Country Presentation on BANGLADESH RAILWAY on the current status and challenges to facilitation of international railway transport

Presented by

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Presentation Outlines

- Bangladesh Transport Sector – An Overview
- Bangladesh Railway - At A Glance
- Railway Master Plan 2010-2030: Status and Prospects
BANGLADESH TRANSPORT SECTOR
Overview

- Bangladesh economy is burdened by major transportation constraints
  - physical, developmental and institutional-cum-policy framework-related
  - lower efficiency, higher transport costs, and "transport unreliability"
  - major adverse consequences for the environment and economy.

- Over time, the road sector expanded disproportionately.
  - Roads have been built at places ignoring existence of parallel railway facilities.

- Investment shares of railways and waterways were bare minimum just for some rehabilitation of existing assets
  - No significant development and expansion program for railways and waterways.

- Road transport expanded at the expense of railways and inland water transport.

- Sea Ports: 2 nos.
- Airports: 9 nos. (Int. 3 nos.)
Transport Sector Investment

<table>
<thead>
<tr>
<th>Year</th>
<th>Transportation Sector Investment as % of Annual Development Budget</th>
<th>Investment as % of Transportation Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Roadway</td>
<td>Railway</td>
</tr>
<tr>
<td>1974-75</td>
<td>11.56</td>
<td>32.4</td>
</tr>
<tr>
<td>1979-80</td>
<td>13.79</td>
<td>42.0</td>
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<tr>
<td>1984-85</td>
<td>11.59</td>
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</tr>
<tr>
<td>1989-90</td>
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<td>1994-95</td>
<td>16.91</td>
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<td>1999-00</td>
<td>18.81</td>
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<tr>
<td>2004-05</td>
<td>19.00</td>
<td>88.6</td>
</tr>
<tr>
<td>2009-10</td>
<td>19.20</td>
<td>88.9</td>
</tr>
</tbody>
</table>

Allocations in the Past 5YPs

- **Transport Sector (million Tk.)**
- **Railway Sub-sector (Million Tk.)**
Modal Share by Modes of Transport

Source: Bangladesh Transport Sector Review (WB)
# Bangladesh Transport Sector Performance

## Comparison of Infrastructure Quality 2014-2015

<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Country Ranking</th>
<th>Overall Infrastructure Score</th>
<th>Roads</th>
<th>Railroads</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>130</td>
<td>2.8</td>
<td>2.9</td>
<td>2.4</td>
<td>3.7</td>
</tr>
<tr>
<td>India</td>
<td>87</td>
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<td>3.8</td>
<td>4.2</td>
<td>4.0</td>
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<tr>
<td>China</td>
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<td>4.6</td>
<td>4.8</td>
<td>4.6</td>
</tr>
<tr>
<td>Cambodia</td>
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<td>3.4</td>
<td>1.6</td>
<td>3.6</td>
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<tr>
<td>Myanmar</td>
<td>137</td>
<td>2.1</td>
<td>2.4</td>
<td>1.8</td>
<td>2.6</td>
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<tr>
<td>Pakistan</td>
<td>119</td>
<td>2.7</td>
<td>3.8</td>
<td>2.5</td>
<td>4.4</td>
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<tr>
<td>Sri Lanka</td>
<td>75</td>
<td>4.0</td>
<td>5.1</td>
<td>3.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Thailand</td>
<td>48</td>
<td>4.6</td>
<td>4.5</td>
<td>2.4</td>
<td>4.5</td>
</tr>
</tbody>
</table>


## GCI Comparison between the 2009-2010 and 2014-2015 for Bangladesh

<table>
<thead>
<tr>
<th>Year</th>
<th>Country Ranking</th>
<th>Overall Infrastructure Score</th>
<th>Roads</th>
<th>Railroads</th>
<th>Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-2015</td>
<td>130*</td>
<td>2.8</td>
<td>2.9</td>
<td>2.4</td>
<td>3.7</td>
</tr>
<tr>
<td>2009-2010</td>
<td>126**</td>
<td>2.4</td>
<td>2.9</td>
<td>2.3</td>
<td>3.0</td>
</tr>
</tbody>
</table>


* Ranking out of 144 countries; ** Ranking out of 133 countries.
Transport Sector Need Assessment: A Critical Analysis

- Since Independence in 1971, Bangladesh witnessed rapid growth of transport.
  - Annual growth rates nearly 8.2% for freight transport and 8.4% for passenger transport.
  - Road traffic vol. increased by 88% from 1985 through 1993, water & rail traffic declined in almost equal proportion.

- **Road density in km per 100 sq. km is the highest** (102.57 compared to 70 km/100 sq. km in USA) in the world but in km per 1000 persons is one of the lowest in the world (0.90 against 27 in USA) [WB].

- Transport intensity is still considerably lower than that of neighboring countries in Asia.
  - Freight transport intensity 0.28 ton-km/$GDP and Passenger mobility 350 km/capita (770 for India and 1000 for Malaysia) [WB].
  - But accident rate is high- death in road accident is 21,000/yr. (7th in Asia & 13th in the World).

- A country of 147,570 sq. km area having a population of about 170 million at present would have to cater for transport needs of 200 million people by 2020.

- If transport intensity based on road system alone is to reach somewhere near to any developed country, the entire population might have to migrate elsewhere to make room for road infrastructure.

- So, sustainable development of transport sector by restoring railway’s role as the dominant mode of transport is **MUST**.
BANGLADESH RAILWAY
BR: Milestone Events

- Bangladesh Railway is the single-largest government-owned-&-managed transportation agency of the country
  - 1862: Started its journey as Eastern Bengal Railway with 53.11 km Jagoti-Darsana BG Rail link
  - 1961: Renamed as Pakistan Eastern Railway
  - 1972: Started providing services as Bangladesh Railway
  - 1998: East-West Railway connectivity over river Jamuna was established from the day of opening Bangabandhu Bridge (Jamuna Multipurpose Bridge)
  - 2003: Direct BG train communication between East and West zones was established over Bangabandhu Bridge
  - 2007: Bangladesh signed TAR agreement
  - 2008: Direct passenger train “Maitree Express” between Dhaka and Kolkata established
  - 2011: Separate dedicated ministry, Ministry of Railways, was formed on 4 Dec 2011
BR: Facts & Figures

- Route km: 2,877.10 (2,874.03 in 1971)
  - BG: 659.33 km
  - MG: 1,808.05 km
  - DG: 409.72 km
- Track km: 4,093.15 (4,448.02 in 1971)
- No. of stations: 459 (470 in 1971)
- Passenger carried: 67.34 m (72.89 m in 1971)
  - Pass-km: 8,711.31 million
- Tonnes carried: 2.55 million (4.88 m in 1971)
  - Ton-km: 693.84 million
- Daily pass. trains: 349 nos.
- Daily freight trains: 37 nos.
- Rolling stock: 282 (486 in 1971)
- Coaches: 1,639 (1,643 in 1971)
- Operating ratio: 170.5
- Rev. per pass-km: BDT 77.6
- Rev. per ton-km: BDT 2.38
- No. of employees: 27,620 (55,825 in 1971)

Source: BR Information Book, 2015
BR: Issues & Opportunities

**Issues**
- BR is made up of truncated portions of the then British-Indian rail system
- Inherited a number of structural and physical weaknesses as a part of its legacy
  - Gauge differences between East and West
  - Missing links and overall deteriorated rail networks
  - Poor multi-modal transport and logistics facilities
- Less priority and minimal investment over decades
- Management and reform issues

**Opportunities**
- Geographical location
- Large population
- Huge demand
- Connectivity to TAR network
- Connectivity to Sea Ports
- Regional Transport HUB
- Container services
Rapid development of Bangladesh over last 4 decades has been underpinned by large-scale investment in the transport sector.

However, there is a growing consensus that continued road building to deal with increasing demand for transport is neither environmentally nor financially sustainable.

- Railways pose less carbon emission and its land utilization efficiency is very high as a safe mode of mass transport.

- A properly integrated transport plan should utilize the best features of road and rail, and ensure that the two modes can largely complement one another.

- Railways surely can play vital role especially for a densely populated country like Bangladesh

- In recent policies of the Government’s we rightly observe a paradigm shift away from road construction towards investment in railways and inland water transport.
Present railway network inherited from colonial era does not suit the strategic transport needs of modern Bangladesh.

- Track, locomotives and rolling stock are in relatively poor conditions
- A range of physical and institutional issues inhibit the realisation of the full capacity of the existing network.

At the same time railways have potential in-built advantages over road transport, for the carriage of containers and a range of bulk commodities.

- Railways can offer safer and faster inter-city travel at more reasonable fare than road transport.

Railways in Bangladesh has the potential to play a major role in the context of regional transport and trade.

The full potential of BR can only be realised through planned investment in track, signalling, rolling stock, maintenance and human resource development which is the goal of the Railway Master Plan.
Background  

The Railway Master Plan (July 2010~June 2030) was approved by the Government on 30 June 2013 having total 235 projects at BDT 2,33,944 crore (US$ 30 billion) to be implemented over a period of 20 years spanning from FY 2010-11 to FY 2029-30.

- The Master Plan was in place to guide the overall development of BR in the foreseeable future to meet country’s transport demand.

- The implementation program has been divided into four phases of 5 years each.

- The Master Plan focused on-
  - increase railway efficiency with interventions to make best use of assets
  - extend railway infrastructure to meet policy objectives
  - integrate railway network in a multi-modal approach
  - allow railway to play a greater role in the overall transport sector with a view to contributing to economic and social development
  - prepare railway for playing role in regional and international context
  - uniformity in the gauge system by establishing BG throughout the country
  - extend its network within the capital city by introducing metro system and commuter services to reduce Dhaka’s traffic congestion
  - modernize its loco workshops and training institute with a view to increase its operation and human capacity.
The Master Plan deals with an assessment of the BR’s present situation in contrast of the compatibility of standards with neighbouring countries and future needs. Diagnosis of existing problems and explores future opportunities with way forward to achieve the targets.

A number of recommendations were made based on policies imbued in:
- the Vision 2021
- the Sixth Five Year Plan
- the revised Poverty Reduction Strategy
- the MDGs
- the National Land Transport Policy (2004) and
- the draft Integrated Multi-modal Transport Policy.
Major Corridors in the RMP

To enable BR to carry the anticipated traffic in the future, the RMP focused on the **nine major corridors** where almost 90% traffic movement takes place. Alongside lack of major connectivity throughout the country also considered.

- **Corridor 1:** Dhaka – Chittagong — Cox’s Bazar – Deep Sea Port/ Gundum.
- **Corridor 2:** Chilahati – Ishurdi – Khulna – Mongla.
- **Corridor 3:** Dhaka – Bangabandhu Bridge – Darsana/Benapole.
- **Corridor 4A:** Dhaka – Bangabandhu Bridge – Rajshahi – Rohanpur.
- **Corridor 4B:** Dhaka – Bangabandhu Bridge – Ishurdi – Parbatipur- Chilahati/Birol.
- **Corridor 5:** Dhaka – Sylhet/Shahbazpur.
- **Corridor 6:** Dhaka – Bangabandhu Bridge – Sirajganj/Roypur(Jamtoil) – Bogra - Lalmonirhat- Burimari.
- **Corridor 7B:** Dhaka – Mawa – Jajira - Bhanga – Jessore – Benapole.
- **Corridor 7C:** Dhaka – Mawa – Jajira - Bhanga – Barisal.
- **Corridor 7D:** Dhaka – Mawa – Jajira - Bhanga – Kashiani – Gopalganj – Tungipara.
- **Corridor 8A:** Dhaka – Mymensingh – Jamalpur – Tarakandi- Bangabandhu Bridge.
- **Corridor 8B:** Dhaka – Bhairab Bazar – Mymensingh
- **Corridor 9A:** Dhaka – Mawa –Jajira – Rajbari - Mizanpur (Moukuri) –Bara Durgapur (KhasChar) – Pabna – Ishurdi.
- **Corridor 9B:** Dhaka – Paturia – Douladia – Mizanpur (Moukuri) - Bara Durgapur (Khas Char)- Pabna – Ishurdi.
Assessment of Rolling Stocks Requirements

Indicative Requirement of Locomotives by the Plan Phases

<table>
<thead>
<tr>
<th>Year</th>
<th>Locomotives requirement</th>
<th>Stock available under BR</th>
<th>Need for replacement</th>
<th>Procurement to be needed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MG</td>
</tr>
<tr>
<td>2009-13</td>
<td>280</td>
<td>239</td>
<td>120</td>
<td>119</td>
</tr>
<tr>
<td>2014-18</td>
<td>315</td>
<td>119</td>
<td>40</td>
<td>61</td>
</tr>
<tr>
<td>2019-23</td>
<td>346</td>
<td>79</td>
<td>16</td>
<td>31</td>
</tr>
<tr>
<td>2024-28</td>
<td>371</td>
<td>63</td>
<td>10</td>
<td>25</td>
</tr>
</tbody>
</table>

Indicative Requirement of Coaches by the Plan Phases

<table>
<thead>
<tr>
<th>Year</th>
<th>Coaches requirement</th>
<th>Stock available under BR</th>
<th>Need for replacement</th>
<th>Procurement to be made</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MG</td>
</tr>
<tr>
<td>2009-13</td>
<td>1492</td>
<td>1098</td>
<td>309</td>
<td>452</td>
</tr>
<tr>
<td>2014-18</td>
<td>1548</td>
<td>789</td>
<td>394</td>
<td>350</td>
</tr>
<tr>
<td>2019-23</td>
<td>1832</td>
<td>395</td>
<td>215</td>
<td>400</td>
</tr>
<tr>
<td>2024-28</td>
<td>2056</td>
<td>180</td>
<td>177</td>
<td>300</td>
</tr>
</tbody>
</table>
Assessments of Freight and Flat Wagons Requirements

- The need for more introductions of more 8-wheel wagons in place of 4-wheel wagons to carry goods.

- In addition, the plan also suggests for conversion of vacuum brake into air-brake system in the 8-wheel wagons for freight movement.

- 400 BC and 50 other 8-wheel wagons need to be procured to carry future projected freight traffic.

- The plan recommended **procurement of 500 flat wagons** in the phases to accommodate future demand for container handling.

- A total of 531 MG, 259 BG Tank Wagon was proposed to procure within the plan period.
Dhaka Rail- Problems and Probable Solutions

- Being the capital of a highly populous country, Dhaka has a major role to play in the socioeconomic development of the country and in the era of regional & sub-regional cooperation.
- But the existing transportation system of Dhaka is a major bottleneck for the development of the city.
- Unplanned urbanization, especially poor transportation planning & lower land utilization efficiency, has turned the city into a dangerous urban jungle.
- Dhaka has primarily a road-based transportation system and its traffic congestion not only causes increased costs, loss of time & psychological strain, but also poses serious threats to our socioeconomic environment.
- From the experience of other mega cities, road system alone cannot satisfy the need for transportation of such a large city, like Dhaka.
- But the STP (2005) did not explore the full potentialities of railways that could effectively solve Dhaka’s urban transport issues like other mega cities of the world.

- 33-km long rail-road passes through the heart of the city but little contribution to city’s transport system. The Master Plan emphasizes coordinated development of railway and other modes within Dhaka
  - Commuter Rail services
  - Metro Rail
  - Effective inter city connection
- Dhaka has unique potential for waterways development due to surrounding rivers and waterways in the metropolitan area.
Regional Cooperation and Bangladesh

- Deeper regional cooperation and integration is required for peace and prosperity.

- In geopolitics, Bangladesh enjoys a unique position
  - As a member of SAARC, BIMSTEC and BCIM, Bangladesh plays an important role in regional integration and cross-border connectivity for regional trade facilitation and harmony.

- When the SAARC, BIMSTEC and BCIM regions will be fully developed, each member country will demand much larger space for marketers and investors. Cross-border direct and indirect investment will rise manifolds.

Regional Transport Connectivity: South & Southeast Asia

**BIMSTEC**: Unique link between South Asia and Southeast Asia
- 1.6 billion people (22% of the world population)
- Combined GDP of US$2.7 trillion
- Considerable amount of complementarities
- Potential of US$43-59 billion trade creation
Existing Regional Connectivity

Existing Connectivity with India:
- Benapole – Petrapole
- Darsana – Gede
- Rohanpur – Singhabad
- Birol – Radhikapur

Closed Connectivity:
- Shahbazpur – Mohishasan (since 07-07-2002)

Possible new Connectivity:
- Chilahati – Holdibari
- Burimari – Chengrabandha
- Akhaura - Agartala
- Dohazari – Cox’s Bazar – Gundum

Connectivity with Nepal through India:
- Rohanpur – Singhabad.
- Birol – Radhikapur (By conversion MG into DG).

Possible Connectivity with Bhutan through India:
- Chilahati – Holdibari (by constructing 7 km missing link in Bangladesh side and signing a new MOU).
- Burimari – Chengrabandha (by constructing transshipment facilities at Burimari and signing a new MOU).

Possible Connectivity with Myanmar:
- Dohazari – Cox’s Bazar – Gundum (By constructing rail link in Myanmar side and new Bi-lateral Agreement)
**Trans-Asian Railway network  Bangladesh Perspective**

**TAR ROUTE – 1:**
Sub-route – II : Akhaura – Kulaura – Shahbazpur – Mahisasan (India)

**TAR ROUTE – 2:**
Singabad (West Bengal, India) – Rohanpur – Rajshahi – Abdulpur – Ishurdi and thereafter following the rest of the route/sub-routes of Route – I.

**TAR ROUTE – 3:**
Radhikapur (West Bengal, India) – Birol – Dinajpur – Parbatipur – Abdulpur – Ishurdi and thereafter following the rest of the route/sub-routes of Route – I.
Bangladesh faces difficulties in international trading due to weak infrastructure and poor logistics.

- Doing Business 2016 Rank 174 (India 130, Singapore 1)
- LPI (Logistics performance Index) 2016 Rank 87 (India 35, Germany 1)

Presently, most of the freights are carried by road transport.

- Voluminous items could be carried by rail, depending on good connectivity and location of final origins and destinations.

For trade facilitation with neighbouring countries the Master Plan proposes:
- Conversion of track into DG from Tongi via Akhaura to Shahbazpur
- Extension of yard and capacity at Rohanpur
- Re-commissioning of Kulaura-Shahbazpur-Karimganj (India) Line.
- Construction of DG line from Parbatipur-Birol and BG line from Birol-Birol Border
- Construction of Railway line from Chilahati-Chilahati Border
- New ICD at Dhirasram
- Deep Sea Port
## Railway Master Plan: Program costs and Phasing

<table>
<thead>
<tr>
<th>Phases</th>
<th>Phase Period</th>
<th>Cost (in million USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>July 2010 to June 2015</td>
<td>16,410</td>
</tr>
<tr>
<td>Phase II</td>
<td>July 2015 to June 2020</td>
<td>3,610</td>
</tr>
<tr>
<td>Phase III</td>
<td>July 2020 to June 2025</td>
<td>5,640</td>
</tr>
<tr>
<td>Phase IV</td>
<td>July 2025 to June 2030</td>
<td>4,340</td>
</tr>
<tr>
<td>Total Investment Cost</td>
<td>July 2010 to June 2030</td>
<td>30,000</td>
</tr>
</tbody>
</table>
# Development of Rail Sector: Govt. Priority in 7 FYP

## Seventh Plan Railway Objectives and Targets

<table>
<thead>
<tr>
<th>Goal/Objectives</th>
<th>Actions</th>
<th>Specific targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand and improve railway system to provide safer, better, environment friendly &amp; less expensive transport facilities to the national and international traffic to increase its market share.</td>
<td>Expansion of railway network to expand rail operations</td>
<td>Undertake construction of 856 kilometre of new rail track.</td>
</tr>
<tr>
<td></td>
<td>Double tracking of important sections and gauge unification to overcome operational bottlenecks</td>
<td>Undertake dual gauge double tracking of 1110 kilometre.</td>
</tr>
<tr>
<td></td>
<td>Rehabilitate/upgrade existing rails for improved speed and safety</td>
<td>Undertake rehabilitation of 725 km of existing rail track.</td>
</tr>
<tr>
<td></td>
<td>Construction of railway bridges and other infrastructure for operational improvement.</td>
<td>Undertake construction of rail bridges, improvement of level crossing gates and improvement of other infrastructure.</td>
</tr>
<tr>
<td></td>
<td>Procure new locomotives to improve service quality</td>
<td>Purchase 100 new locomotives, 1 locomotive simulator and 4 relief cranes.</td>
</tr>
<tr>
<td></td>
<td>Procure new coaches for passenger comfort</td>
<td>Purchase 1120 passenger coaches and rehabilitate 624 coaches.</td>
</tr>
<tr>
<td></td>
<td>Upgrade railway workshops and maintenance</td>
<td>Procure modern maintenance equipment</td>
</tr>
<tr>
<td></td>
<td>Improve rail speed and safety</td>
<td>Upgrade rail signal for 81 stations</td>
</tr>
<tr>
<td></td>
<td>Improve rail efficiency</td>
<td>Strengthen railway management</td>
</tr>
<tr>
<td></td>
<td>Improve railway finances</td>
<td>Eliminate operational deficit through price increases and operational efficiency gains.</td>
</tr>
</tbody>
</table>

*Source: Ministry of Railways*
# Transport Sector Development Budget in 7FYP

<table>
<thead>
<tr>
<th>Ministry</th>
<th>FY2016</th>
<th>FY2017</th>
<th>FY2018</th>
<th>FY2019</th>
<th>FY2020</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Transport and Highways Division</td>
<td>56.8</td>
<td>65.3</td>
<td>73.5</td>
<td>81.7</td>
<td>91.4</td>
<td>368.6</td>
</tr>
<tr>
<td>Bridges Division</td>
<td>89.2</td>
<td>120.4</td>
<td>135.3</td>
<td>150.3</td>
<td>168.1</td>
<td>663.4</td>
</tr>
<tr>
<td><strong>Total Ministry of Road Transport and Bridges</strong></td>
<td>146.0</td>
<td>185.7</td>
<td>208.8</td>
<td>232.0</td>
<td>259.5</td>
<td>1032.0</td>
</tr>
<tr>
<td>Ministry of Railways</td>
<td>56.5</td>
<td>60.2</td>
<td>67.9</td>
<td>75.4</td>
<td>84.4</td>
<td>344.3</td>
</tr>
<tr>
<td>Ministry of Shipping</td>
<td>10.8</td>
<td>10.7</td>
<td>12.0</td>
<td>13.4</td>
<td>15.0</td>
<td>61.9</td>
</tr>
<tr>
<td>Ministry of Civil Aviation and Tourism</td>
<td>3.3</td>
<td>4.0</td>
<td>4.8</td>
<td>5.4</td>
<td>6.2</td>
<td>23.7</td>
</tr>
<tr>
<td>Posts and Telecommunications Division</td>
<td>17.7</td>
<td>17.6</td>
<td>17.1</td>
<td>17.1</td>
<td>20.4</td>
<td>89.9</td>
</tr>
<tr>
<td><strong>Total Sector</strong></td>
<td>234.3</td>
<td>278.2</td>
<td>310.5</td>
<td>343.3</td>
<td>385.5</td>
<td>1551.8</td>
</tr>
</tbody>
</table>

*Source: Seventh Plan Projections, GED*
GoB has put utmost priority to improve railway infrastructure.
Since 2009, 52 projects have been approved at a total cost of US$3.6 b.
Recent Developments of Bangladesh Railway

- 234.87 km new tracks, 67 new station bldgs, 179 new bridges constructed
- 1063.43 km existing tracks, 160 station bldgs, 597 bridges rehabilitated
- 248.50 km MG tracks converted into DG

- New 46 (20 MG & 26 BG) Locomotives, 20 sets MG DEMU, 516 wagons and 30 bogie brake vans, 2 relief cranes and 1 wheel lathe machine procured
- Existing 288 passenger coaches, 277 wagons rehabilitated/repairsed

- Signalling system of 65 stations have been modernized

- 104 new trains introduced

** Status during 2009 ~ June 2016**
Financing of Bangladesh Railway Projects

41 Investment Projects and 7 TA Projects of BR are included in Annual Development Plan (2016-17)

- GOB funded 16 nos.
- JDCF funded 1 no.
- ADB funded 10 nos.
- JICA funded 2 nos.
- DRGA-CF funded 2 nos.
- EIB funded 1 no.

- LOC funded 7 nos. and
- EDCF funded 1 no.
- China funded 1 no

TA projects are ADB and WB funded (7 nos.)

- **Total Cost**: USD11.1 billion (BDT859.68 billion)
  - PA: USD7.2 billion
  - GOB: USD3.9 billion
Responses from Development Partners

- **ADB**
  - Over $5.0 is expected over next couple of years. Very recently approved $1.0 b.

- **China G2G**
  - Committed $3.5 billion for Padma Bridge Rail Link Project [contract signed with China Railway Group Ltd. on 8 Aug 2016]
  - Around $4 billion expected for Dhaka-Chittagong express railway [a non-binding MOU was signed with the same company and feasibility study is going on]

- **JICA**
  - $1 billion for construction of Jamuna Railway Bridge Project

- **Indian LOC**
  - $490 million for construction of Khulna-Darsana double line, a new carriage workshop at Saidpur and conversion of MG Parbatipur-Kaunia section into DG

- **EDCF**
  - Around $273 million for construction of Karnaphuli rail-cum-road bridge, procurement of carriages & locomotives and modernization of signaling system.
## Future Priority Projects of Bangladesh Railway

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Project Title</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Construction of a new Rail Inland Container Depot at Dhirasram</td>
<td>USD 350 million</td>
</tr>
<tr>
<td>2</td>
<td>Construction of Dhaka-Chittagong Express Railway</td>
<td>USD 4.00 Billion</td>
</tr>
<tr>
<td>3</td>
<td>Strengthening/Re-construction of Hardinge Bridge to allow Trans Asian Railway Traffic</td>
<td>USD 250 million</td>
</tr>
<tr>
<td>4</td>
<td>Dual Gauge Double Tracking of Joydebpur-Ishurdi Section</td>
<td>USD 1060 million</td>
</tr>
<tr>
<td>5</td>
<td>Construction of Bogra-Sirajganj new Dual Gauge Rail Line</td>
<td>750 Million</td>
</tr>
<tr>
<td>6</td>
<td>Conversion of Dhaka-Chittagong-Dohazari MG Double Line Corridor into DG</td>
<td>USD 2.00 Billion</td>
</tr>
<tr>
<td>7</td>
<td>Construction of Rail Link with Matarbari and Maheshkhali Power Plants and Deep Sea Port</td>
<td>USD 350 Million</td>
</tr>
<tr>
<td>8</td>
<td>Construction of Rail Link Bhanga-Barisal-Payra Deep Sea Port via Barisal</td>
<td>USD 2.50 Billion</td>
</tr>
<tr>
<td>9</td>
<td>Establishment of a New Carriage &amp; Wagon Maintenance Workshop in South-West part of the Country.</td>
<td>USD 450 million</td>
</tr>
<tr>
<td>10</td>
<td>Capacity Enhancement of Railway Training Academy (RTA)</td>
<td>USD 150 million</td>
</tr>
<tr>
<td>11</td>
<td>Construction of Double track from Abdulpur-Parbatipur</td>
<td>USD 850 Million</td>
</tr>
<tr>
<td>12</td>
<td>Construction of Double track from Khulna-Darsana</td>
<td>USD 1.00 Billion</td>
</tr>
<tr>
<td>13</td>
<td>Procurement of 30 set BG AC DEMU</td>
<td>USD 250 Million</td>
</tr>
<tr>
<td>14</td>
<td>Establishment of a New Maintenance Workshop for DEMU</td>
<td>USD 350 Million</td>
</tr>
<tr>
<td>15</td>
<td>Procurement of Rolling Stock</td>
<td>USD 600 Million</td>
</tr>
<tr>
<td>16</td>
<td>Establishment of new Mechanized Track Maintenance Shop in East and West Zone of BR</td>
<td>USD 500 Million</td>
</tr>
<tr>
<td>17</td>
<td>Construction of Double Track from Joydevpur-Mymensigh</td>
<td>USD 750 Million</td>
</tr>
<tr>
<td>18</td>
<td>Establish new BG &amp; DG PSC Sleeper Manufacturing Plant</td>
<td>USD 500 Million</td>
</tr>
</tbody>
</table>
Long Term Plans of BR

- To maintain, upgrade and modernize the railway system to cope with the needs and support Government strategies for achieving SDGs.
  - Gauge unification (BG/DG)
  - Double tracking of main corridors with BG/DG standard.

- To expand railway network to all districts addressing missing links for national, regional and TAR network.
  - Making the network fully oriented to intra-country and inter-country traffic flow requirements.

- To modernize signaling & interlocking and telecom systems.

- To procure standard and adequate rolling stocks and coaches.

- To introduce dedicated HSR and container services/freight corridors.

- To ease urban traffic congestion through effective commuter services and metro development.
Bangladesh Railway is going through a reform process to restructure it into a more commercially-oriented organization in combination with substantial investment in infrastructure, rolling stocks, signaling systems, maintenance and technical modernization.

The implementation of the Master Plan, along with modern management and operating practices, would allow the railway to play its full role, not just in the transport system, but in fostering the economic and social development of Bangladesh.

While some progress has been made in recent years, there is still a long way to go.
- BR has access to resources of capital to upgrade its operations following recent development in Government policies.
- To efficiently exploit those resources, BR needs a revised Master Plan, which is currently ongoing under ADB support.
- Master Plan is a live document and can accommodate future needs.

We welcome all DPs and stakeholders to engage with the ongoing opportunity and support Bangladesh Railway to achieve its goal towards sustainable development.
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Thank you
Transport Network in Bangladesh

- **Roads** : 151,364 km
  - Highways: 21,571 km
  - Rural Roads: 129,793 km (paved 65,102 km)
  - Roads: 151,364 km

- **Railways** : 2,877.10 km
  - BG: 659.33 km
  - MG: 1,648.24 km
  - DG: 569.53 km

- **Inland Waterways**: 24,000 km
  - Navigable round the year: 3,900 km
  - Navigable during monsoon: 6,000 km

- **Sea Ports**: 2 nos.
- **Airports**: 9 nos. (Int. 3 nos.)
Corridor-1: Dhaka-Chittagong-Cox’s Bazar-Deep Sea Port

- The busiest rail track both for passenger and freight
- Infrastructures are old with many deficiencies
- Mixture of single and double tracks
- Major works need
  - Chittagong-Cox’s Bazar section of the corridor needs special consideration
  - Rehabilitation of Chittagong-Dohazari
  - Deep Sea Port/Mega Port
  - Replacement or widening of Ghorashal Bridge, King Georg-VI Bridge, Titas Bridge
  - Modernisation of 12 numbers station’s signalling system
  - Construction of 3rd and 4th line from Dhaka to Tongi
Corridor-2: Chilahati-Ishurdi-Khulna-Mongla

- The busiest BG section in the West Zone, which connects Khulna River Port (with a road link to Mongla seaport) to Chilahati border point.
- Before partition in 1947 linking Kolkata to Assam.
- There is opportunity to use this corridor from Mongla Port to Abdulpur via Rohanpur by Nepalese freight traffic in near future.

Major works to be completed:
- Construction of Khulna-Mongla Port Rail Line
- Upgrade and modernization of Signalling in 48 Stations
- Rehabilitation of Yards and Extension of Loops at different Stations
- Construction of double line between Parbatipur-Khulna
Corridor-3: Dhaka-Bangabandhu bridge (BB)-Darsana/Benapole

- Important railway corridor in context of national as well as regional freight traffic
- Major works needed to enhance the capacity are:
  - Construction of stations between Joydebpur – Jamtoil to decrease the length of block section.
  - Construction of a parallel Bangabandhu Bridge dedicated to railway only.
  - Rehabilitation of Darshanahalt-Darshana borderline including yard.
  - Rehabilitation of Jessore – Benapole section
  - Construction of double line between Joydevpur- Bangabandhu Bridge East end
  - Construction of double line between Bangabandhu Bridge West end – Ishurdi
Corridor - 4A : Dhaka-BB-Rajshahi-Rohanpur
4B: Dhaka-BB-Ishurdi-Parbatipur-Chilahati/Birol

- Strategic rail corridor through which BG Railway system is connected with Indian Railway.
- This corridor is presently carrying only Indo-Bangladesh bilateral traffic, but it has potential of carrying Nepal-Bangladesh regional traffic – as well
- Nepal likely to use Birgunj (Nepal) – Raxaul (India) – Singhahbad (India) – Rohanpur – Mongla Port to overcome captive uses of Kolkata/Haldia port.

- Major works needed to enhance capacity are:
  - Rehabilitation of Rajshahi – Rohanpur – Border section and Amnura Line
  - Extension of yard and capacity at Rohanpur
  - Construction of Double line from Tongi-Joydebpur.
Corridor -5 : Dhaka-Sylhet / Shahbazpur

- Busy rail track for passenger and freight transport in the East Zone.
- Mainly dominated by Inter-city passenger train followed by express and local trains.
- The Kulaura-Shahbazpur section is not in use since 1995.
- Shahbazpur border crossing is a part of the Trans Asian Railway (TAR) corridor.
- To allow both bilateral and Indian traffic to move along this corridor, it would need major rehabilitation of certain sections.

- Major works needed to realize full potential of this corridor enhance capacity are:
  - Replacement or improvement of Kushiara Rail Bridge
  - Conversion of the track from Tongi via Akhaura to Shahbazpur, from MG to DG
  - Conversion of the track from Akhaura to Chittagong from MG to DG
  - Re-commissioning of Kulaura-Shahabazpur-Karimganj (India) Line
  - construction of Ashuganj-Noapara rail link
The construction the missing MG line Shadanandapur - Sirajganj (Roypur) - Bogra line would reduce the distance between Dhaka to Burimari by 112km and Dhaka to Dinajpur by 102.07 Km.

After construction of missing line it will be shortest route for:
- Traffic originating from Burimari-Lalmonirhat-Kaunia and Bonarpara to and from Tongi-Dhaka-Chittagong side
- Traffic originating from east to Parbatipur-Rangpur and
- Traffic originating from east of Santahar on Santahar-Bogra section

Major works to be done to realize full potential are:
- Construction of Metre Gauge Line from Bogra to Sirajganj Roypur (Jamtoil)
- Modernisation of Signalling System between Bogra and Kaunia
This is a new corridor, which is proposed by the Railway Master Plan. After the construction of Padma Bridge at Mawa-Jajira point over Padma River, the new line (Dhaka-Jessore) will reduce the distance both for corridors and will become the shorter route for:

- Traffic originating from Jessore, Darsana, Benapole, Khulna and nearby other places to and from Tongi-Dhaka side
- Traffic originating from Faridpur areas and there as well as Rajshahi areas.
- Traffic originating from Mongla Port. Traffic originating from Barisal areas (when Bhanga-Barisal railway line will be constructed in the near future)

Major works needed besides construction of Padma bridge are:

- Padma Bridge Rail link Project – 1 (construction of Dhaka-Mawa-Janjira-Bhanga rail line including feasibility study)
- Padma Bridge Rail link Phase-II (Construction of BG line between Bhanga-Jessore)
- Construction of new broad gauge line between Bhanga- Barisal including feasibility study
- Construction of Khulna-Mongla sea port Rail link including feasibility study (LOC)
- Re-opening of Pachuria – Faridpur – Pukuria section and construction of Pukuria – Bhanga railway line.
Corridor 8A: Dhaka-Mymensingh- Jamalpur-Tarakandi- BB
8B: Dhaka-Bhairab Bazar-Mymensingh

- Dhaka-Mymensingh section of the corridor is important for passenger traffic
- It is expected that the construction of Sirajganj Roypur –Bogra railway line will open up the opportunity for MG goods trains from Chittagong-Bhairab Bazaar-Mymensingh- Jamalpur-BB-Bogra and the beyond.
- Major works to be done to realize full potential are:
  ✓ Construction of Double Line from Joydevpur-Mymensingh
  ✓ Construction of 3rd and 4th Dual gauge Railway trackbetween Dhaka-Tongi section and doubling of Dual Gauge track between Tongi-Joydevpur section.
Corridor -9A: Dhaka–Mawa–Jajira–Rajbari–Mizanpur (Moukuri)–Bara Durgapur (Khas Char)–Pabna–Ishurdi.

9B: Dhaka–Paturia–Douladia–Mizanpur (Moukuri)-Bara Durgapur (Khas Char)-Pabna–Ishurdi.

- These two corridors will be constructed as new railway line.
- It is expected that both of the corridors will dominate intercity, mail/express and goods trains where BR's present businesses are concentrated. Opening these corridors the BR's future market will be expanded by a large portion of intercity passenger, carrying of container, petroleum, food grains, fertiliser, and marble and stone that are now fully carried by roads and waterways.

- Major works needed are:
  ✓ Construction of Rail Bridge over Padma at Mawa-Jajira point
  ✓ Construction of Ishurdi-Dhalarchar Line.
  ✓ Rehabilitation of Pachuria – Pukuria rail link.
  ✓ Construction of rail link from Pukuria to Bhanga.
  ✓ Construction of Padma Bridge at Paturia – Dauladia.
  ✓ Feasibility study and construction of double rail line between Dhaka and Aricha.
  ✓ Feasibility study and construction of railway stations at Fatullah and Savar.
RCI TA project under ADB fund for the following investment projects:

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Name of the Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feasibility study for construction of Railway link from Dhaka-Bhanga-Jessore through Padma Bridge (Phase-I and Phase-II) and Detailed Design &amp; Tendering Services for Phase-I (Dhaka-Bhanga rail line).</td>
</tr>
<tr>
<td>2</td>
<td>Feasibility study, Detailed Design and Tendering Services for construction of Double Line and upgrade of existing rail line between Akhaura and Laksam.</td>
</tr>
<tr>
<td>3</td>
<td>Feasibility Study for construction of a Railway Bridge parallel to the existing Bangabandhu Bridge with provision of Dual Gauge Double Track over the river Jamuna.</td>
</tr>
<tr>
<td>4</td>
<td>Feasibility Study for Strengthening/Re-construction of Hardinge Bridge to allow Trans Asian Traffic.</td>
</tr>
<tr>
<td>5</td>
<td>Update previous Feasibility study, Detailed Design and Tendering Services for construction of single line Meter Gauge Railway track from Dohazari to Cox's Bazar via Ramu and Ramu to Gundum near Myanmar Border.</td>
</tr>
<tr>
<td>6</td>
<td>Feasibility Study for construction of Double Line between Joydevpur- Ishurdi section of BR.</td>
</tr>
<tr>
<td>7</td>
<td>Feasibility Study for Construction of Railway Bridge over the river Jamuna near Phulchari-Bahadurabad Ghat including approach rail links.</td>
</tr>
</tbody>
</table>
Opportunities:

- The unique geo-graphical position of Bangladesh.
- 20 years Railway Master Plan has been approved which emphasise establishing international, regional and sub-regional railway connectivity.
- Khulna-Mongla rail link would provide the shortest railway corridor to connect Nepal, Bhutan and North-West India.
- The Padma rail link and the proposed Dhaka-Comilla chord line would provide shortest railway corridor to connect Chittagong port to West Bengal of India.
- New Akhaura-Agartala rail link and re-opening of Shahbazpur-Mohishoshan would facilitate traffic from Chittagong port to North-East India.
- Actions taken for construction of missing links and enhancement of capacity.
- All ports in the Bay of Bengal are estuarine with shallow drafts of 9m or less where as Sonadia Deep Sea Port will have 14m draft which will allow container vessels arrival at the port with 4000 TEUs or more.
- The deepest berth in Sonadia deep sea port would be the key to make Bangladesh a regional transport Hub which would be the nearest deep sea port to Nepal, Bhutan and parts of India.
Action to be taken to establish regional land transport Hub and logistic centre in Bangladesh

- Establish Deep sea Port at Sonadia.
- Establish railway and road connection with Sonadia Deep Sea Port.
- Establish a land transport hub & logistic centre in Bangladesh.
- Establish Trans-Asian Railway network and regional railway connectivity.
- Establishment of double line in important railway corridors and new railway connectivity with important areas of Bangladesh to emphasise export-import activities.
- Arrangement of essential financing for implementation of Railway Master Plan, specially regional and sub-regional connectivity projects.
- Establish efficient multi-modal arrangement in Ports and ICDs.
Conclusion (Contd.)

- The implementation of the Railway Master Plan relies on a massive expansion in resources devoted to infrastructure development and maintenance, procuring new rolling stock and improved maintenance practices.

- The success of the Master Plan and achievements of Bangladesh Railway mainly will depend on the timely implementation of the projects.

- Now the Government of Bangladesh has created a separate Ministry i.e. Ministry of Railways giving emphasis on railway transport for the country.

- BR should connect at least all the District Head Quarters with its network. Connecting of District Head Quarters with railway network will reduce pressure on road infrastructure both for passengers and freight traffic.
Conclusion (Contd.)

- The implementation of the Plan will require capacity building within BR’s management, and therefore, the Railway Training Academy in Chittagong should be made well equipped in this respect.

- To address the current needs and challenges, the RMP requires regular update/revision every five years.

- Finally, this plan is a starting point for a shift in the way in which Bangladesh addresses transport investment, and provides a platform for a shift towards investment in rail for the best social, economic and sustainable reasons. When the Integrated Multi-modal Transport Policy (IMTP) is approved by the Government of Bangladesh, an integrated investment programme for all modes of transport should be prepared, to allow the provisions of the IMTP to be implemented. BR is expected to play a significant role in this regard.