

Foreword

To fight poverty with passion and professionalism for lasting results.” This is the very essence of the World Bank’s Mission Statement that has a special place in South Asia, a region that harbors a lion’s share of the world’s poor. Development strategy for poverty alleviation must be rooted in transformation of society by the society. For this, individuals in society must be energized with a vision for their own betterment, and through shared knowledge, resources and capacity building, be helped to translate the vision into reality. Societies that have discovered the magic of individual and collective empowerment are the ones that have discovered the link between political and economic stability and poverty alleviation.

We are rapidly moving to an era of globalization where countries are increasingly connected by markets, trade, finance, resources, transport, information and communication. South Asian countries face a unique opportunity to participate competitively in this global production and trading system. However, this opportunity will be realized only if they can meet the market demands that call for high quality products and services and just-in-time delivery.

This report focuses on a poor sub-region of South Asia covering Bangladesh, Bhutan, Nepal and Eastern India. As the South Asian countries are positioning themselves to participate in global and regional markets in light of recent liberalization policies, their efforts and opportunities to find markets within and outside the region are severely limited due to serious transportation and logistics impediments. These impediments significantly raise the cost of doing business affecting critical economic sectors. In turn, they have an adverse impact on economic growth, low skilled employment and poverty in the sub-region. The landlocked countries or regions are in particular, severely constrained by poor access.

The issues involved in efficient regional transport logistics systems are complex and often politically sensitive. They cut across not only physical infrastructure related bottlenecks, but also policy and

procedural issues in the logistics chains—such as red tape and corruption in customs, highly restrictive bilateral protocols on cross-border movement of vehicles, delays and pilferage in ports, and poor modal interfaces. Through the innovative analytic framework that would support more open and rational dialogue among countries and among public and private sector groups in the region, this report would contribute to the process of helping forge partnerships and collaboration in the sub-region, promoting trade, investment, growth and employment.

Let us continue to strive through these and other on-going efforts in the region in our mission to fight poverty.



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Executive Summary

The area of study in the South Asia subregion consists of Bangladesh, Bhutan, Nepal, Eastern India, and the seven Northeastern Indian states. The states included in Eastern India are West Bengal, Uttar Pradesh, Bihar, and Orissa. The Northeastern Indian states include Assam, Mizoram, Nagaland, Arunachal Pradesh, Tripura, Meghalaya, and Manipur. (See Maps 1 to 5 at the end of the report for the key routes considered and the important cross-border points of interest). The subregion, home to half a billion people, is among the poorest regions in the world.

This report synthesizes the work and background reports prepared as part of the sector work under the Bank's South Asia Regional Initiative on Transport Integration. One of the fundamental objectives of this report (in line with the objective of the regional initiative on transport) is to use an analytic framework to identify key transport and logistics impediments that have left the subregion lagging behind in economic growth. A closely linked objective is to improve the access of the landlocked areas in the South Asia subregion, specifically Nepal, Bhutan, and Northeast India, to regional and international markets. The intention is to share the framework and logistics cost model developed with the countries in order to allow stakeholders to continue the process of analysis and dialogue based on updated data as markets, trade, and transport services in the subregion and elsewhere change.

EMERGING TRENDS AND IMPLICATIONS FOR THE SOUTH ASIA SUBREGION

Recent trends in globalization that enable decentralization of production and distribution activities worldwide offer tremendous economic opportunities for employment and growth in poor countries. The ability of countries to grow rapidly depends on their capacity to link with global and regional markets. In turn, this capacity depends significantly on connectivity, and the efficiency and speed with which goods and services can be moved from production centers to final markets. Improvements in transport logistics therefore have important implications for poverty alleviation by offering new economic opportunities

through better market linkages, expanded employment possibilities, easier and cheaper development of the resource base, and reduced damages and losses due to inefficient storage and multiple handlings. The rationale for improving transport logistics among countries and with the outside world can also be applied to internal trade between the rural areas and urban markets. Improved transport logistics are very important for small and medium industries in rural areas that must deliver a quality product within an acceptable time and at a competitive cost.

As in other parts of the world, regional and subregional issues are addressed with a great deal of sensitivity in South Asia. Given the sensitivities of regional issues, the Bank study team sought to promote dialogue among key regional stakeholders and provide for a better understanding of key issues and options by learning from experiences in other parts of the world. Its goals were to create a greater popular awareness of the mutual benefits of cooperation and establish a high level of commitment for improved transport logistics, both in the government and the private sector. The Bank team sought to provide technical inputs and a framework to evaluate the broader regional implications of proposals generated by the participants.

The report includes a set of analytic tools that include a geographic information systems (GIS) database for the region and a logistics cost model developed in collaboration with stakeholders in the subregion. The report is not aimed at offering a master plan for a regional transportation network, nor is it envisioned to be a regional transport sector strategy. The broader objective of the report, in line with the objectives of the regional initiative, is to provide an analytic framework and a user-friendly decision support tool to address improved regional movement of goods and services and allow for moving issues from a purely political realm to a more economic and

commercial level (Map 6 at the end of this report). We think that the framework would help lead to improved and rational dialogue in key sectors among and within the countries on substantive issues in the area of transport, logistics, and regional connectivity.

LINKAGES WITH OTHER BANK STRATEGIES¹

The approach reflects several of the principles under the Bank's Comprehensive Development Framework, including:

- The interactive approach to Advisory and Analytic Activity adopted through continual subnational, national, and regional consultations with stakeholders from various sectors in order to build ownership in the countries.
- Partnership building with and among governments, private sector groups, research institutions, and other development organizations. The task team therefore focused on building allies as well as creating broad coalitions of national stakeholders and development partners from the government, private business groups (such as chambers of commerce, freight forwarders, exporters, and shippers), and donor and development organizations (such as the United Nations and the Asian Development Bank.)²
- Knowledge sharing and consultations in order to help develop a joint vision for the subregion that will enable the evolution of national to regional strategies. Toward this

1. These other strategies include Country Assistance Strategies and the Comprehensive Development Framework of the World Bank.

2. For more information on the summary proceedings of the Private Sector Consultative Workshop Transport and Trade Facilitation in the subregion, see Background Note 1.

objective, a regional technical workshop was held to offer international experiences on regional integration.³

The Regional Initiative on Transport is consistent with country assistance strategies (CAS) for the relevant countries and reflects client interest in the regional dimension for sectoral activities. This was noted in the CAS for India (dated December 19, 1997), the CAS for Nepal (FY98) and Bhutan (FY99), and the forthcoming CAS for Bangladesh. The results of this study can provide information for transport sector strategy updates, such as the Bangladesh and India transport sector updates. It can also provide potentially relevant data for ongoing lending and technical assistance projects, including the Nepal Multimodal Transport and Transit Facilitation project and the Bangladesh Export Diversification project.

METHODOLOGY FOR THE STUDY: SELECTION OF STRATEGIC COMMODITIES AND ROUTES

The core set of strategic commodities and routes selected for this study were chosen for two reasons. First, they provide opportunities for landlocked areas to reach markets and, second, they are critical commodities that link the subregion to the global market. Accordingly, the study examined Bangladeshi exports of garments to Los Angeles and imports of yarn from India; Nepali exports of carpets to Europe and imports of wool from Australia; fruit and processed products from Bhutan to regional markets; and essential consumer commodities to Northeastern India from

the rest of India. The routes included those connecting Nepal and Bhutan to international and regional markets through Calcutta and other India ports, as well as routes linking Northeast India to the rest of India via Bangladesh and on to international markets via Chittagong port.

The analytic framework applied in the evaluation of commodity movements on existing and proposed transit routes took into account both the cost and time associated with the entire logistics chains, including the time and cost for cross-border procedures and moving cargo through seaports (Map 6 at the end of this report). It enabled two types of analysis:

- **Identifying critical impediments along a logistics chain.** Detailed information on physical gaps and constraints, policies, procedures, commodity type, and market conditions helped determine where improvements in the short term can bring about significant returns in terms of efficiency improvements.
- **Comparing alternative routes (and modes) as a means toward the more cost-effective route.** Existing routes were compared with alternative routes that were either already proposed by the private sector or under consideration by the relevant governments, or with those that have some potential for growth. The comparative analysis not only provides information on the potential savings if these routes were operationalized, but it also allows for a dynamic analysis of how improvements in the components of both logistics chains would affect overall benefits and route selection.

HIGHLIGHTS OF THE COMMODITY FLOWS STUDY

None of the routes provided logistics that could be considered fast and reliable, though some of them were more cost effective than others. This

3. Specifically, the South Asia Regional Technical Workshop on Transportation and Transit Facilitation, held in April 1999 in Bangkok. It was sponsored by the World Bank and the United Nations' Economic and Social Commission for Asia and the Pacific.

is important as the region moves toward more regional and international trade in higher-value, finished goods. International markets are increasingly demanding tighter and more reliable deliveries. It is clear that improved logistics are essential to remain competitive. Without improvements, the region will not only miss out on new markets, but it will also suffer a decline in market share in existing markets.

The most important constraints in the logistics chains include:

- **Excessive delays in moving cargo through the ports of Calcutta and Chittagong for international trade.** The problems include congestion within the port that leads to inefficient handling of the cargo, cumbersome customs procedures, and delays that stem from waiting for vessels that cannot operate to a fixed day-of-the-week schedule because of the uncertainty regarding the turnaround time in the port. This adds to the time for ocean shipment of containers because the movement of the feeder vessels cannot be coordinated with that of the mother vessels, and containers in Singapore have an average waiting time of a week.⁴
- **Inefficiencies at land border crossings.** Significant time delays and logistics costs are due to a combination of impediments. The basic constraints are the lack of efficient customs operations, which cause unnecessary queuing delays for inspection and customs clearance; and a lack of adequate facilities for the transfer of cargo between vehicles and for the storage of cargo that is consolidated at the border. Poor physical planning and lack

of coordination in operations cause serious congestion at the busier crossings, such as Petrapole (India)–Benapole (Bangladesh). It also leads to long delays at the less developed crossings where there is no customs office or official in residence, such as at the Banglabandh border crossings in Bangladesh for Nepalese trade cargo.

- **Limitations on routes for transit cargo, regardless of which country the trucks belong to.** This is a significant problem because it prevents the shippers from taking the routes that offer the best balance of time and cost and from selecting the port that offers the least-cost shipping to the overseas destination. This is also true for regional movements.

HIGHLIGHTS OF THE COMPARATIVE ROUTE ANALYSIS

The routes from Nepal, which could use Nhava Sheva rather than Calcutta as a gateway port, would require an initial transfer from road to rail at Moradabad and, later on, at new inland container depots (ICDs) located closer to the origin or destination of the cargo. The longer land transport distance to Nhava Sheva would be more than compensated for by short sailing times to Europe and the potential for direct shipments from Nhava Sheva or transshipment along the route to Europe (instead of backtracking to Singapore, as in the case of Calcutta port).

The shipment of Assam tea on its traditional route through Chittagong is not possible under the current bilateral protocol. Even if there is bilateral agreement on this option, this route offers relatively small savings over the long route around Bangladesh through Siliguri to Calcutta because of the delays at the Akhaura-Agartala border crossing and at the port itself.

The road route between East India and North-east India through Bangladesh reduces transport

4. Haldia was not included in the selected routes, although its role in handling the cargoes studied, such as tea, is increasing rapidly.

distance by more than 60 percent in comparison to the current route around Bangladesh through Siliguri, but it is not open under current protocol. If access for transit cargo to or from Northeastern India were permitted through Bangladesh, the transshipment requirements (the transfer of cargo from Indian to Bangladeshi trucks, and back to Indian trucks) and the cross-border processing delays at the two borders would offset any potential benefits from the reduced distance. However, if border-crossing procedures were significantly reduced and if transit access for Indian vehicles were allowed, there would be significant savings in time and cost.

The rail route between East India and Northeast India through Bangladesh, though also not available under current agreements, may be a feasible one in the medium term as the Indian and Bangladeshi railway systems are increasing compatibility and connectivity.

Among the route-specific observations resulting from the comparative analysis are:

- Seaports are very important factors in determining route selection because of the large delays and high costs for transferring cargo through the ports. The elimination of unnecessary customs procedures and delays in cargo handling will cause cargo to be routed through more efficient seaports.
- Customs clearances lead to unnecessary delays and informal payments. However, they do not have as great an impact as other procedures at border crossings and ports. The uncertainties associated with the delays and costs of clearing customs can often be traced to inadequate preparation of customs documents by the shipper. Customs limitations on working hours, the low supply of officials at the border to clear consignments, the limited number of gates for receiving cargo, and the lack of transparency of procedures for inspection all reduce efficiency and create animosity. With simplified procedures, standardized documents, and limited inspections, especially for transit cargo, the congestion at the border could be substantially reduced or eliminated.
- The constraints at land border crossings would be significantly reduced if protocols were established for unrestricted movement of cargo across borders in-bond. Instead, there is a provision preventing Indian, Nepalese, or Bhutanese trucks from moving across the Bangladeshi border. India has agreements with Bhutan and Nepal that allow trucks to move across the border, but their movements within the country are restricted. These restrictions add to the cost of transport, not only because of the labor and losses involved in transferring cargo between vehicles, but also because the shipper cannot choose the least-cost provider and the transport companies cannot position themselves to obtain backhaul cargo other than at the border.
- High-value exports from Nepal to the Pacific Rim require faster handling at Calcutta, Chittagong, and Haldia, whereas shipments to Europe and the east coast of the United States require direct (intermodal) connections to the Jawaharlal Nehru Port Trust (JNPT). Both types of shipments require containerization of the cargoes at the earliest point in the logistics chain. The ability to ship in containers will be substantially improved with the operationalization of the three ICDs on the Nepalese border. A direct rail link from Birgunj to the JNPT would provide the greatest efficiency gains among the alternatives considered.
- Truck routes via Bangladesh can offer reductions in time and cost for medium-value goods moving between East India and Northeast India if the cargo can be moved in-bond and

there is coordination between customs checkpoints at border crossings on both sides of Bangladesh to significantly reduce delays and eliminate transshipment. The savings to the shippers should be sufficient to support tolls to cover the cost for road maintenance resulting from the increase in transit traffic.

- For trade in high-value goods between India and Bangladesh, trucks will be the dominant, if not the exclusive, mode. Travel time will be the major concern and route selection will be based on reducing door-to-door delivery time. Significant improvements in rail operations would be needed if this mode were to capture some of this traffic.
- Intraregional shipments of fruits, vegetables, and other perishables from Bhutan and Nepal to India and Bangladesh require much better logistics. This can be achieved by allowing the cargo to move in a single truck from origin to destination and by ensuring that clearance time at the border on both sides does not exceed six hours.
- The extension of the broad-gauge network in India and the development of a dual-gauge network in Bangladesh will offer much broader coverage with much fewer delays. If the Indian and Bangladeshi railways continue to integrate their systems and extend their broad-gauge networks, they might capture some medium-value break-bulk cargoes. However, delays will continue at the border unless compatible rolling stock is introduced and the shortage of locomotives ends. If these capital investments can be combined with more efficient operations, as the Indian organization Concor has achieved, there is the possibility that the railroads can provide the quality of logistics services required by higher-value goods. At a minimum, the railroads will be able to maintain market share in their core business, the hauling of low-value bulk commodities, because of the higher costs for trucking and the longer transit times for inland water.
- Inland waterways could play a more prominent role in the transport of the low-value bulk cargoes that move between Calcutta and north and east Bangladesh, which is not yet served by broad-gauge rail. The inland water transport network in Bangladesh is of considerable importance for domestic shipments, but it is less relevant for the movement of transit traffic. Very low travel speeds could be compensated for by improvements in channel markings to allow for nighttime navigation and by improvements in port operations to reduce turnaround time. However, this mode is expected to continue to attract only low-value cargoes that can afford long delivery times. An exception is the proposed container-on-barge service between the proposed Patenga port and Dhaka that would take advantage of the poor rail container service and lack of efficient road connections for containers on this major corridor. Another exception would be the countries agreeing to route Numaligarh refinery (Assam) products through Bangladesh to West Bengal.
- Investments in the transport network are necessary to improve the quality of logistics services, but these were given a lower priority than the procedural problems. The lower ranking is due in part to the recognition that these are long-term problems and will require major capital investment and increased private sector participation if they are to be solved. It is also because of expectations that current efforts to improve the transport network in the subregion will yield measurable results over the next five years.
- Trucking is provided almost entirely by the private sector. Truckers use older vehicles with

relatively low power-to-weight ratios, suitable for short-haul traffic but not for the long-haul movements of bulk and unitized cargoes. The rates for trucking services are competitive, both within the countries and between the countries, although India has the competitive advantage of not needing to import trucks. The rates are held down by an emphasis on low labor costs and inexpensive equipment rather than by efficient utilization of more expensive, higher-capacity equipment. This is unlikely to change until the road network is improved and regulations regarding truck loads and safety are enforced.

NEED FOR PUBLIC-PRIVATE PARTNERSHIP

The private sector is pursuing improvements in trade relations and transport logistics to ensure a smoother flow of goods and more cost-effective services among the countries in the region. The chambers of commerce of the four countries have established a joint forum called the Emerging East Initiative to examine and promote investment, trade, and the economic growth of the subregion. Participants expressed strong dissatisfaction with the state of freight transportation for regional and international markets and the lack of consultation with users in bilateral and multilateral discussions on cross-country route and mode choices. In their view, the private sector can plan an increased role in the operation and management of landports and logistics services facilities; the development of container transport, container operations, and facilities; cargo-handling facilities and services; and freight-forwarding, customs clearance, financial services, storage, warehousing, general transit, and shipping services at seaports and land border crossings. The private sector delegates' proposals for government action in trade facilitation included:

- Harmonizing government trade and transport policies and regulations in the subregion;

- Amending transit treaties and protocols to allow for a freer choice of transport routes and service providers;
- Instituting a program of modernization for customs and cross-border facilities;
- Increasing the use of container transport by removing institutional impediments, such as the protocol between India and Bangladesh;
- Constructing ICDs in the region to encourage container transport outside the main India rail transport corridors; and
- Improving access to credit and financial intermediation services.

PRELIMINARY AGENDA FOR ACTION

The actions recommended in this report build upon the general theme of consultation with the private and public sectors, and would require action at national and regional levels. Table 1 summarizes short-term and medium- to long-term actions at the national and regional levels. The preliminary agenda focuses on three areas: (a) trade facilitation, (b) coordination of transport sector reform and investment, and (c) development of business-to-business e-commerce. Several actions under the agenda would require action at national levels. Others, such as trade facilitation and improved procedures at the land border crossings, would need a regional mechanism to create regional consistency. At the national level, the recently established national Transport and Trade Facilitation Technical Committees (TTTCs), which comprise key ministries and agencies and private sector representatives, could be the nodal point in Bangladesh, Bhutan, and Nepal. A possible coordination mechanism that has been suggested is a regional technical forum, which would include not only the

TABLE 1 NATIONAL AND REGIONAL ACTIONS: SHORT TERM AND MEDIUM TO LONG TERM

National	Regional
<i>Short Term</i>	
<p>1. Strengthen the Transport and Trade Facilitation Technical Committees (TTTCs) recently established in Bangladesh, Bhutan, and Nepal that are aimed at sustaining interaction between the public agencies and the private sector. These committees now include representation from ministries or departments of commerce, customs, and transport or communication, and private sector representation from chambers of commerce, transport service providers associations, and trade associations. Examine similar institutional options for increased effective dialogue on transport, logistics, and trade facilitation issues in India in the public and private sectors.</p>	<p>1. Establish a regional technical working committee to (a) identify methods for improving logistics for intraregional and extraregional trade, (b) set priorities and short-term targets for achieving the greatest benefits, and (c) develop a forceful and sustainable program for improving logistics in the region. The committee will include:</p> <ul style="list-style-type: none"> • Government representatives of the relevant trade, transport, and customs agencies to provide the policy and public infrastructure perspective. • Private sector representatives from shippers, consignees, chambers of commerce, and logistics providers to bring a private sector and commercial perspective. • Specialists from other countries and academia representatives to provide best practices knowledge of trade facilitation, supply-chain management, and logistics services, as well as practical limitations on reforms experienced by other regional trade blocs.
<p>2. Technical assistance should be provided to assist transport ministries, development banks, planning ministries, freight forwarders, major shippers, and experts in logistics in the techniques of supply-chain analysis. The logistics cost model developed would provide an easy and adaptable tool for training stakeholders. Procedures should be developed for incorporating supply-chain analysis into decisions regarding investments in transport infrastructure and changes in procedures for cross-border movement. Workshops could be used to inform transport professionals, shippers and consignees, and forwarders of the techniques used in supply-chain management.</p>	<p>2. Regional workshops could be used to share information among transport professionals, shippers and consignees, and forwarders to improve supply-chain logistics in the region. This would be particularly helpful for improving regional and international trade, particularly for landlocked regions.</p>
<p>3. Port reform and modernization for improved performance and logistics is a priority for development of the countries' trade in global markets. The measures would include:</p> <ul style="list-style-type: none"> • Privatization of port management and operations, • Dedicated private terminal operations to expedite cargo handling, • Facilitating routing cargo through more efficient ports, and • Better coordination of movements between feeder and mainline vessels by improving port performance so the feeder vessels can operate on a fixed schedule. 	<p>3. Bilateral (and multilateral) dialogue and agreements can facilitate routing regional cargo through more efficient ports. For instance, routing cargo through more efficient ports on the western coast of the subcontinent could reduce travel time by about one week for exports to Europe.</p>

National	Regional
<p>4. Improve the physical design of land border crossings in high traffic crossings to reduce congestion and delays, with strategic investments in place of the current practice of ad hoc investments. Support private sector involvement in development of superstructure and operations at border crossings.</p>	<p>4. Coordination among relevant countries in effectively improving the physical design of strategic high-traffic land border crossings so that current congestion and delays are reduced dramatically.</p>
<p>5. Simplification of import and export cargo clearance procedures within the countries, including introduction of Automated Systems for Customs Data (or compatible) documentation.</p>	<p>5. Harmonization and standardization of cross-border cargo clearance procedures across countries.</p>
<p>6. Improved communication systems and adoption of automated technology for electronic transfer of information.</p>	<p>6. Compatibility of automated systems for effective electronic interchange of information.</p>
<p>7. Eliminate requirements for transshipment of cargo by trucks at border crossings and move toward increased transit access for vehicles from neighboring countries, so that multiple cargo handling and associated costs and delays are avoided. In addition, introduce:</p> <ul style="list-style-type: none"> • Automatic weighing of vehicles at border points • Simplified procedures and risk-assessment strategies to replace current cargo inspection practices • Round-the-clock clearance of cargoes at high-density interchange points like Petrapole–Benapole and Gede–Darsana. 	<p>7. Revisions of bilateral transit protocols to facilitate uninterrupted movement of transit. Important changes include:</p> <ul style="list-style-type: none"> • Replacement of the movement of transit cargo in truck convoys to flexible movement against specified time limits with in-bond goods; • The use of secure seals for rail cars or containers carrying transit cargo with very few or no inspections of cargo at the border, other than checking seals; • The Transports Internationaux Routiers (TIR) system for the carriage of goods approved by customs authorities from the transport of sealed containers using the TIR carnet; and • Common vehicle inspection and licensing procedures for trucks used to transport cargo across borders.
<p>8. Monitoring/tracking systems for cargo movement.</p>	<p>8. More effective mechanisms for monitoring the movement of the cargo, instead of the existing practice of using fixed routes and truck convoys. These could include:</p> <ul style="list-style-type: none"> • Joint checking of cargoes at the origin and destination; • Electronic data interchange (EDI) between customs facilities within the country and across borders; • Identification numbers, bar codes, or other forms of electronic identification for trucks and cargo containers; • The use of a freight operation information system for real-time monitoring of trains, rail cars, and cargo; and • Tracking systems for transit cargo carried by trucks.

(Table continues on the following page.)

TABLE 1 (continued)

National	Regional
9. Assignment of liability for the carriage of goods within the country to encourage more efficient multimodal transport.	9. Assignment of liability for the carriage of goods and harmonization of this liability scheme across regional and international borders.
10. Development of full rake sidings for rail, night unloading facilities, and terminal facilities at major loading and unloading points.	
11. Development of night navigation facilities on selected inland waterways in Bangladesh and in the waterways linking Northeast India and West Bengal.	
12. For Bangladesh, a cohesive plan identifying key bridges that need upgrading along high-traffic corridors, taking into account ongoing efforts to strengthen bridges on the Dhaka-Chittagong highway.	
<i>Medium and Long term</i>	
1. Investments in road network infrastructure, including widening roadways and constructing divided highways. Bangladesh would base this on a review and update of the existing road master plan. India would incorporate planned and ongoing road projects, including the Golden Quadrilateral and West Bengal north-south highway, and a medium-term plan for less congested road links to and among the Northeastern states.	1. Investments at border crossings to facilitate easier two-way flow of traffic.
2. Increased movement of containerized goods, particularly high-value commodities. It would be useful to review (a) the Container Corporation of India (CONCOR) experience and (b) the experience of Nepal ICDs, including efforts to integrate private sector operations and prepare recommendations for making the process more efficient, effective, and transparent.	2. Extend the movement of containerized goods, particularly high-value commodities such as yarn, across national and regional borders.
3. Strengthening and widening bridges where necessary, particularly along selected roadways for Bangladesh and Northeast India.	

National	Regional
<p>4. The TTTCs could oversee a review of the progress and plans for harmonization of rail networks to determine the likely impact on national traffic flows.</p> <p>Other items on the rail agenda would include proposing standards for rolling stock, such as the configuration of container rail cars, the identification system for rail cars, and the introduction of air brakes and semi-automatic couplers for the freight cars crossing the border between India and Bangladesh. Finally the review committee would look at increased private sector involvement in unit train operations, especially proposals for shipping lines and other logistic providers to operate trains for the movement of containers inland.</p>	<p>4. A review of the progress and plans for harmonization of rail networks to determine the likely impact on regional traffic flows. The review should include ways to introduce, expand, and improve block train operations and rail-based ICDs to serve landlocked areas; scope for private sector operations.</p>
<p>5. Modern laws and regulations covering clearer assignment of liabilities for the carriage of cargo, permitting tighter integration of intermodal movements and reducing barriers to entry for potential third-party logistic providers.</p>	<p>5. Harmonization of laws and regulations in the region to enable clear assignment of liabilities for the carriage of cargo and permit tighter integration of intermodal movements across national and international borders. (There is considerable international experience and legal precedence concerning this issue.)</p>
<p>6. Expand e-commerce opportunities more broadly to remote sectors, industries, and regions so that small and medium enterprises can market their products directly to businesses and markets. This would involve:</p> <ul style="list-style-type: none"> • Access to assured data communications and Internet services, • Supportive legislation to allow financial transactions over the Internet that are both secure and legally binding, • Increased privatization of telecommunications and Internet services, • Establishment of a public-private partnership to ensure a competitive environment for e-commerce services, and • Training for small- and medium-scale businesses for effective use and development of services. 	<p>6. New systems are needed for improving voice and data transmissions between customs checkpoints at the border crossings and between the checkpoints and central customs offices and seaports. Initially this could be accomplished through a value-added network used by customs. This could be expanded to the ICDs and other border crossings that would act as a center of efficient and effective communications for scheduling and coordinating movements with other activities on the logistics chain. Ultimately, it should allow the users to input data electronically through multiple ports and, eventually, through the Internet.</p>
<p>7. In the long term, systematically introduce measures to move toward offering shippers door-to-door economical just-in-time delivery service, which is important for the country to gain position in the global market.</p>	<p>7. In the long term, systematically introduce measures to move toward offering shippers door-to-door economical just-in-time delivery service, which is important for the region to gain position in the global market.</p>
	<p>8. Implementation of a smart card system for expediting all the transactions associated with cross-border movements.</p>

government and private sectors, but also international expertise.

The analytic framework developed in this report could be used to evaluate other routes as a basic tool for evaluating investments in transport and trade facilitation. The framework should be broadened to consider the impact of delivery time on the perishability of cargoes and the impacts of uncertain delivery times on inventory requirements.

There is need for both short- and long-term improvements. The short-term improvements would address problems related to:

- The exchange of goods between East and Northeast India;
- Bhutanese and Nepali trade with both international and regional markets (in the case of the latter, many commodities have short shelf lives); and
- The trade between Bangladesh and neighboring areas, including Northeast India, and strategic improvements for Bangladesh transport and logistics to improve global trade.

These improvements would also have significant implications for improved logistics in the individual countries. The long-term improvements would focus on the region's capacity to meet the logistics requirements for trade in higher value goods.

The priority problems relating to seaports have to be addressed primarily at a national level. Efforts to reform the port sector in India and Bangladesh are longstanding but have not achieved much, other than private sector initiatives in western Indian ports and the proposed Patenga port in Bangladesh. Port reform is critical for the subregion. Inefficiencies associated

with port and ocean transport time can be reduced by routing cargo through more efficient ports and by better coordination between feeder and mainline vessels.

The transport sector reforms, including increased private sector participation in the seaports and railways and the improvements in road capacity and maintenance, are issues that are already under consideration by individual governments. The TTTCs could push for action on these improvements by coordinating private sector advocacy of these reforms and by adding international best practices and benchmarks to the discussion.

Bilateral transit protocols have not provided efficient mechanisms for handling transit cargo, and they instead treat them like import or export cargo. There is a need to end the remaining prohibitions on cross-border movements of cargo, both for regional and international trade. The next step would be to eliminate the remaining requirements for transshipment of cargo between the vehicles at the border. Then it would be necessary to introduce the various procedures used in different trading blocs for the efficient movement of transit cargo.

Simplification of customs documents and procedures and the introduction of electronic data interchange (EDI) systems for direct input by shippers and logistics providers is another important area to reduce constraints at border crossings. Some of the more important reforms that need to be introduced to facilitate cross-border movement of transit traffic as well as bilateral trade are:

- Replacing the movements of transit cargo in truck convoys to flexible movements based on specified time limits.
- The use of secure seals for rail cars or containers carrying transit cargo to eliminate most border inspections, other than checking the seals.

- Common vehicle inspection and licensing procedures for trucks that transport cargo across borders.
- Automatic weighing of vehicles at border points.
- The Transports Internationaux Routiers (TIR) system for the carriage of goods approved by customs authorities from the transport of sealed containers using the TIR carnet.
- Simple procedures and risk-assessment strategies to replace current cargo inspection practices.
- Round-the-clock clearance of cargoes at high-density interchange points like Petrapole–Benapole and Gede–Darsana.
- Development of full rake sidings, night unloading facilities, and terminal facilities at major loading and unloading points.
- Clearer assignments of liabilities to permit tighter integration of intermodal movements and reduce barriers to entry for potential third-party logistic providers. This also encourages railroads and trucking companies to improve quality of service to limit their exposure due to loss or damage of cargo.

In addition, better mechanisms for monitoring the movement of the cargo would include:

- Joint checking of cargoes at the origin and destination;
- EDI between customs facilities within the country and across borders;
- Identification numbers, bar codes, or other forms of electronic identification for trucks and cargo containers;

- The use of freight operation information system for real-time monitoring of trains, rail cars, and cargo; and
- Tracking systems for transit cargo carried by trucks.

The committee should evaluate the alternatives and select those that can be implemented in the next five years. The committee should also look at the longer-term implementation of a smart card system for expediting all the transactions associated with cross-border movements.

BANK GROUP INVOLVEMENT

A fundamental role for the Bank in the regional transport initiative has been that of a convenor, bringing in global knowledge and experience on regional transport and logistics issues, and helping to promote more effective dialogue among the relevant countries and between the public and private sectors.

Four elements of an effective transportation and logistics system for the subregion would be: (a) trade facilitation and logistics improvements, (b) provision of flexible and strategic routes and modal choices, (c) promotion of greater private sector participation, and (d) rationalization of bilateral and regional protocols. For elements (a), (b), and (c), most of the Bank's instruments are critical and add value. Some of these issues are being addressed through ongoing country operations and technical assistance (such as the India National Highways project, the Nepal Multimodal Transport and Trade Facilitation Project, and the Bangladesh Export Diversification project). The strategic impact of country operations, particularly on poverty, could be enhanced if the regional dimension could be more effectively and consistently integrated in country strategies.

Rationalizing regional and bilateral protocol is a historically sensitive issue in South Asia, as in other parts of the world. The Bank's role in this aspect would naturally be small; but this role could be a critical one in providing a more objective and rational basis by bringing in analyses of options and international best practices, and in supporting greater private sector participation. The tools and analysis used in this report could contribute toward this purpose.

In meeting the requirements of the four elements, the opportunity exists for strong partnerships with other development agencies, including the Asian Development Bank, the U.N. Conference on Trade and Development, World Customs Organization, Japanese International Cooperation Agency, and United Nations Economic and Social Commission for Asia and the Pacific. All are involved in regional transport, logistics, and trade facilitation projects in South Asia.

THE REPORT'S AUDIENCE AND ITS STRUCTURE

This report and the complementary outputs are aimed at several audiences:

- People from both governmental agencies and the private sector (such as transport operators and service providers, intermediaries, and other private business officials) in the relevant region, and
- Within the Bank, the individual country work programs for the South Asia subregion and the thematic groups concerned with regional transport.

The first chapter provides an overview of the socioeconomic and economic growth profile of the subregion, the challenges faced by landlocked regions in accessing regional and international markets, and regional and international trade patterns in light of the transport and logistics constraints. It also presents the rationale for the Bank team's role and participatory approach adopted for the sector work. The second chapter examines specific impediments in the transport logistics chain of selected strategic commodity movement in the context of regional and international trade. It focuses on constraints with line-haul movement and impediments at border crossings and at ports. The third chapter provides a framework for a comparative analysis of existing routes with alternative ones, both for the movement of commodities within the region and to international markets. It takes into account all transportation and logistics costs and the availability of physical links. It also addresses issues of modal choice, based on factors such as time sensitivity of the market and the value and perishability of the commodity.

The fourth chapter presents highlights of the constraints faced by private businesses, freight forwarders, exporters and importers, and shippers in the subregion.

The fifth chapter summarizes the key constraints and suggests short-term and long-term options. It also attempts to outline the role that the Bank could play in assisting the subregion to reduce the transportation and logistics constraints.

The sixth and final chapter of the report outlines a preliminary agenda for discussion in the subregion.