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**Improving Transport Connectivity in
South Asia**

Presented by

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Presentation Outline

- **Introductory Remarks**
- **Connectivity needs to be conceived regionally**
- **Earlier initiatives towards regional connectivity**
- **Recent initiative: India-Bangladesh Joint Communique**
- **Implications of Joint Communique**
- **Benefits of regional connectivity: Win-win for all**
 - Identification of routes
 - Route analysis & costing
 - Expected benefits
 - Assessment of Traffic
 - Cost of infrastructure improvement
- **Transit charges: Experience elsewhere**
- **Concluding Remarks**

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Introductory Remarks

- Surface transport network in South Asia still continue to remain fragmented, despite existence of basic infrastructure & facilities
- At present, goods are transshipped at the border between trucks. No inter-country freight train except a passenger train between Dhaka-Kolkata. Rail wagons are pulled by Indian Locos upto the border and BR Locos pull these to certain destinations.
- NE-India, virtually a landlocked territory; and traffic from NE-India is required to travel 1400-1650 km to reach Kolkata Port. If transit was allowed, distances would be around 450-700 km.
- Before 1947 trade from NE-India used to pass through, territories of what is now Bangladesh.
- Rail and IWT transit across the then East Pakistan continued till 1965 & then suspended.
- Only IWT transit restored in 1972 after liberation of Bangladesh

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Connectivity needs to be conceived regionally

- India had been asking for quite sometime, access of NE-India to Chittagong Port. Similarly Nepal and Bhutan have been asking for access to Mongla Port
- Transit, therefore, no longer an issue only between India and BD, as Nepal and Bhutan both want transit through India and Bangladesh.
- If transport connectivity is provided to these countries/territory, BD could benefit by trading in "Transport Services".
- It is crucial to realize that these transport services have no market outside the sub-region, and BD's deep sea port would need sub-regional patronage. At the same time it is also to be recognized that it is BD only, which can provide such transport services, to its hinterland countries/territory.
- If above opportunities could be recognized, and political decision made accordingly, BD could become "transport hub" of the sub-region.

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Earlier initiatives towards regional connectivity

ESCAP Initiatives

- UN-ESCAP took pioneering efforts for AH (1959) and TAR (1960)
- Although AH network Agreement came into force on July 04, 2005, and BD signed it in 2009, but the network could not be operational without an agreement on movement of vehicles (See Map).
- BD signed TAR Agreement in 2007, but a separate agreement is needed for movement of trains including container trains.
- Another initiative needed to complete missing links (See Map)

SAARC Initiatives

- As part of SRMTS, 10-road corridors, 5-Rail, 2-IWT corridors, 10-Maritime and 16 Aviation Gateways, for regional transport connectivity identified.
- But implementation of SRMTS recommendations approved by SAARC Summit in 2007 is slow, due to lack of political commitment, except some recent initiatives in Eastern South Asian sub-region.

Map 1: Asian Highway Route Map



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Map : Trans-Asian Railway



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Recent Initiatives: India-Bangladesh Joint Communique

India-Bangladesh Joint Communique- Agreement included:

- Use of Mongla and Chittagong sea ports by India, Bhutan and Nepal.
- Rohanpur-Kathihar-Rauxal-Birgunj BG rail link for transit traffic movement between Nepal and Mongla Port
- Construction of Akhaura-Agartala rail link
- Designating Ashuganj as a new port of call and transshipment port for onward connectivity to Tripura
- Allowing bilateral container traffic between India and Bangladesh to be carried by both rail and IWT.

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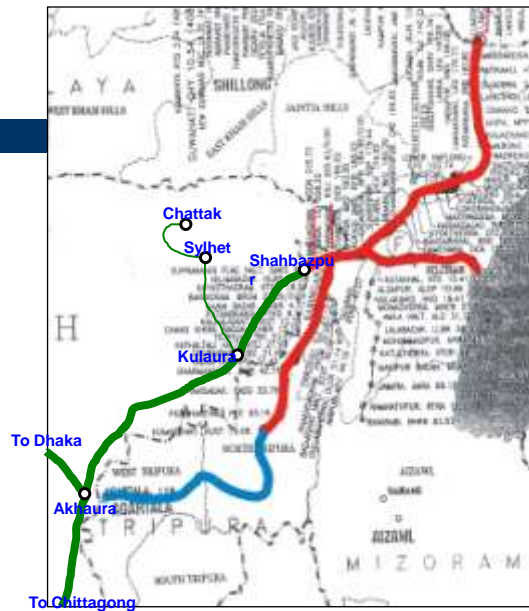
Implications of Joint Communique

Allowing use of Mongla and Chittagong ports

- Mongla port has 80% and Chittagong port has 40% spare capacity, at present level of management
- Some investments already planned to further modernize ports and involvement of private sector at New Mooring under process.
- Railway and IWT to be main mode to serve regional traffic. Major projects include:
 - (a) Recommissioning Kulara-Mahissasan (39 km), plus a transshipment facility
 - (b) construction of Akhaura-Agartala rail link (10 km)
 - (c) Double tracking of 3-major sections along Dhaka-Ctg. Route
 - (d) Construction of 2nd Bhairab rail Bridge and 2nd Titas Bridge
 - (e) Construction of an ICD at Dhirasram near Tongi
 - (f) Strengthen several rail sections, modernization of signaling & acquisition of rolling stock
 - (g) 2nd rail bridge on Jamuma

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Map 8: Rail Link Between NE-India & Bangladesh



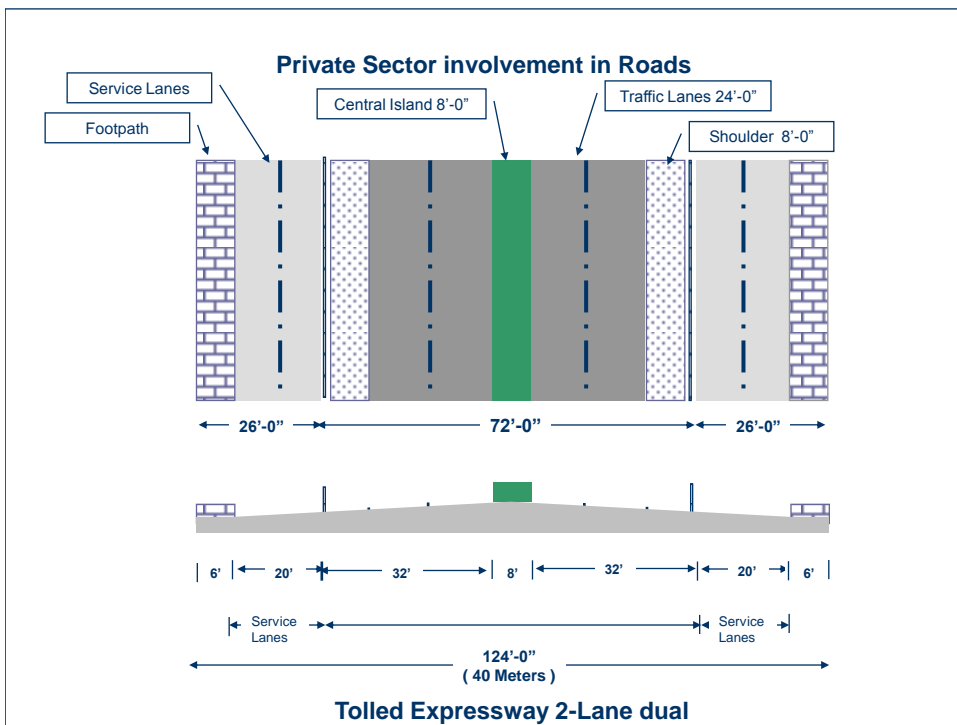
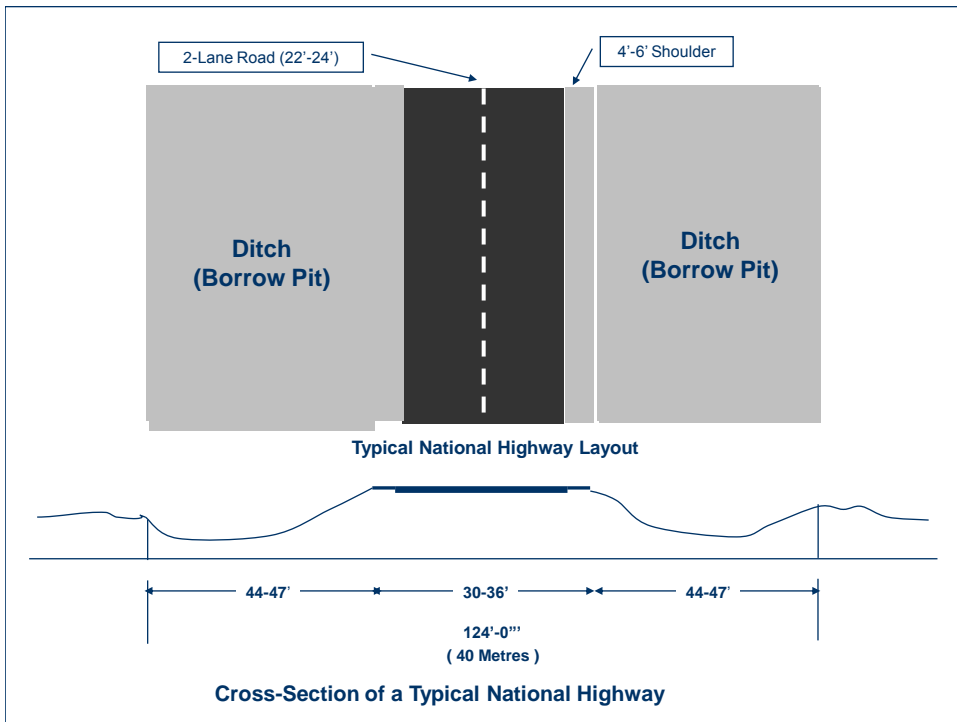
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Implications of Joint Communique

Use of Bangladesh Road Network

- Due structural weakness of BD roads, which have only 2-lanes, loaded Indian trucks can not be allowed to use these, until expressways are built on PPP basis using ROW of National Highways
- Some road sections- Brahmanbaria-Mainamati, Sutarkandi-Sylhet and Benapole-Jessore-Khulna need upgradation
- As part of immediate solution, Bangladesh Road Transporters could perhaps provide transshipment facilities, border to border across Bangladesh.
- Alternatively, a Joint Venture Trucking Company (JVTC) could be set up by Bangladesh Road Transporters with shareholders in India, Nepal and Bhutan, with double registration for the company's multi-axle vehicles.

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Implications of Joint Communiqué

Rohanpur-Kathihar-Birgunj rail link

- Allowing above link to be used for bilateral trade between BD and Nepal, and third country trade of Nepal through Mongla port involving around 900 km travel.
- Mongla port has already taken up several projects to enhance efficiency
- A transshipment facility for container handling at Khulna, and arrangements for truck-trailers for onward movement to Mongla (44 km) being planned.
- Strengthening of track and signaling in Rohanpur-Rajshahi section is also planned.

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Rohanpur-Kathihar-Birgunj Rail Link



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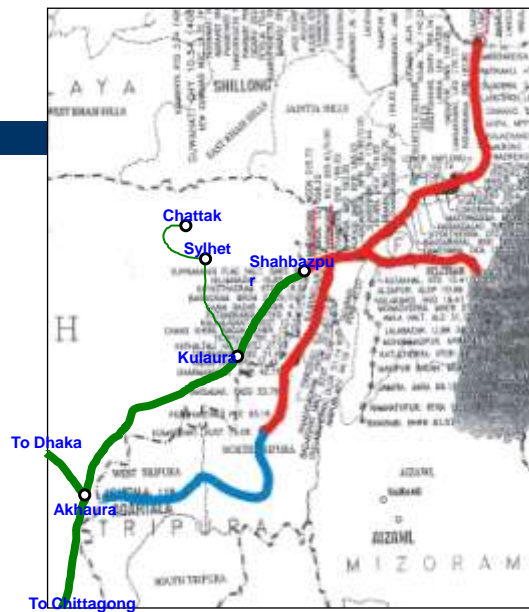
Implications of Joint Communique

Akhura-Agartala rail link

- Alignment of new link (around 10.0 km) finalized jointly and recommendations are with respective governments.
- This link will provide another connectivity between IR and BR on East side.
- This link will become a direct competitor to existing Mahishasan-Kulaura link after recommissioning (See Map).
- Construction of new link and recommissioning old link (39 km) its opening to traffic may need around 3 years.

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Map 8: Rail Link Between NE-India & Bangladesh



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Implications of Joint Communiqué

Ashuganj, a new transshipment port

- This development will provide NE-India a shorter IWT-cum-road transport link to Kolkata.
- India will pay for development of facilities to carry ODC for power plant at Palatana, Tripura.
- Upgradation of Sultanpur-Akhaura-Sonarbadi (35 km) link is critical for carrying ODC and Bangladesh is paying for its construction out of 1 billion Indian LOC.
- BD is investing in developing transshipment facilities at Ashuganj to facilitate India's container movement to Agartala by IWT-cum-road transport, which would be a new transit route.

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IWT-CUM-ROAD TRANSPORT FROM ASHUGANJ TO AGARTALA



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Implications of Joint Communiqué

Container movement by Rail & IWT between India & Bangladesh

- Jamuna bridge has no restriction for ISO containers movement, but problem may arise with regard to number of trains that could cross the bridge in a day.
- A new dedicated rail bridge essential, which may cost around \$700-800 million.
- Containers can move upto Dhaka ICD through dual gauge
- IWT container terminal under construction at Pangaon, and a few more private sector IWT container terminals also under development
- These IWT terminals will facilitate direct container movement between Kolkata and Dhaka as well as between Dhaka-Chittagong/Mongla
- Self propelled barges to carry containers are already under construction in private sector in Bangladesh.

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Benefits of Regional cooperation: Win-win for all

- Studies following the Joint Communiqué revealed that due to geographical proximity, and existing transport networks, certain states of NE-India are already well connected with Bangladesh by road and rail network (See Map)
- Based on existing connectivity with NE-India, three nodal points could be: (a) Guwahati (b) Silchar and (c) Agartala, for route analysis.
- 13 routes were selected for investigation, including routes to Nepal & Bhutan. Breakdown of routes was: Road routes-7, Rail routes-5, IWT cum-road route-1 (see Maps).
- Route analysis and costing included cost per ton along a route based on costing of all links and nodes. (See route analysis).

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Map 1: Transport connections of Bangladesh to NE-Indian States



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Map 3: Road Corridors to Serve NE-India's International Traffic



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Map 4: Rail Corridors to Serve NE-India's and Nepal's Traffic



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Map 5: Road Corridors to Serve Nepal and Bhutan Traffic

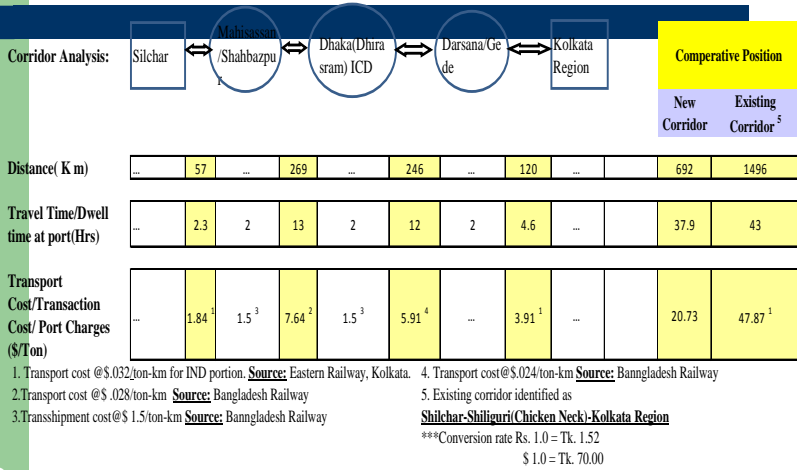


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Analysis of Corridors and Costing

Indian Traffic

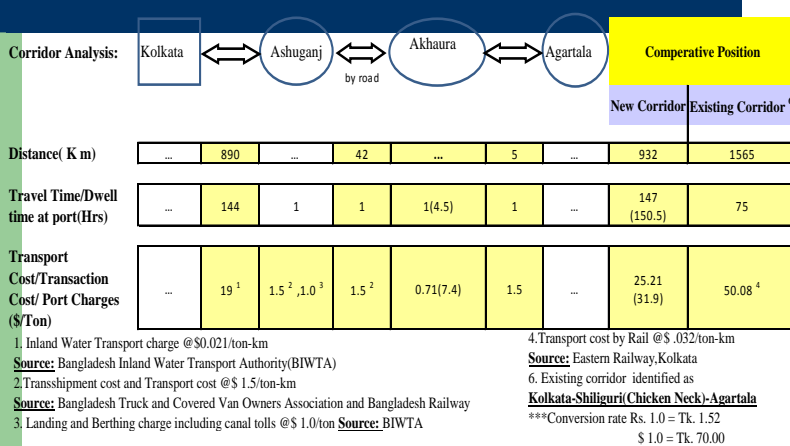
Rail Corridor-1: Silchar-Mahisassan/Shahbazpur-Dhaka (Dhira sram)-Darsana/Gede-Kolkata Region



Analysis of Corridors and Costing

Indian Traffic

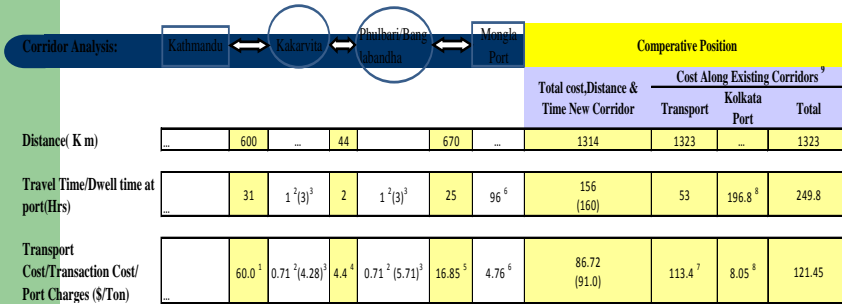
IWT Corridor-1: Kolkata-Raimongal-Mongla-Naravanganj-Ashuganj by Road to Agartala



Analysis of Corridors and Costing

Nepal Traffic

Road Corridor-1: Kathmandu-Kakarvita-Phulbari/Banglabandha-Mongla Port



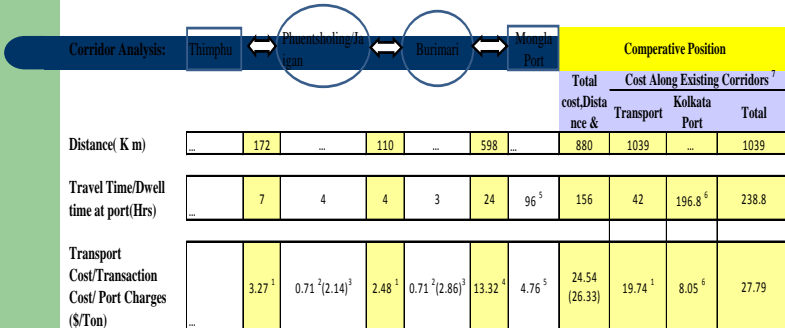
1. Transport cost @\$0.1/ton-km **Source:** Maresk Sealine,India
2. Indicates nominal transaction costs per ton and time for transit traffic crossing after mutual agreement among neighbouring countries signed
3. Figure in parenthesis indicates prevailing transaction cost and crossing time at land port
4. Transport cost@\$ 0.1/ton-km **Source:** Nepal Truckers Association.
5. Transport cost @\$ 0.025/ton-km **Source:** Bangladesh Truck and Covered Van Owners Association

6. **Source:** Mongla Port Authority
 7. Transport cost @\$0.085/ton-km **Source:** Road Transporters,Nepal
 8. **Source:** Ministry of Shipping, GOI, 2007
 9. Existing corridor identified as **Kathmandu-Birgunj-Kolkata Port**
- ***Conversion rate Rs. 1.0 = Tk. 1.52
\$ 1.0 = Tk. 70.00

Analysis of Corridors and Costing

Bhutan Traffic

Road Corridor: Thimphu-Phuentsholing/Jaigan-Burimari-Mongla Port



1. Transport cost @\$0.019/ton-km, same as Guwahati **Source:** Maresk Sealine,India
2. Indicates nominal transaction costs per ton and time for transit traffic crossing after mutual agreement among neighbouring countries signed
3. Figure in parenthesis indicates prevailing transaction cost and crossing time at land port
4. Transport cost @\$ 0.022 /ton-km, **Source:** Bangladesh Truck and Covered Van Owners Association

5. **Source:** Mongla Port Authority
 6. **Source:** Ministry of Shipping, GOI, 2007,India
 7. Existing corridor identified as **Thimphu-Phuentsholing-Jaigan-Kolkata Port**
- ***Conversion rate Rs. 1.0 = Tk. 1.52
\$ 1.0 = Tk. 70.00

Comparison of Transport Costs: Existing vis-à-vis Proposed Corridors

Name of the Corridor	Transport Costs (US\$/Ton)		Costs Saving	
	Proposed Corridor	Existing Route	(US\$/Ton)	%
Road Corridor 1: Sutarkandi – Benapole	25.80	38.52	12.72	33%
Road Corridor 2: Akhaura – Benapole	21.94	42.00	20.06	48%
Road Corridor 3: Tamabil – Chittagong	28.87	32.91	4.04	12%
Road Corridor 4: Sutarkandi – Chittagong	21.67	46.57	24.90	53%
Road Corridor 5: Akhaura – Chittagong	14.88	50.05	35.17	70%
Road Corridor 6: Banglabandha – Mongla	86.72	121.45	34.73	29%
Road Corridor 7: Burimari - Mongla	24.54	27.79	3.25	12%
Rail Corridor 1: Shahbazpur - Darshana	20.73	47.87	27.14	57%
Rail Corridor 2: Shahbazpur - Chittagong	18.48	56.13	37.65	67%
Rail Corridor 3: Akhaura - Darshana	16.41	54.00	37.59	70%
Rail Corridor 4: Akhaura - Chittagong	12.52	52.05	49.53	80%
Rail Corridor 5: Rohanpur - Mongla	29.62	27.76	-1.86	---
IWT Corridor : Raimangol - Ashuganj	25.21	50.08	24.87	50%
Total 13 routes covering 3-modes				

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Benefits of Regional cooperation: Win-win for all

Expected Benefits to Bangladesh: Sources are

- Transport charges (rail freight or roads or IWT charges)
- Port charges (for international traffic)
- Border crossing charges for transit traffic
- Toll charges for major bridges, ferries, expressways, etc.
- Transit fees or sharing of benefits due to large savings in transport costs and travel time of Indian transit traffic moving through Bangladesh.

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Benefits of Regional cooperation: Win-win for all

Type of Traffic being looked into

- Current studies focused on “diverted traffic” only. Future studies should focus on “generated traffic” as well.
- Two studies focused on traffic to be diverted from NE-India, Nepal and Bhutan, as well as their international traffic to pass through Chittagong and Mongla ports.
- Another study focused on only inter-state traffic to and from NE-India, which could be diverted through Bangladesh.

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Benefits of Regional cooperation: Win-win for all

Assessment of traffic

- Based on factors of geographical proximity, transport connectivity and convenience, two of the studies assumed that around 35% of traffic from Assam, 50% from Meghalaya could be potentially diverted through Bangladesh ([see Map-1](#))
- On same logic, there is potential for 100% diversion of inter-state and international traffic from Monipur, Mizoram, Nagaland and Tripura, through BD to Kolkata region, and to BD ports.
- 50% Nepal traffic and 100% of Bhutan traffic could also get diverted to Mongla Port due to cost savings.
- Diversion of likely inter-state and international traffic is summarized in the Table.

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Map 1: Transport connections of Bangladesh to NE-Indian States



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Total Potential Diversion of Freight Traffic of NEI, Nepal and Bhutan

States/Countries	International		Domestic		Total (in TEU)		
	TEUs	Tons	TEUs	Tons	Intl	Domestic	All
Assam	4294	488132	3503	12015829	36836	804558	841394
Nagaland	1768	201008	1442	2317791	15169	155962	171130
Tripura	2328	264671	1899	788516	19973	54467	74440
Other NEI states	2457	308082	2201	2564990	28476	173200	201675
Nepal	15883	429000	0	0	44483	0	44483
Bhutan	0	58000	0	0	3867	0	3867
Total	26719	1749793	8808	15641649	143372	1051584	1194957
Total Traffic in million tons.					1.75	15.64	17.39

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Benefits of Regional cooperation: Win-win for all

Cost of Infrastructure Improvement

- Bangladesh shall have to make sizeable investment for strengthening and expanding its transport infrastructure to carry transit as well as national traffic.
- A quick assessment revealed that following investments would be needed:

(1) Railways	Tk. 17,308.00 crores	= US\$ 2490.00 million
(2) Roads and Highways	Tk. 9487.00 crores	= US\$ 1365 million
(3) Inland Waterways and Inland Ports	Tk. 4578.00 crores	= US\$ 658.00 million
(4) Chittagong Port	Tk. 1728.00 crores	= US\$ 249.00 million
(5) Mongla Port	Tk. 2690.00 crores	= US\$ 387.00 million
(6) Land Ports	Tk. 500.00 crores	= US\$ 72.00 million

Total Tk. 36,291.00 crores i.e. US\$ 5221 million = **US\$ 5,221 billion**

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Benefits of Regional cooperation: Win-win for all

India's financial assistance

- India offered US\$1.0 billion Line of Credit (LOC) to BD for infrastructure development, @ 1.75% interest per annum. This is India's largest loan ever given to any country.
- 20 years repayment period, with a provision of 0.5% commitment fee per year, on unused credit after 12 months from date of contract approval.
- 14 projects identified costing around US\$601 million, of which 10 are of interest to BD, and 4 of India-BD interest.
- 10 projects of BD's interest will also benefit India when transit traffic movement starts. The 4 projects of BD-India interest should ensure that both sides benefit almost equally.

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Benefits of Regional cooperation: Win-win for all

Details of the Projects being financed

- 6 Nos high powered dredgers and transshipment port at Ashuganj and reconstruction of road to Akhaura/Agartala.
- Procurement of Locomotives, passenger coaches, tank wagons, flat wagons, break vans, etc.
- 2nd Railway Bhairab Bridge and 2nd Titas Bridge.
- Purchase of 300 double decker and 50 articulated buses
- Construction of Rail over passes at Jurain and Malibagh
- Ramgarh-Sabroom Road
- Power Grid line between India-Bangladesh, around Bheramara
- 4-subprojects related to capacity building of BSTI/ Laboratory.

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Transit Charges: Experience Elsewhere

- According to UN convention and statute on procedure of transit, "Transit traffic" is defined as transport of goods across the territory of a country, when the passage through this territory is only a portion of a complete journey starting and ending beyond the frontiers of the country across whose territory the traffic passes.
- "Transit" in NE-Indian context means Indian goods passing through BD using BD infrastructure and BD/Indian owned fleet/rolling stock.
- "Transshipment" in NE-Indian context means movement of Indian goods across BD using BD's owned fleet, after transshipment at the border.
- "Corridor" means a strip of territory that runs through that of another country, and secures access to some desired place.
- All transit/transshipment traffic should be subjected to inspection, scanning and supervision by BD authorities, and sealed by BD customs, so that goods can move as bonded cargo.

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Transit Charges: Experience Elsewhere

European Experience (Switzerland)

- In 1992, European Economic Community reached an agreement with Switzerland, a transit country, to allow charges on transit traffic for use of infrastructure. Agreement covered international transport by road and rail. Charges were infrastructure user fees.
- In 1999, EU and Switzerland signed another agreement to replace ban on vehicles over 28 tones with a quota and high charges system, w.e.f. June 01, 2002.
- According to EU "White Paper on Transport Policy for 2010"; the charges, or using infrastructure must cover not only infrastructure and its damage cost, but also external costs, related for air pollution, noise, congestion and accidents.

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Transit Charges: Experience Elsewhere

GMS Experience

- GMS countries charges toll to transit traffic, which is directly related to distance travelled. Toll includes replacement costs, maintenance and operating costs.
- However, since LDCs cannot afford cost-based toll rates, in line with relevant UN-resolutions, LDCs were allowed to charge domestic traffic, a toll rate that is different from the rates for international traffic.

African Experience

- 19 members of COMESA (Common Market of Eastern and Southern Africa) countries introduced in 1991, a harmonized scheme for road transit charges.
- Use of coupons for payment of transit charges were found user friendly. Designated commercial banks issue these coupons in each country.

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Concluding Remarks

- Transit traffic from NE-India, Nepal and Bhutan would find it attractive to transit through BD, and use its ports, as the savings for each ton of diverted traffic could range between 12% to 80% depending on the route being used.
- Potential transit and international traffic could be around 18.00 million tons of which inter-state would be around 16.00 million tons and international (including Nepal & Bhutan), around 2.00 million tons.
- Railway and IWT shall have to carry most of the transit traffic. Initially Bangladesh transport system can perhaps carry around 10% of potential traffic.
- Bangladesh will need around 3-5 years to put its transport system in full gear to carry anticipated transit traffic, say from 6th year

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Concluding Remarks

- BD shall have to invest around US\$ 5.0 to 6.0 billion to improve its national transport system for its continued economic growth as well as to create enough capacity to carry transit traffic.
- In view of large investments by BD and potential savings by India, ranging between 12% to 80% per ton of cargo movement, negotiation should be held with India to share part of the savings, besides payment of user charges for infrastructure.
- For carrying high value commodities, instead of providing transshipment service from border to border, which may not be cost-effective, Bangladesh road transporters could float a joint venture trucking company (JVTC).
- Finally, by providing transit facilities to neighbouring countries, BD would open up opportunities for regional patronage of its Deep Sea Port (DSP). BD has already offered India as well as China to invest and use DSP.

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***Thank You for
Your Kind Attention***