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Transport Sector in the Sixth Five Year Plan of Bangladesh: An Overview

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Abstract

Modern transportation infrastructure plays a significant role in the socio economic development of a country. In the current context of globalization and market economy, there is a critical need for evolving a developed and well-knitted transport system that should be able to integrate Bangladesh with the international transport network Addressing the importance of transport sector, government has taken huge plans and programs for development of this sector. The constructions of Padma Multipurpose Bridge and Dhaka-Chittagong Elevated Expressway have already started. For rapid development and to provide quick and cheaper services government has created a separate railway ministry. To achieve an average GDP growth rate of 7 percent per annum the transport sector growth rate is projected to increase by 7.5 percent per annum in the Sixth Five Year Plan and to achieve the target government has allocated Tk 415,120 million for the development of transport sector which is 15.7% of total public allocation.

1. Introduction

Modern transportation infrastructure plays a significant role in the socio economic development of a country. In the current context of globalization and market economy, there is a critical need for evolving a developed and well-knitted transport system that should be able to integrate Bangladesh with the international transport network. Realizing this importance, the concerned ministries and their

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agencies continue to exert their concerted efforts to develop the system. In Bangladesh the transport sector mainly comprises of land transport (road and rail transport), water transport and air transport. The contribution of land, water and air transport in GDP was 8.07 percent, 0.63 percent and 0.09 percent, respectively, at current market prices in FY 2009-10. The growth rate of land, water and air transport was 5.98 percent, 1.01 percent and 9.13 percent, respectively, at 1995-96 prices in FY 2009-10. After liberation, land transport sector has got highest priority and at present this sector carries 70 percent of passenger and 60 percent of freight traffic. The contribution of water and air has decreased day by day and at times the growth rate of these two sectors was negative. In the Sixth Five Year Plan, to achieve an average GDP growth rate of 7 percent per annum the transport sector growth rate is projected to increase 7.5 percent per annum. The Government has identified the transport infrastructure as the key sector for ensuring socio-economic development and has set the Sixth Five Year Plan targets to achieve that objective. Keeping in view the increased volume of domestic traffic as well as the future traffic from the Asian Highway and Trans-Asian Railway, the main objective of the Sixth Five Year Plan will be to develop a balanced and integrated transport network through adoption of different strategies and programs.

The government has, therefore, taken initiatives to implement appropriate projects in transport sector on a priority basis. These include establishing an extensive road network in each district to connect villages, unions, upazilas and the district headquarters; taking appropriate measures to construct the Padma and Karnaphuli bridge/tunnel, Dhaka - Chittagong four-lane expressway, and expansion and modernization of the railway; establishing rail and road connection with neighboring countries under the Asian Rail and Highways schemes; undertaking measures to dredge every big and small river to maintain navigability throughout the year; improving river routes and river transportation system to facilitate safe and cost effective transportation of cargo and passengers; restructuring Bangladesh Biman to enable it to operate on commercial and profitable basis, encouraging aviation services in the private sector; construction of modern airport of international standard to facilitate air transportation linking Bangladesh with the world; installation of new rail lines to maintain communication link with the capital and provide cheaper transportation in railway sector; construction of underground railway; mono or circular rail and navigable river route around Dhaka to the solve the public transportation problem and traffic jam in the capital. The broad objectives of the study are as follows:

Objective of the study:

1. To investigate the growth performance of transport sector over the last decade;
2. To investigate the Sixth Five Year Plan targets and financing of the Transport sector;
3. To find out the problems in transport sector and constraints in achieving SFYP targets;
4. To give some policy suggestions to overcome the problems.

2. Literature Review

It is not surprising that despite the massive amount of research work done by individuals and organizations there have been frequent demands from the policy makers to undertake further specific studies in this area. Hence the important work carried out on this aspect is reviewed comprehensively to understand the direction of research carried out so far and to evolve a possible improvement over such available studies.

Justice (2004) studied a not so quiet transport revolution in Bangladesh: a case study on rural motorized three-wheelers in Bangladesh. An attempt was made to examine the effect of a massive national innovation system that has developed wholly outside government regulations and policies where locally manufactured motorized rickshaw and tempos or auto rickshaw, numbering in the tens of thousands has silently changed the face of rural road transportation in Bangladesh.

Davies and Hossain (2008) analyzed a general information system to reduce flood impact on road transportation system. The adverse effect of flooding is recognized when it disrupts the road transportation system of a country since it is considered as a country's socio-economic lifeline. By determining interaction probabilities, the flood impact can be modeled, visualized, quantified and evaluated by developing a sophisticated general information system.

Ahmed, Fujiwara and Zhang (2010) quantified land transport sector in Bangladesh: an analysis towards motivating GHG emission reduction strategies. Traditionally, road transport has been the dominant mode of transportation in Bangladesh, causing not only a burden on the economy through the import of gasoline, but also aggravating the environment through increased emission of greenhouse gases.

Rangoraj and Raghuram (2007) reviewed viability of inland water transport in India. In water-based transport generally, fuel costs are low and environment pollution is lower than in transport by road, rail or air. Transport based on inland waterway such as rivers, canals, lakes, etc. and also overlapping coastal shipping in tidal rivers constitute 20% of the transport sector in Germany (WB 2005) and 32% in Bangladesh (Rahman 1994). In India it has a paltry share of 0.15% (Raghuram 2004).

Another study in Bangladesh by Malek (2006) showed the role of public investment to promote eco-efficiency of infrastructure of such as public transport. The role of an efficient transport and communication system is extremely critical for the socio-economic progress of a country. As physical infrastructure is indispensable, a well-knit transport and communication network ensures a well balanced distribution system for the means of production, efficient marketing of produced commodities, maintaining stability of price and raising industrialization.

Islam (2004) in a study showed the special constraints faced by the landlocked developing countries due to their unfavorable geographical locations. The landlocked developing countries (LLDCs) depend on transit trade for their integration into the world economy. The lack of access to the sea, remoteness from major international markets, inadequate transport infrastructure and cumbersome transit procedures force the landlocked developing countries to bear additional costs for their external transactions. It is estimated that landlocked developing countries have to bear, on average, 50 percent higher international transport costs than their neighboring transit/coastal countries.

3. Methodology

The study is based on secondary data. Time series data for 1979-2010 were obtained from several official documents viz., Statistical Year Book of Bangladesh 1995-2009 published by Bangladesh Bureau of Statistics, Bangladesh Economic Review 1991, 1997, 2001, 2004, 2009, 2010, of the Ministry of Finance, and official website of various ministries and departments of the Government. The data were analysed for examining the present condition of the transport sectors and their contribution to GDP growth. Economic analysis provides valuable tools for identifying the relationship among macro-economic variables, and hence provides the suitable basis for making future projection.

4. Modes of Transport in Bangladesh

An adequate and efficient transport system is a pre-requisite for initiating and sustaining economic development. Transport efficiency is the key to the expansion and integration of markets – sub-national, national and international. It also helps the generation of economies of scale, increased competition, reduced cost, systematic urbanization, faster export-led growth and a large share of international trade. Transport system of Bangladesh consists of roads, railways, inland waterways and civil aviation catering for both domestic and international traffic. Presently there are about 21,040 km of paved roads; 2835.04 kilometers of railways; 3,800 km of perennial waterways, which increases to 6,000 km during the monsoon, 2 sea ports, and 3 international and 8 domestic airports.

4.1 Land Transport/Surface Transport

Land transport comprises road transport and railway transport. Both of these transport sectors play a significant role in economic development. There has been a massive change in road transport system. Number of vehicles and length of roads have increased over the decades. Government also gives priority to the cheap and safe railway transport sector.

4.1.1 Bangladesh Road Transport

In Bangladesh, road transport system in recent years has been playing a significant role in transporting passengers and goods. According to BBS data, in FY 2008-09 the share of transportation sector in GDP at constant price is 6.36 percent (Economic Review -2009). Bangladesh Road Master Plan 2007 estimated that the growth of both freight and passenger transport would be around 6.4% per year for the period of 2010-15 and 6% over the Master Plan period i.e. 2005-2025. Roads and Highways Department (RHD), Local Government Engineering Department (LGED), Bangladesh Road Transport Authority (BRTA), Bridge Division and Bangladesh Road Transport Corporation (BRTC) are the major organizations which control and maintain the road transport system.

Roads and Highways Department (RHD)

The Roads and Highways Department (RHD) is a major public sector agency directly responsible for planning, design, construction, improvement and maintenance of primary and secondary road network in the country. RHD is also responsible for operation, and maintenance of an extensive ferry system in the country. It is currently operating about 153 ferry boats in 60 ferry *ghats* on its road network throughout the country. Gradual replacement of ferry system with

Table 1 : Various Categories of Road under Roads and Highways Department During 2001-2009

Year	National Highway (km)	Regional Highway (km)	Feeder Road 'A' Type (km)	Total (km)
2001	3086	1751	15962	20799
2002	3086	1751	15962	20799
2003	3086	1751	15962	20799
2004	3723	4832	13823	22378
2005	3570	4323	13678	21571
2006	3570	4323	13678	21571
2007	3570	4323	13678	21571
2008	3482	4128	13255	20865
2009	3478	4222	13248	20948

Source: Department of Roads and Highways. The Ministry of Communication

bridges is another broad dimension of RHD's regular activities. The figures of Table-1 show a dramatic change in regional highways of the country.

Road transport has emerged as the most dominant mode in surface transportation carrying in recent years over 70% of passenger and over 60% of freight traffic, respectively (Table 2). It transpires from the table that the share of road transport in carriage of passenger was 54% in 1974-75, which increased to 73% in 2004-05. At the same time, the share of freight transport increased from 35% to 72%.

Table 2 : Mechanized Surface Transport Output and the Share of Road Transport in Carriage of Passenger and Freight Traffic during 1974-2005

Year	Passenger Transport		Freight Transport	
	Total Output in Billion km	Share of Road Transport in %	Total output in Billion Ton-km	Share of Road Transport in %
1974-75	17	54	2.6	35
1984-85	35	64	4.8	48
1988-89	57	68	6.3	59
1992-93	66	75	9.0	61
1996-97	72	73	10.0	63
2004-05	110	73	18.6	72

Source: Bangladesh Transport Sector Study (BTSS) 1996-97

Local Government Engineering Department (LGED)

Local Government Engineering Department (LGED) is a major public sector agency directly responsible for design, construction, improvement and maintenance of rural road. The LGED made significant contribution toward rapid

expansion of the rural transport network resulting in rapid growth of transport service. Several study results reveal that a good rural transport network is crucial for higher economic growth, poverty reduction and social development. It plays a pivotal role, *inter alia*, in product diversification, trade expansion, providing basic services, increasing productivity, decreasing production cost, and thereby, enhancement of the quality of life and welfare of people.

LGED is implementing a series of programs with foreign and local funding for infrastructure development in urban and rural areas. Since its inception up to June 2009 it has so far constructed a total of 131290 km (64691 km dirt road and 66599 km paved roads) upazila and union roads and 953295 meter bridge/culverts (Table 3).

Table 3 : Programs of LGED for Infrastructure Development.

Year	Dirt Road (km)	Paved Road (km)	Bridge/Culverts (meter)
Cumulative June 2001-02	35389	22834	318412
2002-03	4750	3739	42003
2003-04	6252	4804	49405
2004-05	6040	5237	60908
2005-06	6573	5872	39728
2006-07	42	5086	40067
2007-08	-	3769	29600
2008-09	-	3277	33800
Cumulative June 2009	64691	66599	953295

Source: LGED (-) indicates data is not available

Bangladesh Road Transport Authority (BRTA)

Bangladesh Road Transport Authority (BRTA) has been entrusted with the task to ensure constant supervision, proper management and effective control with a view to bringing about discipline in the road transport sector since its inception in 1998. Over the period, with active support from the ministry of communication BRTA has brought about marked improvement in almost all areas. This organization is responsible for issuing registration and fitness certificate as well as for executing other regulatory activities as per Motor Vehicles Ordinance.

It is seen from Table 4 that the number of vehicles doubled from FY 2001-02 to FY 2008-09. Number of all types of vehicles increased except taxi and trawler. It is very difficult for BRTA to handle this large number of vehicles.

Table 4 : Estimated Numbers of Mechanized Vehicles on Road by Type during 2001-2009

Types	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Bus/ Minibus	29717	31848	33302	34388	35349	36526	37906	39088
Micro bus	14743	16244	17359	18826	20998	23637	26484	30055
Truck	48753	50786	52961	55082	57399	59674	61717	65064
Jeep	10790	11009	11172	11386	11704	12090	12506	13028
Car	63094	66393	69461	72254	75728	80453	87142	96137
Taxi	4352	7030	9613	10037	10372	10509	10519	10527
Auto Rickshaw	77700	84693	94120	99930	104432	111046	122092	135875
Tractor	3267	3344	3429	3489	3571	3663	3760	3893
Motor Cycle	220225	239884	257086	281599	316847	366031	433287	501825
Trawler	1853	1863	187	1883	1894	1906	1919	1938
Others	10734	13215	15827	17897	20787	24107	27617	32330
Total	485228	526309	566194	606770	654964	729642	824948	929760

Source: Statistical Year Book of Bangladesh 2009

Bangladesh Bridge Authority

The Bridge Division was created under the ministry of communication in 2008 to regulate and co-ordinate the activities of the bridge authority. The main activities of the bridge division were to build and maintain the bridge, toll road, flyover, expressway, link road etc. Bangabandhu Bridge was constructed to establish direct road and rail link between the north-west and eastern zone of the country, which is separated by the mighty river Jamuna. Besides, the road and railway communication facilities, electricity and gas pipelines have also been laid on the bridge. The bridge is now acting as a fixed major link in the national transportation system. With the facilities of communication both by road and rail from north-west to east, movement of traffic has become easier. This, in turn, has resulted in reducing transport cost and travel time. The farmers of the north-west region are now getting fair prices of their crops, which has encouraged commercial farming of various agricultural products. Besides, a good environment has been created to establish new industries in the northern region.

Apart from playing a vital role in the transportation system, the bridge is contributing to the economy by facilitating accelerated growth, poverty alleviation and revenue generation.

Bangladesh Road Transport Corporation (BRTC)

Bangladesh Road Transport Corporation (BRTC) was established in 1961 to set a standard road transport system in the country. The only government organization in road transport sector under the Ministry of Communication, BRTC is mandated to provide fast, efficient, economic, reliable, comfortable, modern and safe road transport services in the country. BRTC buses and trucks are largely used to meet up emergency needs arising out of natural calamities, *hartals*, strikes, and political restlessness, for carrying government relief, food, prescribed books, and election materials and so on. BRTC extends its services for the employees of Bangladesh Secretariat, Bangladesh Supreme Court, and Election Commission and for the students of Dhaka University, Jagannath University, and Jahangirnagar University. At present BRTC has 6 training institutes and through these it imparts training in the trade of driving and auto mechanics with a view to creating a critical mass of efficient drivers and auto mechanics, which eventually will help reduction of unemployment and accident. BRTC has undertaken a scheme to set up another six training institutes. BRTC has introduced e-ticketing system through its six ticket counters in the city. BRTC is thinking to expand the system gradually throughout the country to establish e-governance.

Regional and International Connectivity Issue

The government is pursuing the policy of corridor based road development with a view to accommodating regional as well as international traffic in Bangladesh. The government has been making efforts to improve the road connectivity with neighboring countries through various regional cooperation forums such as SARC, SASEC, BIMSTEC and BCIM.

Asian Highway Network

Bangladesh acceded to the Asian Highway Network on 8 November 2009. The physical alignment of Asian Highway Route in Bangladesh is more or less completed in so far as the road connectivity is concerned. Three routes which are the part of the Asian Highway Network in Bangladesh are as follows:

International Routes:

1) Route AH-1: Benapole – Jessore – Narail – Bhatiapar – Mawa – Dhaka – Katchpur – Sylhet - Tamabil (length 495 km).

2) Route AH-2: Banglabndha – Phanchgarh – Rangpur – Bogra – Hatikamrul - Jamuna Bridge - Tangile - Dhaka - Katchpur - Sarail - Sylhet - tamail (length 805 km).

Sub-Regional Routes

1) Route AH-41: Mongl Port – Jessore – Bonpara – Hatikamrul – Katchpur – Comill–Chittagong-Cox's Bazaar–Teknaf-Myanmar Border (length 752 km)

3.1.2 Bangladesh Railway

Bangladesh Railway BR is one of the oldest state owned, government managed and service-oriented organizations, which provides, environment friendly, less hazardous and cheap transport services. BR also provides critical transport services during natural calamities such as flood and cyclones on an emergency basis. In a land scarce country like Bangladesh, railways can perform a useful and effective role in transporting bulk freight and passengers more cost effectively and with lower adverse environmental impacts than road transport. Its contribution to pollution is very little, consumption of fuel is only 10% of the other modes of transport and the rate of casualties in accident is negligible in comparison to other modes of transport. Traveling cost on railways is cheaper than any other mode of land transportation. Although railway has great potentials, it carries only 4% of all traffic. Due to lack of proper investment, BR faces a number of constraints which limit its ability to provide service and minimize its losses. Recently government resource allocations have had heavy road bias and this particular sub-sector has been losing ground in competition with both water and road transportation. The allocation to the railway sub-sector in respect to the total allocation of transport sector was 23.9% in the First Five Year Plan, 32.13% in the Second Five Year Plan, 27.84% in the Third Five Year Plan, 13.1% in the Fourth Five Year Plan and 13% in the Fifth Five Year Plan. Those allocations could barely meet the need of rehabilitation or replacement costs. As a result no improvement or up-gradation took place and some railway sections and stations had to be closed down. On the other hand, huge investment in road sub-sector resulted in high road density of 69.2 km per 100 square km. of total land in Bangladesh.

After liberation, like other agencies, BR had to emphasize on rehabilitation and reconstruction of the damaged railway system. Till then the bulk of the investment was for replacement, renewal and rehabilitation of track, rolling stock and signaling system. During the past three decades, the only remarkable investment was the establishment of railway network over the Bangabandhu Multipurpose Bridge, which provides seamless railway connectivity between East and West

zone of BR. Bangladesh Railway has introduced Computerized Seat Reservation and ticketing system, selling ticket through mobile phone, giving information through mobile network. At present, there are some important policy signals that things are beginning to change. Government has already created a separate rail ministry and taken huge programs to develop this sector.

Bangladesh Railway has got a total network of 2835.04 route kilometers (Broad Gauge 659.33 km, Dual Gauge 374.83 km and Meter Gauge 1800.88 km). Train services between Dhaka-Calcutta were introduced on 14 April 2008 in order to establish communication facility between Bangladesh and India. The overall activities of Railway from FY 2001-02 to FY 2008-09 are presented in Table 5.

Table 5 : Route kilometer and Station by Gauge of Bangladesh Railway during 2001-2009

Year	Broad Gauge		Meter Gauge		Total	
	Station	Route Km.	Station	Route Km.	Station	Route Km.
2001-02	130	936	324	1830	454	2766
2002-03	134	660	320	1830	454	2490
2003-04	134	660	320	1830	454	2490
2004-05	134	660	320	1830	454	2490
2005-06	134	659	320	1801	454	2460
2006-07	134	659	307	1801	441	2460
2007-08	134	659	306	1801	440	2460
2008-09	134	659	306	1801	440	2460

Source: Bangladesh Railway

Figures of Table 5 show a pathetic scene because the total length of railway has decreased from 2766 km in FY 2001-02 to 2460 km in 2008-09. The railway sector gets most importance in developed countries but in Bangladesh this sector is very much neglected. It is seen from table 6 that the total number of locomotives was 279 in year 2008-09, of which the number of broad gauge diesel engine was 71 and meter gauge engine was 208. Passenger carriages increased from1272 in 2001-02 to 1415 in 2008-09. In 2007-08 some new coaches and locomotives were added in the railway sector.

Trans Asian Railway: To establish regional railway connectivity and Trans Asian Railway (TAR) connectivity, Bangladesh signed the "Intergovernmental Agreement on the Trans-Asian Railway (TAR) Network" as 20th signatory on 09-11-2007 and ratified it on 11-08-2011. TAR routes enter Bangladesh from three directions from the Indian state of West Bengal and exits through one direction.

Table 6 : Rolling Stock of Bangladesh Railway During 2001-2009

Year	Locomotives		Total	Coaching Vehicles		Freight Wagons	
	Broad Gauge Diesel	Meter Gauge Diesel		Passenger Carriages	Other Coaching Vehicles	Unit	Four Wheelers
2001-02	75	202	277	1272	135	10631	13707
2002-03	75	200	275	1273	137	10605	13679
2003-04	75	198	273	1347	64	10328	13217
2004-05	78	208	286	1344	62	10236	13122
2005-06	77	208	285	1341	62	10246	13230
2006-07	75	208	285	1385	31	9473	12443
2007-08	75	208	285	1435	35	9409	12326
2008-09	71	208	279	1415	35	8998	11909

Source: Bangladesh Railway

The TAR routes in Bangladesh are as follows-

TAR ROUTE - I

Gede (West Bengal, India) – Darsana – Ishurdi – Jamtoli – Joydebpur - Tongi - khaura – Chittagong Dohazari – Gundum – Myanmar Border Station.

TAR ROUTE – II

Singabad (West Bengal, India) – Rohanpur – Rajshahi – Dinajpur – Abdulpur – Ishurdi - Jamtoli – Joydebpur - Tongi - khaura – Chittagong Dohazari – Gundum – Myanmar Border Station.

TAR ROUTE – III

Radhikapur (West Bengal, India) – Birol – Dinajpur – Parbatipur – Abdulpur – Ishurdi - Jamtoli – Joydebpur - Tongi - khaura – Chittagong Dohazari – Gundum – Myanmar Border Station.

Regional Connectivity

The regional routes through Bangladesh identified by SAARC Regional Multimodal Transport Study (SRMTS) and BIMSTEC Transport Infrastucture and Logistics Study (BTILS) are as follows.

BRCI and SRCI: Lahore/Delhi/Kolkata/Dhaka/Mahishasan/Imphal.

BRC3 and SRC4: Birgonj (Nepal)/ Raxaul/Katihar (India)/Rohanpur – Chittagong with links of Jogbani (Nepal) and Agortola (India)

SRC6: Birgonj (Nepal)/Raxaul/Singhabad (India)/ Rohanpur – Rajshahi – Khulna – Mongla Port with links of Biratnagar (Nepal).

3.2 Inland Water Transport

Bangladesh Inland Water Transport Corporation (BIWTC) is a service oriented government owned organization. It is also the largest inland water transport organization. BIWTA is playing a vital role in regulating the water transport

Table 7 : Water Transport Operation under Bangladesh Inland Water Transport Authority during 2001-2009

Year	Navigable Waterway in km.		Number of Passengers (in million)				Volume of Cargo Handled (million ton)
	Monsoon	Dry season	Motor launch	By steamer	By ferry service	Total	
2001-02	5968	3600	86.24	0.94	9.60	96.79	5.90
2002-03	5968	3600	66.56	1.18	11.40	79.14	7.93
2003-04	5968	3600	76.16	1.11	13.34	90.61	8.08
2004-05	5968	3600	49.47	1.08	13.99	64.54	11.59
2005-06	5968	3600	166.50	1.11	17.05	184.6	17.80
2006-07	5968	3600	177.62	0.94	17.84	196.4	20.50
2007-08	5968	3600	190.30	0.89	17.80	208.9	25.51
2008-09	6000	3824	199.80	-	-	-	26.77

Source: BIWTA, (-) indicate data not available

system of the country. Under its dredging programme for maintaining waterways navigable, the cumulate dredging of 53.98 lakh cubic meter has been completed in eleven waterways up to June 2009.

Under another project titled, “Introduction of circulation waterways in and around Dhaka city (2nd phase)”, a total dredging of 2.45 lakh cubic meter along Ashulia-Tongi river route and 4.24 lakh cubic meter along Demra-Isapura route in the river

Balu has been completed up to June 2009. In addition, a total of 7.26 lakh cubic meter dredging was completed in, Badda and Rampura canals, during the same period.

The waterways in Bangladesh vary according to Monsoon and dry season. In Monsoon the water way increases from 3,824 km to 6,000 km (Table 7). Most of the passengers are carried by motor launch and still ferry service plays an important role in passenger's carrying. Figures presented in the Table 8 shows the total number of vessels under Bangladesh Inland Water Transport Corporation gradually decreased. In FY 2001-02 the total number of vessels was 223, which came down to 182 in FY 2008-09. Many bridges and culverts were constructed in last decades which are the main reason of the decrease in the number of vessels.

Table 8 : Vessels by Type under Bangladesh Inland Water Transport Corporation During 2001-2009

Items	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Passenger vessels	18	15	14	15	15	15	15	16
Ferry steamers	35	35	35	35	35	35	35	35
Tankers	12	12	12	12	12	12	12	12
Coasters	15	14	14	14	14	14	14	12
Self Propelled vessels	10	10	10	10	10	10	10	10
Bay Tugs and Burgers	26	23	20	20	20	21	21	20
Harbor Duty Launches	6	5	5	5	5	5	5	5
Inland Flats	35	29	25	24	24	21	21	19
River Burgers Jute Boats	6	-	2	2	2	2	2	2
Receiving Pontoons	28	27	27	27	27	27	27	28
Sea Trucks	14	14	14	14	14	14	14	13
Miscellaneous	18	24	16	16	16	11	11	11
Total	223	208	194	194	194	187	187	182

Source: BIWTA, (-) indicate data not available

3.3 Bangladesh Biman

The national flag carrier Biman Bangladesh Airlines Limited makes significance contribution towards establishing air links within the country and with other countries. Despite various constraints, Biman is continuing its development efforts with its fleet of aircrafts. It is now maintaining 3 international airports and 7 domestic airports, of which 2 airports are left unused. Another 5 Short Take-Off and Landing (STOL) ports have been built for the convenience of airlines and when necessary. Biman is operating flights to 3 domestic and 18 international destinations. Due to significant rise in aviation fuel price, Biman's expenditure

Table 9: Number of Aircraft in Operation of Bangladesh Biman during

Year	Number and Type of Aircraft in Operation				Total
	Fokker	B-747	Air Bus	DC-10-30	
2001-02	3	-	4	6	13
2002-03	3	2	4	8	17
2003-04	3	2	6	6	17
2004-05	4	-	4	6	14
2005-06	4	-	4	5	13
2006-07	3	-	3	5	10
2007-08	4	1	3	4	12
2008-09	2	2	2	4	10

Source: Bangladesh Biman Airlines Limited

has increased. Biman suspended its operation to New York, Brussels, Paris, Frankfort, Mumbai, Narita, and Yangon in 2006. In spite of fleet constraints, Biman operated more than 200 additional flights to Malayasia and United Arab Emirates during last one year to meet labour traffic demand.

Table 9 shows that the total number of aircrafts of Bangladesh Biman were 10 in 2008-09, which was 17 in year 2002-03. In 2003-04 the total number of Air Bus was 6, which fell to 2 in 2008-09. Sometimes Bangladesh Biman runs their flight with rented aircrafts. At present some private organizations run their flight in domestic routes.

Table 10 presents data on passenger and cargo movement by Biman. Domestic passenger movement was 432,335 in 2003-04 which came down to 68,365 in 2006-07 because most of the domestic airports were suspended from their services. The international passenger movement shows an increase in the figure in 2008-09. The domestic cargo movement through Bangladesh Biman was very low because fare is very high compared to other transports. Biman is planning to

Table10 : Passengers and Cargo Movements by Bangladesh Biman during 2001-2009

Year	Number of Passengers Movement		Cargo Movement (Ton)	
	Domestic	International	Domestic	International
2001-02	406626	1075163	482	37017
2002-03	412503	1116757	554	37902
2003-04	432335	1214331	501	37063
2004-05	380539	1258613	326	39041
2005-06	288009	1231112	393	38351
2006-07	68365	1091665	1078	59041
2007-08	103512	1345095	189	15761
2008-09	157711	1387148	303	26006

Source: Bangladesh Biman Airlines Limited

resume its services to some of the suspended destinations and extend services to some new destinations after acquisition of new generation aircrafts. Aging fleet is the major problem of Biman, which resulted in cost increase, disruption of flight schedule and loss of market share. Biman is on the road to modernization of its fleet to make the airline competitive in the market.

5. Contribution of Transport Sector in the GDP of Bangladesh

A review of Bangladesh's past growth experience tells a remarkably encouraging story. The long-term trend in GDP growth rates since 1991-92 is shown in Table 11. A few striking results stand out. First, Bangladesh has continued to steadily improve its rate of growth. Second, which GDP growth in phase 1 (FY 1974-FY 1991) was below 4 percent per annum, it expanded significantly in Phase 2 (FY 1991-FY 2010), shooting up to over 5 percent per annum on a 10 year average, but exceeding the 6 percent mark for a number of years during FY 2001-FY 2010, despite the global financial crisis of 2008-10.

It is seen from Table-11 that the growth rate of water transport sector was negative from FY 1991-92 to FY 1997-98 but increased to 2 percent after FY 2004-05. The figures of Table-11 show that there is instability in the air transport sector. Because of the increase in fuel price and suspension of some flight operations, the growth rate of air transport sector declined after FY 2001-02. The growth rate of land transport was 4.14 percent, which was the lowest growth rate after FY 1994-

Table 11: Growth Rates of Transport Sector at Constant Price during 1991-

Year	Land Transport	Water Transport	Air Transport	Transport Growth	GDP Growth
1991-92	3.49	-1.43	0.58	2.30	5.04
1992-93	3.91	-2.99	11.81	2.54	4.57
1993-94	3.91	-1.83	8.17	2.79	4.08
1994-95	5.13	-2.12	-8.44	3.40	4.93
1995-96	5.50	-1.46	6.25	4.21	4.62
1996-97	5.44	-0.84	-10.68	4.01	5.39
1997-98	6.75	-0.92	16.89	5.61	5.23
1998-99	6.62	1.60	14.46	5.97	4.87
1999-00	6.32	1.78	16.80	5.84	5.94
2000-01	6.37	0.57	4.62	5.48	5.27
2001-02	6.73	0.34	-16.84	5.32	4.42
2002-03	6.64	0.07	-1.35	5.62	5.26
2003-04	6.02	0.16	0.84	5.20	6.27
2004-05	4.25	1.95	2.49	3.94	5.96
2005-06	4.14	1.95	5.25	3.90	6.63
2006-07	4.18	1.73	2.01	3.87	6.43
2007-08	4.54	2.54	6.20	4.34	6.19
2008-09	5.17	2.46	7.38	4.90	5.74
2009-10	5.98	1.01	9.13	5.49	6.07
2010-11*	4.03	1.94	7.61	3.87	6.66

Source: Bangladesh Bureau of Statistics. * indicate temporary

95. Among land transport, the contribution of road transport increased day by day but the contribution of rail transport did not increase sufficiently. The average growth rate of transport sector has varied between 2.30-6.00 percent.

Transport Sector Share of GDP at Constant Price (1995-96), %

It is evident from the Table-12 that at constant prices, the share of the transport sector (excluding support transport and communication) in total GDP is 7.04% in FY 2010-11 which was 8.40% in FY 1991-92. The total share varies between from 7.0% and 9.0%. The share of air transport is very low compared to the land transport. The share of inland water transport sector has decreased to 0.72% in FY 2010-11 which was 1.85% in FY 1991-92.

Table 12 : Transport Sector Share of GDP at Constant Price during 1991-

Year	Land Transport	Water Transport	Air Transport	Total share
1991-92	6.39	1.85	0.16	8.40
1992-93	6.36	1.72	0.17	8.25
1993-94	6.34	1.62	0.18	8.14
1994-95	6.37	1.52	0.15	8.04
1995-96	6.44	1.43	0.16	8.03
1996-97	6.45	1.35	0.13	7.93
1997-98	6.54	1.27	0.15	7.96
1998-99	6.64	1.23	0.16	8.03
1999-00	6.65	1.18	0.18	8.01
2000-01	6.71	1.12	0.18	8.01
2001-02	6.86	1.08	0.14	8.08
2002-03	6.95	1.03	0.13	8.11
2003-04	6.96	0.97	0.12	8.05
2004-05	6.85	0.93	0.12	7.90
2005-06	6.67	0.89	0.12	7.68
2006-07	6.50	0.85	0.11	7.46
2007-08	6.42	0.82	0.11	7.35
2008-09	6.38	0.79	0.12	7.29
2009-10	6.36	0.75	0.12	7.23
2010-11*	6.20	0.72	0.12	7.04

Source: Bangladesh Bureau of Statistics. * indicate temporary

The water transport performed very well in the last decade of the twentieth century because at that time the navigation was very good and rivers got plenty of water in the rainy season. But the situation changed in the past few years due to shortage of rain in the rainy season and the construction of dams by our neighboring country upstream of our rivers. The performance of air transport has gradually become power because of shortage of new investment, corruption and continuing losses. After liberation, most of the governments have neglected both the water and air transport.

6. Sixth Five Year Plan Targets and Financing of the Transport Sector

6.1 Sixth Five Year Plan Targets, Objectives and Strategies

RHD's Objectives, Targets and Strategies for SFYP

An efficient and modern road transport system has a unique role to play to achieve the government target set for SFYP and Vision 2021 as well. The contribution of road sector to the national income is around 8 percent at current market prices at present. The prime target of RHD is to make the growth sustainable. Roads and Highways Department will construct 4672 km new roads within the plan periods. Roads and Highways Department is going to start the construction of 5400 meter tunnel in the plan period (Table 13).

Table 13 : Physical Targets of the Sixth Five Year Plan for Roads and Highways Department

Sr. no	Physical Activities	SFYP Targets (2011 - 15)
1	Construction of New Roads	4672 km
2	Improvement/Rehabilitation of Roads	8433 km
3	Construction of New Bridges/Culverts/Overpass	23777 meter
4	Reconstruction of Bridges/Culverts	10362 meter
5	Construction of Tunnel	5400 meter

Source: Roads and Highways Division

LGED's Objectives, Targets and Strategies for SFYP

The main purpose of providing support to the rural transport sector is to ensure a cost effective, affordable and efficient transportation system. The basic principle of the strategy will be to improve and maintain the Upazila, Union and prioritized village roads network integrating rural river and rail transport so that cost effective, demand responsive and flexible systems could be provided for all. The labour-based construction techniques for road improvement will be adopted to enhance employment opportunity, sustainability and affordability.

The SFYP given priority to the policy of country-wide homogeneous development in light of rural development strategy to implement all activities under LGED programmes. LGED has already prepared a long–term Master Plan for 2004-2025 for development of rural roads and other infrastructure in order to achieve country-wide balanced development as stipulated in PRS plan. It should be kept in mind that integration of rural road network with waterways will make the rural transport system cheaper, flexible and demand responsive. However, this

would necessitate appropriate actions for a) revival of prioritized rural waterways; b) embankment protection; c) construction of landing stations or river jetties; d) provision for loading/unloading spaces with toilets; e) design development of country boats; and f) navigation safety.

BRTA's Vision, Goal and Objectives for SFYP

Bangladesh Road Transport Authority (BRTA) planned to set up Vehicle Inspection Centers (VICs) in 1999, with semi-automatic test, in 4 metropolitan cities – two in Dhaka and one each in Chittagong, Khulna and Rajshahi. Establishment of VICs was a component project of Road Overlay and Improvement Project, funded by the Asian Development Bank. BRTA is also looking forward to outsourcing of vehicle inspection and issuance of fitness certificates of motor vehicles under Public Private Partnership (PPP). The VIC project proposes to establish 6 Motor Drivers Standard Training Institutes cum Driving Competency Test Centers in 5 divisional headquarters in Bangladesh. The objective of the project is to develop awareness and professional skill of motor drivers to reduce road accident and to conduct Driving Competency Test for applicants of motor driving license. BRTA is expecting project assistance from Korea International Cooperation Agency (KOICA) to implement the project.

BRTA plans to collect motor vehicle taxes and fees through On-line Banking System by engaging service providers. The service provider will provide important services including establishment and maintenance of sufficient infrastructure required to collect motor vehicle taxes and fees from different locations covering all 64 district Head Quarters through On-line Banking.

BBA's Vision, Goal and Objectives for SFYP

The main objectives of the SFYP are to develop an integrated transportation network by constructing Padma Bridge at Mawa-Jinjira for socio-economic development of the country. After successful completion of Bangabandhu Bridge, the Government has taken all out efforts to construct the Padma Bridge, the largest infrastructure project in Bangladesh. Japan International Corporation Agency (JICA) conducted feasibility study of the project which confirmed the viability of the project from technical and economic viewpoints. The project was approved by the ECNEC on 20th August, 2007.

An integrated transportation network will be developed in Bangladesh with the implementation of the proposed Padma Multipurpose Bridge at Mawa-Jinjira. This bridge will bring significant socio-economic upliftment of the people of the

south-western region. The Government has a plan to construct about 6.10 km long 2nd Padma Multipurpose Bridge at Paturia-Goalundo point to correct the capital city, Dhaka with the West and South-west parts of Bangladesh as well as with the main landport Banapole, Darshona and sea port at Mongla. To establish a direct road communication between Barisal and Khulna Division, government has planned to construct about 1550 meter long Bekutia Bridge over the river Kocha on Perojpur-Jhalakathi road. Bangladesh Bridge Authority has taken initiative to implement infrastructure projects through Public Private Partnership (PPP). The projects include the construction of about 26 km. long Dhaka Elevated Expressway from Shahjalal International Airport to Kutubkhali at Dhaka-Chittagong Highway on PPP basis with cost of US$ 1.24 billion. After implementation of this project, traffic congestion in Dhaka city will be reduced substantially. The target in SFYP is also to implement Dhaka-Ashulia Elevated Expressway and Gulistan Golapshah Mazar-2nd Burigonga Bridge Flyover on PPP basis.

Bangladesh Bridge Authority has also taken initiative to construct tunnels in Dhaka and Chittagong cities, the first of its kind in Bangladesh. The construction works are expected to commence after conducting feasibility studies and arrangement of necessary foreign funding.

Bangladesh Railway's Objectives, Targets and Strategies for SFYP

BR targets and objectives encompass the government's vision to expand and improve the railway system to provide safer, better, environment friendly and less expensive transport facilities to national and international traffic.

BR's Objectives

1. Rehabilitate, upgrade and replace old-aged infrastructure and rolling stocks to reduce journey time, improve the service quality and to build the image of railway as a safe and reliable means of transport.
2. Connect the Capital City with Cox's Bazar, Mongla Port, Tungipara, Barisal, Chittagong Hill Tracts and other areas where rail network does not exist.
3. Establishment of Padma rail links, Trans Asian Railway network and regional railway connectivity.
4. Undertake implementation of Land Use Plan, enhance Public-Private Partnership in railway sector and create other business opportunity.
5. Improve Commuter Train Services to provide better urban train facilities to the daily passengers around Dhaka, Chittagong, Rangpur, Dinajpur, Parbatipur, Nilphamari, Sylhet etc.

BR's Targets

1. Undertake construction of 1201.42 km new rail line or re-opening of closed rail lines, double tracking of 506.20 km track and 6 new important bridges along with all necessary infrastructure, rehabilitation of 1535.73 km existing rail line along with all necessary infrastructures; remodeling of 7 stations in existing section, improvement of 831 level crossing gates, construction of one ICD at Dhirasram and improvement of other infrastructures to increase carrying capacity.
2. Undertake procurement of 234 DE locomotives, 50 DEMU/MHMU, 771 passenger coaches and 1430 wagons to introduce new trains and improve the service quality and passenger amenities and increase carrying capacity of containers, fuel oil, aviation fuel, bulk freight parcels etc.
3. Undertake procurement of DEMUs and investment projects to increase line capacity for introducing more commuter trains around Dhaka, Chittagong, Rangpur, Dinajpur, Parbatipur, Nilphamari, Sylher etc.

BR's Strategies and Policies

Government, underscoring the need for railway communication, put priority to railway amongst all the surface modes of transport under National Land Transport Policy (NLTP) and Draft Integrated Multi Modal Transport Policy (Draft IMMTP). In order to overcome the constraints and to achieve the visions of BR, a 20 year development plan is being prepared by the planning commission. To become self sustainable, BR has to improve service quality and operational efficiency as well as develop its own infrastructure facilities to carry more traffic efficiently. Historically the railway enjoyed a monopoly as a carrier and used to carry most of the principal commodities in the country such as cement, coal, fertilizer, raw jute, stone, food grain, sugar cane etc. However, railway still dominates in carrying stone, iron, steel and food grains. In addition, railway also carries about 10% of containers handled in Chittagong port. BR has taken initiative to increase the modal share especially in container transportation.

Bangladesh railway has planned to undertake about 149 projects within next five years. With the implementation of the on-going as well as new projects Bangladesh Railway will be able to regain its market share and create other business opportunities. Out of the total 149 projects, 46 are on-going and 103 are new. It is very essential to get the required allocation in time to implement the projects efficiently. Lack of adequate fund will result in time over-run as well as cost over-run.

Inland Water Transport's Objectives, Targets and Strategies for SFYP

To develop a balanced and least cost transport system in Bangladesh, it is imperative to improve IWT both from infrastructure and technological points of view.

IWT's Targets

During the period of Sixth Five Year Plan, activities relating to development of inland waterways would focus on dredging and resuscitation of dead and dying river routes, development of inland river ports, providing navigable aids for smooth and safe movement of cargo and passenger vessels, improvement of waterways in and around Dhaka City for making surrounding rivers navigable and wider. All these activities will accelerate the infrastructure development and promote economic growth, which in turn will lead to poverty alleviation.

IWT's Objectives

The main objectives of the SFYP are as follows:

1. To improve the channel of the existing waterways through dredging.
2. To improve day and night navigation of water crafts by providing navigational aids.
3. To develop inland container river ports for transportation of containers by waterways to and from sea ports.
4. To develop river port handling facilities as well as storage facilities and introduce mechanical equipment for handling cargo in order to save waiting time for berthing of vessels.

IWT's Strategies and Policies

In order to achieve the above plan objectives, the following strategies will be undertaken:

1. Completion of spilled-over projects within the stipulated time.
2. Intensification of the dredging program, including procurement of dredgers to develop existing channel conditions of inland waterways and provision of navigation aids for smooth navigation of water crafts.
3. Establishment of inland container river port on priority basis within the first two years of the plan.
4. Upgrading port facilities (both cargo and passenger) as well as storage facilities so that vessels can be loaded and unloaded without delay.

Bangladesh Biman's Objectives, Targets and Strategies of SFYP

The objectives of SFYP are to open more airports for international flight and to expand the existing facilities for safe and secured operation of aircrafts. The major objectives of CAAB is to develop Hazrat Shahjalal International Airport for operation of wide body aircraft of international flights, to modernize ATC and communication system, to implement CNS/ATM based navigation aid system and to accommodate/create parking facilities for new aircrafts of National and Private Airlines. Another important recent development is that Cox's Bazaar Airport will be improved for operation of wide-body aircrafts.

To implement the above objectives, following aspects have been given priority in the SFYP:

1. Strengthening of existing runway, taxi-way and apron for safe and secured operation of modern aircrafts.
2. Construction of new-aircrafts for better communication with remote areas.
3. Expansion of parking area to accommodate new aircrafts of National Airlines and Domestic Airlines of Bangladesh.
4. Enhancement of operational facilities at domestic airports.
5. Outsourcing of operation, maintenance and management of ground handling services at international airports.
6. Enhance the operational facilities of control tower at Hazrat Shahjalal International Airport.
7. Construction of a new international airport to cope with the increasing traffic and upcoming challenges.

6.2 Financing of the Transport Sector

Allocation and Expenditure of Funds under Roads and Highway Department in Different Plan Periods

The road network has been developed mainly on the basis of short term need instead of long term planning due to the lack of appropriate road sector policy guideline. There has been large scale deterioration of the network due to lack of proper maintenance, large sections of the network have inadequate structural strength, many of them severely damaged by vehicle overloading. Lack of adequate road safety has already reached an alarming level; faster and smooth movement along the highways is not possible due to the presence of large number of hats and bazaars on the edge of roads. Through 5 Five Year Plans and 2 Two

Year Plans, road sector has developed gradually. The completion of Bangabandhu Jamuna Multipurpose Bridge was possible under the Fourth and Fifth Five year Plans. It is seen from Table-14 that Roads and Highways Department has got the maximum allocation compared to the other departments of road transport sector. Under different plan periods the utilization of resources was higher than under Poverty Reduction Strategy Programs.

It is seen from Table 14 that the resource allocation was Tk. 2076.10 million in the First Five Year Plan but this increased to Tk. 91,087.50 million in the Fifth Five Year Plan and the utilization as percentage of allocation is more than 90%. This is a good sign for utilization of allocated resources because it is difficult for Bangladesh to properly utilize allocated resources.

Table 14 : Allocation and Expenditure of Funds under RHD in Different Plan Periods (million taka; at current price)

Plan Period	Allocation	Expenditure	Utilization as % of Allocation
First Five Year Plan (FY 1973-74 to FY 1977-88)	2076.10	2215.70	106.72
Two Year Plan (FY 1978-79 to 1979-80)	1800.30	1780.90	98.92
Second Five Year Plan (FY 1980-81 to FY 1984-85	8269.00	8471.90	102.45
Third Five Year Plan (FY 1985-86 to 1989-90)	19961.50	22748.60	113.96
Fourth Five Year Plan (FY 1990-91 to 1994-95)	52092.30	51243.20	98.37
Two Year Plan (FY 1995-96 to FY 1996-97)	19001.60	18044.60	94.96
Fifth Five Year Plan (FY 1997-1998 to 2001-02)	91087.50	84570.90	92.85
Interim Poverty Reduction Strategy (FY 2002-03 to 2003-04)	48576.30	43348.70	89.24
Interim Poverty Reduction Strategy (FY 2004-05 to 2005-06)	65966.20	57526.80	87.21
Poverty Reduction Strategy Paper (FY 2007-08 to 2009-10)*	49657.20	28794.20	57.99

Source: Sixth Five Year Plan, Part - 2

Development Resource Allocation for Transport Sector in SFYP

The government is aware that even with a strong public resource mobilization effort, total resource available will be limited in relationship to demand. The Government also recognizes that ensuring proper use of these scarce resources is very important. This requires paying attention to implementation capacity, governance and results-based monitoring and evaluation (M&E). The public investment priorities will be determined on the basis of realization of the key plan targets in relation to growth, poverty reduction, human development, equity and sustained development. So transport sector development has got special priority in SFYP. Out of total public investment (Tk 265,174 crore; base year 2011 price), transport sector allocation is Tk 41,512 crore, which is 15.7% of total public allocation.

From Tables 15 and Table 16 it is seen that resource allocation is high at current market price rather than at constant market price because Bangladesh has suffered from high inflation that around 11.79% in January 2012. It is obvious that the project cost will increase in the second, third, fourth and fifth year of the plan due to inflation.

Table 15 : Development Resource Allocation for Transport Sector in SFYP (Crore taka; FY2011 price)

Ministry/Division	2010-11	2011-12	2012-13	2013-14	2014-15
Roads and Railways	3402	5139	5905	7069	8226
Shipping	409	205	220	243	262
Civil Aviations and Tourism	283	258	277	306	329
Bridge Division	1277	1550	1745	2052	2354
Total	5370	7153	8147	9670	11172

Source: Different Plan Year Books

Total Investment Requirement for Major Transport Projects

The investment needs in Bangladesh infrastructure sector are enormous. The Transport Ministry has already identified a large number of major projects in the transport sector which could be implemented in the medium to long term (by 2021 and over two five year plans starting from 2011). In the transport sector, the amount of investment in road, railway, inland water transport, airport and Dhaka transport system development will require Tk 1321,420 million or more than $ 17 billion (Table 17). A major share of the estimated transport sector investment would be forthcoming during the SFYP.

Table 16 : Development Resource Allocation for Transport Sector in SFYP (million taka; current price)

Ministry/Division	2010-11	2011-12	2012-13	2013-14	2014-25
Roads and Railways	34020	55250	67930	86600	106820
Shipping	4090	2210	2530	2980	3400
Civil Aviations and Tourism	2830	2770	3180	3740	4270
Bridge Division	12770	16660	20070	25140	30570
Total	53700	76890	93710	118460	145060

Source: Different Plan Yearbooks

7. Problems in Transport Sector and Constraints in Achieving SFYP Targets

The transport intensity of Bangladesh is considerably lower than that of many comparable developing countries. The relative roles of transport modes are evolving with road transport expanding at the expense of railways and inland water transport because of its technical and cost advantages. The overall performance of the transport sector has been generally weak and is now considered a major constraint to the expansion of exports and economic growth. One important factor underlying this weaker performance is high transport costs. Urban transport system, especially in the capital city Dhaka, has become outdated and inefficient owing to both lack of adequate infrastructure and weak management.

Constraints in surface Transport: The development of surface transport system in Bangladesh is constrained by three distinct sets of factors such as physical (e.g., difficult terrain, periodic flooding, poor soil condition, siltation and erosion of rivers, inherited management weaknesses etc.), low investments for maintenance,

Table 17 : Total Investment Requirement for Major Transport Projects during the Period 2008/09-2020/21

Sr. no	Sector	Project Cost (Tk in Crore)
1	Road Sector Development	45,569
2	Railways Development	36,214
3	Inland Water Transport Development	8,160
4	New Sea Port Development (Tentative)	600
5	Deep Sea Port Development (Short Term)	7,420
6	Dhaka Transport System Development	34,179
7	Total	132,142

Source: Ministry of Communication

and inadequate institutional framework. The poor financial performance of the SOEs and their weak capital structure create a huge financial liability on the government, estimated at around Tk. 200 crore annually. Vehicle overloading has contributed significantly to road deterioration. A large number of bridges already need replacement or major repair due to a lack of proper maintenance. Road safety is critical but it is not adequately addressed in road design and traffic enforcement. That's why every year a large number of people die by road accident.

Road Transport: Massive irregularities and corruption are pervasive in the road and transport system of Bangladesh. The role of all stakeholders including the Bangladesh Road Transport Authority (BRTA) is under question. The trade unions of the transport sector and bus and truck terminals are beyond the control of BRTA.

Instances of massive corruption were revealed in a study of Transparency International Bangladesh (TIB). The study shows that a service recipient has to pay up to Tk. 50,000 as bribe during registration depending upon the type and the value of the vehicle. In Dhaka Metropolitan Area, a bus owner has to pay bribe of Tk. 10,000 to Tk. 300,000 as entry fee for each bus to get route permit and transfer of vehicle ownership documents. Vehicles owners have to pay bribe up to taka to Tk. 20000 to BRTA personnel and brokers. The survey reveals that about 61% of drivers get license without appearing in driving test. Bribe paid for driving license varies from Tk. 100 to Tk. 7000 depending on the type of the license. The study also shows that 54% of drivers are running vehicles with expired licenses. According to the findings, BRTA has no effective role in controlling motor vehicles fare.

In the name of 'bit' an amount up to Tk. 3000 is collected by a section of traffic police from commercial vehicles and long route covered van owners. All luxury coaches departing from Dhaka have to pay bribe of Tk. 300 to Tk. 400 to traffic police for each trip. Any vehicle facing legal suit can be released from local police station by paying a bribe up to Tk. 50,000. The study found that no effective supervision, monitoring and accountability system exists for BRTA staff.

Rail Transport: Due to lack of proper investment, Bangladesh Railway faces a number of constraints, which limit its ability to provide service and minimize its losses. During the past three decades, the only remarkable investment was for the establishment of railway network over Bangabandhu Multipurpose Bridge, which provides seamless railway connectivity between east and west zones of BR. But its utility to BR is limited by significant load restriction placed on BG freight

trains to cross over the bridge. Due to inadequate investment, the railway track is in poor condition in a number of areas, including the vital Dhaka-Chittagong corridors, which need immediate rehabilitation and upgrading. Almost 785 of the locomotives and 28% of passenger coaches are beyond their economic life and need immediate replacement. 70% of the signaling system has become old aged and obsolete and needs modernization, including human resource development. All these result in serious deterioration of the performance of BR.

Water Transport: In spite of having several advantages, IWT has persistently received comparatively less fund and less attention in allocation of resources out of development and non-development budgets. The provision has always been low and merely enough to cover only emergency maintenance works. Until now network maintenance has been given a low priority with share of resources allocated to network maintenance decreasing in recent years. Bangladesh Inland Water Transport still suffers from (i) siltation problems in inland water crafts, (ii) day and light navigational problems of waterways, (iii) shortage of passengers and cargo handling facilities including transit shed at river ports, (iv) manual loading/unloading of cargo at river ports, (v) underdeveloped rural launch landing stations etc.

Air Transport: The air transport services have gone through major challenges. The national carrier, Bangladesh Biman, has experienced serious performance problems owing to inefficiencies, corruption, overstaffing, weak management and inadequate investment. As a result, there has been a substantial loss of passengers that has added to the financial difficulties of Bangladesh Biman.

Resource Constraints: Public sector investment, much of it through the Annual Development Plan, will amount to 3.1 trillion in constant FY 2011 prices, accounting for about 22.8% of total investment in the economy. Of the total public sector investment, Tk 2.2 trillion (72.8%) will be financed from domestic sources comprising savings of the government sector, capital receipts, self financing by public enterprises, and borrowing from the domestic banking and nonblank sources. But Bangladesh has one of the lowest tax-GDP ratios in the world and the ratio has not improved much over the last several decades despite the pickup in real GDP growth rate. Bangladesh's legal tax rates are not low by the regional and international standards, but because of inefficiencies in tax administration and inadequate coverage, the tax-GDP ratio has remained virtually stuck at below 10% level over many years. The introduction of Value Added Tax in 1991 boosted revenue performance for several years, but the momentum could not be sustained due to lack of modernization of tax administration and ad hoc arrangements put in place for political and administrative expediency.

It is also difficult for government to finance the plan by borrowing from domestic banking sector because government has already borrowed Tk 43,195 crore from the central bank and commercial banks. In the first half of current fiscal year (FY 2011-12) government has borrowed Tk 15,538 crore from the banking sector. If government takes more loans from the domestic banking sector, private sector development will be hampered.

The expected external resources are Tk 1254.1 billion which is 9.3% of total investment. External financing for private investment, primarily in the form of foreign direct investment is expected to grow, but will still remain modest in relative term at about 4.0% (Tk. 417.9 billion). Use of external financing for project and budget support will be done flexibly within the context of prudent management of external debt. This will mostly entail loans from the official bilateral and multilateral sources on best possible terms. A limited borrowing from the international capital market may also be possible. But it is very difficult for government to attract foreign direct investment and get loans from external sources, because the donor countries greatly suffered from the global financial crisis. In the first seven months (July to January) of FY 2011-12, the committed foreign assistance was US$ 395.5 crore but the donor countries sanctioned only US$ 101.2 crore. The delay of sanction of assistance on right time by the donor community along with lack of efficiency in resource use are the main causes for slow growth of foreign assistant (The Daily Protham-Alo, 16 February 2012). Among total public investment in SFYP, government plans to collect Tk. 46,179 crore through Public-Private Partnership (PPP) programs but it will be difficult for government to collect this money because PPP does not work at full swing.

A large number of big projects (Padma Multipurpose Bridge, Dhaka-Chittgong Four-Lane Expressway etc.) are included in the transport sector under SFYP which requires a huge resource allocation. But the transport sector gets only 15.70% of total resource allocation which is not sufficient to implement these large number of projects. Construction of Padma Bridge, one of the most important projects of SFYP, however, faces difficulties because World Bank has denied giving loans in this project.

To improve the facility of transport sector, it is necessary to produce vehicles engine and railway engine locally. But in SFYP there is no plan to produce vehicles engine and railway engine by using local raw materials.

8. Policy Suggestions and Conclusion

Government must recognize the importance of substantially upgrading the transport infrastructure and improving transport services. In recognition of this,

government should give priority to transport in budgetary allocations, improving the performance of public transport entities through policy and institutional reforms, and encouraging the private sector in both building infrastructure through PPP and in providing transport services.

Government should be more sincere to implement The National Land Transport Policy 2004 (for 20 years), Integrated Multi-Modal Transport Study 2004 (for 50 year) and Bangladesh Road Master Plan Study 2009 (for 20 years), because this policies will act as guidelines for RHD in selecting development and improvement projects to achieve the target of lower transportation costs, uninterrupted and safer road communications.

To address road safety issues government must control the overloading problem by setting up overload control stations/weigh bridges on national highway to reduce road deterioration and road accident. Upgrading of all national highways to international standards with provision of sign signal, and service lanes for slow moving vehicles will be important. Construction of railway overpasses on all railway level crossings on all national highways will be desirable.

In the past railway sector was under the Ministry of Communication but at present railway has a separate ministry. Now, the railway sector gets more importance and also gets budget allocation for development of this sector. The Railway Ministry Should give highest priority to rehabilitate, upgrade and replace old-aged infrastructures and rolling stocks to reduce journey time, improve the service quality and to build the image of railways as a safe and reliable means of transport. It is important that the Capital City is connected with Cox's Bazar, Mongla Port, Tungipara, Barisal, Chittagong Hill Tracts and other areas where rail network does not exist. Government should be more sincere to establish Padma Rail Links, Trans Asian Railway Network, and Regional Railway Connectivity.

Budget allocation as in all past five year plans is very low in Water Transport Sector compared to Road and Railway Transport. So, it is necessary to increase the budgetary allocation to develop the water transport. Emphasis has to be given to intensification of the dredging program, including procurement of dredgers to develop existing channel conditions of inland waterways and provision of navigational aids for smooth navigation of water crafts. Upgrading port facilities, both cargo and passengers, as well as storage facilities deserves priority so that vessels can be loaded/unloaded without delay. Sinking of launch and collision of launches are very common in Dhaka-Barisal and Dhaka-Chandpur routes. So, old aged launches and steamers must be banned from their services.

Bangladesh has received favorable ratings from the international rating agencies like Moodys and Standard and Poors (S&P). The positive ratings are reflections of Bangladesh's good track record in macroeconomic management, prudent debt management and its positive external outlook. By using this favorable rating Bangladesh can borrow from the international capital market at reasonable terms by issuing sovereign debt instruments.

Bangladesh has got success in ship building industry. So it is possible for Bangladesh to produce vehicles engine and railway engine by using local raw materials. Keeping this view in mind government can design railway engineering course in different engineering and technological university.

Finally, government must ensure the proper use of scarce resources because total resources available will be limited in relationship to demand. For this reason government requires paying attention to implementation capacity, governance and results-based monitoring and evaluation.

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