

ROADS

9.51 India has one of the largest road networks in the world, aggregating to about 3.34 million kilometres at present. The country's road network consists of National Highways, State Highways, Major District Roads, Other District Roads and Village Roads. The road network comprises 66,754 km of National Highways, 1,28,000 km of State Highways, 4,70,000 km of Major District Roads and about 26,50,000 km of Other District and Rural Roads. Out of the total length of National Highways, about 32 per cent is single lane/intermediate lane, about 55 per cent is standard 2-lane and balance 13 per cent is 4-lane width or more. Though National Highways account for only 2 per cent of the total length of roads, they account for about 40 per cent of the total traffic.

The National Highways Development Project (NHDP)

9.52 The largest highway project ever undertaken in the country is being implemented by the National Highways Authority of India (NHAI). Phase-I and II of the NHDP envisaged 4/6 laning of about 14,279 kilometres of National Highways at a total estimated cost of Rs. 65,000 crore (at 2004 prices). These two phases consist of the Golden Quadrilateral, the North-South & East-West Corridors, port connectivity and other projects. The Golden Quadrilateral (GQ – 5,846 km) connects the four major cities of Delhi, Mumbai, Chennai and Kolkata. The North-South and East-West Corridors (NS-EW – 7,300 km) connects Srinagar in the North to Kanyakumari in the South including spur from Salem to Kochi and Silchar in the East to Porbandar in the West, respectively. Under the Port Connectivity Project, roads connecting 12 major ports (380 km) and Other Projects (962 km) will be improved.

9.53 As of November 30, 2007, 7,962 km of National Highways under NHDP project has been completed, the bulk of which (5,629 km) lies on the GQ. About 7,744 km of National Highways are under construction. Nearly 96 per cent works on GQ have been completed by November 2007 and the NS and EW Corridors are expected to be completed by December 2009. A summary of progress under different phases of NHDP is given in Table 9.13.

9.54 The upgradation of 12,109 km has been approved by the Government under NHDP Phase-III at an estimated cost of Rs. 80,626 crore. In addition to the above-mentioned approved projects, there is a proposal for two-laning with paved shoulder for 20,000 km of National Highways under NHDP Phase-IV. The Government has also approved six-laning of 6,500 km of NHs comprising 5,700 km of GQ and balance 800 km of other sections of NHs under NHDP Phase-V at a cost of Rs. 41,210 crore. The Government has approved construction of 1,000 km of expressways with full access control on new alignments at a cost of Rs. 16,680 crore under NHDP Phase-VI and the construction of ring roads including improvement of NH Links in City, grade separated intersections, flyovers, elevated highways, ROBs, underpasses and service roads at a cost of Rs. 16,680 crore under NHDP Phase-VII.

9.55 The implementation of NHDP has been faced with a number of constraints that include delays in land acquisition and removal of structures, shifting of utilities, law and order problem in some States and poor performance of some contractors. Regardless of these constraints, the impact on the economy due to completion of about 96 per cent of the GQ is already visible.

Table 9.13 NHDP & other NHAI projects(as on November 30, 2007)

Sr. No.	NHDP Component	Total Length	Completed 4-lane	Under implementation		Balance for award of civil works
				Length(km)	No. of contracts	
1	GQ	5,846	5629(96%)	217	25	-
2	NS-EW	7,300	1,559	4,762	148	821
3	Port connectivity	380	163	211	8	6
4	Other NHs	962	337	605	16	20
5	NHDP Phase-III	12,109	274	1,801	32	10,034
6	NHDP Phase-V	6,500	-	148	2	6352
Total		33,097	7962	7944	231	17233

Corridor management

9.56 The substantial completion of NHDP Phase-I, i.e., Golden Quadrilateral, has necessitated greater emphasis on corridor management, that is, on managing highways in such a manner as to deliver maximum throughput in terms of speed and traffic volume while minimizing the cost of operation and enhancing road safety. The concept of corridor management is being applied on completed sections of NHDP through operation and maintenance contracts. The scope of work, among other things, includes road maintenance, road property management, incident management, traffic management, toll fee collection, wayside amenities and engineering improvements.

Financing of NHDP

9.57 The main source of finance of NHAI for the implementation of various phase of NHDP is the fuel cess. The present rate of cess is Rs. 2 per litre on both petrol and diesel, a part of which is allocated to NHAI to fund implementation of NHDP. During 2007-08, an amount of Rs. 8,106.39 crore has been provided for the National Highways and for State roads out of the same. Of this amount, Rs. 6,541.07 crore is for National Highways and Rs. 1,565.32 crore for State roads. An amount of Rs. 173.93 crore has also been allocated during 2007-08 for the development of State Roads.

9.58 The funds allocated from the cess is leveraged by NHAI to borrow additional funds from the domestic market. The Government of India has also taken loans from the World Bank (US\$ 1,965 million), Asian Development Bank (US\$ 1,605

million) and the Japan Bank for International Cooperation (JBIC) (Yen 32,060 million) for financing the projects under NHDP. These loans are passed on to NHAI by the Government partly in the form of grant and partly as loan. NHAI has also negotiated a direct loan of US\$ 165 million from the ADB for one of its projects. The funds provided to NHAI including the borrowings from the market are utilized for the projects and for servicing and repayment of borrowings from the domestic market. The year-wise funds received from the Government and funds borrowed by NHAI are given in Table 9.14.

Public-Private Partnership (PPP)

9.59 Historically, investments in the infrastructure, particularly in the highways, were being made by the Government mainly because of the large volume of resources required, long gestation, uncertain returns and associated externalities. The galloping resource requirements, concern for managerial efficiency and consumer responsiveness have led in recent times to an active involvement of the private sector.

9.60 It has been decided that all the sub-projects in NHDP Phase-III to Phase-VII would be taken up on the basis of Public-Private Partnership (PPP) on Build Operate and Transfer (BOT) mode. To this end, and to encourage participation of private sector, the Department of Road Transport and Highways has laid down comprehensive policy guidelines for private sector participation in the highway sector. The private sector participation envisaged in Phase-II of NHDP has also been increased.

9.61 The Government has also announced

Table 9.14 Financial structure of NHAI

Year	Cess Funds	External Assistance		Borrowings	Budgetary Support
		Grant	Loan		
1999-2000	1,032.0	492.0	—	656.6	-
2000-01	1,800.0	461.0	120.0	804.4	-
2001-02	2,100.0	887.0	113.0	5,592.9	-
2002-03	2,000.0	1,202.0	301.0	-	-
2003-04	1,993.0	1,159.0	290.0	-	-
2004-05	1,848.0	1,239.0	361.0	-	-
2005-06	3,269.7	2,400.0	500.0	1,289.0	700.0
2006-07	6,407.5	1,582.5	395.5	1,500.0	110.0
2007-08	6,541.5	1,788.8	447.2	2,000.0	265.0

(Rs. in crore)

several incentives such as tax exemptions and duty-free import of road building equipments and machinery to encourage private sector participation. Implementation of projects through construction contracts is to be done in exceptional cases where private sector participation is not possible at all. Preparatory work has begun in consultation with the Planning Commission for seeking the Government approvals for the enhanced scope of NHDP.

Special Accelerated Road Development Programme in the North-Eastern Region

9.62 The Special Accelerated Road Development Programme for the North-Eastern region (SARDP-NE) aims at improving the road connectivity to State capitals, district headquarters and remote places of the NE region. It envisages two-/four-laning of about 3,846 km of National Highways and two-laning/improvement of about 4,891 km of State roads. This would provide connectivity to 85 district headquarters in the North-Eastern States, to National Highways and State Roads. The programme has been divided into the following two phases:

9.63 *Phase A* would include improving 2,304 km of roads consisting of 1,889 km of National Highways and 415 km of State roads at an estimated cost of Rs. 12,793 crore. Out of 2,304 km, the Border Roads Organization (BRO) and State PWDs have been assigned the development of 1,386 km of roads at an estimated cost of Rs. 4,085 crore. Improvement of remaining 918 km of National Highways is to be done by NHAI. Out of this works on 330 km will be done by inviting bids for construction works and the balance 588 km will be taken up on BOT basis. Out of 1,386 km roads assigned to State PWDs, projects covering

a length of 664 km at a cost of Rs. 1,613 crore have been approved till date and works are in different stages of progress. The likely target date of completion for Phase A is 2012-13. Phase B involves two-laning of 1,957 km of National Highways and two-laning/ improvements of State roads. Phase B is approved only for DPR preparation and investment decision is yet to be taken by the Government.

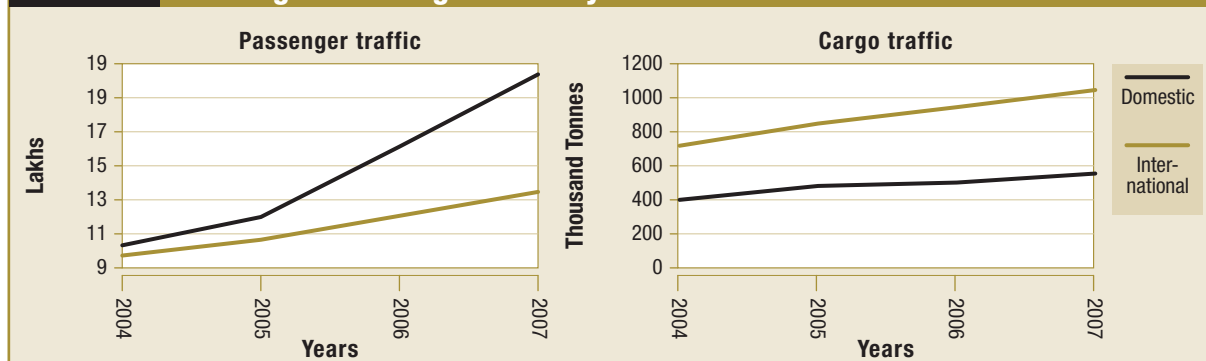
9.64 The Ministry of Road Transport and Highways has set up a high-powered Inter-Ministerial Committee to appraise and coordinate individual sub-projects under SARDP-NE. The Committee has approved various sub-projects covering 664 km length at an estimated cost of Rs. 1,613 crore under Phase A of the programme (up to December 31, 2007).

Legal framework for road transport, some recent initiatives

9.65 Transportation by road has steadily expanded over the years. The share of road transport was 87 per cent for passenger movement and 61 per cent for freight movement in 2004-05 as compared to 15 and 14 per cent, respectively, in 1950-51. The expansion of the road network through further investment needs to be accompanied with appropriate changes in related laws and regulations. In this regard, some of the important changes carried out or initiated during the year are as follows:

- **Carriage by Road Act, 2007:** The rights and liabilities of the common carrier in India are governed by the Carriers Act, 1865. The road transport industry has undergone a sea change since its enactment. It had become necessary to redefine the scope and

Figure 9.4 Passenger and cargo traffic by air



applicability of the Carriers Act, 1865. Hence, the Carriage by Road Act, 2007, was gazetted on October 1, 2007. It will replace the Carriers Act, 1865 and is expected to make the transport system transparent and facilitate modernization of systems and procedures of the transportation trade through registration of common carriers. It would also provide scope for apportionment of liability between the common carrier and the consignor. A working group has been constituted to frame rules under the Act so that the Act could be brought into force.

- **Amendment in the Motor Vehicles Act, 1988:** The Motor Vehicles Act, 1988 (MVA), has been the principal instrument for regulating motor vehicles. Since its enactment, the Act was amended thrice in view of the technological changes in road transport. In response to suggestions received from various stakeholders like State Governments, transport associations, NGOs and citizens, the process of further amending the MVA was initiated. A proposal for amendment of the Act was approved by the Union Cabinet on March 1, 2007, and a Bill was introduced in the Rajya Sabha on May 15, 2007, which has since been referred to the Department-related Parliamentary Standing Committee for further examination.
- **Accreditation of bus body builders:** The Department of Road Transport and Highways has notified the rules for accreditation of bus body builders on March 23, 2007, to bring in uniformity in bus body design and to enhance safety and comfort to passengers. Bus body builders in the country would thus be accredited through the system of Zonal and National Level Accreditation Board and only

such approved builders would undertake bus body building activities as per the specifications laid down by the Government. It is expected that these rules would come into effect from March 23, 2008.

Strengthening of public transport system

9.66 While the country has seen a rapid expansion in personalized modes of transport, there is a large unmet demand for public transport that needs to be addressed. The public transport system in India mostly comprises of passenger bus transport service offered by the State-owned road transport undertakings and private operators plying their buses under stage carriage permits. As the passenger road transport service has not achieved the desired growth both in terms of quality and numbers, despite growing demand, it has resulted in exponential growth of personalized mode of transport leading to enormous problems of traffic congestion, pollution, etc. Keeping in view the financial position of various States, the Central Government proposes to assist them through the viability gap funding mechanism to improve their public transport system. The assistance would be provided subject to certain reforms to be undertaken by the State Governments. A scheme in this regard is being worked out.

Investment projected for the Eleventh Five Year Plan

9.67 The Eleventh Five Year Plan places high priority to the expeditious completion of works approved under the different phases of the NHDP. For the roads and bridges sector, the Eleventh Five Year Plan envisages a total investment of Rs. 3,14,152 crore (approximately US\$ 78.5 billion @ Rs. 40/\$) over the five-year period starting from 2007-08. Of this the shares of the Centre, the States and the private sector are expected to be 34.2, 31.8 and 34 per cent, respectively.