SECTOR ASSESSMENT (SUMMARY): TRANSPORT (RAIL TRANSPORT [NONURBAN])

Sector Road Map

1. Sector Performance, Problems, and Opportunities

1. Bangladesh’s transport system consists of roads, railways, inland waterways, two seaports for maritime shipping, and civil aviation facilities that cater 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 (increasing 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. During 1975 to 2005, road transport’s modal share rose from 54% to 88% for passenger traffic and from 35% to 80% for freight. In the past 10 years, traffic has grown at an average annual rate of 8.2%, with passenger transport traffic growth of 8.4%. Motor vehicle registrations have nearly doubled, from 0.74 million in 2003 to 1.34 million in 2009—an average annual increase of 10.5%.

2. Responsibility for elements of the transport system is as follows: (i) major highways and bridges: the Ministry of Road Transport and Bridges, through the Roads and Highways Department and the Bangladesh Bridge Authority; (ii) railways: the Ministry of Railways, through Bangladesh Railway; (iii) rural roads: the Ministry of Local Government, Rural Development, and Cooperatives through the Local Government Engineering Department (city corporations manage urban roads); and (iv) inland waterways, ports, and shipping: the Ministry of Shipping, with the two major seaports managed by the Chittagong Port Authority and the Mongla Port Authority, inland waterway ports by the Bangladesh Inland Waters Transport Authority, and land ports by the Land Port Authority. The Planning Commission is responsible for coordinating investment and main policies.

3. The public sector provides most rail and port services. 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 intra-urban and inter-urban 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.

4. Historically the railway enjoyed a monopoly as a carrier and transported most principal commodities, including cement, coal, fertilizer, raw jute, stone, food grain, and sugar cane. With the gradual emergence of road transport, railway began losing market share, which declined from 30% in 1975 to a mere 4% in 2005 for both passenger and freight transport. However, the railway dominates in the transport of stone, iron, steel and food grains, and carries about 10% of Dhaka bound containers handled in Chittagong Port. Most of the commodities carried by rail are shipped via sea ports.

5. Travelling by railway in Bangladesh is safer, more energy efficient and reliable, and has a lower environmental impact than other modes of transport; railway transport is also considered more comfortable than long-distance buses. Intercity trains operated by Bangladesh Railway are very popular, with very high occupancy, especially in the east zone (98%); intercity trains in the Dhaka–Chittagong corridor are usually sold out. Intercity trains account for about 40% of Bangladesh Railway’s passenger travel, and for more than 75% of passenger revenue. The high
demand for intercity service in the Dhaka–Chittagong corridor cannot be fully met because of insufficient line capacity and shortage of rolling stock, hence no additional trains can be scheduled despite the high revenue potential. Given the country’s rapid economic growth (over 6% annually) demand for domestic and regional railway transport is expected to rise, but it cannot be met using the existing infrastructure.

6. Congestion in cities and on major highways is a major constraint to economic growth in Bangladesh. The rise in motor vehicle registration numbers is expected to worsen congestion. Regaining market share for public transport, including the railway system, is essential (i) if Bangladesh’s economy is to remain competitive in globalized markets, and (ii) to honor delivery contracts for goods manufactured in Bangladesh for international markets by providing reliable and safe access to Chittagong Port.

2. Government’s Sector Strategy

7. The country’s Sixth Five-Year Plan (2011–2015) includes the improvement of railways as energy efficient multimodal transport systems to reduce carbon emissions. It also refers to the establishment of proper rail connectivity to provide Bhutan, India, and Nepal access to the Chittagong and Mongla ports as a major investment priority. The government’s Sixth Five-Year Plan strategy is to increase Bangladesh Railway’s market share from 4% to 15% in freight transport, 10% to 15% in container transport between Dhaka and Chittagong Port, and from 4% to 10% in passenger transport. The railway will focus on lucrative market segments, and provide long-distance passenger traffic in intercity trains, long-haul freight traffic along selected corridors, and container traffic (mainly between Dhaka and Chittagong Port). To achieve this, the government intends to (i) augment line capacity along main subregional corridors; (ii) procure modern locomotives, passenger carriages and freight wagons; and (iii) reform Bangladesh Railway, and introduce a modern financial management system, improve operation and maintenance, and establish a human resource management system.

8. The Integrated Multimodal Transport Policy, which was approved in 2013, includes railway subsector policies. The policy observes that railway infrastructure in Bangladesh is characterized by a lack of maintenance, with many speed restrictions and safety concerns; in addition, the railway operates on two gauges, which obviously hampers seamless travel and efficiency. Bangladesh Railway can help to reduce road congestion by attracting current and future road users using various measures, including: (i) improving intercity service quality, frequency, and capacity; (ii) increasing container movement efficiency and capacity; (iii) reorganizing Bangladesh Railway into separate business lines, with a focus on operations in consideration of multimodal transport needs; and (iv) reorganizing Bangladesh Railway to introduce efficient and modern business practices.

9. The Railway Sector Master Plan toward 2030, approved in 2013, stressed that in order to survive as a viable mode of transport the railway sector must significantly improve its efficiency and service quality, and establish better connectivity. The plan refers to needs in the following areas: (i) further investment in track, signalling, rolling stock, and maintenance; (ii) development of prospective lines using standards compatible with neighbouring countries and the Trans-Aisa Railway network’s design standards; (iii) a focus on multimodal integration with road and inland water transport systems on major corridors, and the improvement of railway infrastructure.

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facilities for traffic efficiency; (iv) better management of continuing traffic growth that will exceed the capacity of some corridors in the next 20 years; (v) a focus on containers, and commuter and inter-city services; (vi) rehabilitation of many old bridges, which requires double tracking; and (vii) modernisation and rehabilitation of workshops to regain their full capacity. ADB plans to update the master plan under the ongoing project preparatory technical assistance.  

3. ADB Sector Experience and Assistance Program

10. Since 1973, ADB has been active in four transport subsectors: road, rail, port, and urban transport. Bangladesh Railway has implemented 22 ADB loans since 1974, totaling over $720 million. The project completion report prepared for the Jamuna Bridge Rail Link loan assessed Bangladesh Railway’s performance partly satisfactory, but it also referred to Bangladesh Railway’s strength in relation to project management, which included meeting the covenants for loan effectiveness, acquiring land in a timely fashion, and managing project implementation efficiently.  

11. In 2006 ADB approved the Railway Sector Investment Program Multitranche Financing Facility (MFF), which will improve the performance of the railway sector by implementing (i) sector policy, organizational, and capacity building reforms to make Bangladesh Railway more commercially focused, and improve governance and accountability; and (ii) an investment project for infrastructure and rolling stock capacity improvements to overcome capacity bottlenecks in areas where the investments is economically and financially viable, e.g., the Dhaka–Chittagong and the Dhaka–Darsana–Khulna corridors.  

12. The investment project under the MFF finances (i) the construction of 64 km of double-track in the Tongi–Bhairab Bazaar section of the Dhaka-Chittagong main line, including signaling and implementation consulting services; (ii) the extension of loop-lines and modernization of signaling in the Ishurdi–Darsana/India border section; and (iii) the procurement of 150 passenger carriages, which will replace old rolling stock and increase the number of passenger trains on the Bangladesh Railway network. The MFF initially faced implementation delays, but performance has improved and the project is now on track. It is expected that total MFF disbursement will reach almost $75 million in 2014.  

13. The Bangladesh Railway Reform Project under the MFF supports implementation of sector reform and institutional strengthening actions agreed with the government and Bangladesh Railway. It encompasses (i) restructuring Bangladesh Railway into lines of business; (ii) preparing an asset register for Bangladesh Railway; (iii) improving financial governance, management, and accounting systems; (iv) improving human resource governance and utilization; and (v) ultimately transforming Bangladesh Railway into a government-owned corporate entity, while enhancing the rail safety regulatory framework. The sector reform matrix gives detailed time-bound policy actions and reform measures to be undertaken by the government and their linkages to approvals of subsequent loan tranches under the MFF. The reform project is on track and the government and Bangladesh Railway remain committed to its implementation; a report on the railway reform progress is available.  

6 Railway Reform Progress Report (accessible from the list of linked documents in Appendix 2 of the main text).
14. In 2014 ADB approved the South Asia Subregional Economic Cooperation (SASEC) Railway Connectivity: Akhaura–Laksam Double Track Project. The project will upgrade the 72-km Akhaura–Laksam section of the Dhaka–Chittagong railway corridor to a double track railway line with modern signaling equipment. The section is part of a major subregional corridor and the Trans-Asia Railway network, and will create the necessary line capacity to allow access from landlocked Bhutan, Nepal and Northeastern India to Chittagong Port by railway. The project will also (i) improve 11 railway stations; and (ii) strengthen railway sector capacity in project management and implementation, as well as in accessing climate mitigation funds. By increasing the capacity of a major international trade corridor, the project will boost the national economy and facilitate subregional cooperation and trade.

15. Future ADB assistance in the transport sector will contribute to improved transport infrastructure to reduce high transport and logistical costs, which currently render large parts of Bangladesh economically isolated from national and regional markets. Encouraging more environmentally benign transport modes such as railways will be given priority. Future ADB interventions in the rail transport sector will focus on improving the main railway corridors, particularly those that facilitate subregional trade. ADB will also continue to support government initiatives to reform Bangladesh Railway into a more modern, efficient organization. The ongoing TA loan is preparing future road and railway projects in Bangladesh with a subregional impact, in order to improve project readiness and expedite project implementation.7

PROBLEM TREE

EFFECTS

- Limited access to economic opportunities
- Limited access to social services
- High logistics cost
- Low regional trade and inefficient subregional transport

CORE PROBLEM

- Poor and inefficient railway transport system in Bangladesh

CAUSES

<Physical>

- Poor railway infrastructure with:
  - Missing Links
  - Different Gauges
  - Lack of line capacity
  - Infrastructure not suitable for Trans Asia Railway network
  - Operational limitations

- Poor status of Rolling Stock
  - Lack of modern Rolling Stock
  - Poor workshop capacity
  - Backlog of maintenance

<Non-Physical>

- Railway reform ongoing
  - Low passenger and freight tariff

- Limited capacity for
  - Development of projects
  - Project management
  - Safeguard implementation

- Lack of regional trade enhancing environment
  - Limitations in international rail agreements

Interventions

- Financing support by proposed Railway Rolling Stock Project
- South Asia Subregional Economic Cooperation (SASEC) Railway Connectivity: Akhaura-Laksam Double Track Project
- Railway Sector Investment Program
- Railway Reform Project

Other projects and initiatives supporting public transport, and multimodal transport integration
## Sector Results Framework (Transport, 2011–2015)

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<th>Country Sector Outcomes</th>
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<td>Outcomes with ADB Contribution</td>
<td>Rail passenger traffic increased from 7.3 billion passenger-km in 2010 to 15 billion passenger-km in 2015</td>
<td>Road transport systems expanded, improved, and maintained</td>
<td>Roads newly constructed (5,416 km) and rehabilitated (7,809 km) by 2015</td>
<td>(i) Planned key activity areas National roads (95% of funds) Road transport policies and reforms (5% of funds) (ii) Projects in the pipeline SASEC Road Connectivity MFF ($800 million) (iii) Ongoing projects SASEC Road Connectivity ($198 million) TA Loan for Dhaka–Chittagong Expressway PPP ($10 million)</td>
<td>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</td>
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<td>Rail freight traffic increased from 710 million ton-km in 2010 to 1,238 million ton-km in 2015</td>
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<td>Bridges constructed and rehabilitated (51.3 km) by 2015</td>
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<td>Annual average daily traffic (motorized) on national and regional highways increased from 3,085 units in 2010 to 4,532 units in 2015</td>
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<td>Rail transport systems expanded, improved, and maintained; Bangladesh Railway restructured</td>
<td>Tongi–Bairab Bazar line with double track by 2015</td>
<td>Length of railway in usable conditions to be increased from 2,835 km in 2010 to 4,237 km in 2015</td>
<td>(i) Planned key activity areas Double tracking, track rehabilitation, and signaling; Sector reform (ii) Projects in the pipeline Railway Sector Investment Program (PFR 4, $50 million); Railway Rolling Stock Project ($200 million) (iii) Ongoing projects Railway Sector Investment Program MFF (PFR 1, $130 million; PFR 2, $150 million; and PFR 3, $100 million); SASEC Railway Connectivity: Akhaura–Laksam Double Track Project ($505 million)</td>
<td>Improvement of Bangladesh Railway’s operational efficiency Double tracking for 134 km; Line capacity improvement by signaling upgrades for 11 stations Commissioning of 10 diesel locomotives and 414 passenger carriages Feasibility studies and detailed design for 340 km of new railway line with regional impact Feasibility studies for three major railway bridges</td>
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**Source:** Asian Development Bank.