SECTOR ASSESSMENT (SUMMARY): SUBREGIONAL ROAD TRANSPORT

1. Sector Performance, Problems, and Opportunities

a. Transport Network and Traffic in Bangladesh

1. The transport system of Bangladesh consists of roads, railways, inland waterways, two seaports for maritime shipping, and civil aviation—catering to both domestic and international traffic. It has about 271,000 kilometers (km) of roads, including about 21,000 km of major roads; 2,835 route-km of railways; 3,800 km of perennial waterways (which increases to 6,000 km during the monsoon) and the ports of Mongla and Chittagong; and three international airports (Dhaka, Chittagong, and Sylhet) and eight domestic airports. From 1975 to 2005, road transport's modal share rose from 54% to 88% for passenger traffic and from 35% to 80% for freight. Traffic grew at an average annual rate of 8.2% while passenger transport traffic grew at 8.4% in the past 10 years. Motor vehicle registrations nearly doubled from 0.74 million in 2003 to 1.34 million in 2009—a 10.5% average annual increase. For trade between Bangladesh and India, the Benapole land port is the busiest crossing, providing transshipment services for about 80% of the annual trade between the countries, e.g., 450 trucks a day carrying in total an estimated 1.4 billion tons valued at $4 billion passed Benapole land port in FY2011.

b. Operations and Management

2. The Ministry of Communication (MOC) is responsible for major highways and bridges through the Roads and Highways Department (RHD) and Bangladesh Bridge Authority. The Ministry of Railways is responsible for railways through Bangladesh Railway. The Ministry of Local Government, Rural Development, and Cooperatives is responsible for rural roads through its Local Government Engineering Department (city corporations manage urban roads). The Ministry of Shipping is responsible for inland waterways, ports, and shipping. Within the Ministry of Shipping, the two major seaports are managed by Chittagong Port Authority and Mongla Port Authority; inland waterway ports are managed by Bangladesh Inland Waters Transport Authority; and land ports are managed by the Land Port Authority (LPA). The Planning Commission is responsible for coordinating investment and main policies.

3. The public sector provides most rail and port services. However, in recent years private sector involvement in road transport, inland water transport, and ocean shipping has increased considerably. The private sector is also gradually entering the domestic air transport and passenger rail markets, as well as the transport logistics market. Many rivers lack high-capacity bridges, requiring the use of ferries. As a result, both intraurban and interurban distribution services must rely on small trucks. Limited network capacity and poor quality infrastructure also constrain rail and road services. Inadequate maintenance has led to severe deterioration of roads and railways.

c. Budget for Roads and Land Ports

4. While the original budget allocation fluctuates year by year because of the political environment (i.e., caretaker government) and the disaster-prone natural environment, the RHD's annual expenditure in recent years increased from Tk25.7 billion ($318 million) in FY2010 to Tk31.2 billion ($385 million) in FY2012, an annual increase of 10%. FY2012 expenditure exceeded the original budget by 30% because of emergency rehabilitation works, which were added during the fiscal year to address imminent rehabilitation needs. The capacity of RHD and contractors is being improved fairly well against emergency works requirements.

5. About 75% of the total budget is used for development works, which cover new projects and major improvement works to the existing roads, e.g., strengthening, major rehabilitation, and widening. The remaining 25% of the total budget is used for recurrent costs, including routine and periodic maintenance. Since the road master plan was prepared in 2007, the maintenance expenditure has been substantially increased from Tk2.9 billion ($36 million) in FY2007 to Tk6.9 billion ($85 million) in FY2012, which substantiates government prioritization of maintenance rather than new development.

6. The LPA administers 16 land ports. As development and operations are mainly outsourced to the private sector, the LPA is a lean organization and financially self-sustained for the current level of operational efficiency and volumes. The LPA expenditure for FY2011 is Tk326 million ($4 million). About half of the revenue is spent on development of land ports other than Benapole. The expenditure is financed through its internal resources of Tk412 million ($5.1 million). The revenue share of Benapole was reduced to 61% in FY2011. Both revenue and expenditure have been increasing by about 20% per annum since FY2007. The surplus, e.g., Tk86 million ($1.1 million), will be spent on taxes and retained to the LPA account.

d. Road Sector Issues

7. The Road Network Improvement and Maintenance Project II[1], financed by the Asian Development Bank (ADB), provided a list of reform agenda for the road sector in Bangladesh, together with the Department for International Development of the United Kingdom (DFID) and the World Bank, mainly covering (i) a long-term and integrated transport policy, (ii) modernization of the road sector institution, (iii) road maintenance financing, and (iv) private sector participation. Substantial efforts through partnerships between the government and various external funding agencies have helped improve road sector institutions.

8. **Road sector policy and institution.** The road master plan has been approved and the national land transport policy is prepared. The MOC and RHD have been restructured. RHD has computerized its financial management and asset management systems, supported by DFID. The central management system (CMS) has been rolled out for RHD-wide use at the district level. Procurement capacity is being strengthened under the World Bank's Public Procurement Reform II, utilizing the central management system and introducing e-procurement. Pending liability for major unpaid contracts has been eliminated, except delayed release of the approved budget. A public–private partnership (PPP) cell has been established in RHD and pilot PPP road projects have been identified. RHD is improving its road management capacity, planning and monitoring capability, environmental and traffic safety practices, and control of overloading. ADB has provided two technical assistance (TA) projects to improve the capacity of road safety[2] and the internal control mechanism in the financial management systems[3]. Other areas will be supported under the TA for Institutional Development of RHD attached to the proposed loan.

9. **Maintenance financing.** The two aspects for maintenance are (i) routine and periodic maintenance, and (ii) reduction to the maintenance backlog. The current provision of the maintenance financing at Tk6.9 billion is assessed at the same level of the requirement for

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[1] ADB. 2003. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of Bangladesh for the Road Network Improvement and Maintenance Project II.* Manila.

[2] ADB. 2011. *Technical Assistance to Bangladesh for the Road Safety Improvement Programs.* Manila

[3] ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the People's Republic of Bangladesh for the Subregional Transport Project Preparatory Facility.* Manila.

routine and periodic maintenance to sustain maintainable roads, i.e., roads in good to fair condition. The issue for routine and periodic maintenance is to ensure effective and efficient utilization of available budget. It is often technically difficult to split sections between fair and poor conditions, and emergency works are sometimes required for sections to address needs caused by floods, etc. This is also because of the tedious government process for project approval and fund release. Maintenance prioritization and budget allocation, and expenditure as planned, need to be ensured to sustain the road network. At the same time, sufficient contingency budget needs to be secured to address emergency works so that such works could be undertaken without hampering routine and periodic maintenance works.

10. Another issue is to reduce the maintenance backlog, which is in poor to very bad condition and beyond maintainable conditions. A maintenance financing strategy was developed and agreed with the government to eliminate the maintenance backlog over 10 years by FY2024 for national and regional highways while ensuring routine and periodic maintenance for maintainable roads. It requires a 2% annual increase in maintenance financing (before price escalation) from the current allocation for maintenance and rehabilitation, i.e., budget for routine and periodic maintenance, plus a major part (75%) of the development budget, over the next 10 years by FY2024. This target is achievable, taking into account (i) the past increase to the road budget, (ii) the increase of routine and periodic maintenance costs to the required level, and (iii) more frequent execution of emergency works undertaken in 2011 for rehabilitation of heavily deteriorated roads using the development budget. The strategy requires a gradual and realistic increase in financing, taking into account the capacity of RHD. The government has agreed to undertake the strategy as a loan covenant.

e. Subregional Road Connectivity

11. The South Asian Association for Regional Cooperation (SAARC) Regional Multimodal Transport Study[4] determined priority corridors in Bangladesh that include six out of 10 road corridors, two out of five rail corridors, and two principal ports (Chittagong and Mongla). The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation[5] Transport Infrastructure and Logistics Study (BTILS)[6] identified the issues, and provided the policy framework and strategies for governments to jointly pursue the development of subregional transport projects. A major constraint in subregional road connectivity is poor road conditions, which are only capable of handling local rather than long-distance transport, especially in northeast India, Bangladesh, and Myanmar. The terrain is difficult, with mountain ranges and many rivers. In Bangladesh, the road network is deficient in terms of its ability to handle modern multi-axle articulated transport and both the number and diversity of vehicles. The road construction cost is high because of the river systems and limited availability of land.

12. Customs procedures are not considered the primary cause of delays at many of the ports and borders, which compounds the delays due to (i) lack of border infrastructure and traffic planning, (ii) insufficient handling capacity of land ports at borders, (iii) trade practices where land port storage is used as stock storage instead of transit storage, and (iv) lack of cross-border transport agreements. The BTILS report assessed that the intermediate storage situation may suit some of the trading community because of trader and transport practices.

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[4] SAARC Secretariat. 2007. *Regional Multimodal Transport Study*. Kathmandu. Prepared under ADB. 2004 *Technical Assistance for Promoting South Asian Regional Economic Cooperation*. Manila (TA 6187-REG).

[5] Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation.

[6] ADB. 2008. *BIMSTEC Transport Infrastructure and Logistics Study.* Consultant's report. Manila (TA 6335-REG).

ADB has provided TA to help governments enhance cross-border trucking operations and customs procedures for transit cargo, including identification of investment requirements for cross-border facilities and drafting bilateral or trilateral agreements based on SAARC recommendations.[7]

2. Government's Sector Strategy

13. Under the draft Integrated Multimodal Transport Policy, the government aims to improve transport services, minimize transport costs, and integrate transport services with the regional transport network. A road master plan approved in 2009 proposes short- and long-term investment programs for the next 20 years to the problems of RHD's road networks, including inadequate structural strength of pavements, deterioration of roads because of lack of maintenance, damage to roads caused by vehicle overloading, and lack of adequate road safety. The road sector development strategy under Bangladesh's 6th Five-Year Plan, FY2011–FY2015 highlights (i) prioritized undertaking of development projects, (ii) cost recovery from users, (iii) streamlining procedures of pre-construction activities, (iv) private sector financing, and (v) road sector institutional strengthening, as provided in the Road Master Plan. One of the major tasks is the improvement of the regional road connectivity to boost trade and commerce, pursuing the policy of corridor-based road development with a view to accommodate regional as well as international traffic in the country. The government plans to upgrade the Asian Highway Network in Bangladesh to four lanes, with emphasis on three arterial corridors: Dhaka–Chittagong, Dhaka–Northwest, and Khulna–Northwest. The road sector strategy in the 6th Five-Year Plan includes institutional changes, and capacity development in road maintenance, addressing road safety issues, improving land port connectivity, and controlling overload.

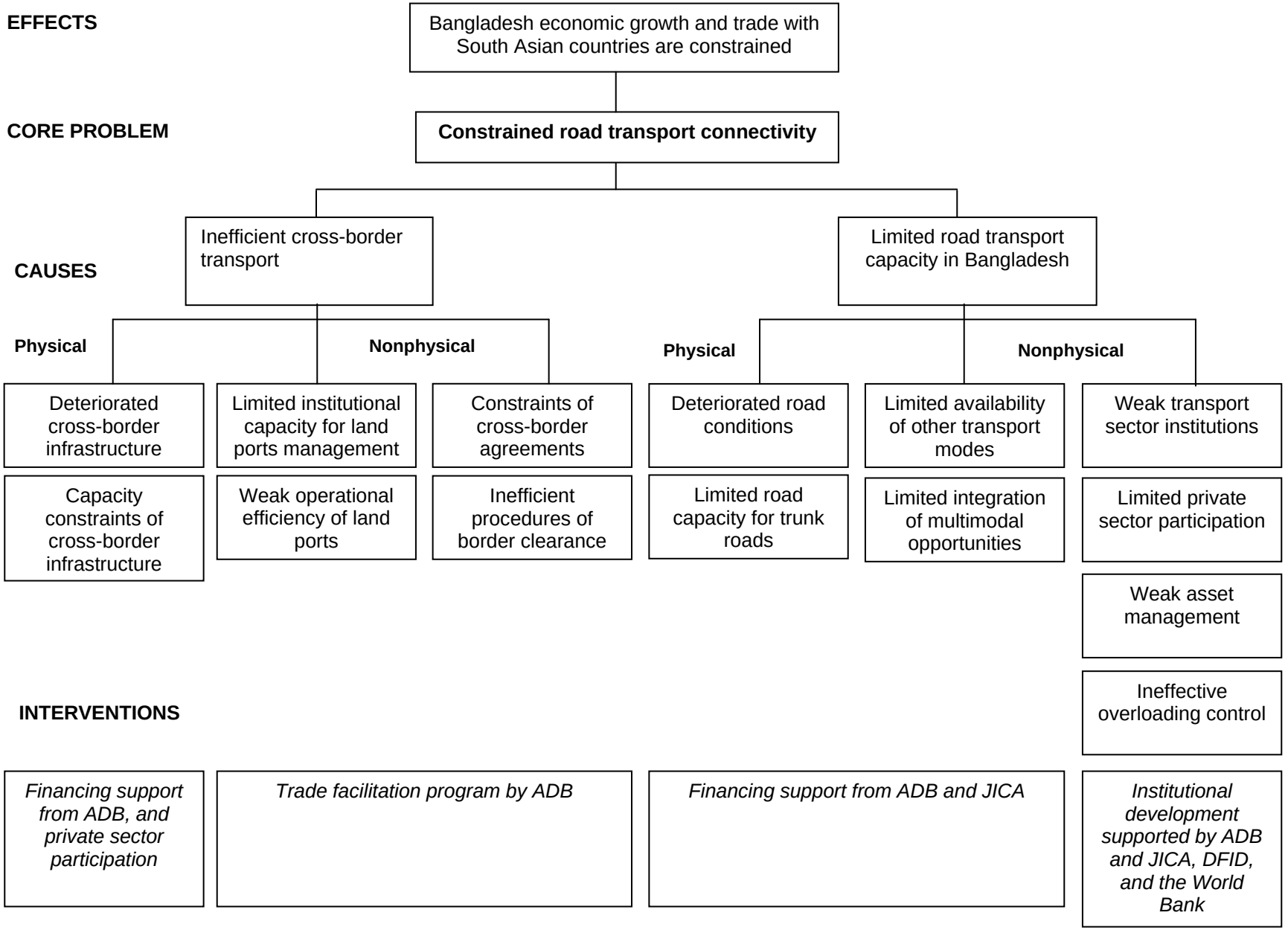
3. ADB Sector Experience and Assistance Program

14. Since 1973, ADB has been active in four transport subsectors: road, rail, port, and urban transport. RHD has implemented 14 ADB loans since 1977, totaling over $1 billion. Project completion reports prepared for loans assess RHD's performance *satisfactory*. However, projects often experienced start-up delays, cost underestimation, and overoptimistic scheduling. Lessons learned have been incorporated in this project. Institutional reform and capacity development—along with capital investments—will be continuously provided for sustainable road transport development.

15. ADB interventions in roads will focus on improving the main transport corridors, particularly those that facilitate subregional trade. ADB will also support government initiatives to strengthen governance and project implementation capacity through modernization of transport institutions and improvement of project readiness. The project, in conjunction with the TA, will help strengthen RHD in line with the Institutional Development Action Plan. Key selected areas include (i) continued modernization of RHD, and (ii) strengthening the planning and implementation capacity of maintenance and enforcement of overloading control. The project will also provide capacity development support to the LPA for operational efficiency improvement, together with physical improvement to land ports.

[7] ADB. 2007. *Technical Assistance for Preparing the South Asia Subregional Economic Cooperation Transport Logistics and Trade Facilitation Project.* Manila.

PROBLEM TREE FOR SUBREGIONAL ROAD TRANSPORT



Sector Results Framework: Transport, 2011–2015

Country Sector Outcome		Country Sector Outputs		ADB Sector Operations	
Outcomes with ADB Contributions	**Indicators with Targets and Baselines**	**Outputs with ADB Contributions**	**Indicators with Incremental Targets**	**Planned and Ongoing ADB Interventions**	**Main Outputs Expected from ADB Contributions**
Increased, more efficient, and safer movement of people and goods	Rail passenger traffic increased from 7.3 billion passenger-km in 2010 to 15 billion passenger-km in 2015 Rail freight traffic increased from 710 million ton-km in 2010 to 1,238 million ton-km in 2015 Annual average daily traffic (motorized) on national and regional highways increased from 3,085 in 2010 to 4,532 in 2015	Road transport systems expanded, improved, and maintained	Roads newly constructed (5,416 km) and rehabilitated (7,809 km) by 2015 Bridges constructed and rehabilitated (51.3 km) by 2015	**(i) Planned key activity areas** National roads (95% of funds) Road transport policies and reforms (5% of funds) **(ii) Projects in the pipeline** TA Loan for Dhaka–Chittagong Expressway PPP ($10 million) SASEC Road Connectivity ($198 million) SASEC Road Connectivity MFF ($800 million) **(iii) Ongoing projects** Road Network Improvement and Maintenance Project II ($126 million) closed in June 2012	Improvement to RHD operations efficiency Periodic road maintenance for about 840 km and performance-based maintenance contracts for about 155 km Design for 2,400 km of roads with regional impact Design for 215 km of expressway between Dhaka and Chittagong
		Rail transport systems expanded, improved, and maintained; Bangladesh Railway restructured	Tongi–Bairab Bazar line with double track by 2015 Length of railway in usable conditions to be increased from 2,835 km in 2010 to 4,237 km in 2015 Bangladesh Railway reorganized by line of business, and with accounting and operating systems	(**i) Planned key activity areas** Double-tracking, track rehabilitation, and signaling Sector reform **(ii) Projects in the pipeline** Railway Sector Investment Program (PFR 2, $150 million; PFR 3, $100 million; and PFR 4, $50 million) Subregional Railway Investment Program MFF (PFR 1, $150 million) **(iii) Ongoing projects** Railway Sector Investment Program MFF (PFR 1, $130 million)	Improvement of Bangladesh Railway's operational efficiency Double tracking for 64 km Line capacity improvement by signaling upgrading for 14 stations Feasibility studies and detailed design for 340 km of new railway line with regional impact Feasibility studies for 3 major railway bridges and upgrading of signaling in 40 stations in the west zone of Bangladesh Railway

ADB = Asian Development Bank, km = kilometer, MFF = multitranche financing facility, PFR = periodic financing request, PPP = public–private partnership, RHD = Roads and Highways Department, SASEC = South Asia Subregional Economic Cooperation, TA = technical assistance.
Source: Asian Development Bank.