance has the necessary draught. Totally, 77 million cubic metre needs to be dredged. Out of this, 10 million cubic metre of dredged soil will be used to refurbish 750 hectares of land. The lost land in Danushkodi would also be rehabilitated. Early completion of the long pending canal project would greatly benefit the region.

Although the project was conceived more than a century ago and numerous studies have been done, nothing much had happened.

In the speech of the Union Finance Minister for Budget 2004-05, it has been indicated that the Environmental Impact Assessment study of the project has been

completed by the National Environmental Engineering Research Institute (NEERI), Nagpur, which is now preparing the techno-economic feasibility report and the report is expected to be submitted shortly. The Ministry of Shipping proposes to establish a special purpose vehicle (SPV) under the name "Sethusamudram Ship Canal Project Corporation Ltd". with an appraised capital of Rs.1000 crores. The SPV will raise funds for the project through loans from domestic and international institutions. Government of India will participate in the funding through a mix of equity support and debt-guarantee. Profit making Port Trusts on the East Coast including Chennai, Tuticorin, Paradeep, Vishakapatnam and Ennore will participate in the SPV through equity. Tuticorin port will be the biggest beneficiary of the project.

### Airports

There are five airports in the State. Chennai is an international airport serving both domestic and international traffic. Madurai, Coimbatore, Tiruchirappalli and Salem are the other airports serving domestic traffic. Chennai airport is located at about 7 km from the city limit in the close vicinity of defence department establishments. This handled about 2.7 million passengers and nearly 62,000 tonnes of freight in 1994-95. Various land use developments have also come up around the existing airport. Considering the long term needs of the region it is desirable to identify a new site for building a modern international airport preferably in a site close to the city which is environmentally acceptable and taking into account noise level, land use developments and connectivity to existing regional transport network. The existing airport could then become a domestic terminal. Realising the need for such a new international airport, the Government of Tamil Nadu undertook detailed investigations with the help of international consultants and have identified a new site.

The Annual Plan Outlay for the year 2004-05 is shown in the following table below.

**Annual Plan Outlay for 2004-05**  
**Road Transport Services**  
**Abstract**

(Rs. in lakhs)

Sl. No.	Name of the Scheme	A.E. 2002-03	B.E. 2003-04	R.E. 2003-04	B.E. 2004-05
I)	Road Transport				
1)	Vehicles Maintenance Dept.	197.89	235.78	228.47	258.86
2)	Implementation of Road Safety Programme	473.22	500.00	500.00	500.00
3)	Establishment charges for Project Management Group for implementation of Tamil Nadu Road Sector Project	-	-	-	270.95
4)	Special Institutions in e-governance in Transport Department	-	-	-	500.00
	Road Transport - Total	671.11	735.78	728.47	1529.81
II)	Investment in Public Sector and other Undertakings	-	0.21	0.24	0.24
	Assistance towards the share capital of all Transport Corporations and Tamil Nadu Transport Development Finance Corporation				
III)	Other Expenditures	461.69	-	-	-
	Grand Total (I to III)	1132.80	735.99	728.71	1530.05

Source: Plan Budget Link – 2004-05 (Yellow Book)