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Connecting a Subregion: A Strategic View

This report synthesizes the work and background reports that were prepared as part of the interactive policy dialogue under the Bank's South Asia Regional Initiative on Transport Integration.[1] It provides a spatial assessment of key transport and logistics issues faced in opening up a region that is lagging in economic growth. The area of study in the South Asia subregion consists of Bangladesh, Bhutan, Nepal, and four Eastern and seven Northeastern Indian states. The Eastern Indian states are West Bengal, Uttar Pradesh, Bihar, and Orissa. The Northeastern Indian states are Assam, Mizoram, Nagaland, Arunachal Pradesh, Tripura, Meghalaya, and Manipur (see Maps 1 and 7 at the back of this report).

The focus of this report is on (a) the costs of doing business within the subregion and with international markets that result from transportation impediments and other logistical issues; (b) an analytic framework to evaluate alternative and cost-effective regional routes; (c) the scope of increased public–private partnerships in the provision, management, and use of transportation services; and (d) identification of priorities for improving regional transportation and logistics services and related policies in the subregion and a discussion on the possible use of World Bank instruments in supporting subregional linkages.

Recent trends in globalization, supported by technological advances in information, communication, and transportation, facilitate increasing decentralization of production, distribution, and supply processes. Outsourcing of component economic activities across multiple countries is becoming more and more common. This process of outsourcing offers economic opportunities to all countries, particularly developing ones, by allowing them to participate in providing value-added services and low-cost raw material or human resource skills. In turn, these countries benefit from improved market access for their exports, acquisition of new technology through international knowledge

1. See the list of background notes prepared for this report under the South Asia Regional Initiative on Transport in the bibliography.

transfers, efficiency gains in the economy resulting from increased competitive pressures on domestic economic activities, and increased employment opportunities.

Globalization thus presents economic opportunities. However, the capacity of a country or a region to participate in the global economy and derive concrete benefits is dependent on national and regional policies. Global trade and the associated economic growth of a country or a region depend critically on the efficiency and speed with which goods and services can be delivered from production centers to final markets. Since one-third of world trade in the mid 1990s occurred within global production networks (World Bank 1999),[2] the ability of countries in Mercosur, the Southern African Development Community (SADC), or South Asia to link with these networks and to be more responsive to demand depends on developing an efficient transport and logistics system, which can provide just-in-time and reliable delivery, and ensure quality of cargo. These are important parameters in the emerging global market because market expectations have risen substantially in the last few years.

Within regions or countries, efficient transport and logistics systems offer increased possibilities for linking isolated and landlocked regions to markets and new economic opportunities. The systems also offer easier and cheaper development of the resource base and increased employment opportunities. By facilitating access to a larger regional market, they can help countries benefit from economies of scale. By providing market access to rural areas, they enable rural producers and small industries to deliver quality products within an acceptable time and at a competitive cost. Improved transport logistics systems within the region would encourage growth in trade—not only international and intraregional trade, but also domestic trade between rural and urban areas.

The growth of South Asian trade, both with external markets and within the region, is critically dependent on the time and monetary costs of goods movement and cross-border transit of cargo. As the countries are positioning themselves to participate in global markets, the transportation and trade logistics costs must be reduced to at least ensure their current position in the world market. Logistics inefficiencies translate into higher costs of their commodities and, more importantly, have serious implications for the credibility and position of these countries in the international market.

PROFILE OF THE SOUTH ASIA SUBREGION

The subregion, consisting of Bangladesh, Bhutan, and Eastern and Northeastern India, is home to almost a half-billion people. It is among the most densely populated regions in the world. More than half the population lives on less than US$1 a day, and socioeconomic indicators such as infant mortality, life expectancy, and adult and female literacy are among the poorest in the world. Over the next 25 years this population is expected to double, exacerbating problems of poverty, social tension, and environmental degradation, unless strategies for encouraging faster economic growth are conceived and implemented. See Table 1.1 and Table 1.2 for social and economic indicators.

Paradoxically, this region is endowed with abundant natural resources—fertile soil, water, minerals, and energy resources—which are essentially untapped because of poor connectivity and lack of market access. Although the resource potential is large, the interdependencies among the countries are also significant. Both Nepal and Bhutan are landlocked, as are the seven North-

2. *World Development Indicators* 1999, The World Bank.

TABLE 1.1 SOCIOECONOMIC INDICATORS

Area	GNP per capita (1998 US $)	Percentage of population living on less than US $1/day	Percentage of population living on less than US $2/day	Infant mortality rate, per 1,000, 1997	Under-5 mortality rate, per 1,000, 1997	Life expectancy at birth, 1997	Adult illiteracy rate, % of people 15 or above, 1997: Males	Females
Subregion								
India	430	47	87.5	71	88	63	33	61
Bangladesh	350	50.3	86.7	75	104	58	50	73
Nepal	210	n.a.	n.a.	83	117	57	44	79
Bhutan	430	n.a.	n.a.	63	n.a.	61	n.a.	n.a.
Other Countries								
Indonesia	680	7.7	50.4	47	60	65	9	20
China	750	22.2	57.8	32	39	70	9	25
Argentina	8,970	n.a.	n.a.	22	24	73	3	4
Brazil	4,570	23.6	43.5	34	44	67	16	16
Burkina Faso	n.a.	n.a.	n.a.	99	169	44	n.a.	n.a.
Namibia	n.a.	n.a.	n.a.	65	101	56	n.a.	n.a.
Regions								
East Asia & Pacific	990	n.a.	n.a.	37	47	69	9	22
Latin America & Caribbean	3,940	n.a.	n.a.	32	41	70	12	14
Sub-Saharan Africa	480	n.a.	n.a.	91	147	51	34	50
South Asia	430	n.a.	n.a.	77	100	62	36	63

Note: South Asia includes all the countries in South Asia as categorized in the *World Development Report*.
n.a. = Not available.
Sources: 1999 *World Development Indicators*, World Bank; *World Development Report* 1999/2000, World Bank.

eastern Indian states. In fact, the Northeastern region of India is connected to the rest of the country by a land corridor between Bangladesh and Nepal that is as narrow as 22 kilometers. This landlocked region, a natural hinterland to Chittagong port, trades with the rest of India and the world through this congested land corridor, with high transportation costs. For instance, consider tea exports from Assam that are shipped to Europe via Calcutta port. The transportation cost includes a trucking route of more than 1,400 kilometers through the land corridor around Bangladesh to Calcutta port. The traditional tea route for Assamese tea via Chittagong port would cut the distance down by almost 60 percent. Third-country trade for both Nepal and Bhutan is also routed through Calcutta port, with associated delays and costs.

TABLE 1.2 ECONOMIC GROWTH INDICATORS

Indicators	India	Bangladesh	Nepal	Bhutan
Area (thousand sq. km)	3,288	144	147	47
Population (million)				
1980	687	87	14	n.a.
1998	980	126	23	0.8
Average annual growth rate (percent) 1997–98	2.0	2.1	2.5	n.a.
GNP ($USBillion)				
1998	427.4	44.2	4.9	0.4
Average annual growth rate (percent) 1997–98	6.2	5.9	2.7	8.2
GNP per capita ($US)				
1998	440	350	210	470
Average annual growth rate (percent) 1997–98	4.3	3.2	0.3	6.8
GNP per capita at PPP (percent $US)	2,071	1,330	1,079	1,446
Trade as percentage of GNP				
1970	8.0	17.0	13.0	n.a.
1998	25.0	33.0	58.0	n.a.

PPP = Purchasing power parity.
n.a. = Not available.
Source: World Development Indicators, World Bank, 1999.

Historically, South Asian countries have had restrictive trade policy regimes with stringent barriers to cross-border trade, quantitative restrictions and steep tariffs, restrictions on foreign capital investments, and a predominant role of the public sector in the direct production of goods and services and in regulating the private economy. Consequently, the role of trade in the national income of South Asian countries has been historically low. Foreign direct investment flows to the South Asian region have risen in the last decade but remain lower than other regions in the world (Figure 1.1).

Trade among countries in South Asia has been traditionally low during the decades following independence. The rate of growth in exports within the South Asian Association for Regional Cooperation (SAARC) region as a percentage of total exports has been historically low and has stayed low in comparison with other trading blocs such as Mercosur and the SADC (Figure 1.2).

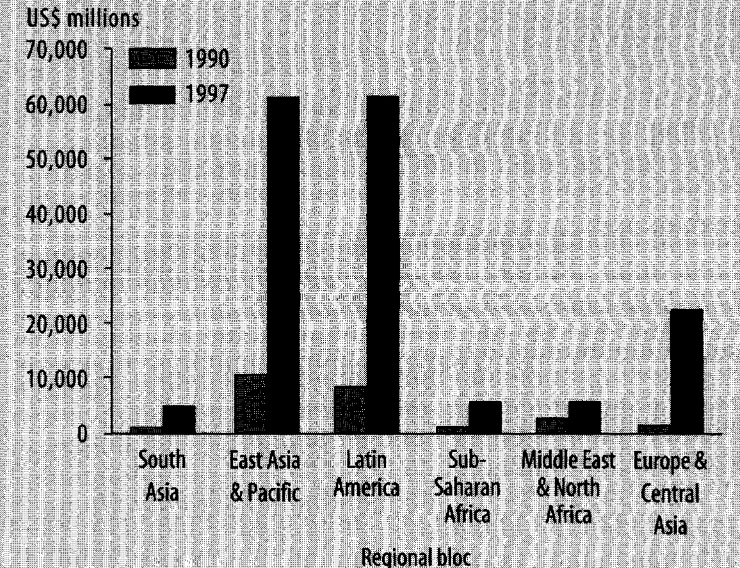
This pattern is reflected within the subregion, with intraregional trade accounting for only a fraction of total third-country trade in each of the countries (Figures 1.3 to 1.6). Trade among the four countries is concentrated in a few key commodities and has not demonstrated much diversification in the last few years. Table 1.3 presents the top 10 commodities traded among Bangladesh, Bhutan, India, and Nepal.

The low official trade figures should also be examined in the context of significant informal trade among the countries concerned. It is estimated that unofficial exports from India to Bangladesh are approximately equal to official exports. The composition of unofficial trade flows is generally complementary to, but markedly different from, official flows. A large portion of the unofficial exports (85 percent) that take place through West Bengal are comprised of food items, live animals (cattle), and consumer goods. The unofficial flow from Bangladesh into India is dominated by a few major products, including synthetic yarn, electronic goods, and spices. A sizeable portion (44 percent) of the unofficial imports consists of gold and Bangladesh currency to pay for Indian goods that are then smuggled into Bangladesh. There is also an unofficial flow of consumer items, such as ready-made garments, from Bangladesh to Tripura. By some estimates this flow is eight to ten times higher than the official flow. The borders between India and Nepal are also porous. According to one estimate, the informal trade between the two countries during the late 1970s and early 1980s could have been eight to ten times higher than the officially recorded trade.

As in other regional trading blocs, such as the ones established by the North America Free Trade Agreement (NAFTA) and Mercosur, regional collaboration in South Asia is complicated by distrust among countries, political agendas that focus on domestic issues, bureaucratic inertia and instability, and infrastructure and logistics constraints. The low levels of mutual trust are reflected in the transport and transit arrangements among the countries in the region.

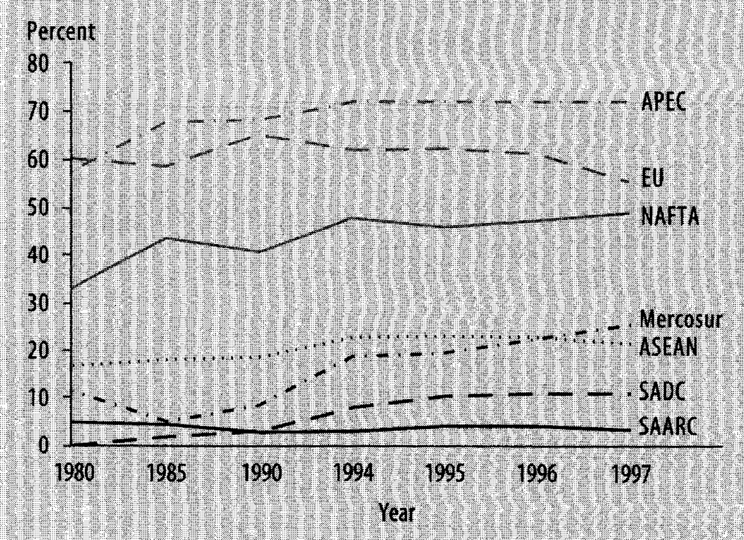
For example, no foreign vehicle is allowed on Bangladeshi roads. As a result, all products transported by road to Bangladesh from the neighboring countries are transferred onto Bangladeshi trucks at the border, adding to the transportation

FIGURE 1.1 FOREIGN DIRECT INVESTMENT, 1990 AND 1997



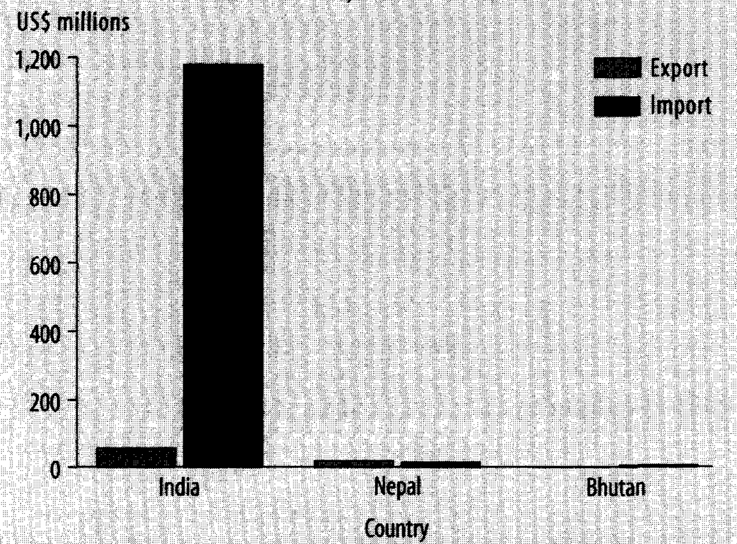
Source: World Bank, *World Development Indicators*, 1999.

FIGURE 1.2 EXPORTS WITHIN REGIONAL TRADE BLOCS AS A PERCENTAGE OF TOTAL EXPORTS, 1980–97



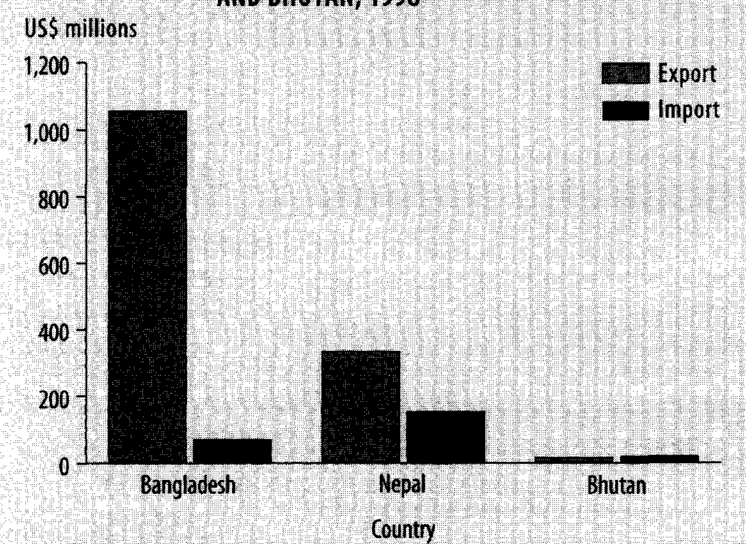
Source: World Bank, *World Development Indicators*, 1999.

FIGURE 1.3 BANGLADESH: TRADE WITH INDIA, NEPAL, AND BHUTAN, 1998



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

FIGURE 1.4 INDIA: TRADE WITH BANGLADESH, NEPAL, AND BHUTAN, 1998



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

costs and delays at the border crossings. Commodities between the Northeastern Indian states and the rest of India get routed around Bangladesh through India's narrow land corridor (referred to as the "chicken's neck" in the subregion). Nepalese trucks are allowed access only on dedicated routes within India, and Indian trucks that enter Nepal must depart within 72 hours. By one estimate, it takes 45 days to transport a container from Delhi to Dhaka, Bangladesh, because the container moves to Tughlakabad, then to Mumbai, India, and Singapore. From Singapore, the container is shipped to Chittagong port, and then to Dhaka. The distance of 2,000 kilometers between Dhaka and Delhi could be covered in two to three days by rail, according to estimates. But this does not happen because India and Bangladesh lack a proper agreement to move container traffic. These delays illustrate the inefficiencies in the subregional trade system that result from inadequate or nonexistent bilateral and regional agreements.

Inefficiencies at border crossings, which result from a combination of factors, pose another major source of constraints in the subregion. The key border crossing point between Bangladesh and India at Benapole, Bangladesh–Petrapole, India, for instance, through which more than 80 percent of trade gets routed, is severely congested. There are long lines of trucks on both sides of the border (up to 1,500) and waiting times of one to five days. The delays are caused not only by protocol requirements requiring transshipment at the border, but also because of two other important factors: procedural inefficiencies for customs clearances and physical infrastructure constraints (such as poorly designed warehouses and narrow access roads) that do not support efficient utilization of existing capacity.

Ports in the subregion pose a serious constraint to international trade, affecting both national and regional economies. Exporters from South Asia cannot guarantee just-in-time deliveries in the global market. Carpet exports from Kathmandu to Germany, for instance, take almost 50 days to reach a European port. Similarly, the average time to move time-sensitive ready-made garments from Dhaka to Los Angeles is about four to five weeks. In both cases, the delays at the port play a predominant role. Improving port performance would bring direct benefits not only for regional commodity movements but, more importantly, for national economic development. The critical importance of an efficient gateway port for Bangladesh is obvious. The performances of Calcutta and Haldia ports have strong implications for the revitalization of Calcutta and West Bengal.

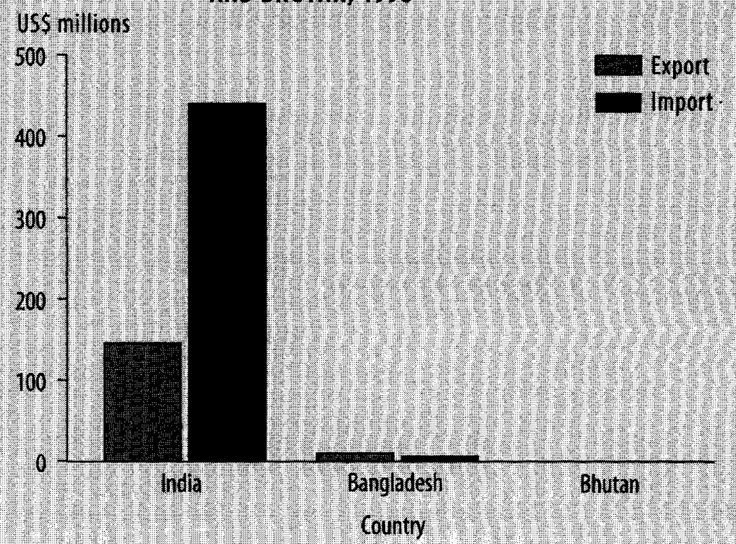
Perhaps more problematic than the total time is the uncertainty of the actual time of the shipments due to the unreliability of the system. Effective infrastructure links that offer convenient access to markets, supported by rational transport and transit procedures across borders and progressive trade facilitation policies, would offer significant options for this region to develop and enhance intraregional and third country trade.

Impediments to transport and trade facilitation in the South Asian region can be classified as follows:

- Documentation and procedural inefficiencies. The procedures involved in customs inspections, excessive documentation requirements, multiple signatures, lack of transparency, and informal payments lower the efficiency of goods movement and set back regional competitiveness.

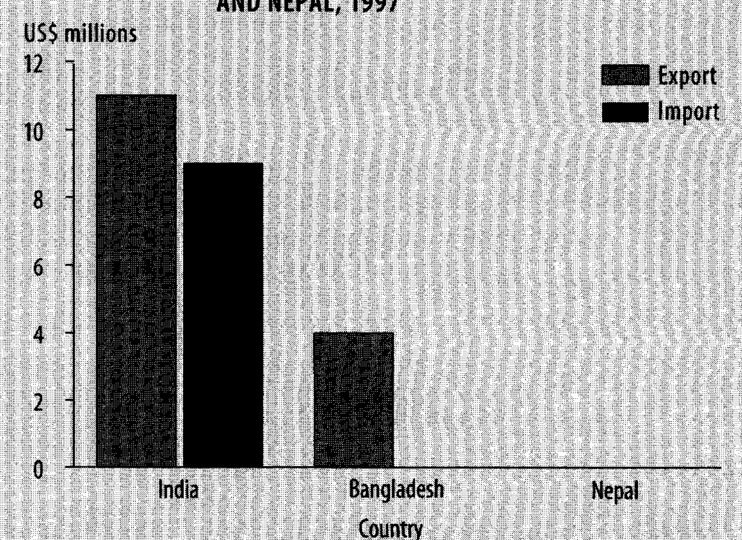
- Impediments caused by protocol. These include the various restrictions on cross-border travel of trucks and route choice.

FIGURE 1.5 NEPAL: TRADE WITH INDIA, BANGLADESH, AND BHUTAN, 1998



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

FIGURE 1.6 BHUTAN: TRADE WITH INDIA, BANGLADESH, AND NEPAL, 1997



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

TABLE 1.3 KEY COMMODITIES TRADED IN THE SOUTH ASIA SUBREGION

1996		1997		1998	
Commodities	**Percent**	**Commodities**	**Percent**	**Commodities**	**Percent**
India export to Bangladesh					
Total trade	100.0	Total trade	100.0	Total trade	100.0
Textile yarn	31.4	Textile yarn	27.3	Textile yarn	27.3
Cotton fabrics, woven	7.2	Rice	12.3	Rice	12.3
Rice	4.7	Cotton fabrics, woven	7.7	Cotton fabrics, woven	7.7
Motor vehicle parts and accessories	4.6	Lime, cement, building products	4.7	Lime, cement, building products	4.7
Iron, steel, plate, sheet	3.4	Iron, steel, plate, sheet	2.8	Iron, steel, plate, sheet	2.8
Lime, cement, building products	3.3	Coal, lignite, and peat	2.4	Coal, lignite, and peat	2.4
Stone, sand, and gravel	2.7	Motor vehicle parts and accessories	2.1	Motor vehicle parts and accessories	2.1
Cycles, etc. motorized or not	2.5	Rubber tyres, tubes, etc.	2.0	Rubber tyres, tubes, etc	2.0
Rubber tyres, tubes, etc.	2.2	Textile, leather machinery	2.0	Textile, leather machinery	2.0
Aluminium	2.0	Feeding stuff for animals	1.9	Feeding stuff for animals	1.9
Bangladesh Export to India					
Total trade	100.0	Total trade	100.0	Total trade	100.0
Fertilizers, manufactured	92.0	Fertilizers, manufactured	92.7	Inorganic elements, oxides, etc.	44.0
Articles of plastic	7.1	Petroleum products	3.8	Fertilizers, manufactured	38.2
Tea	0.2	Tea	1.2	Tea	5.6
Alcohols, phenols, etc.	0.1	Alcohols, phenols, etc.	0.9	Iron, steel, plate, sheet	2.7
Fish, fresh, chilled, frozen	0.1	Metal tanks, boxes, etc.	0.5	Leather	1.7
Other machinery for special industry	0.1	Leather	0.2	Metal tanks, boxes, etc.	1.6
Under garments not knit	0.1	Textile articles	0.2	Mens outerwear not knit	1.2
Leather	0.1	Articles of plastic	0.1	Under garments not knit	0.8
Metal tanks, boxes, etc.	0.0	Special transactions	0.1	Petroleum products	0.8
Petroleum products	0.0	Floor coverings, etc.	0.1	Womens outerwear nonknit	0.5

Source: UN COMTRADE data, 1998.

- Knowledge and institutional inefficiencies. Because efficient trade facilitation and customs management practices are knowledge- and human capital-intensive, the acquisition of such crucial competency in the workforce is a major challenge for the member countries.

- Physical infrastructure gaps or inefficiencies. These include poor, inadequate, or incompatible physical transportation links; a lack of such physical facilities as warehouses, parking, and storage at border crossings and ports; and a lack of terminal facilities.

RECENT DEVELOPMENTS IN THE SUBREGION

Since the late 1980s, and especially since the early 1990s, there has been a clear shift from the protective trade regime. Most South Asian countries have adopted policy reforms that have made their economies more open to the rest of the world, and they have promoted greater interest in intraregional trade. India, Pakistan, Bangladesh, Sri Lanka, Maldives, Nepal, and Bhutan established SAARC in 1985. The agreement began with the SAARC Preferential Trading Arrangement (SAPTA). The countries now are pursuing initiatives to establish the South Asia Free Trade Area (SAFTA).[3]

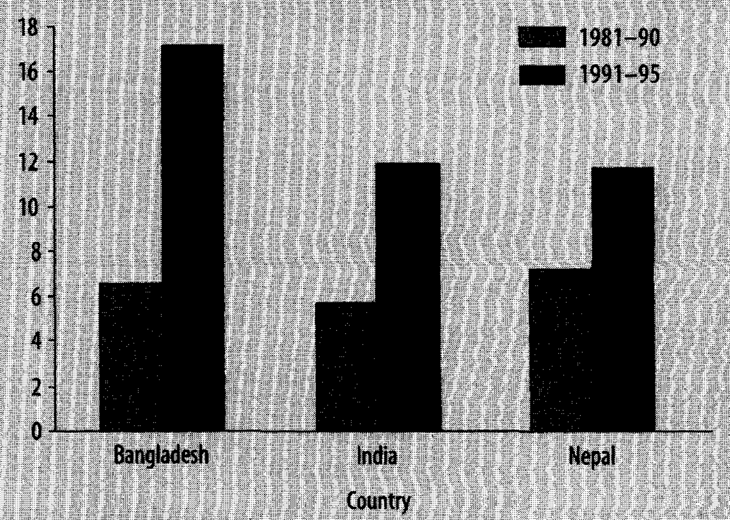
At both the regional and subregional levels, there has been further interest in the last decade in improving links among the countries. Relations have begun to thaw both because of the political leadership of the respective countries and because of SAARC and the planned creation of SAFTA in the near future.

As in other parts of the world, this drive toward regional cooperation in South Asia is occurring in the context of major changes in the economic institutions in these countries—growing liberalization, deregulation and decontrol of industries and markets, reduction in the economic role of the state, and an expanding role for the private sector. Although these processes are still nascent, there has been a steady increase in the share of trade to GDP, and a growing economic dynamism that is reflected by the robust income growth in the last decade, which is second only to that of East Asia (World Bank 2000).[4] The share of trade to GDP is 25 percent. Figures 1.7 to 1.9 show the improvement in export performance consequent to trade reforms, with Bangladesh's export growth particularly impressive. The share of manufactured exports as a proportion of total goods exports also shows rapid growth.

3. A proposed World Bank study is examining regional integration in trade.

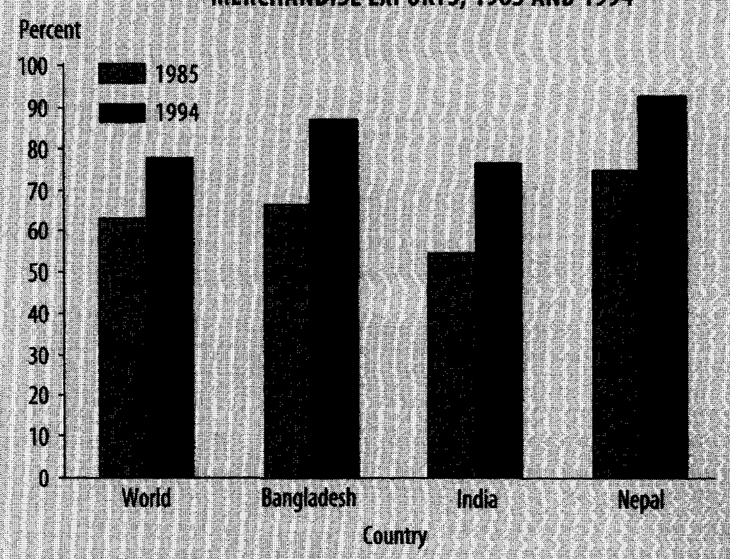
4. *World Development Report* 2000, the World Bank.

FIGURE 1.7 REAL EXPORT GROWTH IN SOUTH ASIA, 1981–95



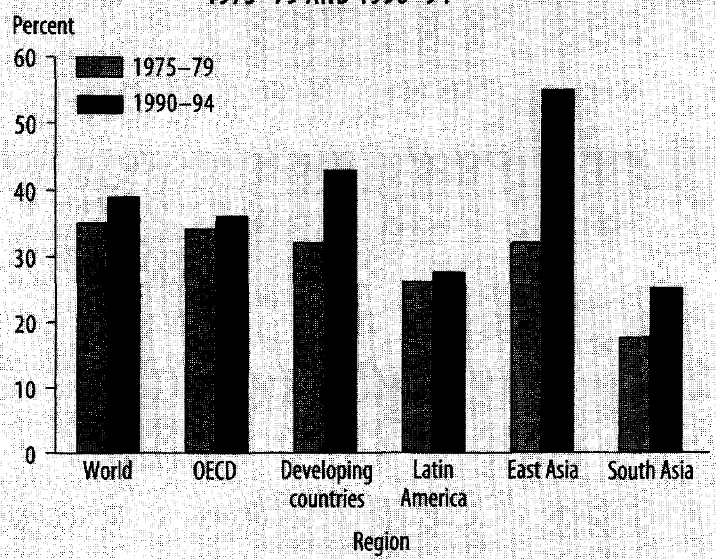
Source: Bandara and McGillivray (1998).

FIGURE 1.8 SHARE OF MANUFACTURING EXPORTS IN TOTAL MERCHANDISE EXPORTS, 1985 AND 1994



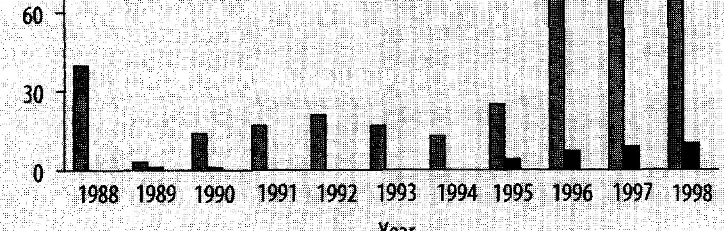
Source: World Bank, *World Development Indicators*, 1999.

FIGURE 1.9 RATIO OF TOTAL TRADE TO GDP, 1975–79 AND 1990–94



Source: Bandara and McGillivray (1998).

FIGURE 1.10 NEPAL EXPORTS TO INDIA, BANGLADESH, AND BHUTAN, 1988–98



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

Though intraregional trade is only a fraction of total trade, and the growth rate of intraregional trade as percentage of total trade has been slow, in terms of absolute value there has been a multifold increase in intraregional trade in the last decade (Figures 1.10 to 1.12). Between 1988 and 1998, India's exports to Bangladesh increased in value terms by over six times, while exports from Bangladesh to India increased four to five times. A similar pattern has emerged for Nepal–India trade. Trade between Bangladesh and Nepal and Bangladesh and Bhutan has also begun to rise, though not so steeply.

With economic liberalization, there is slowly mounting domestic and international private sector interest in the region. The Indo–U.S. Joint Council Summit in December 1997 in Calcutta brought prominent private sector groups from the United States and South Asia to examine opportunities for investment.[5] On January 15, 1998, the prime ministers of Bangladesh, Pakistan, and India, accompanied by business delegations from each of the countries, met at a business summit in Dhaka to discuss issues related to the establishment of regional energy grids, as well as improvements in trade relations and transport logistics to ensure a smoother flow of goods and services among the countries. Local business communities are pursuing improvements in trade and transport logistics to improve the flow of goods and services and enhance communications among the countries in the subcontinent.

In the area of transport and trade facilitation in particular, there have been several important developments in the last two or three years that clearly indicate the beginnings of change. The following need to be supported:

5. The World Bank was represented by the India country management team member.

- The Emerging East Initiative is a key private sector development within the subregion to promote economic growth, development through improved investments, trade, and transportation in the subregion. In 1998, the chambers of commerce of Bangladesh, Bhutan, India, and Nepal signed a joint memorandum of understanding to this effect.

- A "subregional quadrangle" consisting of Bangladesh, Bhutan, India, and Nepal was formed in 1998 under the auspices of SAARC to examine development opportunities in several sectors.

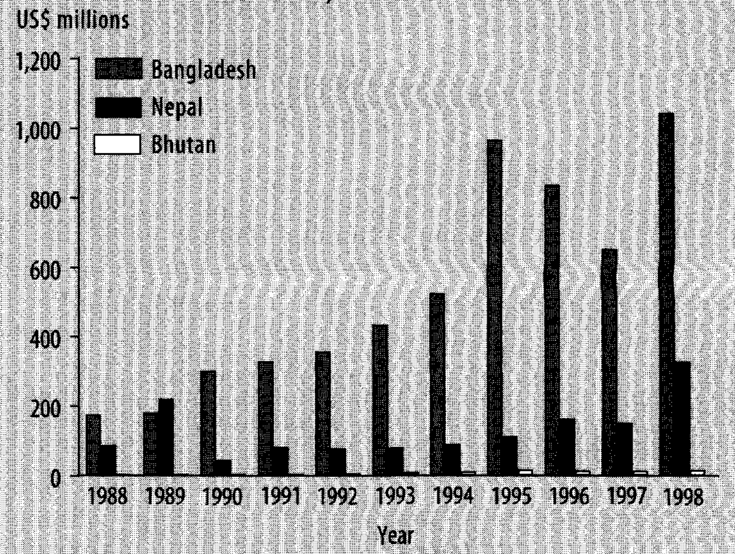
- India and Bangladesh renewed the Inland Waterways Transit Treaty in October 1999. They removed some of the anomalies that have existed for the last few decades, allowing for a more equitable transit opportunity that should benefit both countries.[6]

- Bangladesh and India launched a direct bus service between Dhaka and Calcutta in March 1999.

- Transshipment for Indian cargo through Bangladesh is being debated in Bangladesh. If well conceived and regulated, this effort could benefit the eastern and northeastern parts of India and Bangladesh. This debate has been ongoing since fall 1999.[7]

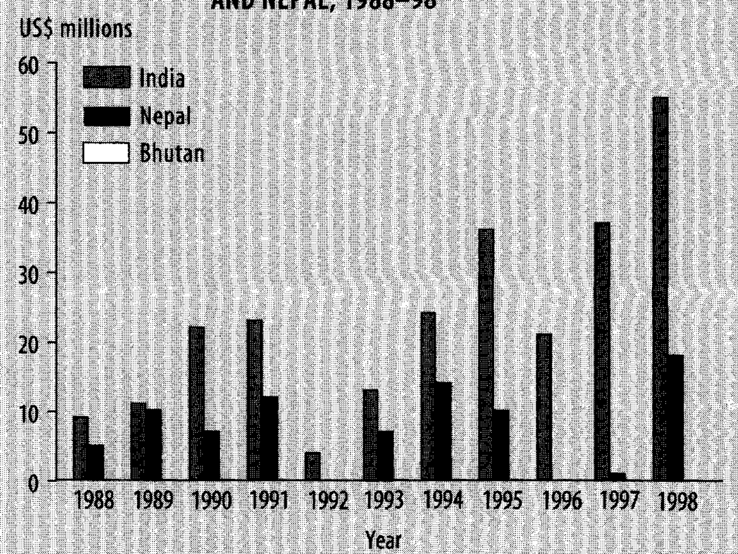
- India and Bangladesh are engaged in sustained efforts to integrate their railway systems. Both railways have completed the work for open-

FIGURE 1.11 INDIA EXPORTS TO BANGLADESH, BHUTAN, AND NEPAL, 1988–98



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

FIGURE 1.12 BANGLADESH EXPORTS TO BHUTAN, INDIA, AND NEPAL, 1988–98



Source: International Monetary Fund (1999). "Direction of Trade Statistics" and "International Financial Statistics Yearbook," Washington, D.C.

6. The Numaligarh refinery in Assam is already examining options to move refinery products via Bangladesh inland waterway route to Calcutta.

7. The Bangladeshi government has commissioned a study to examine transshipment options under the Bank's Export Diversification Project.

ing the entry through the Petrapole–Benapole border crossing, in addition to the three existing crossings on the western side of Bangladesh. On the eastern side of Bangladesh, plans to connect rail links between Akhoura, Bangladesh, and Agartala, India, have already been agreed to by the two countries.

- The governments of Bangladesh, Nepal, and India signed the Phulbari treaty in 1998 to allow Nepalese goods access to Bangladeshi markets.

- Bangladesh introduced preshipment inspection on a mandatory basis in the spring of 2000.

POTENTIAL FOR GROWTH: THE NEED FOR A SHARED VISION

As illustrated by such developments as the establishment of the subregional quadrangle, the stakeholders in the subregion clearly see that development would be effectively realized by:

- A long term vision in which the economies are more closely integrated, and are characterized by global and intraregional transport, trade, and investment activities;

- New economic opportunities that provide employment, attract domestic and foreign investment, and provide the essential basis for more rapid economic growth;

- Optimal development and management of the rich natural resources of the region; and

- Private sector-led growth in an enabling policy environment.

The realization of these goals is related to the ability of the countries to grow rapidly. In turn, this ability is dependent upon the countries being well linked to global and regional markets, and upon the efficiency and speed with which the countries are able to move goods and services from production centers to final markets. Improvement of transportation networks and logistics not only facilitates these links to global and regional markets, but it also increases the potential for cross-border integration of manufacturing and service activities and the potential for exploiting the economies of scale in a larger regional market. These changes would have significant implications for opening up one of the poorest regions in the world.

An example of expanding to regional markets is that of Bhutanese fruit and fruit products finding markets in Bangladesh and India. Nepal is also trying to expand its market for agricultural products (such as jhumla apples) to Bangladesh and India.[8] The Northeastern Indian states have good potential to find markets in Bangladesh for horticultural products that are currently confined to local markets or informally traded across borders for low prices. Similarly, the Northeastern states could obtain fish from Bangladesh instead of having it transported from Andhra Pradesh, Bihar, West Bengal, and Uttar Pradesh. It is estimated that the Northeastern states get 90,000 tons of fish per year from these other states.[9] According to the report of the Committee on Clause Seven of the Assam Accord (1990), Assam was spending almost as much to transport essential commodities such as grains, fish, and edible oils from "mainland" India as for the commodities

8. The Phulbari treaty that allows Nepalese cargo access to Bangladesh via a new route through Banglabandh was supposed to facilitate this trade. Though there are physical and logistical constraints that impede free flows, Nepal is keen to extend the treaty.

9. The estimate comes from B.G. Verghese's 1996 book, *India's Northeast Resurgent: Ethnicity, Insurgency, Governance, and Development*, published by the Centre for Policy Studies, New Delhi, India.

themselves.[10] The Indian-Bangladeshi trade groups, as well as policy research groups in the countries, have identified a number of possibilities for collaborative ventures in such areas as fertilizer, cement, and gas-based industries.[11] For both Nepal and Bangladesh, ready-made garments are the top export commodity for international markets.

In discussing regional transport and logistics systems, a fundamental question that is often asked is: To what extent does the economy of the transit country benefit from improvements in transport and logistics systems? The country providing the transport infrastructure could, in principle, recover its investment through appropriate charges to the transit vehicles and cargo while deriving added value from complementary services provided to these transport activities. The value added is greatest when the transit country provides an efficient international seaport gateway and some of the trucking or rail services used in the logistics chain.

A more critical question that is of direct relevance to our work in South Asia is: To what extent do transport logistics improvements benefit the poorer members of society? The more immediate benefits would be better access to domestic and foreign markets for local products and increased employment associated with upgrading the transport infrastructure. The medium- and long-term benefits are the continuity and even expansion of employment in economic activities or industries that, without better logistics, would either not have been established or would have rapidly lost market share. The extent and allocation of benefits would, of course, be affected by:

- How well the isolated or landlocked regions are served;
- The extent to which the new economic activities are labor-intensive;
- How the charges are structured (who pays and who benefits); and
- How efficient are the logistics systems that will help minimize cost to the economy.

The experiences of countries in other regional trade blocs such as Mercosur, NAFTA, and SADC could provide insights to South Asia, because the region is looking increasingly toward both global markets and greater trade and investment relationships within the region.[12] An example for South Asia is that of Rotterdam port, which has maintained its position as one of the world's largest ports for four decades. There are clear lessons in Rotterdam's experience for managers of ports and airports in developing countries as they organize their trade and transport chains. Rotterdam has retained its prominent position in the global transportation networks by:

- Acquiring the knowledge and competency necessary to offer its customers and industrial tenants state-of-the-art trade and transport chain services; and
- Engaging in strategic scanning of the larger economic and transportation environment, identifying adaptive future paths in the context of emerging change trends, and keeping up to date by implementing the relevant physical, human, and institutional investments.

10. Ibid.

11. The possibilities were discussed at the 1995 meeting, Indo-Bangladesh Dialogue: Economic and Trade Cooperation. The Center for Policy Dialogue, India, and the Center for Policy Dialogue, Bangladesh, hosted the meeting as part of an ongoing dialogue between nongovernmental and research groups.

12. For a more detailed discussion of global case studies on regional integration, please see publication, *Integration of Transport and Trade Facilitation,* 2001, World Bank.

APPROACH

As this chapter mentioned earlier, the countries in the subregion are only slowly beginning to open up to each other and to external markets. As in other parts of the world, regional and subregional issues are still addressed with sensitivity. Given the political sensitivities of regional issues, the study team did not adopt the standard models in sector work or project preparation for the work under the Regional Initiative on Transport. Instead the approach adopted under the Regional Initiative on Transport sought to build confidence among key regional stakeholders, support increased dialogue, provide for a better understanding of key issues and options by learning from experiences in other parts of the world (such as NAFTA, the European Union, Mercosur, and the SADC), create a greater popular awareness of the mutual benefits of cooperation, and establish a high level of commitment in both the government and private sectors.

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

- 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.
- Knowledge sharing and consultations in order to help develop a joint vision for the subregion that will enable moving out of national strategies to regional strategies. To move toward this objective, a regional technical workshop on transport and transit facilitation was held in Bangkok in April 1999.[13] Regional stakeholders from the government and private sector were able to draw lessons for South Asia from international experts on global regional integration cases. The proceedings and the recommendations that emerged from intensive discussions among the delegates at the regional workshop were discussed in national consultative meetings in the countries to determine priorities for the countries.[14]
- Partnership building with and among governments, private sector organizations, research institutions, and other development organizations. The task team therefore focused on building allies as well as broad coalitions of national stakeholders and development partners from the government, private business groups (such as chambers of commerce, freight forwarders, exports, and shippers), donor and development organizations (such as United Nations agencies and the Asian Development Bank). Private sector representatives of the four relevant countries were invited to participate in a consultative workshop at a regional meeting in Kathmandu to discuss the principal constraints they face in their operations and examine options for improving transport links and trade in the subregion.[15]
- An integrated and cross-sectoral approach that takes a comprehensive view while identifying specific short- and medium-term solutions for a region that could well be one of the world's poorest pockets.

13. The April 1999 Bangkok workshop was called the South Asia Regional Technical Workshop on Transportation and Transit Facilitation. The World Bank and the United Nations Economic and Social Commission for Asia and the Pacific sponsored it.

14. Proceedings of the Regional Technical Workshop on Transportation and Transit Facilitation can be found on the World Bank website at: http://www.worldbank.org/html/fpd/transport/publicat/twu-34.pdf. The presentations are available in pdf format at: http://www.worldbank.org/html/fpd/transport/tr_facil/present.htm.

15. Please see Background Note 1 for a summary of discussions at the regional private sector meeting in Kathmandu.

In its country operations, the Bank and the countries themselves are confronting development issues that have regional implications. The Regional Initiative on Transport is consistent with CAS for the relevant countries and reflects client interest in the regional dimension for sectoral activities as noted in the CAS for India (dated December 19, 1997), Nepal (1998 fiscal year), and Bhutan (1999 fiscal year) and the forthcoming CAS for Bangladesh. There is significant synergy with the transport sector strategies, such as the Bangladesh Transport Sector update and the forthcoming India Transport Sector update, as well as with relevant ongoing lending and technical assistance projects (such as the Nepal Multimodal Transport and Transit Facilitation project and the Bangladesh Export Diversification project). The work has strong synergy with the transport and trade facilitation work performed by other development agencies, including the Asian Development Bank, United Nations Conference on Trade and Development, and United Nations Economic and Social Commission for Asia and the Pacific.

This report contains a set of analytic tools that include a Geographic Information Systems database for the region and a logistics cost model developed by the Bank study team in collaboration with stakeholders in the subregion (Map 7 at the end of this report).[16] Together they provide a strategic framework for identifying key impediments ranging from physical infrastructure gaps, gaps and inefficiencies in services at transshipment points and border crossings, constraints at border crossings and ports, an analysis of alternative routes for moving strategic commodities for regional and international trade, and, more importantly, a transparent and user-friendly analytic instrument that will allow improved and more information-based dialogue among countries and between the public and private sectors on regional and bilateral trade, transit, and transport protocol.

Consistent with the overall approach of the regional initiative, this report does not purport to offer 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 a strategic framework for improved and rational dialogue among the countries, as well as among key sectors in the countries, on substantive issues in transport, logistics, and regional connectivity. Instead of single solutions, it offers an analytic framework and a user-friendly decision support system to address improved regional movement of goods and services, allowing for moving issues from a purely political realm to a more economic and commercial level. As the countries are privatizing and reaching out to global markets, it is becoming more apparent that intrinsic dependencies and comparative advantages must be exploited so that the subregion can open itself to new economic activities. The analysis starts with the premise that strengthening the linkages among the countries is not a zero-sum game.

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

- People in both government agencies and private sector organizations (including transport operators and service providers, intermediaries, and private business officials) in the relevant countries and regions.

- Within the Bank, the report complements the individual country work program. At the network and thematic groups level, the work and

16. In addition, a report that compiles international case studies of transport and trade facilitation arrangements in selected regional trading blocs is also available. Please see publication, Lakshmanan, T. R., U. Subramanian, B. P. Anderson, F. A. Leautier (eds.). *Integration of Transport and Trade Facilitation: Selected Regional Case Studies*. The World Bank, 2001.

the analytic approach and tools developed add to the knowledge management base, contributing to the regional transport work being done in other regions of the Bank.

For the analytic framework we took a microeconomic, practical hands-on approach that evolved with close work with the private sector in the subregion. The analytic approach helped us not only determine distance and transportation costs, but also time, reliability, and cargo safety, including market and commodity characteristics.

In order to understand how well the markets and transportation of commodities work, we chose strategic routes and commodities. Because our larger objective was to open up a subregion that had been lagging, the selection of the strategic routes and commodities took into account the regional development aspect as well. From the sample route and commodities studies, we get an in-depth understanding of impediments in transportation and other logistics in moving commodities on existing routes to regional and international markets.

We then looked at promising route linkages to understand what makes some routes more cost-effective than others, whether they could be further improved, and why the more cost-effective routes were not being used. The results of the analysis allow us to point to specific problems regarding specific commodities and routes, as well as to more general problems affecting the subregion:

- Border crossings that include ports are a critical cause of delays and logistics costs.
- There is a need for greater flexibility in transporting cargo between routes and between modes of transportation, not only because of the characteristics of markets and commodities, but also because of fundamental changes occurring in international trade and logistics.

The report does not attempt to define specific investment projects, nor does it attempt to quantify the larger benefits to the economy from improved regional transport and logistics. The analysis provides insights into cost savings to the private sector for specific routes and commodities through transport and logistics efficiency improvements and different route choices. The savings from improved transport logistics systems can produce significant cost savings to the private exporter, importer, and shipper. However, as a percentage of the costs of delivered goods in the final market, the logistics costs in the studies in this report—although higher than international standards—are not outrageously higher. The reason, of course, is that transport logistics costs are a small part of the overall delivered costs of goods, except for very low-value goods (such as cement and limestone). The important point to note here is the underlying and more dynamic implications of poor logistics and higher associated transport costs. The real benefit of improved transport logistics are reduced delivery times, more reliable deliveries, and increased cargo security, all of which are critical parameters in the emerging global market in which market expectations have risen substantially in the last few years.

Though the countries in the region (to varying extents) have started to liberalize trade, make their industrial sectors more efficient, reduce government involvement in commercial activities, and improve transportation networks and institutions, they have not been as assiduous in improving the logistics systems to the same extent. Failure to address logistics inefficiencies not only compromises the extent and depth of other reforms, but it also threatens loss in market share and could weaken the current competitive edge of these countries in providing low-wage work forces. Examining the garment sector alone, the implications include (a) fold: loss of employment to a large unskilled and semiskilled workforce, and (b) denial of the same workforce opportunities to upgrade skills and income as the market dictates higher-grade products.

STRUCTURE OF THE REPORT

This first chapter has provided an overview of the socioeconomic and growth profile of the subregion. It examined regional and international trade patterns in light of the transport and logistics constraints. The second chapter examines specific impediments in the transport logistics chain of commodity movement in the context of regional and international trade, focusing on constraints with line-haul movement and on impediments at border crossings and ports. The analysis draws heavily on origin-to-destination studies of selected strategic commodities for each of the concerned countries.

The third chapter provides a framework to examine alternative routes for the movement of commodities, either within the region or to international markets. It takes into account all costs of transportation and logistics and the availability of physical links. Issues of modal choice based on factors such as time sensitivity of market, commodity value, and commodity perishability, are also addressed. Although the chapter presents the key constraints and opportunities in the subregion in terms of strategic linkages and areas for priority attention, it does not advocate one physical route over another. We believe that international routings are best determined by the concerned stakeholders that include governments, network users, and service providers. What we have attempted to do is provide a rational framework under which such decisions can be made in a participatory transparent manner, in which those who will be affected can move beyond purely political considerations to commercial and economic considerations.

The fourth chapter highlights the constraints faced by private businesses, freight forwarders, exporters and importers, and shippers in the subregion. The constraints and options that we present reflect the views of the private sector participants from the subregion at the regional consultative meeting hosted by the Bank in February 1999 in Kathmandu, which we mentioned earlier.[17] In addition, the chapter also presents some innovative private sector initiatives in the subregion in the area of transport.

The fifth chapter of the report summarizes the key constraints in transportation and logistics. It discusses the broad set of options for consideration in the countries. It also attempts to outline the role that the Bank could play in assisting the subregion reduce its transportation and logistics constraints.

The sixth and final chapter outlines the next steps that would be important to consider for national and regional action in the short and long terms.

17. Summary proceedings of the Consultative Workshop Transport and Trade Facilitation in the subregion. Please see Background Note 1.