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ADB Working Paper Series

**Connecting South Asia and
Southeast Asia:
A Bangladesh Country Study**

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Abstract

Economic integration is being inhibited by the poor state of transport connectivity between Bangladesh, and South Asia and Southeast Asia. This study reviews connectivity initiatives of Bangladesh and the two neighboring regions and proposes ways to deepen regional and interregional connectivity. Since the early 1990s, as a consequence of trade-led growth strategy, South Asia and Southeast Asia have emerged as important economic partners of Bangladesh both in terms of export destination and import sourcing. However, constraints “at the border” and “behind the border” have tended to undermine the prospects of reaping the benefits accruing from closer economic cooperation.

There is now an increasing realization among policymakers in Bangladesh of the importance of transport integration as an effective tool for market integration and also for attracting efficiency-enhancing and market-seeking investment. This changed perspective has been reflected in Bangladesh’s long-term development policies. This study identifies cross-border initiatives with Bangladesh’s involvement particularly at the bilateral, subregional, and regional levels. Some of these initiatives are also integrated with Asia-wide broader connectivity particularly through the Asian Highway and Trans Asian Railway initiatives. Ongoing initiatives include construction and upgrading of multi-lane highways and railways, road and rail bridges, procurement of locomotives and wagons, and construction of internal container river ports. However, progress has been slow and cross-border transit still remains an unaddressed issue. A consensus among the concerned countries is needed with regard to standard operating procedures, harmonization of standards and customs procedures, and service charges and user fees for transit facilities. Additionally, significant investment will be required for trade facilitation and to upgrade border trade facilities at land ports, inland waterways, and sea ports.

The study identifies five key areas where concrete action from major stakeholders is required: (i) mobilizing the necessary funds for building physical infrastructure; (ii) identifying and sequencing of priorities; (iii) cross-border coordination; (iv) building human resources to manage cross-border mega projects; and (v) building supply-side capacities to benefit from connectivity-driven regional market opportunities.

JEL Classification: F15, R42

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1. INTRODUCTION

Bangladesh's geographical location between two major regions of Asia—South Asia and Southeast Asia—provides a unique opportunity for the country to benefit from greater cross-border movement of goods and services, investment flows, and enhanced human contact. Bangladesh has lost its heritage as a bridge between South Asia and Southeast Asia and is one of the most disconnected countries in the region, deprived of its status as a key node on the silk route (Sobhan 2000). Discussion is again shifting toward concrete measures to re-establish Bangladesh's connectivity through the establishment of the Asian Highway and the Trans-Asian Railway network. Improved connectivity will enable Bangladesh to translate the potential opportunities to benefit its economy and people through strengthened subregional, regional, and global integration.

This study analyzes connectivity initiatives between Bangladesh and South Asia and Southeast Asia and proposes suggestions for strengthening those initiatives with a view to reaping the benefits. Section 2 presents an overview of the macroeconomic scenario based on key performance indicators. Section 3 presents Bangladesh's strategy toward South Asian and Southeast Asian regional connectivity and reviews the policies and implementation of projects. Section 4 deals with the state of customs, trade facilitation, and trade finance with a view to identifying the gaps in cross-border soft infrastructure. Section 5 discusses energy trading and explores its potential for cross-border trading. Section 6 presents the state of financial opportunities for infrastructure and how this could be improved. Finally, Section 7 assesses the factors that could impede or encourage deeper regional connectivity and integration and summarizes the relevant policy recommendations.

2. THE MACROECONOMIC SITUATION OF BANGLADESH AND THE CURRENT STATE OF DOMESTIC PHYSICAL CONNECTIVITY

2.1 Dynamics of GDP Growth and Public and Private Investments

Since the 1990s, in spite of the challenges faced, Bangladesh has progressed in terms of macroeconomic performance. Trade and economic reform have given Bangladesh tangible results in growth acceleration, growing domestic investment, and higher international trade. Due to sustained growth, the economy has made a significant transition from a predominantly aid-receiving economy to a trading economy. Robust and accelerated economic growth has contributed toward a rise in total and per capita gross domestic product (GDP). The country's share in global GDP has also gone up (Table 1).¹ GDP composition shows a growing share of manufacturing and services in contrast to a receding share of agriculture indicating a degree of structural transformation in the economy (Table 1).

A consistent rise in domestic investment, particularly private investment, has played an important role in accelerating the pace of GDP growth (by about 1% each decade)

¹ Bangladesh revised its GDP by using the new base year for 2005–2006 that put GDP at \$173.6 billion in 2014 with per capita per annum being \$1,115 (Bdnews24.com 2013).

since the 1990s (CPD 2014). Private investment, as a percentage of GDP, has doubled from 10.3% to 20% since 1991.

Table 1: Selected Macroeconomic Indicators of Development, 1991–2012

Economic Indicator	1991	2001	2005	2011	2012
GDP (\$ million)	30,957	46,988	60,278	111,879	115,609
% of world GDP	0.134	0.146	0.132	0.159	0.17
GDP growth (annual %)	3.3	5.3	6.0	6.7	6.2
GDP per capita (current \$)	287	349	421	732	747
Value added (as % of GDP)					
Agriculture	30.4	24.1	20.1	18.3	17.5
Industry	21.7	25.9	27.2	28.2	28.5
Services	47.9	49.9	52.6	53.5	53.9
Total investment (% of GDP)	16.9	23.0	24.5	25.1	26.5
Private investment (% of GDP)	10.3	15.8	18.3	19.5	20.0
Public investment (% of GDP)	6.6	7.2	6.2	5.6	6.5
FDI (% of total investment)	NA	0.73	5.49	4.04	4.05
Gross national savings (% of GDP)	11	22	26	29	29
Export share (% of GDP)	5.54	13.76	14.33	20.48	20.94
Import share (% of GDP)	11.33	19.87	21.77	30.07	30.60
Current account balance (% of GDP)	0.21	-1.14	-0.29	0.22	NA

FDI = foreign direct investment; GDP = gross domestic product; NA = not available.

Source: World Bank (2013a).

The contribution of foreign direct investment (FDI) to domestic investment is small—at about \$1.2 billion (around 1% of GDP) in FY2013 (World Bank 2013a). In 2012, total FDI stock reached \$6.3 billion, which is 2.05% of the total FDI stock of South Asia and only 0.48% of that of Southeast Asia (Bangladesh Bank 2013). Most of these investments are targeted toward the domestic market-oriented gas, petroleum, banking, and telecommunication sectors; and the export-oriented textiles, clothing, and leather sectors.² Realized FDI is higher in sectors where domestic supply chains are well established, sourcing of raw materials is easier, and where markets are assured (Moazzem 2012).

Weak infrastructure related to trade facilitation undermines the interests of both domestic and foreign investors. The low level of FDI inflow is attributed to a number of factors including limited policy support for investors at the pre-establishment phase and the lack of a conducive environment.³ The scarcity of suitable land, limited availability of gas and electricity, and the lack of well-developed sector-specific supply chains constrain FDI flows to the country. Most of the registered FDI flows are less than \$1 million, and whether these will be realized hinges on the availability of the needed infrastructure facilities.

² Other sectors include power, cement, agriculture and fisheries, chemical and pharmaceuticals, food processing, and metal and machines.

³ Policy support at the pre-establishment stage includes information access on market size, market players, risks, and profitability.

2.2 Dynamics and Changes in the External Sector

Bangladesh's trade openness has significantly increased over the years with a reduction in tariff peaks, tariff bands, and para-tariffs. The average applied and most favored nation (MFN) tariff rates have come down since the early 1990s, from over 80% to around 10%, in both manufactured and primary products (World Bank 2013a).⁴ Besides, duty-free import facilities provided to the export-oriented sectors for raw materials, intermediate products, and capital machineries have contributed to incentivizing export-oriented sectors.⁵ Export share in GDP increased from 5.5% in 1991 to 20.9% in 2013; import share increased from 11.3% to 26.4% over the same period. However, Bangladesh is facing challenges in realizing its potential opportunities in the global market due to gaps in skills, the weak state of product and process upgrading, and shortcomings in raising competitiveness. Other external sector variables, particularly inward remittances, inward FDI, and official development assistance have played important roles in Bangladesh's economic growth by transforming the balance of payments to a favorable state, particularly the current account component.

2.2.1 Trade with South and Southeast Asia

Bangladesh's trade with South Asia and Southeast Asia has been on the rise since the early 2000s, and about 40% of total trade currently takes place with these regions. The operation of the South Asian Free Trade Area (SAFTA) since 2006 and duty-free market access for most products in the Indian markets since 2011 have created potential opportunities for higher trade with South Asia, particularly with India (Rahman et al. 2010).⁶ However, the share remains low. Various tariff and non-tariff barriers lead to bottlenecks that impede greater intra-regional trade. Pruning the sensitive lists of SAFTA member countries on an urgent basis will help greater trade flows within the region (Moazzem and Basak 2013). Southeast Asia is increasingly becoming a major source of imports for Bangladesh (Table 2). Both these regions are important not only for Bangladesh but also for other South Asian countries as a source of imports, particularly for raw materials, intermediate products, and capital machineries (Chandra and Kumar 2008). Appendix, Table A.1 shows the importance of regional countries as export destinations and import sources for Bangladesh.

⁴ The share of number of tariff lines with tariff peaks has reduced from over 90% to about 30%–40%.

⁵ Though in recent years, rises in supplementary duties and other taxes at the import stage, particularly in favor of selected domestic market-oriented industries, has led to an increase in the effective rate of protection.

⁶ India offered this as a package to all SAARC least developed countries (LDCs) in October 2011. According to the UN classification, a least developed country (LDC) is a country that exhibits the lowest indicators in terms of socioeconomic development, and economic vulnerabilities with the lowest Human Development Index ratings of all countries in the world. (http://www.un.org/en/development/desa/policy/cdp/ldc/ldc_criteria.shtml). Out of 48 LDCs, 4 LDCs are located in South Asia which include Afghanistan, Bangladesh, Bhutan, and Nepal.

Table 2: Bangladesh's Trade with South and Southeast Asia

Trade Indicator	2005	2011	2012	2013
Selected region's share in Bangladesh's total global exports (%)				
Southeast Asia	2.2	1.0	1.4	1.2
South Asia	2.0	2.6	2.4	1.9
Rest of the world	95.8	96.4	96.2	96.9
Selected region's share in Bangladesh's total global imports (%)				
Southeast Asia	15.4	22.3	18.9	18.4
South Asia	15.7	14.0	18.4	20.4
Rest of the world	68.9	63.7	62.7	61.1
Selected region's share in Bangladesh's total global trade (%)				
Southeast Asia	9.8	17.9	15.4	15.3
South Asia	9.9	12.5	15.8	17.3
Rest of the world	80.3	69.5	68.8	67.4

Source: UNCOMTRADE Database (2013).

Bilateral trade potential between Bangladesh and South and Southeast Asian countries is high not only with existing major trading partners within the regions but also with other non-traditional trading partners (Appendix, Table A.1). For example, Bangladesh and Myanmar have insignificant bilateral trade (\$91.8 million in 2010). However their potential trade was about 2.9 times higher (\$270 million) compared to the existing level (UNCOMTRADE 2013). Bangladesh's major potentially tradable items are in minerals, chemical products, textiles and apparels, electrical equipment, and base metals. On the other hand, Myanmar's potentials lie in vegetable products, textiles, apparel, base metals, and articles. The development of cross-border connectivity between these two neighboring countries will open up opportunities to further enhance trade.

2.2.2 Free Trade Agreements with Other Countries

Bangladesh, as an LDCs, enjoys preferential market access in developed countries under unilateral preferential schemes (such as the European Union [EU]–Everything but Arms [EBA], United States [US] Generalized Scheme of Preferences [GSP],⁷ Canadian GSP, Japanese GSP, and the People's Republic of China's [PRC] GSP) and in regional trading agreements (SAFTA, Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation [BIMSTEC], and the Asia–Pacific Trade Agreement [APTA], for example). These schemes provide duty-free market access for most of the products with favorable rules of origin. High MFN tariff rates of some Bangladesh exports to Southeast Asian markets has constrained enhancing its export in these markets (Moazzem, Chowdhury, and Raz 2014; Rahman et al. 2010). The bilateral trade potential of Bangladesh's top 50 export products reveals the possibility to develop economic partnerships with countries including India, Singapore, and Malaysia.

A number of new developments in trade alliances will have implications for Bangladesh as also for other developing countries. The Trans-Pacific Partnership is an initiative to forge closer partnership among 12 economies in the Asia and Pacific region, including the US, Japan, and the Republic of Korea. The Trans-Atlantic Trade and Investment Partnership is another mega-idea that has been mooted in recent times. A number of

⁷ The US has suspended the GSP facility for Bangladesh products exported to the US market on several grounds including poor compliance standards in the ready-made garment and shrimp sectors.

regional (for example, the Regional Comprehensive Economic Partnership) and cross-regional free trade agreements (FTAs) (for example, India–Association of Southeast Asian Nations [ASEAN] FTA and India–EU FTA) are also at various stages of negotiation; other such initiatives are also likely to have important implications for developing economies. Since Bangladesh has strong trade and investment links with countries that are part of such initiatives (for example, the US, Canada, the PRC, India, and Japan), their implementation is likely to have a significant impact for developing economies including Bangladesh (Palit 2014). Firstly, this could lead to the undermining of competitiveness of developing countries for similar products through significant preference erosion. Member countries of these FTAs, including the developing and developed country members, will enjoy preferential market access within FTAs, on par with the LDCs that enjoy GSP facilities in those markets. Secondly, these mega regional trade agreements are likely to set high standards in terms of labor compliance, trade-related intellectual property rights assurance, intellectual property rights, investment regimes, financial services, copyright and patent requirements, and sanitary and phytosanitary measures, technical barriers to trade compliance. Developing countries may find that their market access is constrained because of lack of flexibility as regards compliance with high standards in those markets. Thirdly, these powerful blocs will create pressure for plurilateral agreements that could undermine developing country interests in the backdrop of the single undertaking nature of the World Trade Organization (WTO) negotiations and decisions. Keeping in mind their offensive and defensive interests, Bangladesh will need to decide whether to remain engaged with these emerging blocs.

3. COUNTRY STRATEGY TOWARD PROMOTING REGIONAL CONNECTIVITY

According to the Sixth Five Year Plan (2011–2015) and the Ten Year Perspective Plan (2011–2020), effective regional connectivity and better trade facilitation are being given higher prominence at the policy level in Bangladesh (Planning Commission 2011; Srinivasan 2012). Bangladesh is a member of a number of regional and subregional trade arrangements and initiatives that include various modes of cooperation such as trade, investment, trade facilitation, and connectivity. New initiatives include South Asia Trade in Services that focuses on liberalizing services. The BIMSTEC FTA is another preferential market access initiative where Bangladesh is a member, and which gives a window to ASEAN in the east.⁸ Joint communiqués between India and Bangladesh, and joint statements of heads of governments of Bangladesh and Myanmar and the foreign secretaries of Bangladesh and Bhutan reflect the aspiration of greater regional cooperation.

3.1 Major Policies toward Promoting Regional Transport Connectivity

The Sixth Five Year Plan sets out a strategy for market integration through developing a transport network at the domestic and regional levels. Major elements include the development of the Chittagong and Mongla seaports and their links with Dhaka. The plan includes the establishment of rail links between the east and southwest; investments in rolling stock, modern traffic, and safety equipment; and conversion of

⁸ Other members include two Southeast Asian countries, Myanmar and Thailand.

narrow to broad gauge to harmonize with neighboring countries, allowing regional rail connectivity.

The plan also includes the development of critical inter-modal transport networks linking the two seaports to promote connectivity with neighboring countries by enhancing the capacity to handle the expected cargo flows. The Padma Bridge will connect the eastern part with the rest of Bangladesh, by removing the major remaining barrier and advancing the cause of an integrated nation-wide transport network. The bridge is also important for regional connectivity with India, Nepal, and Bhutan, with Mongla Port. The plan emphasizes Bangladesh's participation in global and regional transport connectivity initiatives to develop land routes between South Asia and East Asia through Bangladesh.

In the Ten Year Perspective Plan, Bangladesh will develop infrastructure such as roads, railways, and ports that will allow it to be connected to the Asian Highway Project implemented by UNESCAP. According to the plan, "Bangladesh Railway will provide safe, reliable, effective and efficient rail transport services, and will foster international rail links to serve regional/sub-regional connectivity and Trans-Asian Railway (TAR)" (Government of Bangladesh 2012).

3.2 Regional and Bilateral Strategies toward Promoting Transport Connectivity

3.2.1 SAARC Multimodal Connectivity

The South Asian Association for Regional Cooperation (SAARC) Secretariat conducted the Regional Multimodal Transport Study to enhance transport connectivity among member countries through strengthened transportation, transit, and communication links across the region (SAARC Secretariat 2006). In the case of regional road corridors, the study put forward suggestions to develop transport and transit agreements between India, Bangladesh, and Pakistan for the movement of freight, improvement of roads to reduce transit costs, and development of modern border crossings between India and Bangladesh to facilitate transit. In the case of rail corridors, the study proposed standardizing technologies including track, rolling stock, and signaling and coordination (SAARC Secretariat 2006). Regional inland waterways are to be developed through the signing of a protocol between Bangladesh and India, which will be effective for the long term; alongside this, more ports of call are to be introduced in Bangladesh to ease inter-country traffic. Maritime gateways are to be developed through the expanding capacity of Chittagong port, planning and augmenting rail, road, and pipeline connectivity in all ports, and dredging to maintain water depth in Chittagong. With regard to regional aviation gateways, suggestions were put forward for the promotion of the low-cost carrier concept.

3.2.1 BIMSTEC Transport Infrastructure and Logistic Study

With a view to build and strengthen connectivity, the BIMSTEC Transport Infrastructure and Logistics Study came up with a strategy to promote Bangladesh's transport links to BIMSTEC member countries (ADB 2008). According to the study, strategies were to be pursued toward the development of integrated regional rail networks between Bangladesh and India that would facilitate access of both the countries to Myanmar and Thailand. Cost assessment was to be made for building dual gauge rail connections in Bangladesh and an inland clearance depot in Tongi for the Dhaka metropolitan area. Initiatives were to be taken for restoring the railway line between Chilahati and Haldibari. For developing the rail link between Dhaka and Chittagong, a chord line is to be built between Dhaka and Laksam. For improving railway freight

services, a container service network was to be established linking Kolkata, Siliguri/New Jalpaiguri, Tongi, and Chittagong.

3.3 Bilateral Strategy for Connectivity

3.3.1 Bangladesh–India Connectivity

The scope for strengthening connectivity between Bangladesh and India was established through the signing of joint communiqués by the respective government heads in 2010 and 2011. According to the first communiqué signed in 2010, both countries agreed to extend cooperation in roads, rails, ports, and waterways connectivity. The communiqué states that Bangladesh will allow the use of Mongla and Chittagong seaports for movement of goods to and from India through road and rail. Bangladesh also conveyed its intention to give Nepal and Bhutan access to Mongla and Chittagong ports. It was agreed that the construction of the proposed Akhaura–Agartala railway link be financed by grants from India. A team of railway authorities from the two countries was to identify the alignment for connectivity. Both countries indicated interest in resuming road and rail links between the two countries. The prime ministers agreed that the Rohanpur–Singabhad broad gauge railway link would be available for transit to Nepal. Bangladesh informed its intention to convert the Radhikapur–Birol railway line into broad gauge and requested that a railway transit link be established with Bhutan as well. India gave Bangladesh a line of credit worth \$1 billion for a range of projects, including the development of railway infrastructure, supply of broad gauge locomotives and passenger coaches, rehabilitation of Saidpur railway workshop, procurement of buses, dredging of rivers, and strengthening of the Bangladesh Standards and Testing Institution (BSTI). The agreement also stipulated that Ashuganj in Bangladesh and Silghat in India would be additional ports of call. Furthermore, it talked of amending the inland water transit and trade protocol through the exchange of letters and removing tariff and non-tariff barriers. Subsequent developments also include signing of the coastal vessels agreement to facilitate bilateral trade through coastal waterways. Regarding the exchange of electricity, India has agreed to sell to Bangladesh 250 megawatts (MW) of electricity from the Indian grid, to be subsequently raised to 500 MW (with talk of taking this up to 3,000 MW).

3.3.2 Bangladesh–Bhutan Connectivity

Bangladesh and Bhutan are keen to establish better connectivity between the two countries. In April 2013, a joint statement signed by the foreign secretaries reiterated the stand of the two countries to put in place better connectivity to foster trade, commerce, and investment. It was agreed that connectivity between the two countries would be discussed in a subregional context involving Bangladesh, Bhutan, and India. Both countries agreed to form a joint working group for finalizing a transit agreement and its protocols. They also emphasized the need to strengthen the role of SAARC, BIMSTEC, and other regional organizations to exploit potential benefits. In addition to the existing Burimari–Chengrabandha and Tamabil–Dawki land customs stations (LCS), the meeting also agreed to establish additional LCSs (Dalu–Nakugaon and Gobraakura and Koraituli in Haluaghat, opposite Ghoshuapara in India).⁹

⁹ Issues of discussion included forming a joint working group to finalize a transit agreement and a joint committee to study the utilization of the protocol on inland water transit and trade between Bangladesh and India for transportation of Bhutan's cargo.

3.3.3 Bangladesh–Nepal Connectivity

Bangladesh and Nepal signed a transit protocol in 1976 to facilitate movement of goods. However, this was not implemented as there were concerns from the Indian side regarding the movement of goods through Indian territory.¹⁰ As per the Bangladesh–India joint communiqué, trucks from Bhutan and Nepal are now allowed to enter about 200 meters to the zero point at Banglabandh, at the Banglabandh–Phulbari LCS. The two countries signed an agreement to set up a timeframe for the conclusion of operational modalities for movement of vehicles between them. Emphasis was given on promoting connectivity through the Rohanpur–Singhabad railway and the Kakarvitta–Fulbari road and maximum utilization of these routes. Bangladesh is taking initiatives to open a new land route to Nepal and is also going to offer Mongla port for export of goods by Nepal to a third country.

3.3.4 Bangladesh–Myanmar Connectivity

A joint statement was issued in connection with the meeting of the heads of governments of the two countries in Myanmar in 2012. The statement highlighted bilateral cooperation on trade, investment, and connectivity. Myanmar and Bangladesh signed two accords on bilateral cooperation: i) an agreement to establish a joint commission for bilateral cooperation between the two governments; and ii) a memorandum of understanding on setting up a cooperation commission office between the federations of chambers of commerce and industry. To develop connectivity between Bangladesh and Myanmar, an agreement was signed to construct a road from Gundum, Bangladesh, to Bawalibazar, Myanmar (25 kilometers [km]); a project on construction of link road from Bangladesh to Myanmar (135 km) is under progress. Bangladesh has also expressed willingness to import energy from Myanmar.

3.4 Government Actions to Implement Policies related to Connectivity

3.4.1 Status of Implementation of Different Projects

Bangladesh's Road Sector Master Plan, developed in 2009, identified 23 projects including key roads, bridges, and ports, most of those linking with regional connectivity projects such as AH1, AH2, SHC4 SASEC4, SASEC9, SASEC9, SASEC5A, and BCIM (Table 3). Major corridors are the Dhaka–Chittagong Four Lane, Dhaka–Mymensingh Four Lane, Dhaka–Tangail Four Lane, Jessore–Benapole Four Lane, Second Meghna Bridge, Second Meghna Gumati Bridge, Padma Bridge, and a deep-sea port.

In connection with the plan and agreement signed between Bangladesh and South Asian and Southeast Asian countries, some projects are being implemented and others are still under negotiation. Bangladesh signed an agreement with UNESCAP in November 2009 on the connectivity with the Asian Highway through three road links: i) Benapole–Jessore–Bhanga–Dhaka–Kachpur–Sylhet–Tamabil (AH1); ii) Banglabanda–Hatikamrul–Tangail–Dhaka–Kachpur–Sylhet–Tamabil (AH2); and iii) Mongla–Khulna–Jessore–Paksi–Hatikamrul–Dhaka–Kachpur–Comilla–Chittagong–Coxsazar–Teknaf (AH41). AH1 and AH2 are international routes and AH41 is a subregional route. The total road length is 2,052 km. As part of this network, new roads will need to be built including the Benapole–Jessore–Bhatiapara (98 km) and Bogra–Natore (62.8 km) roads.

¹⁰ According to the protocol, designated entry and exit points were mentioned for traffic in transit. The protocol also clarified import and export procedures for traffic in transit.

Table 3: Corridors Selected for Further Improvement

SI No.	Route	Length (km)	Interventions	Routes Corresponding to Interventions
1	Joydevpur–Chandra–Tangail–Elenga–Hatikamrul road section in N4 and N405	110	Joydevpur–Elenga section (70 km) is being upgraded to four-lane highway; FS is done and DD is being prepared for Elenga–Hatikamrul section (40 km)	AH2, SHC4 SASEC4, SASEC9
2	Dhaka–Mawa–Bhanga road section in N8	60	FS is done, DD is being prepared	AH1
3	Upgrading Hatikamrul–Rangpur national highway into four-lane highways	157	FS and DD are being prepared	AH2, SHC4, SHC8, SASEC4, SASEC9
4	Upgrading Khulna–Mongla road to four lanes	48	DD is being prepared	AH41, SHC4, SHC8, SASEC4, SASEC9, SASEC5A
5	Upgrading Rangpur–Teesta–Burimari Road to four-lane highway	138	DD is being prepared	AH2, SHC8, SASEC4
6	Upgrading Sonamasjid–Rajshahi–Hatikamrul road to four lanes	205	FS and DD are being prepared	SHC9, AH41, SASEC4, SASEC9
7	Chittagong–Cox’s Bazar–Teknaf	225	FS and DD are being prepared	AH41
8	Four-laning of Douladia–Magura–Jhinaidhah–Jessore Khulna national highway	222	FS is being prepared	AH41, SHC4, SHC8, SASEC4, SASEC9, BCIM
9	Upgrading Dharkar–Akhaura–Senarbadi road to a four-lane highway	13	FS and DD are being prepared	SHC1, SHC6
10	Upgrading Comilla–Brahmonbaria highway to a four-lane highway	85	FS and DD are being prepared	SHC6
11	Four-laning of Dhaka (Katchpur)–Bhairab–Jagadishpur–Shaistaganj–Sylhet–Tamabil Road (N-2)	286	FS and DD are being prepared	AH1, SHC1, BCIM
12	Upgrading Dhaka–Chittagong highway (from Daudkandi to Chittagong)	192	Project is being implemented	AH41, SCH4, SHC8, SASEC4, SASEC9

DD = detailed design; FS = feasibility study; km = kilometer.

Source: Compiled by authors.

Other projects that are being considered for implementation include the construction of missing links in the Asian Highway and bridges over some of the prominent rivers, upgrading national highways to four lanes, implementation of internationally designated signaling systems and safety measures along the Asian Highway routes, and development of a database on road security for the Asian Highway. The government is also mobilizing foreign assistance for building other projects related to the Asian Highway, including the construction of Padma Bridge along the AH1 route and the construction of the Second Meghna and Meghna–Gumti Bridge along the AH41 route.

As part of the India–Bangladesh connectivity agreement, five road related projects are being implemented (Table 4). These projects include the purchase of 300 double-decker and 50 articulated buses for the Bangladesh Road Transport Corporation, development of the road that connects the land port (Sarail–Brahmanbaria–Akhaura–Senarbadi road), construction of an overpass at the Jurain rail crossing, a flyover at the Malibagh rail crossing, and construction of Ramgarh–Sabroom (Tripura southern border). Most of the projects are yet to be implemented.

Table 4: Status of Implementation of Connectivity Projects

Project Name	Project Cost (Tk million)	Implementation Period	Source of Finance	Cumulative Expenditure up to Dec 2012 (Tk million)	Status of Implementation (% of total project cost)
Procurement of double-decker and single-decker buses for BRTC	3,033.4 (\$39.01 million)	1 Dec 2010– 30 Jun 2013	US dollar credit line (from India)	2,224.7	73.3
Construction of an internal container river port at Ashuganj	2,457.5 (\$31.61 million)	1 Jan 2011– 30 Jun 2013	India	0.2	0.01

BRTC = Bangladesh Road Transport Corporation.

Note: \$1 = Tk78

Source: Ministry of Planning (2013).

The road projects linking Bangladesh with Southeast Asian countries are yet to take off. As part of the construction of a 25 km road link between Gundum of Bangladesh and Baowalibazar in Myanmar, Bangladesh has signed an agreement with Myanmar. Implementation of this road link is to facilitate the road network to Kunming, PRC. However, another 135 km road project for construction of the Baowalibazar–Kyauktaw segment needs to be implemented in two phases to make the needed connection (25 km long Ramu–Baowalibazar road and 110 km long Baowalibazar–Kyauktaw road). The Government of Bangladesh has allocated \$650,000 to undertake a study for this project that was supposed to be implemented in 2011. However, no money was spent during the project timeline.

Bangladesh and Nepal have agreed to finalize a deal on operational modalities for goods-carrying vehicles as part of providing a transit facility to Chittagong and Mongla ports by the end of 2013. Both countries have agreed to begin a Dhaka–Kathmandu–Dhaka bus service. Quick implementation of the full-fledged operation of the Kakarbhitta–Panitanki–Phulbari–Banglabandh corridor to allow Nepalese trucks to travel to the Banglabandh port is needed to put the transit facility into operation.

3.4.2 Status of Implementation of Projects Related to Development of the Rail Sector

The National Land Transport Policy articulates the plan for the development of the rail sector; the development of international rail networks and services is encouraged in the policy. In this context, the government encourages investment in additional and extended international rail infrastructure where there are clear economic benefits for Bangladesh. The government has taken a long-term plan for investment worth \$15 billion by 2030; a large share of the required financial resources is to be underwritten by development partners.

At present, 44 projects are planned for implementation, with support coming mainly from India, the Japan International Cooperation Agency, and ADB. The plan will be implemented in three phases. The phases include the construction of new tracks, improvement of the signaling system, procurement of locomotives and coaches, and expansion of domestic and international rail networks. Linking Cox's Bazar with the proposed deep-sea port at Sonadia is to be included in the third phase. ADB is financing some of these projects.

Although a number of projects were included in the annual development program related to the development of the rail sector, implementation of those up to December 2012 has not been satisfactory (Table 5). Indeed, many of the projects may not get the needed funds unless the implementation period is extended.

Table 5: Ongoing Approved Projects under Revised Annual Development Program, FY2012–2013

Project Name	Project Cost (Tk million)	Implementation Period	Source of Finance	Implementation as of December 2012 (%)
Bangladesh Railway Sector Improvement Project	22,880.1 (\$294.3 million)	1 Jul 2006– 30 Jun 2014	ADB	
a. Double lane from Tongi–Bhoirob Bazar with signaling	626.6 (\$8.06 million)	1 Jul 2006– 30 Dec 2014	ADB	33.2
b. Reform of Bangladesh Railway	2,512.5 (\$32.32 million)	1 Jul 2006– 30 Jun 2014	ADB	19.2
Railway sector improvement under second periodic financing request of ADB (included in annual development program for FY2015)	4,657.9 (\$59.91 million)	1 Jul 2012– 30 Jun 2015	ADB	7.0

ADB = Asian Development Bank.
Source: Ministry of Planning (2013).

Under the India–Bangladesh agreement, a number of projects related to the rail network and development of the rail sector are currently being implemented, however progress is not satisfactory (Table 6). Since the timelines have expired for a number of projects, funds will not be available if these are not revised. On the other hand, the Indian Railway Construction Company (IRCON) and Northeast Frontier Railway (NFR) have jointly started fixing of alignment works of the Agartala–Akhaura rail link.

As part of the rail link with Nepal, Bangladesh will provide an additional rail corridor to Nepal through the Rohanpur–Singhabad broad-gauge line to boost bilateral trade and transit. However, an agreement between Nepal and India is necessary to avail of this facility, which India has indicated that it is ready to offer.

Table 6: Status of Implementation of Rail Sector Projects

Project	Project Cost (Tk million)	Implementation Period	Source of Finance	Cumulative Expenditure (up to Dec 2012)	Status of Implementation (% of total project cost)
Procurement of 125 broad gauge passenger coaches	3,532.5 (\$45.43 million)	1 Aug 2010– 30 Jun 2013	India	0.2	0.01
Procurement of 10 broad gauge diesel locomotive engines	2,086.1 (\$26.83 million)	1 Aug 2010– 30 Jun 2013	India	852.2	40.85
Procurement of 50 flat wagons for container traffic and 5 MG break vans	313.8 (\$4.03 million)	1 Aug 2010– 31 Dec 2013	India	1.6	0.51
Construction of 2 railway bridges: second Bhairab bridge and second Titas bridge	9,592 (\$123.37 million)	1 Nov 2010– 30 Jun 2014	India	89.3	0.93
Procurement of 180 BG oil tank wagon and 6 BG break van	1,954 (\$25.13 million)	1 Aug 2010– 31 Dec 2013	India	752	38.49
Procurement of 150 MG passenger car	5,563.1 (\$71.55 million)	1 Dec 2010– 30 Jun 2012	India	0.3	0.01
Construction of rail line from Khulna to Mongla including feasibility study	17,243.7 (\$221.78 million)	1 Dec 2010– 31 Dec 2013	India	423	2.45
Procurement of 170 MG BFCT and 11 MG break van for Bangladesh Railway	966.1 (\$12.43 million)	1 Dec 2010– 31 Dec 2013	India	0.3	0.03
Procurement of 264 MG coach and 2 BG inspection car for Bangladesh Railway	9,832.5 (\$126.46 million)	1 Dec 2010– 31 Dec 2012	India	0.3	0.00
Procurement of 30 BG electric locomotive	6,078 (\$78.17 million)		India	1,243.8	20.46
BG diesel electric multiple unit for Bangladesh Railway	3,313.2 (\$42.61 million)	1 Dec 2010– 30 Jun 2015	India	0.1	0.00
For transporting fuel for airplanes procurement of 100 MG tank wagon and 5 MG break van including air break	770.8 (\$9.91 million)	1 Dec 2010– 30 Jun 2013	India	0.5	0.06

BFCT = bogie flat container wagon; BG = broad gauge; MG = meter gauge.
Source: Ministry of Planning (2013).

3.4.3 Status of Implementation of Projects related to Land and Sea Ports

Although an internal container river port is to be developed at Ashuganj by 2013, only a small part of the fund was allocated till March 2014 (Table 7). There is a need to set a revised timeline for implementation and allocation of funds for this project. The feasibility study for establishing a deep-sea port at Sonadia has been carried out. The PRC, Japan, India, United Arab Emirates, the Republic of Korea, Denmark, Germany, and the Netherlands have expressed interest in investing in the port.¹¹ However, the government has not yet decided on any option to implement this mega project. This issue was discussed during the Prime Minister of Bangladesh's visit to Japan and the PRC in May–June 2014.

¹¹ For details, see Islam (2014).

Table 7: Status of Ashuganj Port Project

Project Name	Project Cost (Tk million)	Implementation Period	Source of Finance	Cumulative Expenditure up to March 2014 (Tk million)	Status of Implementation (% of total project cost)
Construction of an internal container river port at Ashuganj	2,457.5 (\$31.6 million)	1 Jan 2011–30 Jun 2013	India	0.4	0.16

Source: Ministry of Planning (2013).

4. STATE OF CROSS-BORDER RELATED PHYSICAL TRANSPORT INFRASTRUCTURE

4.1 Bangladesh's Position regarding Transit with Regional Countries

Cross-border transit is a component of the broader issue of connectivity. The discourse regarding transit has gained momentum particularly in the context of Bangladesh–India relations. The major issue relates to movement of goods from west to northeast India through Bangladesh territory.¹² On the other hand, Bangladesh is interested in having access to Nepal and Bhutan through India. Indeed, Nepal and Bhutan also have interest in accessing Bangladeshi ports for trade with third countries by taking advantage of road and rail transit through India. Transit could be in the form of roads, waterways, and railways or combinations of these. India allows Nepal and Bhutan transit facilities through its territories for trade purposes. This allows these countries to trade with Bangladesh through rail and road connections and also export and import goods through Bangladesh to third countries.

Following the signing of the joint communiqué in 2010, Bangladesh–India connectivity talks have made progress but have stalled because of several reasons.¹³ An issue that needs addressing relates to service charges and user fees of transit facilities (including customs service charges, foreign vehicle entry fees, charges for land acquisition, load damage, road agency administration, institutional, security, congestion, emission, and noise). Bangladesh has identified some feasible transit routes, primarily based on distance, travel time, and financial cost advantage. It is found that water and rail transport have a cost advantage for bulk goods movement, whereas road transport is better for high-value goods. In this context, routes that could be put into operation in the shortest possible time have also been identified.

There is agreement that if well crafted, and based on benefit sharing, transit could be win–win for both the partner countries. The countries need to reach a consensus regarding service charges and user fees for transit facilities that will cover the costs to be incurred over the years for using the infrastructure. However, developing the routes will entail significant investment particularly because Bangladesh's current transport system is not ready for the additional traffic that will be generated from any possible transit agreement with India. Bangladesh should prepare a comprehensive action plan to develop transit-related infrastructure with resources needed for improving the existing infrastructure and for undertaking regular maintenance.

¹² For North East India's trade with Bangladesh, see Dhar et al. (2011).

¹³ Most notably on account of lack of an agreement on water sharing of some of the common rivers.

4.2 Condition of Cross-border Roads

Road transport is the predominant mode of transport in Bangladesh accounting for 80% of total traffic moved.¹⁴ Bangladesh's road quality does not correspond to the Asian Highway standards. The roads are classified as "primary," "class I," "class II," "class III," and "below class III." Standard primary roads in Bangladesh are limited in length unlike in India and to some extent in Myanmar (Table 8). However, the condition of Bangladesh's roads has improved. Between 2004 and 2012, about 75% of total roads that were classified as class III and below came down to only 6.5%. During the comparable period, roads classified as class II increased from 24% to 89%. India recorded better progress during the same period—road classified as class I increased from 4% to 34.5% (ESCAP 2012). Most of Bangladesh's road network is not suitable for handling modern diversified vehicles (World Bank 2013a). This gap is acutely felt in accommodating containers on Dhaka–Chittagong roads, thus constraining trading activities (ADB 2008). Severe congestion is a prominent and permanent feature of highways from Dhaka to other districts. In cases of cross-border road connectivity, a harmonizing standards signaling system and protocols need to be ensured through the signing of a motor vehicle agreement with India.¹⁵

¹⁴ The share of inland waterways was 16%, and railways 4%.

¹⁵ A draft Motor Vehicle Agreement sent by India is being discussed in Bangladesh. Some officials in Bangladesh feel that such an agreement should cover Bhutan and Nepal as well.

Table 8: Condition of Roads, 2004–2010

Country	Primary (km)			Class I (km)			Class II (km)			Class III (km)			Below Class III (km)			Total (km)		
	2004	2008	2010	2004	2008	2010	2004	2008	2010	2004	2008	2010	2004	2008	2010	2004	2008	2010
Myanmar	0	0	0	147	173	147	144	35	0	983	1,585	1,798	1,729	1,216	1,064	3,003	3,009	3009
Bangladesh	0	0	0	20	92	68	441	1,648	1,574	476	0	32	868	25	83	1,805	1,765	1762
India	0	90	90	484	4,069	4,069	0	1,675	1,675	10,869	5,699	5,699	105	117	117	11,458	11,810	11810
Share (%)																		
Myanmar	0	0	0	4.9	5.7	4.89	4.8	1.2	0	32.7	52.7	59.75	57.6	40.4	35.36	100	100	100
Bangladesh	0	0	0	1.1	5.2	3.86	24.4	93.4	89.33	26.4	0	1.82	48.1	1.4	4.71	100	100	100
India	0	0.8	0.76	4.2	34.5	34.45	0	14.2	14.18	94.9	48.3	48.26	0.9	1	0.99	100	100	100

km = kilometer.

Source: ESCAP (2012).

Of 83 km of road under below class III standard, 36% is under Asian Highway 1 and 63% under Asian Highway 2, both parts of class III or below rank (ADB and ADBI 2013). In view of the low standard of the various sections of roads in Bangladesh, some projects have been identified for development on a priority basis. These projects include Daukandi–Chittagong (upgrading to four lanes) (AH41, 246 km), Chittagong–Cox’s Bazar–Ramu–Gundam (AH41, 186 km), Beldanga–Panchagarh (AH2, 77 km), Dasuria–Paksi–Kustia (AH4, 138 km), and Jhenidah–Jessore (AH41, 45 km). Work on these is ongoing, but with significant delays.

4.2.1 Major Weaknesses in Cross-border Roads

The condition of cross-border roads with regional countries, particularly with India and Myanmar, is below the needed standard and undermines the interests of bilateral and regional trade and investment. Most corridors out of the seven corridors that have been identified face two kinds of constraints and weaknesses—generic and specific. Two generic impediments for cross-border movement of goods between India and Bangladesh are: i) lack of agreement on cross-border movement of goods causes transshipment of goods at the border points causing loss of time and high costs; and ii) roads in Bangladesh are not suitable to take loads over 8.2 axle weight. Other impediments of cross-border movement include limited working hours and no work during weekends leading to delays, limited numbers of clearances given to vehicles, absence of permanent immigration and customs officers at many crossing points, and lack of adequate communication facilities.

4.3 Railway Transport

Bangladesh has a total railway line network of 2,835 km with 710 million tons (per km) of goods transported each year (World Bank 2013a). The railway sector has potential for regional connectivity provided that gauge, track structure, and signal constraints are addressed. The broad gauge rail corridors between Bangladesh and India are not active (Rahmatullah 2006; 2009). The Bangladesh railway sector faces other challenges including non-utilization of available capacity on the Indian side due to trade in one side, and restriction on movement of commodity-specific rolling stock including open freight wagons, oil tanks, and containers.

4.4 Inland Waterways

The Bangladesh–India water protocol, in place since the 1970s, has been extended up to 2015 through the Inland Water Transit and Trade Treaty. Inland waterway connectivity between India and Bangladesh faces challenges. The lack of an adequate number of ports of call in Bangladesh impedes the movement of goods between the two countries. Other constraints in Bangladesh are old vessels, poor navigational aids, outdated jetties, and the lack of dredging and siltation. The lack of appropriate equipment and skilled manpower also undermines the interest of trading through waterways.

4.5 Maritime Transport

The principal maritime port of Bangladesh is Chittagong, handling about 95% of the country’s sea borne exports. The port’s facilities are inadequate to meet the challenges of lower turnaround times and cost effectiveness. The width, curvature, and draft of the Karnaphuli River limit the size of vehicles that can enter the port. Constraints also

prevail in terms of institutional efficiency and operations (ADB and ADBI 2013). Furthermore, there are bottlenecks in the road and rail traffic from the port to the capital city, Dhaka. Mongla is Bangladesh's second port and is riverine. The port lacks the required container handling equipment. Connectivity of this port from other parts of the country is weak. The lack of economic activity, industrial development, and the absence of a wider hinterland (that is, cargo from Nepal and Bhutan) have undermined the potential opportunities of developing this port as a major maritime hub.

4.6 Air Transport

Air connectivity between Bangladesh and South and Southeast Asia remains underdeveloped. Poor infrastructure (such as runways, navigational facilities, ground services, and modern amenities), the lack of skilled manpower, and poor management have undermined the prospects of the airports emerging as major hubs that are capable of linking South Asia and Southeast Asia. During emergencies, exporters have to send products on air cargo flights. However, inefficiencies lead to escalating costs. Significant investment is needed to develop Bangladesh as a regional air hub.

5. CROSS-BORDER ENERGY TRADING

Bangladesh's energy demand is increasing with the rising need for domestic and production-related use of energy. The lack of energy has also emerged as a major obstacle to the development of supply-side capacities. Keeping this in mind, the government has come up with a vision to enhance energy availability and meet energy demand by 2021.¹⁶ In 2010, the government formulated a power sector master plan with the objectives of attaining economic growth, energy security, and environmental protection.

5.1 Power and Energy Situation in Bangladesh

Electricity generation capacity increased from 4,900 MW in 2009 to 8,525 MW in 2012, a rise of about 73% (Table 9). While per capita energy availability has increased, one-third of households remain without electricity. Even by regional standards, this indicates that Bangladesh is lagging. According to the power sector master plan, Bangladesh will require about 34,000 MW by 2030.¹⁷

¹⁶For details, see <http://www.boi.gov.bd/index.php/about-bangladesh1/government-and-policies/government-vision-2021>

¹⁷ For details, see <http://www.powerdivision.gov.bd/user/brec/40/55>

Table 9: Electricity Production in Bangladesh

Indicators	As of 6 January 2009	As of 31 December 2012
Production capacity (MW)	4,942	8,525
Maximum production MW)	3,268	6,350 (until 4 August 2012)
Transmission line (circuit km)	8,305	8,949
Distribution line (km)	256,143	281,123
System loss	16%	12%
Annual per capita production (KW/hour)	183	292 (including captive generation)
Percentage of population with electricity access	43	60 (including renewable energy)

km = kilometer, KW = kilowatt, MW = megawatt.

Source: Bangladesh Power Development Board website <http://www.bpdb.gov.bd/bpdb/> (accessed 28 September 2013).

Bangladesh's primary energy sector is facing challenges despite positive developments. Production capacity of gas is about 2,266 million cubic feet (mcf) per day provided by 89 wells using 90% of total capacity (Table 10). Daily gas production has increased from 1,750 mcf in 2009 to 2260 mcf in 2012. Progress has been made regarding the number of explored gas fields, new exploration structure, the number of exploitation wells, and the number of work over wells. However, additional gas is not sufficient to meet the growing demand for energy for industrial and other economic activities.

Table 10: Generation and Distribution of Gas Supply, 2009 and 2012

Description	2009	2012
Daily average gas production (mcf)	1,750	2,260
Explored gas fields	1	2
Exploration of new structure	4	7
No. of exploration wells	2	7
No. of development wells	6	16
No. of work over wells	1	15
Coal production (tons)	245,000	2,981,000

mcf = million cubic feet.

Source: Petrobangla website. <http://www.petrobangla.org.bd/> (accessed October 2013).

5.2 Import of Energy

Import of fuel has been on the rise due to higher energy demand.¹⁸ India is a major source of coal (on average 3–4 million tons) and diesel. Regrettably, no progress has been made on importing gas from Myanmar through the proposed tripartite gas line (with India's participation). In view of the importance of exploring external sources for meeting domestic energy demands, *National Energy Policy 2004* has kept the provision of examining possible cross-border energy trade among neighboring countries. It is likely that the current agreement to import 250 MW (to be increased to 500 MW) of electricity will see a further upscaling.

¹⁸ Import bills for fuel account for about 15% of total import costs.

5.3 Potential for Investment Cooperation in Regional Energy Projects and Bilateral Agreements for Energy Cooperation

Regarding the diverse energy potentials of SAARC countries, the proposed “energy ring” talks of exploiting opportunities of developing energy resources jointly with coordinated cross-border exchange procedures (USAID 2006; SAARC Secretariat 2010; Siddqui 2008; Singh 2009).¹⁹ India has large coal reserves, Bhutan and Nepal have potential hydropower, Myanmar has large gas reserves, and Bangladesh has a significant volume of high quality coal that remains unexploited. ADB has indicated support for the development of joint projects (for example, in Bhutan) through partnerships of SAARC countries. SAARC countries could also learn from international good practices such as from the ASEAN Power Grid.

A number of regional power sector connectivity projects are currently at different phases of study and implementation (Obaidullah 2010; Raza 2012). The projects include the Bangladesh–India electrical grid interconnection under which technical assistance as well as loan and additional financing have been provided to Bangladesh. Power connectivity between the two countries was established in September 2013 with an agreement to purchase 500 MW of electricity. As part of this, Bangladesh is currently receiving 350–400 MW of electricity (Table 11). A common gridline was developed to interconnect Bheramara, Bangladesh, and Bahrampur, India. Initial work for the construction of the 1,000 MW coal-fired power plant in Rampal has started.²⁰ ADB has extended its support to other domestic power sector development projects including expansion and efficiency improvement programs and the Bibiyana gas-based power sector development projects.

The infrastructure at the border points could be used to import electricity from Bhutan and Nepal. At present, a tripartite joint working group between Bangladesh, India, and Bhutan is working on the feasibility of Bangladesh’s investment in hydroelectric projects in Bhutan with re-export opportunities to Bangladesh using the existing power grid. Bangladesh is also exploring investment opportunities in neighboring Myanmar’s power sector. A coal-based power plant with a capacity of 1,320 MW is to be set up at Rampal. This is a joint-venture initiative with participation of the Indian public sector company (NTPC) and the Bangladesh Power Development Board.

¹⁹ The heads of states endorsed the concept of the SAARC energy ring at the 12th SAARC Summit held in Islamabad in 2004.

²⁰ There are ongoing protests against the implementation of this project on the grounds that it would do irreparable damage to the flora and fauna of the Sundarbans, the world’s largest mangrove forests.

Table 11: Major Bilateral Agreements Undertaken with Other South Asian Countries

Countries	Areas of Cooperation	Volume of Energy
India–Bhutan (power)	India has agreed to import a minimum of 10,000 MW by 2020. This will require increased transmission capacity.	5,620 GWh
India–Nepal (power)	Annual import from India	100–150 MW
India–Bangladesh (diesel)	Import from India	100,000 tons (2008)
India–Nepal and India–Bhutan (petroleum products)	With no refining capacity in Nepal and Bhutan, the two countries import from India	1.2 million tons imported by Nepal (20% annual increase); 63,875 million tons imported by Bhutan
India–Bangladesh (coal)	Coal import from India	3–4 million tons
Myanmar–India–Bangladesh gas pipeline project (proposed)	900km (\$1 billion) pipeline from the Swe field off the Bay of Bengal through Rakhine State in southern Myanmar, from where it would turn east to enter the Indian state of Tripura. The pipeline would then enter Bangladesh at Brahmanbaria and traverse the country till it exited at Jessore and terminated at the Indian state of West Bengal.	5 billion cubic meters of gas
Bangladesh–India (MOU)	Exchange of power through grid connectivity between the two countries (interconnection between Bheramara in Bangladesh and Baharampur in India) Joint venture investment in power generation Capacity development of Bangladesh Power Development Board	Scope of the project included a 400 KV, 30 km double circuit line from Bheramara to Baharampur and the establishment of a 500 MW 400/230 KV back-to-back high voltage direct current substation at Bheramara
Bangladesh–Myanmar	Negotiation for power trading under process that includes hydropower trade by 2017 from Myanmar.	500 MW
Bangladesh–India	Establishment of coal-based power plant at Rampal	1,320 MW

GWh = gigawatt-hour; km = kilometer; KV =kilovolt; kilowatt; MOU = memorandum of understanding; MW = megawatt.

Source: Gippner (2010).

6. STATE OF TRANSPORT ADMINISTRATION AND TRADE FACILITATION

6.1 Management and Administration of Transport Sector related to Regional Connectivity

Cross-border connectivity concerns mainly roads and highways. Land ports are very important for cross-border connectivity, particularly for Bangladesh's trade with India, and to some extent, Myanmar. There are about 24 land ports in the country. Some of the land ports are operated and controlled by a single authority, the Land Port Authority. Others are operated by private agencies under the build–operate–transfer

(BOT) system; the government is planning to privatize three more land ports under the BOT arrangement for 25 years to boost cross-border trade this year.²¹ Bangladesh is planning to set up four new land ports in northern, eastern, and western border areas to speed up cross-border trade with India.²² The Land Port Authority has undertaken the SASEC Road Connectivity Project: Improvement of Benapole and Burimari Land Ports to help expand cross-border business with Bhutan and Nepal. The port authority has taken measures to upgrade the loading and unloading facilities, customs, labs, warehouses and some infrastructural facilities to facilitate cross-border movement of goods.

The Roads and Highways Division administers domestic as well as cross-border connectivity projects. Similarly, the Ministry of Railways has undertaken activities related to connectivity through rail transport and deals with the management and procurement of rolling stock, managing workshops, and signaling and interlocking, among others. The Chittagong and Mongla port authorities deal with port management and management of container terminals (New Mooring terminal under the Chittagong Port Authority [CPA]).

6.2 State of Customs and Trade Facilitation in Bangladesh

The World Bank's Logistic Performance Index ranks countries in terms of logistical performance in international trade. In 2014, Bangladesh was ranked 108 out of 160 countries, which shows weakening performance compared to that in 2010 when its rank was 79 out of 155 countries. Bangladesh's performance is good in timeliness, while poor in customs, infrastructure, and tracking and tracing. India is ahead of Bangladesh in infrastructure ranking, logistics, international shipments, and other performance in most indicators (World Bank 2014). Myanmar on the other hand, is behind in most of the indicators. Bangladesh will need to improve significantly its logistical performance. However, there is a need for improvement on the other side of the border as well if cross-border trade is to be facilitated. This is true particularly for Myanmar where trade logistics are relatively underdeveloped as revealed by logistics competence indicators. However, regarding trade with India, significant improvements will be needed as was articulated by a recent study by Rahman and Akhter (2014).

6.2.1 Customs and Logistics at the Border Points between Bangladesh, India, Nepal, and Bhutan

In South Asia, the procedures to be followed for export and import with neighboring countries vary widely for individual countries and individual activities (De 2013). Most operations involving cross-border trade in South Asia are still carried out through manual processes with about 80% of the documents handled manually. The business process for exporting from Bangladesh is more cumbersome compared to that of imports involving both public and private sector parties. The number of documents required for export and import with Nepal and Bhutan to Bangladesh ranges from 22 to 36, and the number of required copies of these documents is also high at 44–115 copies. Significant improvement is thus required toward more export–import friendly processes concerning border crossing points in Nepal and Bhutan.²³

²¹ Bhomra in Satkhira, Akhaura in Brahmanbaria and Burimari in Lalmonirhat.

²² The land ports are proposed to be set up at Jibannagar in Kushtia, Mujibnagar in Meherpur, Chilahati in Nilphamari, and Teghamuk in Chittagong Hill tracts.

²³ The time required for import of raw materials for the ready-made garments sector from India, particularly cotton fabrics, was on average 10 days; average cost for a 20-foot container was about \$415. On the

In October 2013, Bangladesh and India signed an agreement on greater trade facilitation including allowing trucks to unload goods up to the land customs stations of the importing countries, synchronizing office hours and days at customs offices, exchanging export–import related information, discouraging the misdeclaration of traded goods, and allowing freer movement of customs officials between land customs stations. The two countries have also agreed to develop related infrastructure at customs points and strengthen certification-related capacities.²⁴

Strengthening of human resources and technical capacities toward a well-endowed customs management system remains a major and continuing challenge for Bangladesh. Since 2008, some measures have been adopted to simplify business processes relating to export and import, for example, increasing computer literacy of customs officials, computerization of various processes, reducing the number of signatures needed for clearance of consignments, and frequency of inspection of the goods being traded. The automation of customs processes should be extended to all land ports and ports of call in inland waterways. There is a need to set up a national trade facilitation task force in order to form initiatives to reduce hassles related to documentation requirements and onerous export–import processes, open land customs stations, facilitate shipment insurance, and promote e-communication for obtaining permission and certification (Hossain and Rahman 2011). Taking into account cross-border trade with SASEC countries, the synchronization of cross-border customs should get priority and a national single window for trade could also be introduced. Regulatory barriers that impede trade across borders should be removed. Coordination activities of customs authorities on both sides of land borders should be given priority.

6.2.2 Implication of the WTO Agreement on Trade Facilitation

One of the major outcomes of the Bali Ministerial Conference (3–7 December 2013) of the World Trade Organization (WTO) is the Agreement on Trade Facilitation. While there is a consensus that the gains from improved trade facilitation will be significant, there is also a concern that developing countries such as Bangladesh will need to invest heavily if they are to comply with the provisions of the agreement. Developing countries will have to comply with some of the provisions on an immediate basis; with respect to others this is subject to the availability of the needed support, both financial and technical. Thus, putting in place measures to improve trade facilitation will become increasingly mandatory for developing countries. Keeping in view the potential benefits as well as WTO commitment, developing countries such as Bangladesh will need to give heightened priority to initiatives to strengthen their trade facilitation.

7. FINANCING THE CONNECTIVITY-RELATED PROJECTS

Building the needed physical infrastructure for efficient movement of goods across the South and Southeast Asian regions requires significant financial resources. A national plan for the transport sector provides an estimate for the required resources for building roads and railways related to cross-border connectivity. The resources are to be sourced from domestic resources, foreign finance, or through public–private

other hand, time required for export of final products to India through land and seaports increased fourfold, and costs more than doubled. The average export time was 38 days and 40 days respectively.

²⁴ These were agreed at the 9th Joint Group of Customs Meeting between Bangladesh and India on 21–22 October 2013 in Dhaka. The decisions concerned 16 land customs stations bordering the two countries.

partnerships (PPP). The Indian \$1 billion line of credit is supporting a number of projects to facilitate India–Bangladesh bilateral trade. On the other hand, ADB, has allocated funds for a number of cross-border road, rail, and energy sector projects. This section focuses on projects envisaged under major transport connectivity plans and their financing commitments.

7.1 Financial Requirements as per the Road Master Plan

The Road Sector Master Plan prepared by the Roads and Highways Department identified 46 major projects to be developed by 2030 (Table 12). These include a number of cross-border regional connectivity and related projects, such as the Asian Highway, Padma Bridge, the Dhaka–Chittagong four-lane road, and the Dhaka–Tangail road. The cost of those projects is estimated to be about \$5,363 million. However, actual expenditure will likely go up in view of the delay in implementing the planned projects.

Table 12: Major Projects in the Road Sector Master Plan related to Regional Connectivity

Projects	Required Funds (\$ million)	Suitability for Development Partner's Support or for Private Funding
Axle Load Control	41.3	World Bank proposed
Jessore–Benpole N8	42.5	Not yet decided
Meghna–Gumti Bridge N1	83.9	Private
Deep-sea Port	51.6	Private
Mehgna–Daudkandi Bridge	96.8	Private
Dhaka–Chittagong Highway	24.0	Private
Dhaka–Tangail	89.0	Private
Landport Connections	49.4	Not yet decided
Asian Highway	69.2	Not yet decided
Padma Bridge	3,096.8	Not yet decided

Source: Roads and Highways Department (2009).

ADB is financing a number of projects under the SASEC project including those being implemented by the Roads and Highways Division. ADB has approved an allocation of \$198 million for building roads under various connectivity projects.²⁵

In the railway sector, ADB has financed projects worth around \$350 million. These projects are at various stages of implementation. Projects are also being implemented under the India–Bangladesh joint communiqué, and are being financed from the \$1 billion suppliers' credit provided by India.

7.2 Public–Private Partnership Financing

Besides their role in promoting construction and operation of projects, public–private partnerships could become a potentially promising alternative source for financing connectivity projects. The Government of Bangladesh has been trying to attract private sector investment in various transport facilitation projects.²⁶ Under the prime minister's

²⁵ For details, see <http://www.adb.org/projects/40540-014/main>

²⁶ The *National Land Transport Policy 2004* indicates the interest of the government in promoting private sector participation in the transport sector. This is reflected in the *Private Sector Infrastructure Guidelines 2004*.

office, a national Private Sector Infrastructure Committee was constituted in 2005 to implement *Private Sector Infrastructure Guidelines 2004*. The Road Sector Master Plan also mentions that a number of projects should be of interest to the private sector. These included a deep-sea port, Meghna–Gumti Bridge, Meghna–Daudkandi Bridge, Dhaka–Chittagong Highway, and Dhaka–Tangail Highway.

The Dhaka–Chittagong Expressway is a project earmarked to be implemented through PPP. In October 2008, the feasibility study underwritten by ADB was finalized. The estimated cost of the project was about \$1.47 billion, to be built through PPP on a BOT basis with a concession period of 28 years. Another example of PPP in the transport sector is the Gulistan–Jatrabari flyover that opened in October 2013. The cost will be recovered through toll collection. A number of such projects have been proposed in Bangladesh, however the result has not been promising.

7.3 Issuing Bonds for Infrastructure Development

The bond market in Bangladesh is yet to take off; government treasury bonds are the common form of bonds issued. Despite the potential, the bond market is yet to develop because of weaknesses including the lack of a market-determined interest rate, availability of pension and insurance funds for buying bonds, high yielding government instruments that hinder competition, and poor marketing.²⁷ Since most of the infrastructure-related projects are financially worthy in terms of return and yields, the government may take initiative to issue bonds to raise the required capital, both in Bangladesh and the international market.

8. POLICY IMPLICATIONS

There is a growing realization that countries such as Bangladesh could miss the “Asian Century” if they are not able to fully take advantage of the regional markets. Greater connectivity and better trade facilitation are the key steps to moving toward this. This realization is being increasingly reflected in development plans such as the Five Year Plan and the Ten Year Perspective Plan of Bangladesh, even at the local policy and political levels. However, along with the plans, which are necessary but not sufficient, timely implementation is the crucial phase that will enable the accomplishment of these objectives. It is this task where countries such as Bangladesh suffer from challenges. Mobilizing the huge financial resources for the mega-projects and their management are some of the major challenges. Even implementing the relatively easier tasks such as cross-border customs, cooperation, and coordination take an inordinately long time.

As the analyses have indicated, focus should be on five key areas: (i) mobilizing the needed funds; (ii) identifying and sequencing the priorities; (iii) cross-border coordination; (iv) building human resources to manage cross-border mega projects; and (v) building supply-side capacities to benefit from regional market opportunities and, based on closer regional integration in South and Southeast Asia, to take advantage of strengthened global integration.

This study has identified “at the border” and “behind the border” constraints that undermine Bangladesh’s prospects to realize the benefits of closer cooperation with South and Southeast Asia. The study has also reviewed the state of some of the initiatives being taken to address those. The paper highlights the important role that

²⁷ For details, see <http://www.assignmentpoint.com/business/finance/development-of-brand-market-in-bangladesh.html>

ADB is playing in this context. The paper has argued that if Bangladesh is to enter the 21st century from a position of strength, business as usual will not work. In view of the above, the paper has made the point that the gaps that were identified in trade facilitation, connectivity, cross-border movement of goods and vehicles, and freer flow of goods, services, investments, and energy should command heightened interest of policymakers and ought to be addressed with a sense of urgency. Political will, financial resources, implementation capacity, and cross-border coordination will be keys to addressing these challenges.

Since 2005, there have been initiatives to form a Trans-Pacific Partnership and establish a Trans-Atlantic Investment Area. Many South and Southeast Asian countries will be partners in such initiatives. On the other hand, the envisaged Trade Facilitation Agreement in the WTO is also likely to obligate countries such as Bangladesh to undertake commitments in the area of infrastructure development and trade facilitation. All these will call for forward-looking strategies to address the challenges of the 21st century. The concerned initiatives will need to progress simultaneously—implementing the mega-projects, realizing cross-border investment opportunities to foster trade in goods, services and energy, signing of mutual recognition agreements to deal with SPS-TBT related issues, and the implementation of motor vehicle agreements.

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APPENDIX

Table A.1: Bangladesh's Exports to South Asia and Southeast Asia: Share of Global Exports, 2011

HS Code	South Asia						Southeast Asia					
	India	Bhutan	Maldives	Pakistan	Sri Lanka	Afghanistan	Cambodia	Philippines	Malaysia	Singapore	Thailand	Viet Nam
Live animals (1-5)	13.090	0.001	0.006	0.003	0.003	0.000	0.000	0.000	0.620	0.145	0.380	0.073
Vegetables products (6-14)	37.378	0.004	0.093	1.979	1.645	0.000	0.035	0.000	8.111	2.484	0.001	0.362
Animal and vegetable fats and oils (15)	42.331	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.335	0.282	0.000	0.000
Prepared foodstuffs, beverage (16-24)	7.859	1.466	0.158	2.585	0.080	0.000	0.000	1.314	2.858	1.804	0.001	0.372
Mineral products (25-27)	37.830	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	10.198	0.000	0.000
Products of the chemical or allied industries (28-38)	9.897	0.132	0.036	0.380	5.604	0.812	0.659	2.604	1.169	0.367	18.689	8.663
Plastics and articles thereof (39-40)	2.615	0.087	0.000	0.115	0.486	0.000	0.030	0.000	0.100	0.110	0.009	0.046
Raw hides and skins (41-43)	1.615	0.000	0.000	0.008	0.012	0.000	0.150	0.080	0.019	0.360	0.100	1.851
Wood and articles of wood (44-46)	9.321	0.000	0.018	0.109	0.000	0.000	0.000	0.000	0.546	0.437	0.218	2.494
Pulp of wood or of other fibrous cellulosic materials (47-49)	15.216	0.064	0.000	2.743	6.279	0.000	0.043	0.064	1.157	0.643	0.729	0.836
Textile and textile articles (50-63)	1.137	0.002	0.000	0.314	0.049	0.000	0.002	0.004	0.067	0.194	0.064	0.059
Footwear (64-67)	0.163	0.000	0.009	0.005	0.030	0.000	0.000	0.009	0.015	0.156	0.014	0.004
Articles of stone, cement, plaster (68-70)	5.221	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.232	0.030	0.000
Natural or cultured pearls precious metals (71)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.042	0.000
Base metals and articles of base metal (72-83)	29.909	0.257	0.339	0.082	0.122	0.051	0.000	0.195	0.450	6.962	1.157	5.300
Electrical equipment parts thereof (84-85)	11.878	0.066	0.003	0.857	1.135	0.000	0.199	0.477	1.626	23.849	0.117	0.128
Vehicles, aircraft, vessels, and associated transport equipment (86-89)	5.461	0.000	0.000	0.000	0.902	0.000	0.000	0.004	0.000	0.186	0.033	0.000
Optical, photographic, cinematographic (90-92)	1.414	0.000	0.000	0.011	0.082	0.000	0.000	0.000	0.119	0.865	1.229	3.861
Arms and ammunition, parts and accessories thereof (93)	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous manufactured articles (94-96)	3.629	0.018	0.000	1.009	0.078	0.000	0.003	0.000	0.000	0.332	0.289	1.492

Source: UNCOMTRADE Database (2013).

Table A.2: Bangladesh's Imports from Selected South Asia and Southeast Asian Countries, 2011 (share of total imports)

HS Code	South Asia							Southeast Asia						
	Afghanistan	Bhutan	India	Maldives	Nepal	Pakistan	Sri Lanka	Cambodia	Indonesia	Malaysia	Philippines	Singapore	Thailand	Viet Nam
Live animals (1-5)	0	0	3.6	0	0	0.2	0.3	0	0.1	0.8	6.8	0.6	0.1	0
Vegetables products (6-14)	0	0.5	18.2	0	0.9	10.4	0	0	1.8	0.1	0	1.7	13.5	0
Animal and vegetable fats and oils (15)	0	0	0.1	0	0	0	0	0	54.2	10.4	0	0.1	0.7	0
Prepared foodstuffs, beverage (16-24)	0	0	32.3	0	0.1	0.1	0	0	0.3	0.9	0.1	2	6.7	0
Mineral products (25-27)	0	0.4	7	0	0	0	0.1	0	0.7	34.3	0	26.5	4.8	0
Products of the chemical or allied industries (28-38)	0	0	11.4	0	0	0.3	0.3	0	1.7	2.2	0.2	8.5	1.9	0
Plastics and articles thereof (39-40)	0	0	10.2	0	0	1.4	0.3	0	3.4	7.5	0.1	7.1	13.7	0
Raw hides and skins (41-43)	0	0	7.2	0	0.6	10.6	0	0	0.3	0.1	0.1	0.5	3.3	0
Wood and articles of wood (44-46)	0	0	2.3	0	0	0.1	0.1	0	2.7	19.6	0	1.3	7.8	0
Pulp of wood or of other fibrous cellulosic materials (47-49)	0	0	3.5	0	0	0.1	0.4	0	15.6	0.9	0.2	6.4	2.6	0
Textile and textile articles (50-63)	0	0	15.3	0	0	7.9	0.3	0	1.7	1.2	0	0.3	3.1	0
Footwear (64-67)	0	0	1.7	0	0	0.2	0.2	0	0.5	0.4	0	0.3	0.7	0
Articles of stone, cement, plaster (68-70)	0	0	4.1	0	0	0.4	0.1	0	2.4	1.9	0	0.8	2.7	0
Natural or cultured pearls precious metals (71)	0	0	1.1	0	0	0	0	0	0	3.5	0	94.4	0.1	0
Base metals and articles of base metal (72-83)	0	0.1	4.2	0	0	0.1	0.1	0	1.2	6.1	0.2	4.4	1.1	0
Electrical equipment parts thereof (84-85)	0	0	4.5	0	0	0.4	0	0	0.2	0	0.1	13.4	1.2	0
Vehicles, aircraft, vessels, and associated transport equipment (86-89)	0	0	25.2	0	0	0.5	0.1	0	1.1	0.3	0	3.1	2.1	0
Optical, photographic, cinematographic (90-92)	0	0	8.8	0	0	0.3	0	0	0.1	0	0.1	11.1	0.7	0
Arms and ammunition, parts and accessories thereof (93)	0	0	0.5	0	0	0	0.2	0	0	1.2	0.8	2.2	0	0
Miscellaneous manufactured articles (94-96)	0	0	6	0	0	0.2	0.3	0	2.5	0	0	1.8	2.2	0
Works of art, collectors pieces, and antiques (97-98)	0	0	27.4	0	1.4	0	0	0	0	0	0	5.8	10.6	0

Source: UNCOMTRADE Database (2013).