



U.S. Trade and Development Agency  
South Asia Transport and Trade Facilitation Conference

Preliminary Country Briefing Report  
Fall 2005

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# 2006 South Asia Transport and Trade Facilitation Conference Briefing Book

## Country and Sector Analysis

Prepared for  
US Trade and Development Agency

Prepared by  
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## 1. Introduction

The purpose of this *Briefing Book* is to provide information for two principal objectives:

- To promote intra-regional trade and economic integration among South Asian nations.
- To identify specific short- and medium-term commercial opportunities for U.S. firms in the transportation and IT / logistics sectors

In 2004, a World Bank report demonstrated low levels of intra- and inter-regional trade for South Asia. In order to stimulate trade and realize the economic development promise of the Doha Agenda, the cost of transportation and trade would need to be reduced. It is predicted that improvements in the region's transportation sector could raise intra-regional trade by \$2.6 billion. Therefore, improving international transportation services, customs and ports, and logistics management — *trade facilitation* — will require substantial new investment, additional technical assistance and coordinated multilateral efforts. Transportation and trade facilitation projects are now starting to figure prominently in South Asian Country Assistance Strategies and the World Bank's lending operations.

### 1.1 Why transport, trade facilitation, and logistics matter

Trade-related transaction costs — freight charges as well as other logistical expenses— are a crucial determinant of a country's ability to participate in the global economy. Transport costs determine potential access to foreign markets, which in turn explains up to 70 percent of the variance in the countries' GDP per capita. Among the problems that add to the costs of trade are:

- Frequent reloading of goods
- Port congestion affecting turnaround time for feeder vessels
- Complicated customs-clearance procedures
- Complex and nontransparent administrative requirements, often pertaining to documentation
- Limited use of automation leading to high costs for processing information
- Uncertainty about the enforceability of legal trade documents such as bills of lading or letters of credit.

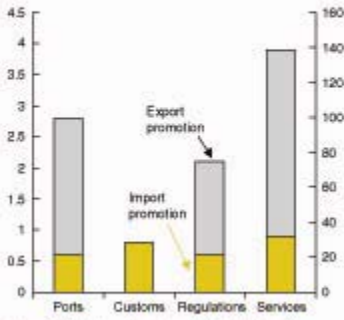
*Investments in improving ports, customs, and trade-related institutions can have a substantial payoff* Building capacity in trade-related services can provide the great gains in this new environment, according to a World Bank report (2004). If the countries now below the world average in trade-facilitation capacity could be raised halfway to the average, trade among 75 countries would increase by \$377 billion annually, according to new analyses. Facilitating trade to improve export-led growth therefore depends on policy reform, technical assistance, and modernization of infrastructure. All trading partners can benefit when barriers are removed and capacity is strengthened—with many of the benefits of reform and modernization flowing directly to developing countries.

The costs of transporting developing-country exports to foreign markets are a much greater hindrance to trade than are tariffs. A comparison of countries' "transport cost incidence" (the share of international shipping costs in the value of trade) and their tariff incidence (the trade-weighted ad valorem duty actually paid) shows that for 168 out of 216 U.S. trading partners, transport cost barriers outweigh tariff barriers. A doubling of shipping costs is associated with slowdowns in annual growth equivalent to more than one-half of a percentage point.



**Figure 5.3 Facilitating trade in less-efficient countries would bring significant gains**

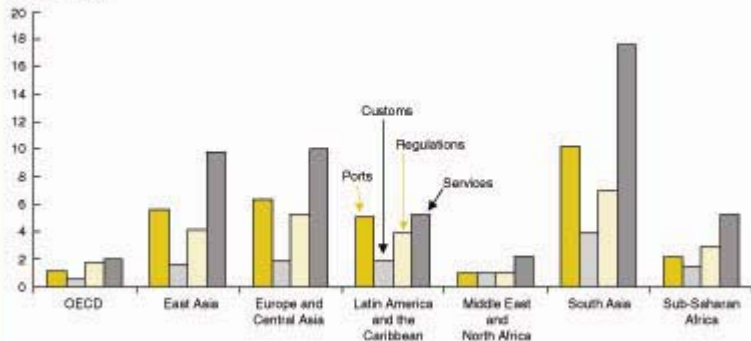
Trade gains from raising handling capacity in 75 below-average countries halfway to the global average (percent change and dollar gain)



Source: Calculations based on table 4 in Wilson, Mann, and Otsuki (2003b).

**Figure 5.4 The impact of individual trade-facilitation measures differs significantly from region to region**

Trade gains (exports plus imports) under the "halfway to average" scenario; gains from domestic and partners' reforms (percent change)



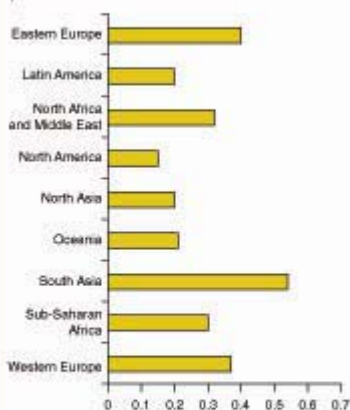
Source: Wilson, Mann, and Otsuki (2003b).

Policies to remove non-tariff barriers and accelerate the flow of goods and services across borders to facilitate trade are thus at the forefront of today's trade-policy debate. Cross-country evidence suggests that high transport costs tax growth in countries with underdeveloped transport links (World Bank 2001). Inefficient internal transport systems can widen income inequalities within countries by separating the hinterland regions from the global marketplace.

The impact of individual trade-facilitation measures differs significantly from region to region, but improvements in service-sector infrastructure would provide the largest gain in sum of imports and exports in all regions— particularly in South Asia. The potential gains from improvements in port efficiency and services liberalization are great— again, particularly in South Asia (see above).

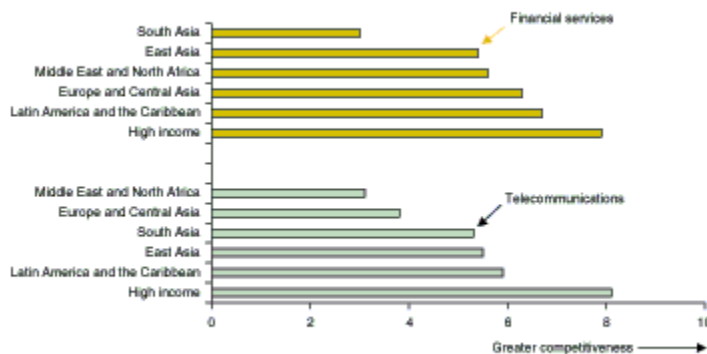
**Figure 5.2 Higher trade costs reduce global welfare**

Overall welfare losses, by region, from a one-percentage-point ad valorem increase in trade costs



Note: The measure of welfare loss—"equivalent variation" divided by GDP—was devised by Walkenhorst and Dibel (2002). "High-risk" regions will suffer greater welfare losses than lower risk regions from an identical increase in frictional costs of trade. Similarly, some sectors are more sensitive than others to increases in frictional costs. Source: Walkenhorst and Dibel (2002).

**Figure 4 Developing countries lag behind rich countries in services liberalization**



Source: World Bank Global Economic Prospects 2002, based on data from Mattoo, et al. (2001).



## 1.2 Tariffs and Foreign Direct Investment in South Asia

After the Middle East and North Africa, South Asia is the region least integrated into the global economy. This is particularly striking in the case of agricultural products, where the tariffs levied on developing-country exports were frequently twice as high as the already high rates levied by the industrial countries. For example for agricultural imports to South Asia, tariffs from other developing countries range from 27.7% to 38.4%. In contrast, tariffs on agricultural imports from developed countries to South Asia were only 16.4%. For nonagricultural products, the differences are even greater in proportional terms. The tariffs imposed by South Asia on imports from developing countries, for instance, are frequently five times as high as the rates imposed by industrial countries.

**Table 2.6 Industrial countries levy higher tariffs on imports from developing countries than from other industrial countries—and some regions have high tariff walls**

*Protection rates facing exporters in each region, 1997 (percent)*

Exporting Region	Importing Region						Industrial
	East Asia	Europe and Central Asia	Latin America	Middle East	South Asia	Sub-Saharan Africa	
<b>Agriculture</b>							
East Asia	31.0	30.3	15.5	45.3	38.4	19.0	30.5
Europe and Central Asia	24.2	36.4	23.8	55.3	34.2	12.7	35.1
Latin America and Caribbean	42.1	36.0	14.8	50.3	29.7	24.7	20.4
Middle East	23.0	43.4	14.9	76.4	31.8	18.9	23.4
South Asia	16.6	34.6	13.7	41.1	27.7	11.0	25.8
Sub-Saharan Africa	26.7	20.3	14.4	39.1	30.9	33.6	23.6
Industrial	33.3	43.7	20.1	65.4	16.4	24.0	15.3
<b>Nonagriculture</b>							
East Asia	8.2	13.8	15.1	12.2	28.1	14.5	5.1
Europe and Central Asia	6.4	6.4	11.4	8.6	25.8	12.8	5.9
Latin America and Caribbean	4.3	6.7	15.4	8.9	19.4	11.9	2.1
Middle East	5.4	11.5	8.8	11.4	33.6	11.7	6.0
South Asia	7.1	11.0	13.6	10.2	19.0	17.4	8.1
Sub-Saharan Africa	4.4	6.1	11.7	6.1	27.6	20.6	4.2
Industrial	7.4	9.6	8.5	10.4	25.2	12.2	1.0

Source: Weighted averages calculated using GTAP Version 5 Database ([www.gtap.org](http://www.gtap.org)). Most-favored-nation rate except for major free-trade blocs such as the European Union and the North American Free Trade Agreement. Does not include other preference schemes.

Also, industrial-country barriers for non-agriculture products are particularly important in South Asia, where they account for close to two-thirds of the tariff burden (see below), as a percentage of each region's exports. By contrast, the industrial-country share is closer to 40 percent in East Asia, the Middle East and North Africa, and Sub-Saharan Africa, and under 30 percent in Latin America and the Caribbean.



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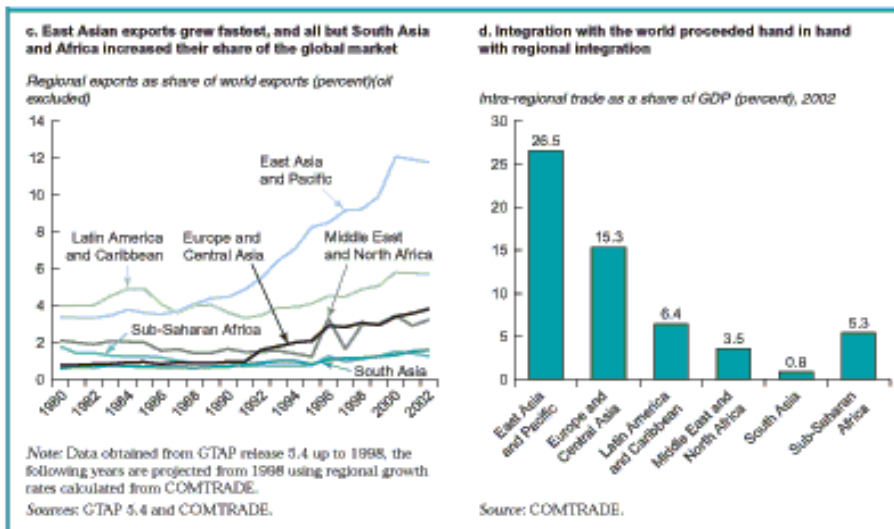
**Table 2.7 Developing countries pay large amounts in tariffs to their neighbors**

The share of the burden on each region's exports imposed by region of destination (percentage of total barriers faced by exporting region)

Exporting Region	Importing Region							Total
	East Asia	Europe and Central Asia	Latin America	Middle East	South Asia	Sub-Saharan Africa	Industrial	
<b>Agriculture</b>								
East Asia	32.8	0.7	0.6	5.6	4.7	2.1	53.6	100
Europe and Central Asia	1.7	19.8	0.6	13.9	0.4	1.4	62.3	100
Latin America (LAC) and Caribbean	13.7	1.6	10.8	14.8	1.4	1.9	55.6	100
Middle East and North Africa	2.1	3.0	0.6	44.4	1.6	1.0	47.3	100
South Asia	12.6	2.0	0.7	28.2	7.5	1.8	47.4	100
Sub-Saharan Africa	7.1	2.3	0.4	4.8	4.0	10.0	71.4	100
Industrial	16.1	3.2	5.0	19.1	0.6	2.7	53.3	100
<b>Nonagriculture</b>								
East Asia	37.4	1.5	6.3	4.8	5.9	4.2	39.9	100
Europe and Central Asia	2.8	13.5	2.1	5.8	2.0	2.9	71.0	100
Latin America and Caribbean	3.7	0.3	63.8	1.7	1.2	1.5	27.7	100
Middle East and North Africa	8.2	1.8	2.4	12.4	28.6	3.1	43.4	100
South Asia	8.8	0.6	3.1	9.7	6.8	7.9	63.0	100
Sub-Saharan Africa	9.0	0.7	4.2	1.7	7.7	40.4	36.3	100
Industrial	31.1	6.8	15.3	14.3	6.5	6.1	19.9	100

Sources: Weighted averages calculated using GTAP Version 5 Database ([www.gtap.org](http://www.gtap.org)). Most-favored-nation rate except for major free-trade blocs such as the European Union and the North American Free Trade Agreement.

Since growth was from a low base, South Asian exports as a share of world trade have remained low throughout 1980–2000 (Figure 2.4 c). South Asia maintained the highest levels of average applied tariffs over the past two decades (Figure 2.4 e), hindering imports and free trade. Further evidence of vertical integration with the rest of the global economy, measured as the import content of exports, remains the lowest in South Asia, resulting from lack of trade liberalization and poor transport links.



In spite of growth in manufacturing exports, net inflows of foreign direct investment to South Asia as a percentage of GDP remains the lowest in the world (Figure 2.4 f). While net FDI inflows to Pakistan rose, attracted by increased macroeconomic stabilization and progress in reforms, net inflows to India declined. In Bangladesh, FDI inflows fell by over 60 percent, mainly reflecting the determination of an absence of export markets (gas exploration) and the lack of progress in reforms of the infrastructure sector, such as in ports, power, and telecommunications. As such, the total external trade of the region amounts to just 1% of world exports and 1.3% of world imports. Intra-regional exchanges represent only 5.3% (exports) and 4.8% (imports) of the total.

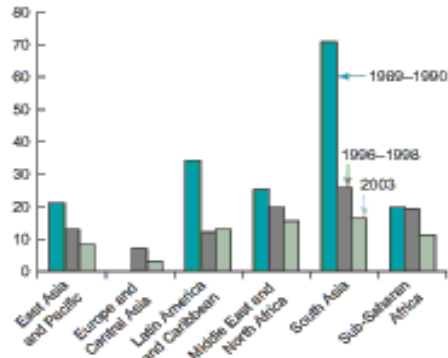




Figure 2.4 (continued)

e. One reason: East Asia liberalized early in trade

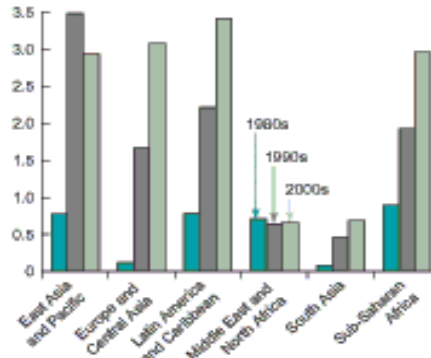
Applied average unweighted tariffs



Source: TRAINS.

f. Strong FDI flows coincided with relocation of production processes

FDI, not inflows (percent GDP)



Note: Period averages for 1980-1989, 1990-1999, and 2000-2002 calculated from annual data. For all regions except LAC, some observations are missing.  
Sources: World Bank, WDI.

South Asian countries other than Sri Lanka neither liberalized trade rules nor the rules governing inflows of foreign direct investment until the 1990s. However, this is changing. Removal of the most egregious forms of anti-export bias and gradual domestic reforms, together with textile preferences, produced a rapid expansion in garment/textile exports, and led to high growth rates for exports share of exports in GDP.

Nepal launched trade liberalization in the early 1990s. Sri Lanka and then Pakistan in 1997 began to reduce their border barriers and increase their trade with the world economy. India began to reduce border protection from very high levels in the early 1990s and has continued doing so; in early 2004, India announced tariff cuts of roughly one-third, reducing the average tariff rate to about 22 percent. Bangladeshi border protections are still among the highest in the world, but they too announced reductions in 2004. The region remains only minimally integrated in world capital markets. Net inflows of FDI, although higher than in the early 1980s, are less than 0.8 percent of GDP—the lowest of all the regions.

### 1.3 Regional Cooperation

In addition to bilateral trade policy reforms, an effort to promote intra-regional trade was begun in the mid 1980s. The South Asian Association for Regional Co-Operation, or SAARC, is an association of 7 countries of South Asia, namely Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. These countries comprise an area of 4,480,000 km<sup>2</sup>. With 1.4 billion inhabitants in 2003, these countries represent more than a fifth of the total world population, but only 2.1% of world GNP (726 billion US\$). Average per capita income was \$510 (Source: World Bank Development Report, 2005). Indeed, poverty is one fundamental element characterizing the situation in South Asia.

#### Evolution

The idea of regional cooperation in South Asia was first suggested in November 1980 by Ziaur Rahman, the then-president of Bangladesh. After consultations, the Foreign Secretaries of the 7 countries met for the first time in Colombo, Sri Lanka in April 1981. At a preliminary meeting in New Delhi, India in August 1983, the foreign ministers of the respective countries adopted the Declaration on South Asian Association for Regional Cooperation (SAARC) and formally launched the 'Integrated



Program of Action' (IPA) in the five agreed areas of cooperation. The heads of state adopted the Charter formally establishing the South Asian Association for Regional Cooperation (SAARC) in Dhaka, Bangladesh on December 7 – 8, 1985.

SAARC encourages cooperation in agriculture, rural development, science and technology, culture, health, population control, narcotics control and anti-terrorism. SAARC has intentionally stressed these "core issues."

#### *Characterization of Participants*

A multilateral approach to date is evolving but remains limited. There is a heavy asymmetry between India (76% of the total population and 77% of the regional GNP) and its neighbors. This is intensified by the fact that India is situated geographically at the center of states, which have no common frontiers.

#### *South Asia Free Trade Agreement*

The rate of increase of multilateral regional trade agreements (RTAs) has been a response to positive effects in trade. Though no preferential treaty exists within South Asia, progress has been made to establish one. In 1993, SAARC countries signed an agreement gradually to lower tariffs within the region. In 2002, at the 12th SAARC summit in Islamabad, Pakistan, SAARC countries devised the South Asia Free Trade Agreement (SAFTA) which creates a framework for the creation of a free trade zone. It is expected to come into effect in January 2006. It replaces the earlier South Asia Preferential Trade Agreement (SAPTA) and may lead to a full-fledged South Asia Economic Union.

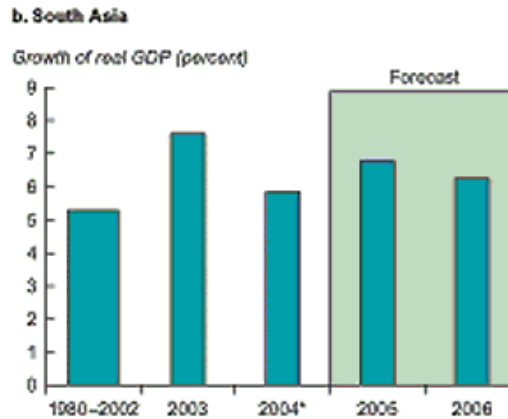
The 13<sup>th</sup> SAARC summit, scheduled for November 2005 in Dhaka, Bangladesh, is expected to set the groundwork for SAFTA through its Committee of Experts (COE). A preliminary meeting, held August 31 – September 2, 2005, was a bid to wrap up the long-drawn negotiations on four unresolved trade issues - rules of origin, sensitive list, mechanisms to support revenue loss compensation for Least Developed Countries (LDCs), and technical assistance to the LDCs within the SAARC realm.

Assuming that transport and frontier issues are outlined, and political instability is moderated, continued trade liberalization policies such as SAFTA should enable the participating member states to be more vertically integrated with the global economy, enable South Asian countries to experience strengthened fiscal improvement, and enjoy moderately accelerated GDP growth. A preferential treaty and free trade zone could create dynamic import-export region trade agreements (RTAs) that have been successful elsewhere in the world in stimulating extra-regional and intra-regional trade.

### **1.4 Major Economic Indicators**

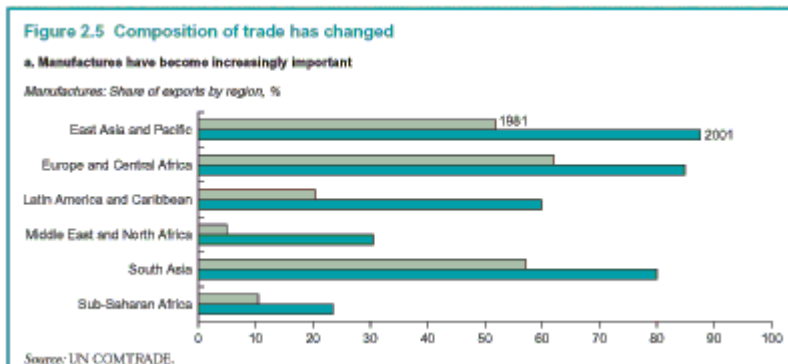
#### *Recent developments*

Real GDP growth in the South Asia region was a robust 6.0 percent in 2004 (estimated), although it was down from an accelerated growth rate of 7.5 percent in 2003. The decline was largely impacted by adverse weather conditions from the Asian tsunami. However, this reversal is a short-term setback from continuous, steady improvement from an average real GDP growth of 5% in the two decades from 1980 - 2002.



These changes can be attributed partly to trade policy reforms. Those reforms are expected to be pursued by local governments over the next decade, giving rise to sustained growth at rates approaching those of East Asia.

The product mix of South Asian exporters was also helpful; the markets for their manufacturing products grew by 129 percent over the period. South Asian countries also experienced substantial improvements in competitiveness, which accounted for an additional 70 percentage points of export growth, bringing their total export growth to just under 200 percent. Though there was a decline in agricultural output in India, Nepal, and near stagnation in Bangladesh, domestic demand is expected to increase and dampen the negative effects of last year's poor crops.



Industrial production in the main economies continued to register gains of 5–10 percent entering 2003. Driven largely by a recovery in India's exports, export volume growth accelerated for the region on average— despite sluggish external demand— thus reducing the region's net trade deficit. Current account balances in the two largest economies, India and Pakistan, posted surpluses, and the region's aggregate external balance strengthened. But exports from Nepal declined significantly, because of weak external demand and heightened competition.

**SOUTH ASIA MAJOR ECONOMIC INDICATORS**

Basic economics (2004 estimates)

	India	Pakistan	Bangladesh	Sri Lanka	Afghanistan	Nepal	Bhutan	Maldives
Population (millions)	1,080	153.7	149.8	19.3	28.0 (2002)	24.2*	0.75	0.280**



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GDP (\$US bn)	\$658.8	\$79.4	\$56.7	\$19.8	\$4.59*	\$5.86*	\$0.685	\$0.640**
% GDP growth	6.8%	6.2%	5.5%	5.3%	15.7%*	0.3%*	6.5%*	6.0%
Per capita GDP	\$610	\$517	\$379	\$1026	\$164	\$39	\$913	\$2286

Source: Economist Intelligence Unit for all countries except Maldives; US State Department for Maldives  
\*refers to 2003; \*\* refers to 2002; Afghanistan GDP excludes opium production



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Imports & Exports (2003 figures unless stated otherwise)

	India	Pakistan	Bangladesh	Sri Lanka
Exports (\$bn)	\$68.3 (\$62*)	\$15.2	\$7.72	\$5.39
Imports (\$bn)	\$92.7 (\$76*)	\$18.4	\$10.5	\$7.16
Trade % of GDP	24.4%	42.3%	32.1%	63.4%
Principal Exports	Engr goods (\$12.2 bn) Gems & jewelry (\$10.5 bn) Textiles (\$6.5 bn) Chemicals (\$6.3 bn) Finished Garments (\$6.1 bn)	Finished Garments (\$1.7bn) Cotton cloth (\$1.1 bn) Cotton yarn (\$0.93 bn) Rice (\$0.448 bn) Synthetic textiles (\$0.441 bn) <i>2002 figures</i>	Garments (\$3.6 bn) Fish, prawns (\$0.321 bn) Jute goods (\$0.220 bn) Leather, hides (\$212 bn) Raw jute (\$ 0.069 bn)	Textiles, garments (\$2.6 bn) Tea (\$0.705 bn) Diamonds, jewelry (\$0.216 bn) Petroleum (\$0.065 bn)
Principal Imports	Petrol & prod (\$20.6 bn) Capital goods (\$9.8 bn) Electronic goods (\$7.5 bn) Precious & semi-prec stones (\$7.1 bn) Chemicals (\$6.2 bn)	Petrol & prod (\$2.81 bn) Machinery (\$1.58 bn) Chemicals (\$1.34 bn) Trans. equip (\$0.498 bn) Iron & steel (\$0.401 bn) <i>2002 figures</i>	Capital goods (\$2.74 bn) Textiles (\$1.90 bn) Petrol & prod (\$0.09 bn) Cereal, dairy prod (\$0.469 bn) Iron & steel (\$0.455 bn)	Textiles (\$1.37 bn) Mach. & trans. equip (\$0.903 bn) Mineral prod (\$0.754 bn) Chemicals (\$0.170 bn)
Main Export Destinations	US (21.9%) -- \$15 bn China (6.8%) UK (5.6%) Hong Kong (5.1%)	US (21.2%) -- \$3.2 bn UAE (8.4%) UK (6.7%) Germany (5.0%) Hong Kong (4.8%) <i>2002 figures</i>	US (27.6%) -- \$2.1 bn Germany (10.4%) UK (9.8%) France (5.7%) Italy (3.8%) <i>2002 figures</i>	US (33.5%) -- \$1.8 bn UK (11.7%) Germany (4.5%) Belgium & Luxembourg (3.8%)
Main Import Destinations	US (7.7%)-- \$7 bn Belgium (6.4%) UK (5.8%) China (5.2%)	China (14.2%) UAE (13.6%) Saudi Arabia (12.6%) Kuwait (7.7%) US (6.6%) -- \$1.2 bn <i>2002 figures</i>	India (14.6%) -- \$1.5 bn China (11.6%) Singapore (11.5%) Japan (7.6%) Hong Kong (5.4%) <i>2002 figures</i>	India (15.1%) -- \$1.1 bn Singapore (8.0%) Hong Kong (6.7%) Japan (6.4%)

Source: EIU \*refers to information from US Commercial Service



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	<b>Afghanistan</b>	<b>Nepal</b>	<b>Bhutan</b>	<b>Maldives</b>
Exports (\$bn)	\$1.25 bn <i>2002; includes re-exports</i>	\$0.642 bn	\$0.136 bn	Exports--\$91 million:
Imports (\$bn)	\$2.41 bn <i>2002</i>	\$1.60 bn	\$0.256 bn	Imports--\$393 million
Trade % of GDP	79.7%	38.3%	57.2%	N/A
Principal Exports	Carpets (\$0.048 bn) Dried fruit (\$0.041 bn) Fresh fruit (\$0.006 bn) Medicinal plants (\$0.03 bn) Animal skins (\$0.01 bn)  <i>2002/2003 fiscal year</i>	Garments (\$0.156 bn) Wool carpets (\$0.697 bn) Ghee / oil (\$0.050 bn) Pashmina (\$0.314 bn) Jute goods (\$0.025 bn)	N/A	fish products, garments.
Principal Imports	Machinery & equip (\$0.855 bn) Household goods, medicine (\$0.623 bn) Fabrics, clothing, footwear (\$0.346 bn) Food (\$0.201 bn) Chem materials (\$ 0.173 bn)  <i>2002/2003 fiscal year</i>	Petrol products (\$0.247bn) Textiles (\$0.739 bn) Vehicles, spares (\$0.709 bn) Crude palm oil (\$0.066 bn) Other machinery, parts (\$0.058)	N/A	:oil, textiles and yarn, rice, cigarettes, cement, engines for boats, televisions, aircraft parts, prefabricated buildings, vegetables
Main Export Destinations	US (25.2%) -- \$0.32 bn Germany (13.6%) UK (11.2%) France (5.8%) Netherlands (4.0%) Italy (3.6%)	India (53.3%) - \$0.34 bn US (25.1%) - \$0.16 bn Germany (7.0%) UK (2.1%) Italy (1.1%) Japan (0.9%) France (0.9%)	India (95.7%) - \$0.13 bn Bangladesh (3.6%) -- \$0.01 bn	<i>Major markets-</i> -U.S., Sri Lanka, EU, Thailand, Japan (source: Maldives Customs Service)..
Main Import Destinations	India (15.4%) - \$0.37 bn China (14.1%) Singapore (9.7%) Japan (6.5%) Hong Kong (5.0%) South Korea (3.8%)	India (56.3%) - 0.9 bn Singapore (6.9%) China (3.6%) Malaysia (3.1%) Indonesia (3.0%) South Korea (2.6%) Thailand (2.3%)	India (88.5%) - \$0.23 bn Japan (1.7%)	Major suppliers- -Singapore, Sri Lanka, EU, India, Malaysia, U.A.E.

**Near-term outlook**

The forthcoming phase-out of the Multi-Fibre Arrangement (MFA) in 2005 will imply greater competition for the region's textile exporters. While India and Pakistan appear to be gearing up for the impending increase in competition, the impact of the MFA phase-out on other South Asian regional economies is more uncertain, particularly in Bangladesh, Nepal, about 75 %, 25 %, and just over 50 % of total merchandise exports, respectively). Given the importance of the agricultural sector to the region, the threat of severe weather conditions and associated poor harvests remain a significant risk to growth outcomes. Political risks and uncertainties also remain a concern, because of both internal and external factors. Heightened domestic and regional instability could undermine



growth prospects and slow the pace of economic reforms. Remittances from overseas South Asian workers could be affected by increased instability in the Middle East. And significantly higher-than-forecast energy prices would pose an additional burden on current account positions.

### **1.5 Political Issues**

In the wake of September 11 and worldwide worries about terrorism, governments everywhere have enacted security measures that could, if not managed properly, drive up trade costs and shut out exports from developing countries. This action has focused attention on the search for greater efficiency in international transportation, the need for cooperation in adopting collective measures to promote transport security, and the imperative of improving customs regimes, port facilities, and logistics management.

The cost of moving goods between destinations and across international borders is often as important as formal trade barriers in determining the cost of landed goods—and ultimately of market share. The costs of transport among many points are as significant as tariffs. Other delays are equally costly. One study estimates that every day spent in customs adds nearly 1 percent to the cost of goods. In developing countries, transit costs are routinely two to four times higher than in rich countries.

#### *The new international security dimension in trade*

The terror and tragedy of September 11, 2001, have emphasized the need for reforms in border and transport infrastructure. Terrorist attacks can seriously disrupt the passage of people, goods, and modes of transport across borders. Measures designed to stop terrorism can add certainty and stability to the global economy, raise investor confidence, and facilitate trade. Secure trade is now as important as free trade—and the two need not be mutually exclusive.

Since the September 11 attacks, billions of dollars have been spent to enhance port security, install airport security equipment, strengthen customs authorities, and bolster border security. While much attention has been devoted to new security protocols in the United States, security plans in other parts of the world also have been revised and strengthened. The G-8 has committed itself to increasing security for all transport modes and to promoting policy coherence and coordination among international organizations such as the International Civil Aviation Organization (ICAO), International Maritime Organization (IMO), and WCO.

The bombing of the *VLCC Limburg* off the coast of Yemen in 2002 was a stark reminder of weaknesses in global maritime systems, which handle 95 percent of world trade. The event alarmed the shipping world and prompted sweeping new security proposals, several of which are outlined below.

#### Maritime Transport Security

*The security of maritime transport has been strengthened, but the costs and benefits of the new security programs have yet to be assessed.* A series of measures aimed at strengthening maritime security and suppressing acts of terrorism was adopted by the IMO at its diplomatic conference in December 2002. These included changes to the 1974 Safety of Life at Sea Convention (SOLAS), which covers 98 percent of the world's fleets. The International Ship and Port Facility Security Code, which will go into force on July 1, 2004, for vessels in international trade, contains detailed security-related requirements for shipping companies, port authorities, and governments, together with guidelines on meeting the requirements. The new rules cover security plans, security officers, and certain security equipment.

In the United States, the Maritime Transportation Security Act of 2002 (MTSA), signed by President Bush in November 2002, is intended to improve safeguards at the country's 361 sea and river ports



and to improve intelligence on cargo and personnel entering U.S. ports. Many of the requirements imposed by the IMO protocol also are mandated by the MTSA. Port-security efforts have been extended with the introduction of the Anti-Terrorism and Port Security Act of 2003. In April 2002, the trade community and the U.S. Customs Service (USCS) launched the Customs-Trade Partnership Against Terrorism (C-TPAT) to improve security along the entire transport chain. The initiative encompasses manufacturers, warehouse operators, and shipping lines. Participation in the voluntary scheme is open to all importers, airfreight consolidators, carriers, and non-vessel-owning common carriers that agree to comply with the supply-chain security profile. Under the program, importers or carriers provide USCS with documentation relating to security measures at each step along the route of goods—from the factory to the warehouse, the port, and the ocean carrier.

The United States has imposed new controls to increase the screening of freight containers arriving at and leaving ports with goods bound for the United States. Almost 90 percent of all freight is transported in containers, 244 million of which move annually among the world's seaports. The Container Security Initiative (CSI), introduced in January 2002 by the USCS, is designed to prevent terrorists from concealing personnel or weapons of mass destruction in U.S.-bound cargo. Participating countries agree to help the USCS identify and screen high-risk containers at the earliest stage.

Beginning with the world's 20 busiest ports, CSI initiative will be extended until 100 percent of containerized cargo is covered. The CSI measure is especially important for countries that send a substantial share of their exports to the United States—for example, 20 percent of Malaysian exports are to the United States. By not joining the CSI, Malaysian goods could lose competitiveness in the global market—a risk not many nations are willing to take. Countries that do not implement the required procedures would have a competitive disadvantage because their shipments would undergo more complex examinations and thus be cleared more slowly.

The WCO passed a resolution on Security and Facilitation of the International Trade Supply Chain in June 2002 to enable ports in all 161 member nations to develop programs similar to the CSI and consider adopting stricter security measures. These measures are intended to enhance security and improve facilitation through a comprehensive reform of customs.

Under the USCS's 24-Hour Advance Cargo Manifest Rule, which took effect on February 2003, carriers must provide cargo manifests electronically via the Automated Manifest System (AMS) 24 hours before loading a container for a U.S. port. USCS will use the information to identify containers that pose a potential risk and determine whether containers cleared for loading. Ships unable to meet requirements risk receiving "no load" orders and thus being detained at the port of origin. Failure by a shipper to comply with the notification requirement carries a fine and the possibility of seizure and forfeiture of the cargo.

## **1.6 Major Transportation Issues**

### *Developing countries may have a hard time meeting new security requirements*

Balancing new security priorities with economic and trade objectives is complicated. Security proposals can affect global supply chains by requiring costly changes in business practices, process redesigns, and new equipment.

Critics fear that developing nations could be squeezed out of the global trading system because of their limited capacity to implement the new international initiatives. High transport costs, poor infrastructure, and the high costs of border clearance already pose a large obstacle to their development. Customs services in many less-developed countries lack qualified personnel to operate





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advanced security equipment and the ability to execute the necessary reforms in their domestic administration. In response to new security demands, for example, shippers are adding extra cycle time to their supply chain rather than risk delays or fines.

The USCS 24-hour rule has affected ports that accept cargo as few as six hours before departure, dealers in perishable commodities that are harvested and loaded within 24 hours, and shipments of emergency replacement parts and medical supplies. Holding additional inventories to hedge against delays and disruptions requires more storage space and more operating capital. The 24-hour rule also has introduced extra costs for Indian exporters. Almost 35 percent of outbound trade from India is headed to the United States, including 600,000 containers. Exporters must now pay additional costs to local agencies that help them with documentation.

Descriptions such as "freight of all kinds" are no longer acceptable. If officials are uncertain about their contents, containers may miss their scheduled carrier sailing dates. Electronic filing and paperless clearance are additional challenges. Most transactions handled by ocean carriers are still conducted by fax or phone. Many shippers in India still use manual type-writers— obviously hindering their ability to provide data in electronic form. Many governments may be unaware of the potentially negative trade-related repercussions from inaction on security.

Despite limited finances and capacity to facilitate trade, some developing countries such as Sri Lanka have adopted cargo security measures that are on par with ports in many developed countries. The same applies to Bangladeshi facilities that boast advanced detection devices. These measures, however, are focused on imports into the country, emphasizing the need to enhance inspection of exports.

*Security-driven improvements can benefit trade*

New programs to combat terrorism and corruption clearly will involve investment in new technology and infrastructure—possibly raising the costs of trade in the short to medium term. At the same time, the prospect of reducing future threats through technology-intensive customs inspections should be viewed as an investment in greater trade efficiency.

Automated technology—such as bar codes, wire-less communications, radio frequency ID tags, tamper-proof seals for containers with global positioning technology, and other electronic measures—could accelerate global trade while improving security (Reddy 2002). Sharing information among terminal operators, shippers, and customs brokers can help expedite the movement of freight through terminals without any new physical investment. By reducing delays in container clearance through customs, the need for shippers to pay "tea money" to officials would be diminished—contributing to port efficiency. In addition, simplification of customs procedures can increase the chances of detection of fraud and criminal activities.



## 2. Afghanistan Country Profile

### 2.1. Background

Afghanistan has a land area of 647,500 sq km (slightly smaller than Texas), divided into 34 provinces, and is the crossroads of Central Asia, with Pakistan to the south and east and Iran to the west. It is bordered by China 76 km, Iran 936 km, Pakistan 2,430 km, Tajikistan 1,206 km, Turkmenistan 744 km, and Uzbekistan 137 km.

Afghanistan is a country with a harsh climate, with the rugged Hindu Kush mountains dividing the northern region from the arid plains or desert in the south. There is very little arable land (12.13%), mostly used for subsistence farming. The population is 29,928,987 (July 2005 est). Apart from Kabul, the capital, and a few provincial capitals such as Herat, Kandahar, and Mazar-e Sharif, there are very few population centers.

### 2.2. Economic Performance

The transitional government which took over in 2002 inherited a war-torn country where most state-owned enterprises had ceased operations and there was over 50% unemployment. In spite of a foreign aid infusion of over \$2 billion since the fall of the Taliban regime, Afghanistan remains extremely poor, landlocked, and highly dependent on foreign aid, farming, and trade with neighboring countries. Afghanistan's living standards are currently among the lowest in the world.

According to the World Bank, actual GDP in 2004 was \$ 6 billion, with GDP per capita of just \$207 in 2003. Agriculture remains a dominant sector, with 47% of GDP and 80% of the workforce. Agricultural growth from wheat and grain yields have reached their natural limits on irrigated land, and many official statistics do not reflect illegal exports from opium estimated at \$2 billion (50% of the GDP) by the ADB. Although the interim government banned the planting of poppies, the average gross income per hectare for opium is \$4,600, compared to \$390 for wheat.

Industry contributes 21% of GDP and services contribute 29%. Afghanistan has oil, natural gas and coal reserves, and at its peak in the late 1970s, supplied 70 -90% of its natural gas output to the Soviet Union via a link through Uzbekistan. In spite of sporadic energy exploration, the country is a net importer of petroleum products such as diesel, gasoline, and jet fuel, mainly from Pakistan, Turkmenistan, and Uzbekistan. The new Afghanistan government has drafted plans to regulate the oil and gas, telecom, mining, and banking sectors to attract skilled Afghan refugees and overseas investment but the political and security risks remain high.

The economy may also be boosted through transit trade through China and the Central Asian countries of the former Soviet republic -- Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. The IMF currently forecasts GDP growth of 13.6% in 2005/06, after an estimated 7.5% in 2004/05, though from a low base.

### 2.3. Trade

Exports totaled \$446 million in 2003-04 (9.4% of GDP) and imports totaled \$3.759 billion (54.4% of GDP). Afghanistan's major goods exports are dried fruits and nuts, handwoven carpets, wool, cotton, animal skins, and precious gems. Afghanistan's largest export partners are: India 23.1%, Pakistan 20.5%, US 12.9%, Germany 6% (2004).



The country's primary imports are capital goods, food, textiles, and petroleum products. Its largest import partners are: Pakistan 25.2%, US 8.7%, South Korea 7.7%, India 7.6%, Germany 6.5%, Turkmenistan 4.5%, Turkey 4.1% (2004).

Pakistan is one of Afghanistan's most important trading partners. Pakistan's trade with Afghanistan was valued at more than \$538 million in 2003-2004 (1 July 2003-30 June 2004), with exports totaling \$493 million and imports \$47.5 million. For comparison, Pakistan's total exports were \$12.3 billion and imports \$15.6 billion during the same period.

Iran's total trade with Afghanistan was estimated to be \$260 million for two years (2003 and 2004), or roughly \$130 million per year. Prior to the fall of the Taliban, trade with Iran was very limited because the Taliban were hostile towards Iran. Trade has since increased because: (1) relations between the two countries have improved; (2) some trade is transiting through the Iranian seaport of Bandar Abbas because of transit delays resulting from congestion in Karachi; and (3) goods destined for Herat and Afghanistan's northwest can proceed more directly to these points without having to transit the less secure route via Kandahar.

#### *Trade Policy*

According to a 1965 Afghan Transit Trade Agreement, Afghan traders do not pay duty to Pakistan for goods imported from a third country, but around 80% of goods entering Afghanistan are subsequently smuggled back to Pakistan. According to a World Bank report, total trade between Afghanistan and Pakistan during 1996/97 was estimated at US\$2.5 billion, of which US\$1.6 billion was re-exported from Afghanistan into Pakistan, straining relations between the two countries.

Afghanistan has turned to Iran as an important trading partner and as a political counterbalance to US relations with Pakistan. Both neighboring India and China provide foreign aid, including a \$110 million grant from India to connect a power line between Uzbekistan and Kabul.

The Central Asian countries are also important trading partners. Turkmenistan has a petroleum product storage and distribution facility at Tagtabazar near the Afghan border, which supplies power to northwestern Afghanistan. A master plan detailing further exploration of natural gas, and policies for market regulation and transmission tariffs required to develop distribution of domestic power was completed in 2004.

Much of the economic policy is aimed at normalization, such as setting up a monetary system, providing electricity, clean water, housing, and education. The trade priority is to institute regulations for a new customs code, as well as to improve the customs infrastructure (such as a customs police and increased computerization), to begin collecting tax revenue.

Afghanistan is a member of the South Asian Association for Regional Co-operation (SAARC), which also comprises India, Pakistan, Sri Lanka, , Nepal, the Maldives and Bhutan. Since Afghanistan is one of the least developed countries in the proposed free trade region, it may not be able to compete on traditional agricultural exports and may receive subsidies for sensitive goods originating within its borders.

## **2.4. Foreign Investment**

International pledges made by more than 60 countries and international financial institutions for Afghan reconstruction in 2004 reached \$8.9 billion for 2004-09. The Afghan government also has outstanding loans totaling \$8 billion in bilateral debt, mostly to Russia; Afghanistan has \$500 million in debt to Multilateral Development Banks (2004).



The chief economic driver remains reconstruction work, through the Afghan Reconstruction Trust Fund (ARTF). The ARTF, which is administered by the World Bank, is run by a management committee that includes the Asian Development Bank (ADB), the Islamic Development Bank and the United Nations Development Program (UNDP).

The government has stressed the fundamental role of a strong private sector in delivering a sustainable and stable Afghanistan. The private sector is viewed as a means for sustainable employment growth needed to alleviate poverty and provide alternative livelihoods to those employed in the poppy industry.

The government created several tax incentives for domestic and foreign investment in 2002 to outweigh the security risks through legal and economic reform. Private investors can freely transfer their capital and profits out of the country and they are allowed to open foreign-currency accounts in Afghanistan. Foreign investors may own up to 100% of Afghan companies, and exports from domestic enterprises are exempt from corporate tax for a period of 4 years. All of these regulatory incentives make Afghanistan more liberal than its neighboring former Soviet republics. However, enforcement and an inefficient bureaucracy may adversely impact business.

## 2.5. Transport Sector

The poor state of the Afghan transportation and communication networks has constrained the Afghan economy. The transport sector comprises 3 ministries in Afghanistan: the Ministry of Civil Aviation and Tourism, the Ministry of Transport, and the Ministry of Public Works. Collectively, the Ministries are responsible for the country's airports, national highways and provincial roads, transportation services in Kabul and throughout the rest of the country, tourism, railways and the regulations and policies that relate to the sector.

In April 2004, at the Afghanistan Development Forum National Transport Program, the Minister of Public Works estimated that implementing national infrastructure for transport would cost \$7.5 billion dollars over the next 7 years (until 2011). For 2004, the expenditures for the transport sector totaled \$931 million, of which 61% were already allocated.

Some of the funding has been obtained through international lending institutions. In March 2003, the World Bank approved a US \$108 million credit Emergency Transport Rehabilitation Project to help remove key transport bottlenecks on an emergency basis, and also support the government of Afghanistan's efforts to rehabilitate its highway and civil aviation programs.

**Ports and harbors:** Kheyraabad, Shir Khan

**Airports:** 47 (2004 est.) ; 10 (16% paved), 37 (unpaved)

**Railways:** none

**Highways:** total: 21,000 km paved: 2,793 km unpaved: 18,207 km (1999)

**Waterways:** 1,200 km (chiefly Amu Darya, which handles vessels up to 500 DWT;2004)

One key development has been the completion in 2004 of an overall transport sector review, which includes a vision for the development and strategy of the sector for the next 10-15 years, including formulating transport policies, restructuring and integrating sector institutions, and formulating projects for the short-and-medium term. The work will improve physical access to



goods, markets, and administrative and social services, all critical to Afghanistan's economic and social recovery.

### **2.5.1. Ports**

Being landlocked, Afghanistan depends on transit rights through neighboring countries. Traditionally, most of its trade was conducted through Pakistan -- the southern city of Karachi is the nearest port. Although the government has attempted to improve Afghanistan's links with other countries such as Iran, Pakistan remains the most important transit route, partly because the US does not encourage transit through Iran.

### **2.5.2. Air Transport**

In the absence of a railway system and functioning river ports, Afghanistan depends solely on road and air transport for the movement of passengers and goods. Domestic civil aviation serves an administrative and social function by providing access to areas with poor or non-existent road connections. Because of Afghanistan's remoteness, aviation is the most practical means for international travel. Afghanistan's airspace, due to its strategic geographical location, offers one of the shortest routes between Asia and Europe. Keeping the Afghanistan's airspace open to international over-flights broadly benefits the international community as well as the country itself.

There are a total of 47 airports in Afghanistan, two of which are major gateways: Kabul International Airport serving the capital and Kandahar International Airport serving the southwest of the country. Both were operated in the past under instrument flight rules (IFR) with day and night operations.

There are 5 smaller domestic airports with airside pavement and air connection to the major cities, Mazar-e Sharif, Herat, Jalalabad, Konduz, and Chakcharan. Additionally there are 15 regional domestic airports serving the smaller and more remote areas of Sheberghan, Maimana, Qilae Naw, Farah, Zaranj, Bost, Bamyan, Tereen, Khost, Khojaghar, Faizabad, Khwahan, Darwaz, Kron Monjan, and Sheghnan. These airports have mainly gravel-paved airside facilities with daytime operations only.

Much of the country's aviation infrastructure was destroyed through civil war, rendering most of Afghanistan's 47 airports inoperable. In the 1970's, two Afghan carriers provided air transport services: one provided international services and the other, domestic services connecting the airports. In 1979, at their preconflict peak, they transported 146,000 passengers and 1.01 million tons of freight.

From an operational perspective, the deterioration in aviation infrastructure has led to an inadequate capability of the air traffic services. In addition to policy recommendations to create more international and domestic flight routes, a proper licensing system, and privatization of the national air carrier, the Asian Development Bank (ADB) and Swedish International Development Cooperation Agency funded a Transport Sector Review (TAR) in 2003 which recommended additional capacity building for airport infrastructure and operation, and adequate funding and technical assistance for air traffic management, such as communication, surveillance, and navigation systems, to assure flight safety over Afghanistan airspace.

The Ministry of Civil Aviation and Tourism also requested US TDA assistance in 2003 for a strategic business plan to provide technical assistance to Ariana Afghan Airlines, the national



carrier of Afghanistan, which it owns. The physical assets of Ariana have largely been destroyed and a poor air safety record led to UN sanctions banning air travel. These were lifted in 2002, and assistance from Air India for training as well as new aircraft allowed the carrier to operate international flights to a 13 destinations such as Mumbai, Dubai, Frankfurt.

The Asian Development Bank (ADB) funded a \$1.18 million feasibility project to draw up a Civil Aviation Master Plan from January 2004 to August 2004. This would include:

- (i) Forecast for aircraft, passenger and air freight traffic at all airports and international overflights for the next 10 years, taking into account the national and regional economic development and impact of tourism development
- (ii) Assessment of the commercial viability of flight operation on the domestic routes over the next 10 years
- (iii) Review the tariff structure for domestic flights
- (iv) Identify deficiencies of existing airports and identify the technical requirements to meet international standards
- (v) Propose the priority for the rehabilitation and improvement of infrastructure, installations, facilities, and equipment

In an April 2004 speech on the Afghanistan Development Forum Transport National Program, the Minister of Public Works announced that none of the airports meet the International Civil Aviation Organization's standards, and that the civil aviation sector was crucial to support the development of high-value export industries in Afghanistan.

The World Bank approved a \$19.3 million loan to upgrade Kabul International Airport and provide communication and air traffic control equipment to bring it up to international standards. The financing will mainly encompass safety and security equipment costs and airfield operational equipment such as maintenance and de-icing equipment, as well as upgrading the communication system and radio navigation aids.

The project required procurement of the following equipment:

- Air traffic control (ATC) equipment: ATC-consoles, radar data recorder, vhf direction finder, radar data display system, telegraph equipment, voice communication system, voice recorder and modernization of existing radar installations
- Airfield Landing Aids: precision approach runway lighting, runway lighting system, terminal lighting system, non-precision approach lighting system, PAPI and emergency power source
- Navigational equipment: instrument landing system and non-directional beacons
- Meteorological Equipment: automatic map transmission equipment and meteorological charts plotter

Japan recently granted \$28 million for the building of a new international terminal at Kabul airport. Other improvements for the master plan of the airport include clearing the airport of land mines, ensuring continuous power supply, and resurfacing the taxiway.

The Ministry of Public Works has also identified the airports at Herat, Mazar-i-sharif, and Jalalabad for upgrading to international standards as key priorities for the civil aviation sector. These airports require emergency reconstruction of facilities which were destroyed, including terminals, administrative offices, control towers, runways, and firefighting equipment. A civil aviation college for the professional training of air traffic controlling, radio navigation, meteorology, and other techniques was also deemed necessary.



A third priority is the revival of domestic airports for the domestic tourism industry. In October 2004, the Asian Development Bank announced a \$30 million loan to expand capacity for the Ministry of Civil Aviation and Tourism (MOCAT) to cover the following goods and services:

- Rehabilitation of 7 regional airports at Bamyan, Chaghcharan, Faizabad, Farah, Maimana, Galai-naw, and Zaranj; these include navigational aids and other civil works
- Provide human resources development training to strengthen the capacity of the Ministry of Civil Aviation and Tourism;
- Provide post-construction operations assistance after the completion of airport rehabilitation;
- Provide administrative support to set up and operate the project steering committee and the project implementation unit;
- Engage a project management consultant

### **2.5.3. Railways**

#### ***Construction of an Afghan National Railway***

The Ministry of Public Works identified the construction of railways linking Afghanistan to its neighboring countries for promoting the flow of bulk goods in and out of the country as a priority. As there is no existing railway in Afghanistan, significant equipment-intensive and labor-intensive projects could be undertaken to construct a national railway system connecting the major cities of Kabul, Herat, Kandahar, and Jalalabad. Specific routes include stations connecting Toorgundi to Herat; Islam Qalad to Herat; Herat to Kandahar; Kandahar to Buldak; Kandahar to Kabul; Torkham to Jalalabad; and Mazar-e Sharif to Hairatan.

#### ***Kabul-Jalalabad-Torkham-Peshawar***

For cross-border trade, the bulk of Pakistan-Afghanistan trade currently moves by truck to and from the Pakistani port of Karachi and Port Quasim. Nearly all of Pakistan's trade with Afghanistan passes through the Torkham/Landi Kotal/Peshawar route. Torkham is on the Afghan-Pakistani border, on the western side of the Khyber Pass. Landi Kotal is about 5 miles east of Torkham and is the terminal end point of Pakistan Railways. Peshawar is 25 miles east of Landi Kotal and is the key town in the Northwest Frontier Province of Pakistan. Peshawar is an important railway terminal in Pakistan, which handled 3,843 containers with a total of 33,028 tons of cargo in 2003-2004. The Peshawar Railway District handled 11,763 wagons or 240,500 tons (3.9% of national railway traffic of 6.18 million tons) during the same period. The Peshawar-Landi Kotal-Torkham route continues to Jalalabad and then on to Kabul.

#### ***Khandahar-Spin Boldek-Chaman-Quetta***

Although the road to Jalalabad is of poor quality, it is by far the best available. An alternative railway route for transportation in South Asia, could be through the existing Pakistan Railway operating route through Quetta to Chaman, and Spin Boldek on the Afghan border, which connects to Khandahar, Afghanistan's second largest city. Although it is a shorter route distance, the Chama-Spin Boldek passage not used for several reasons, including lack of transport infrastructure, security threats, and poor road maintenance.

No dry container terminal exists in Quetta, so new construction for an intermodal terminal facility could be a priority on the Pakistani side. The road from Khandahar to Spin Boldek was badly deteriorated and is being upgraded with funding from the Asian Development Bank (ADB), in order to improve speed of movement of goods and exports. Increased security is also important,



as Khandahar was a stronghold of the Taliban. Safe transport, as well as streamlined customs procedures, would be necessary before more goods transiting to Pakistan can be shifted to the Chaman border crossing.

#### *Trans-Asia Railway Opportunity*

Overall, the Pakistan Ministry of Railways fully supports development of an Afghan rail network to connect the Central Asian countries of Turkmenistan, Tajikistan, and Uzbekistan with exports of goods to the Indian Ocean. The development of a regional rail corridor to provide the construction of intermodal terminal facilities in the Pakistan-Afghanistan border crossings would aid in the transshipment, customs and securities capabilities for Central Asian cargoes. Construction of an Afghan national railway could also provide the key link for a Trans-Asian Railway (TAR) which could connect Singapore to Europe through Myanmar, India, Pakistan, Afghanistan, and Turkey.

China also views the construction of a Trans-Asian Railway as a strategic method for the trade facilitation of its goods and exports, either through Pakistan's deep-sea port of Gwadar on the Indian Ocean, or through Central Asian railway corridors to Europe. China's rail network extends to Karshi in far western Xinjiang province. From there, the rail network could be extended to Irkeshtam and to Osh in Krygzstan and then on to Uzbekistan and the Central Asian rail network. With an estimated cost of \$1.6 billion for Kyrgyzstan line and an additional \$400 million in China for the line between Karshi and the Kyrgyz border in Irkeshtam, this would be an ambitious undertaking, but may open gateways of transport for capital goods and equipment to Afghanistan, and provide transit revenues in the future. China is already a major trading partner of India and Pakistan.

#### **2.5.4. Roads and Highways**

Roads provide the principal means of transport for both domestic and international traffic in Afghanistan network. The network comprises about 6,000 kilometers of national roads, of which 3,300 kilometers are primary highways including 2,400 kilometers that were originally paved. The national primary road network largely consists of the Ring Road (Herat-Kandahar-Kabul-Mazar -e Sharif-Sheberghan-Maimana-Herat) and six international links to neighboring countries. The remaining network of 2,700 kilometers of secondary national roads and 15,000 kilometers of provincial roads is either gravel or earthen.

In the past two decades, almost the entire domestic road infrastructure, including national highways and secondary road connecting to rural provinces and districts, was destroyed or has deteriorated through lack of maintenance. The 1993 UN Development Program (UNDP) assessment was that about 60% of the total of 2,500 km of paved roads required "significant pavement reconstruction" and that regional roads were in "generally poor condition".

The reconstruction of the road network is a major target for the new government. Major transport bottlenecks will need to be removed in order to stimulate early economic recovery and growth and assist the movement of humanitarian aid, returning refugees, and trade-related traffic. This will be achieved by providing equipment and technical assistance related to planning, maintenance, and supervision of works, thereby building capacity in management, implementation, and subsequent maintenance, and by assisting in the establishment of an institutional and policy framework for the sector for sustainable future service delivery in the transport sector.

A \$3 million allocation from the ARTF is being used to quickly repair high-priority routes in Kabul, through filling potholes with asphalt. The US committed \$80.0 million to the rebuilding of the Kabul-Kandahar-Herat road, Afghanistan's main domestic transportation artery. Japan and Saudi





Arabia are joining in this project. The road-building began in November 2002 and is expected to take three years to construct. The stretch from Kabul to Kandahar has already been completed, more than halving the travel time between the two cities to six hours.



In terms of roads to neighboring countries, foreign aid has been focused on connecting the key industrial and political center of Kabul with its wealthier, eastern neighbor, Pakistan. In 2002, Pakistan offered to repair the road linking Jalalabad and Kabul. Germany is financing the building of a road between Jalalabad and Torkham, the last leg of the main border crossing connecting Torkham to Kabul (230 km).

The US has begun a 122-km road project between Jalalabad and Asmar in the northeastern Kunar province, as an alternative route linking to Pakistan. Work on the project began in May 2004 and is due for completion in mid-2005. The Asian Development Bank (ADB) has funded the \$15 million repair of part of the road between Kandahar and the southeastern border town of Spin Boldak, another route that connects Afghanistan to Pakistan, with a distance of 101 km.

To the west, Iran is funding a road between Herat and the Iranian border. India announced plans for the construction of a road linking the Iran-Afghanistan border to the Herat-Kandahar highway to the west and in March 2003, India said it would give Afghanistan US\$70 million to build a road



between Zaranj, on the Iranian border, and Dilaram in western Afghanistan, as part of a transportation route to allow Afghan trade to come through the Iranian port of Chahbahar. The government also plans to build new roads linking Afghanistan with Turkmenistan.

In May 2005, the World Bank announced a \$45 million supplementary grant to existing spending on the Kunduz–Taloqan–Kishem road-rehabilitation project. Other grants agreed in recent months include one of \$55 million from the Asian Development Bank (ADB) to renew the 90-km road between Qaisar and Bala Murghab, the last unsurfaced part of the national primary road network.

The Ministry of Public Works also announced a need for financing a \$410 million highway rehabilitation plan, including several civil engineering projects for poverty alleviation. An additional \$305 million project for priority road rehabilitation was funded or close to funded, with bidding set to begin in 2004, and which are ongoing. The equipment and services needs include:

- Civil works and related technical assistance for design and supervision
- Use of electromechanical equipment, including graders, trucks, concrete mixers, bulldozers, earth-hauling equipment, front-end loaders, asphalt pavers, cranes and crawlers, and asphalt plants
- Temporary Bailey Bridges and bridge rehabilitation
- Complete winter maintenance equipment package
- Technical assistance/training package for maintenance of rehabilitated roads
- Post-repair support for operation and maintenance
- Related technical assistance for institutional, policy, and other studies
- Rehabilitation of related secondary (and tertiary) roads
- Transport sector review to develop institutional and policy framework

The project sites for road construction and improvement identified by the Ministry, with its estimated project value are:

- Kabul to Jalalabad to Turkan (224 km) - \$40 million
- Doshi to Sheberghan (250 km) - \$25 million
- Pul-e Khumri to Mazar-e Sharif (220 km) - \$40 million
- Mazar-e Sharif to Sheberghan to Herat (760 km) - \$130 million
- Herat to Dugharan (121 km) - \$20 million
- Jalalabad to Ashkabad-Bargamator (Turkmenistan) (440 km) - \$75 million
- Gardesh to Doshi - \$20 million
- Kunduz to Faisabad (255 km) - \$43 million
- Faisabad to Wakhan (China) (300 km) - \$50 million
- Kabul to Babhayal Charchara to Herat (Central Road) (824 km) - \$136 million
- Mazar-eSharif to Bamiyan (400 km) - \$ 66 million

World Bank-financed road projects are tendered through a procurement process and administered under the Afghan Assistance Coordination Authority (AACAA). The Afghan government has retained an international procurement agent for contract management for large civil works, smaller turnkey contracts and sub-contracting for ventilators, lighting, and generators through a national competitive bidding process (NCB) and quality-and-cost-based (QCB) for labor and services, respectively.

A recent example of project finance road work in Afghanistan is the \$106 million Kabul-Doshi and Salang Tunnel project. The project included two key road sections, the Kabul–Salang–Doshi Road and the Pol-e Khomri–Kunduz Section of the Kabul–Kunduz–Shir Khan corridor, which is the main



artery between the capital and the Northern Region, and international link to neighboring Tajikistan and Uzbekistan. In addition to linking Kabul to the north, rehabilitation of the Pol-eKhomri-Kunduz section will also ensure a dependable link between Kunduz and the border town of Shir Khan, as well as the road to Mazar-e Sharif.

The overall design/supervision for the Kabul-Doshi portion (\$44.9 million) to build, maintain, and assist in constructing roads was awarded to Louis Berger for a 33-month project that began in April 2003 and is set to be completed in January 2006. The design consultant is in turn responsible for detailed engineering specifications for the actual construction phase. The Norwegian Agency for International Development has agreed to finance construction supervision of the Salang Tunnel contract.

Additional co-financing for secondary roads are also being sought for the following routes:

- Portions of the Talaqan-Faizabad section of the Kunduz-Faizabad road linking Afghanistan to Tajikistan
- Herat-Torghundi road linking Afghanistan to with Turkmenistan, and serving as a transit road for Iran and Pakistan
- Kunduz-Kholm road portion of the Kunduz-Mazar-e-Sharif route in northern Afghanistan, to serve as a transit road between Tajikistan, Afghanistan and Iran; shortening distance and time by 100 km
- Widening of the Kabul-Charikar-Bamiyan road (50km), connecting 8 major cities in northern Afghanistan, which has the highest traffic volume among the country's national highways and poorest safety record

### **2.5.5. Waterways**

Landlocked Afghanistan has very little waterway traffic. The only existing barge traffic is across the Amu Darya (Oxus) River, which forms part of Afghanistan's border with Turkmenistan, Uzbekistan, and Tajikistan. During their occupation of the country, the Soviets completed a bridge across the Amu Darya and built a motor vehicle and railroad bridge between Termez and Jeyretan. In partnership with Norway, the US will provide \$12.0 million to build a bridge over the river between Afghanistan and Tajikistan, forming a key link. No master plan exists to supplement bridge construction to facilitate further expansion or modernization of waterway transport through terminal facilities, privatization of operating a fleet of barges, or the training and monitoring of cross-border customs for waterborne cargo transport.

#### **Credits:**

- Economist Intelligence Unit Country Report, August 2005
- EIU Country Profile Report 2004
- World Bank Country Report
- CIA World Fact Book - Afghanistan
- US TDA Afghanistan Country Overview - June 2003
- US TDA Transport Annex Reports - June 2003
- TERA Definitional Mission of Transport in Pakistan - June 2005
- Asian Development Bank Technical Assistance Report for Regional Airports Rehabilitation - Nov 2003
- Afghanistan Ministry of Public Works, Afghanistan Development National Transport Program - April 2004



### **3. Bangladesh Country Profile**

#### **3.1. Background**

Bangladesh has a land area of 144,000 sq km, divided into 6 regions — Barisal, Chittagong, Dhaka, Khulna, Rajshahi, and Sylhet. It is bordered by Burma (193 km) and India (4,053 km), and coastline in the Bay of Bengal (580 km). Most of the country is situated on deltas of large rivers flowing from the Himalayas: the Ganges unites with the Jamuna (main channel of the Brahmaputra) and later joins the Meghna to empty into the Bay of Bengal. Bangladesh has highly arable land (62.11%). The population was 144 million in 2005 and the country is one of the most densely populated in the world — an average of 955.3 persons per sq km. The population is distributed with 23.4% in urban and 76.6% in rural areas. 45% of the population lives below the poverty line and per capita income was \$400 in 2004 (on par with Iraq, Cambodia, and Micronesia). GNP was \$55 billion.

#### **3.2. Recent Economic Performance**

Despite sustained domestic and international efforts to improve economic and demographic prospects, Bangladesh remains a poor, overpopulated, and ill-governed nation. Although half of the GDP is generated through the service sector, nearly two-thirds of Bangladeshis are employed in the agriculture sector, with rice as the single-most-important product.

Major impediments to growth include frequent cyclones and floods, inefficient state-owned enterprises, inadequate port facilities, a rapidly growing labor force that cannot be absorbed by agriculture, delays in exploiting energy resources (natural gas), insufficient power supplies, and slow implementation of economic reforms.

Economic growth is forecast to slow slightly to 5.3% in 2005, down from 6.3% in 2004. The current account deficit is forecast to widen, owing in part to slowing export growth. If interest rates continue to rise in the developed world, Bangladesh's economy, which is heavily reliant on about \$1.7 billion in overseas worker remittances to sustain demand, could suffer.

#### **3.3. Trade**

Exports totaled \$7.5 billion in 2004 and imports totaled \$10 billion. Export revenue rose by 12.8% year on year but import costs rose by 26.4%. The country depends heavily on exports of ready-made garments (RMG), which account for around 75% of goods exports. Imports are forecast to continue to grow rapidly in volume as demand for capital goods and some industrial raw materials remains strong. Export growth, however, is forecast to be moderate, owing to slowing demand and increased competition. Bangladesh's largest export partners are: US, Germany, UK, France, and Italy. Its largest import partners are: India, China, Singapore, Japan, Hong Kong.

Bangladesh's net imports of goods and services are equivalent to a deficit of around 5% of GDP each year, which is financed by remittances from Bangladeshis working abroad and external financial assistance. High world oil prices are an additional factor causing the trade deficit to widen. The rising deficit is the result of global trade liberalization, notably the removal of quotas on international textile trade. The government's poor fiscal status is also a factor hindering its ability to pay for capital developments for public infrastructure.



U.S. Trade and Development Agency  
South Asia Transport and Trade Facilitation Conference

Preliminary Country Briefing Report  
Fall 2005

Main origins of real gross domestic product 2004 <sup>ab</sup>	% of total	Components of nominal gross domestic product 2003 <sup>a</sup>	% of total
Agriculture	23.1	Private consumption	76.4
Industry	27.8	Government consumption	5.3
Manufacturing	16.2	Gross fixed investment	23.4
Construction	8.8	Exports of goods & services	14.2
Services	49.1	Imports of goods & services	20.0

Principal exports 2004 <sup>ac</sup>	US\$ m	Principal imports 2004 <sup>ac</sup>	US\$ m
Garments	4,443.3	Capital goods	2,739.4
Fish & prawns	387.5	Textiles	2,366.1
Leather & hides	244.5	Petroleum & petroleum products	1,021.4
Jute goods	215.6	Cereal & dairy products	490.5
Raw jute	77.0	Iron & steel	479.5

Main destinations of exports 2003	% of total	Main origins of imports 2003	% of total
US	23.9	India	15.4
Germany	13.6	China	11.3
UK	9.7	Singapore	10.8
France	5.9	Japan	5.9
Italy	3.9	Hong Kong	4.5

<sup>a</sup> Fiscal years ending June 30th of year stated. <sup>b</sup> Factor-cost GDP at constant 1995/96 prices. <sup>c</sup> Customs basis.

#### *Tariffs and Trade Barriers*

Restrictions on trade have been a staple characteristic of Bangladesh's economy for many years. At the start of the 1990s, the country levied quantitative restrictions on almost 600 different types of goods. While it has reversed many of these, tariff protection is still high and rates vary widely. Non-tariff barriers, as well as a lack of access to trade financing, have hindered export growth by domestic businesses.

Recent government policy streamlined tariff rates, reducing the highest rate of import duty from 30% to 25%, and simplified import duty rates for finished goods and raw materials. The maximum rate of supplementary duty on general imports has been fixed at 30%, down from 75%. Custom duties are applied on all imports, except raw cotton, textile equipment, specialized agricultural machinery, animal feeds, and certain medical equipment.

#### *Trade Agreements*

Bangladesh's economy was highly vulnerable to the phasing-out of the Multi-Fibre Arrangement (MFA, a quota system governing trade in textiles) at the end of 2004, but seems to have survived due to its highly competitive labor rates versus India and China.

The South Asian Association for Regional Co-operation (SAARC), which comprises India, Pakistan, Sri Lanka, Bangladesh, Nepal, the Maldives and Bhutan, was established in 1985 at a meeting in the Bangladeshi capital, Dhaka. SAARC's aims include accelerating economic growth and improving relations between member states.

SAARC has also proposed the creation of a South Asian Free-Trade Area (SAFTA). SAFTA is seen as a potential replacement for the 1995 South Asian Preferential Trading Arrangement which had, by 1996, identified more than 2,000 products as eligible for preferential treatment.



In the interim, Bangladesh and India entered into bilateral talks to negotiate preferential trade policies. In 2005, the Indian flag carrier, Air India, resumed its flight operations to Dhaka, ending a 12-year suspension of direct flights. In addition, Bangladeshi and Chinese business leaders urged their respective governments to establish a 900-km road link between Chittagong — Bangladesh's second-biggest city — and Kunming — the capital of China's Yunnan province — to strengthen ties.

### **3.4. Foreign Direct Investment**

Foreign direct investment (FDI) into Bangladesh increased by 2.4% to US\$385 million in 2004, compared to an inflow of US\$376 million in the previous fiscal year. The World Investment Report 2004 maintains that Bangladesh recorded the highest rate of growth in FDI inflows of any South Asian country in 2003.

The government has set up export-processing zones (EPZs) to attract foreign investors, and offers generous tax concessions to firms that locate to Bangladesh's two largest industrial cities, Dhaka and Chittagong. Another EPZ is located in Chalna near Mongla port in Khulna. Three new EPZs are under development in Comilla, Ishwardi, and Saidpur in Uttara in northern Bangladesh. The EPZs had accumulated total investment of US\$514.2 million and total export income of US\$1.07 billion.

### **3.5. Transport Sector**

Bangladesh has an extensive transport system, which includes 236,728 km of roads, 2,700 km of railroads, 6,000 km of waterways, two major seaports, and sixteen airports. The road network consists of 3,086 km of national highways, 1,751 km of regional highways, 13,877 km of district roads, 35,582 km of subdistrict roads, 45,055 km of Union roads and 137,377 km of village roads. Nevertheless, there has been an insufficient supply of transport modes to meet demand. Overall annual growth rate was nearly 8.2% for freight transport and 8.4% for passenger transport since independence.

Historically, poor transport facilities and infrastructure have severely hindered economic development in Bangladesh. Improving the country's infrastructure could provide a huge boost to trade. According to a recent study by the World Bank, trade would increase by more than 30% if Bangladesh were to carry out reforms that lifted port efficiency to just half the international average. The same study suggests that improvements to ports with other multi-modal enhancements would increase trade by at least 68%.

#### **3.5.1. Sector Policy**

Pervasive corruption, poor infrastructure and the high cost of finance are the main hindrances to higher export competitiveness, according to a report published by the World Bank (May 2005). The World Bank's research shows that customs clearance bribes impose a heavy cost on businesses, as they often hit exporters twice — first when raw materials and components are imported, and second when clearance is sought for the export of their processed goods. In addition, local opposition to trade liberalization in the form of labor union strikes has hindered government effectiveness in carrying out economic reforms.

The government created a strategic transport policy through its Ministry of Communications, with the aim of creating a more efficient transport system for passengers and freight over a long-term period of 30 years. To achieve GDP growth targets of 7%, the government estimated that the



transport sector growth had to reach 7.5% per annum through a balanced and integrated transport network.

Primary objectives of the government's transport policy include the introduction of an integrated, multi-modal transport system (across rail, bus, taxi and water services and terminals) to assist economical transport and ease of interchange, growth of traffic commensurate with economic demands, and a reduction of transport costs of goods for export. In addition, the policy specifically encourages private sector participation on a build-operate-transfer (BOT) basis, including a method of taxation through tolls. The policy also aims to provide coordination across various government agencies.

Due to its unique geographical location, the government recognized that Bangladesh could become the transport hub to serve the entire hinterland comprising Nepal, Bhutan and Northeast India. In order to do so, it acknowledged that Bangladesh should try to provide transport services to the sub-region and view the efforts as a potentially important source of foreign exchange earning. It therefore viewed the proposed development of the Sittwi port of Myanmar (for an exit of Northeast India to the Bay of Bengal) as a competitive threat in capturing regional traffic.

### 3.5.2. Current Status At A Glance

Transport	1998/99	1999/2000	2000/01	2001/02	2002/03
<b>Railway traffic</b>					
Freight carried (m tonnes)	3.82	2.96	4.42	3.64	3.54
Passenger-km (m)	3,703	3,887	4,249	3,964	3,996
<b>Sea transport (Chittagong &amp; Mongla ports)</b>					
Vessels handled	1,851	1,858	1,842	1,727	1,545
Cargo (imports & exports) handled (m tonnes)	17.22	18.15	19.67	14.08	15.76
<b>Air traffic</b>					
Passengers carried (m)	2.63	3.12	3.28	3.53	3.70
Freight/mail carried (tonnes)	88,835	91,818	111,791	102,480	106,723

Sources: Bangladesh Bureau of Statistics, *Monthly Statistical Bulletin Bangladesh*.

The development of surface transport systems in Bangladesh is suffering from:

- (i) deteriorating infrastructure due to poor physical conditions (e.g. periodic flooding, soil erosion, poor soil conditions)
- (ii) congestion at inefficient ports
- (iii) sectoral bias and inappropriate modal mix of roads compared with inland waterway and railways
- (iv) a limited role for the private sector
- (v) insufficient institutional framework across 4 ministries and 9 transport sector parastatals and lack of autonomy of transport parastatals
- (vi) insufficient supply of transport infrastructure to meet the rapid growth of transport demand, and
- (vii) lack of integration across several modes of transport.



In a 2003 National Task Force review, these deficiencies were attributed to an unsustainable trend of transport development, characterized by misallocation of resources, an adverse impact on the environment and lack of competition.

**Railways:** *total:* 2,706 km  
*broad gauge:* 884 km 1.676-m gauge  
*narrow gauge:* 1,822 km 1.000-m gauge (2004)

**Highways:** *total:* 207,486 km  
*paved:* 19,773 km  
*unpaved:* 187,713 km (1999)

**Waterways:** 8,372 km  
*note:* includes 2,575 km main cargo routes (2004)

**Ports and harbors:** Chittagong, Mongla Port

**Airports:** 16 (2004 est.)

### 3.5.3. Ports

There are two major seaports, at Chittagong and Mongla, and smaller inland ports at Dhaka, Narayanganj, Chandpur, Barisal and Khulna. At present, the competitiveness of Bangladeshi exports is constrained by the poor service quality of the country's main port. A major cause of the high charges is congestion in the container yard, due partly to the paper-based terminal management and document processing, and limited road access from the port to the container terminals.

The World Bank surveyed 1,001 firms in the capital, Dhaka, and the country's main port city, Chittagong. The majority of those firms viewed corruption as a major constraint on business. For example, bribes paid at the point of import for knitwear manufacturing equipment typically raise the cost of such items by 6-10%, the study found. This investment climate adversely impacts the country's export competitiveness.

#### *Port of Chittagong*

Chittagong, administered by the Chittagong Port Authority (CPA), is the largest of the seaports, handling around 80% of seaborne merchandise imports and 75% of merchandise exports. The port is an integral part of the subregional transport and logistics chain connecting Bangladesh and northeastern India, Bhutan and Nepal to Europe, North America and Southeast Asia.

The total cargo handled at the port increased from 10.3 million tons in 1995/96 to 15.1 million tons in 1999/2000 — an annual average increase of 10%. Containers handled at the Port of Chittagong in the last 10 years increased at an average annual rate of approximately 15%. In 2003, the port handled over 600,000 twenty-foot equivalent units (TEUs), and bulk cargo throughput had reached approximately 21 million tons.

#### *Low Operational Efficiency*

The operational efficiency of Chittagong Port is quite low. For instance the container productivity per gang-hour of 9.73 is less than one third that achieved at the world's best ports. Also waiting times for ships for berths increased from 0.74 days in 1996 to 2.25 days in 2000. The situation worsened by 2003 due to congestion. The port averaged only 184 TEUs per berth per day and turnaround time was about 3.9 days. Average container dwell time at the port has remained





almost unchanged over the past few years at about 18 days compared to about 10 to 12 days at comparable container terminals in the region.

Chittagong Port's low efficiency imposes a direct cost on the country. The total cost of clearing a container at Chittagong from the ship out of the port has been estimated to be \$600 compared with \$150-300 in neighboring ports. The World Bank predicted that the problems at the ports cost the country \$500 - \$900 million annually in GDP.

Maritime transport costs account for 14% of the cost of Bangladesh's textile exports to the US, compared with less than 8% for its competitors such as People's Republic of China, India, Taiwan, and Thailand. It has been estimated that Bangladesh's garment exports could earn 30% more if port inefficiencies were removed. At current taxation levels, a 30% increase in earnings from garment exports would allow the country to invest more in works, services, and infrastructure and thus accelerate poverty reduction efforts.

#### *Current Procedures*

The current customs clearance process requires documents to be manually moved through several stages requiring 48 endorsements, opening up opportunities for corruption. The average container dwell time has remained almost unchanged over the past few years at about 18 days against about 10 to 12 days at comparable container terminals in the region. These delays and informal payments to expedite the flow of documents have contributed to higher maritime costs for Bangladesh's textile exports to the US as compared with exports from China and India. In addition to speeding up operations, a transparent and quick computerized system will minimize opportunities for corruption.

#### *Modernization Efforts*

Bangladesh has prioritized improving the operations and security of Chittagong Port to drive economic growth, increase internal revenue, and comply with international security standards and practices. To address these issues, the government applied for and was granted a loan from the Asian Development Bank (ADB) to improve the efficiency and security of ports in Bangladesh. The Chittagong Port Trade Facilitation Project for \$31 million was announced in December 2004 to enable international port security standards to be met. The government will contribute an additional \$10 million towards the project completion.

The first component focuses on improving the management practices and customs for ship berthing and container clearance by improving processes, procedures and documentation simplification. It also prepared a master plan for the introduction of electronic data interchange (EDI), installing modern container terminal management systems (CTMS) to expedite cargo processing, leading to lower shipping and port-handling charges and foster greater international trade. The CPA has met the basic requirements of the International Shipping and Port Security (ISPS) codes, but the project also calls for the installation of cargo scanners to meet new US-based container security initiatives (CSI).

The second component involved physical improvements necessary within Chittagong Port Authority area to improve the container clearance process. This included recommendations for improvement to the physical layout of the container yards and container freight stations, better vehicle traffic flow within the port operations area as well as preliminary engineering of structures, buildings and internal circulation roads needed within the port area to efficiently link with the proposed port access road.



#### *Dedicated International Container Terminal*

To increase port capacity to handle increased container cargo traffic, infrastructure is being put into place at the New Mooring Container Terminal (NMCT) to handle 1 million TEU, expected to be completed in 2005. With adequate equipment and efficient practices, Chittagong should also be able to handle another 500,000 TEU. Thus, improving efficiency will allow it to increase capacity by 67% without any new infrastructure construction. Chittagong Port can then be an entry point for the South Asia Subregional Economic Cooperation region.

#### *Progress on Privatization*

In a 2003 Supreme Court decision, a \$550 million privatization project proposal by Stevedoring Services of America (SSA) for the Patenga Container Terminal project on the Karnaphuli River (near Chittagong) was declared illegal after strong local union opposition. This was a big setback for attracting foreign private investment to provide cargo handling equipment and services. According to World Cargo News (July 2005), Bangladesh's Shipping Ministry is seeking to transfer 57 acres of land at Chittagong Port to private investors, in the hope of encouraging new container cargo handling facilities, supply base stations, and inland container depots (ICDs).

#### *Port of Mongla*

Mongla Port is the second largest seaport located 48 km south of the town of Khulna with an excellent roadway connection between Khulna and Mongla. The port was developed initially in Chalna, but was shifted to Mongla to accommodate sea-going vessels with greater draughts.

Despite its small size, Mongla handled around one-quarter of Bangladesh's merchandise trade. Although the port of Mongla at times has higher capacity to handle larger shipments than Chittagong —due to the absence of regular dredging that has made the channel almost inaccessible to ocean-going vessels — Mongla often remains closed. In March 2005, local reports claimed the port was under the threat of turning idle due to fewer and fewer ships berthing there and due to a lack of economic activity.

With the drastic fall in number of ships using the port, revenues at Mongla Port Authority (MPA) have also declined significantly. The World Bank suggested that after the completion of Jamuna Bridge, Mongla Port will lose its importance, and a logical step would be to keep Mongla as a port solely for handling bulk freight.

#### *New Deep Sea Container Port*

According to the Chittagong Port Authority (CPA), the container handling capacity of the Chittagong Port is 200,000 TEUs, and the current volume exceeds its capacity by 3 times. With the construction of a new deep sea port, the annual container handling capacity would be nearly 30 million TEUs, and the cargo handling capacity would quadruple.

The World Bank agreed to conduct a feasibility study on the viability of building a new deep sea container port. In 2003, the government identified a site on the western side of Sonadia (Maheshkhal Island) or Akram point in Passur River, 60 km downstream from Mongla Port on the Khulna River. Later, the government chose a suitable spot in Kutubdia and Maheshkhal offshore islands of Cox's Bazar district. The Ministry of Shipping solicited private party participation and received bids from 24 international and local firms on new construction, estimated at TK 3 – 5 thousand crore (US \$ 46-76 million).



#### **3.5.4. Air Transport**

Bangladesh has 16 operational airports, of which three are open to international flights. The main international airport is Zia International in Dhaka and the other two international airports are in Chittagong and Sylhet.

The Civil Aviation Authority of Bangladesh (CAAB) is the government entity responsible for the operation, maintenance, and modernization of existing airports with new airport infrastructure projects. The government has modernized Dhaka Airport by adding a second terminal and more boarding bridges to increase capacity. Both Chittagong and Sylhet were expanded, and Chittagong was upgraded to international standards. There are small landing strips at Rajshahi, Fondpur, Barisal, and Khulna. Some of the unused airports such as Shamsernagar and Thakurgaon could be leased out to private operators for operation and maintenance.

##### *Privatization of Aviation Sector*

To cope with the demand and future traffic growth, the government opened the domestic aviation market to private sector competition. The national carrier, Bangladesh Biman, had a monopoly on international routes, but the government announced that domestic private airlines would be given the right to fly international routes following a review of air-service agreements with other countries.

In 2001/02 Biman carried more than 1.5 million passengers and 39,079 tonnes of cargo, compared with 1.3 million passengers and 30,840 tonnes of cargo in 1996/97. Still, Biman in effect monopolizes air cargo facilities, thereby raising the cost to exporters of gaining access to overseas markets.

For example, ground handling charges at airports are usually fixed as per guideline from the International Civil Aviation Organisation (ICAO) but Biman, the national flag carrier, does not comply with the global standard. Biman, which has taken de facto control of the job, charges \$5,600 for ground handling of a cargo aircraft, while the charge is only \$1,000 in Dubai, UAE, \$1,200 in Bangkok, Thailand and \$4,000 in Kolkata, India. In addition, Biman has extra charges for peak-hour, odd-hour and overstay. These charges are non-existent elsewhere.

Moreover, the landing, parking and navigation charges set by the CAAB are also higher, compared to other regional airports. The landing charge for a 55-tonne capacity cargo plane is \$1,220 in Kolkata, \$1,450 in Karachi, \$295 in Dubai and \$312 in Bangkok while CAAB charges \$2,332 for the service at Zia International Airport.

GMG Airlines, a domestic private carrier, was granted an operating license for international flights including the routes from Dhaka to the Sri Lankan capital, Colombo, via Chennai in southern India; from Dhaka to the capital of the Maldives, Male, via Colombo; and from Chittagong to Chiang Mai in northern Thailand and from Chittagong to Calcutta, in India. GMG also began its domestic flight operations in 1998, and currently operates 28 daily flights to various destinations within Bangladesh.

##### *Airport Infrastructure*

A look at the future pattern of regional air traffic indicates that the airports at Bangkok and Singapore may soon be over-stretched, enabling Dhaka to position itself to handle diverted international traffic. This prospect makes the proposal to construct a new international airport at Trishal worth careful examination.



### **3.5.5. Railway**

Bangladesh has 2,706 km of railways in 2003, operated by Bangladesh Railways (BR), a state-owned enterprise with monopoly rights. Over the years the length of railways has declined and the standard of service has deteriorated, whereas the volume of freight and the number of passengers transported by road has increased.

The passenger railway service has been in decline since the country's independence in 1971, owing to poor service and the phenomenal growth of road networks. Bus services, largely private, have emerged as a challenge to the railways by connecting remote places and providing better services. Modal shares of three surface transports — road, inland water way and railway — are 72%, 17% and 11%, respectively for passengers, and 65%, 28% and 7%, respectively for freight. As a result, the railway service absorbs large subsidies from the government and has an inefficient management. However, Bangladesh Railway aims to commercialize some of its service operations and introduce a new market-based pricing system, as well as open up more areas of railway operations to private sector involvement.

#### *Multi-Modal Transport*

Bangladesh Railway aims to provide the backbone of inter-city, intra-city passenger transit and commuter services. Railway routes and services need to be integrated with other surface modes to make the railway more attractive to the users. The opening of the Jamuna bridge in 1998, allowing railway links into previously remote areas and into neighboring India, encouraged longer journeys and assisted the partial recovery in railway usage.

However, several obstacles stand in the way of integration. An Asian Development Bank (ADB) report on Regional Rail Traffic Enhancement on infrastructure improvement identified the issue of gauge rationalization as a major area of study. It is difficult for railways to be competitive with buses and cars in hauling passenger traffic since the Western and Eastern parts of the country have different gauges.

The major station of Parbatipur in the northern district of Dinajpur is a major area beleaguered with rail problems. Broad gauge lines from Chilahati in the northern district of Nilphamari to Khulna city in the south passes through Parbatipur. Meter gauge railways linking northern stations at Panchagarh in the west to Lalmonirhat and Kurigram in the east also pass through Parbatipur. Beyond that, rail tracks in other areas in Dhaka and Chittagong have links to facilitate regional integration and provide uninterrupted broad gauge rail services from neighboring countries to sea ports in Bangladesh.

In addition, there is a need to standardize the coupling and braking system, as these restrict operating speeds for Indian trains hauling Bangladeshi wagons. In case regional traffic opens up quickly, Bangladesh Railway planned to buy compatible wagons, instead of changing all its assets to an Indian standard.

#### *Inland Container Depots (ICD)*

The ICD at Kamalapur Railway station, located 320km from Chittagong Port, in Dhaka is not being used optimally. Bangladesh Railway (BR) plans to create facilities to carry more containers between Chittagong and Dhaka. BR is carrying only 10 – 12% of the containers which are destined for Dhaka, the rest are currently unloaded and carried by roads.



BR has acquired flat cars capable of carrying 200 TEU containers, but the level of service provided is not very attractive, as container trains very often are delayed. Greater cooperation and understanding between Chittagong Port Authority and Bangladesh Railways is needed to overcome some of the problems. For example, the length of the railway track being laid within the port area is not long enough to accommodate one full train track, and as a result will have adverse impact on the efficiency of container train operation.

To increase efficiency in handling container traffic, Bangladesh Railway may like to establish a separate self-sustaining organization. The handling of containers by BR could have improved a great deal, if a separate self-sustaining organization (like "CONCOR" under the Indian Railways) could be established, to handle these containers. At the moment, the handling of containers at the ICDs and the management of container trains are in two different hands, which give rise to coordination problems.

#### *Railway Facility Upgrades*

The railway tracks in the Western Zone including the Parbatipur junction are largely dilapidated. The aging rail tracks, exacerbated by coal traffic from the Barapakuria coal mine and stone traffic from Madhyapara stone zone, are insufficient to maintain loads, sometimes resulting in accidents. Although more than 40 trains move across Parbatipur station every day, the existing platforms in the junction are inadequate for the increased number of passengers and do not provide shelter for passengers. The existing facilities in the railways have to be upgraded for meeting upcoming demands of passengers and traders who use the railways for movement of their goods.

#### *Cross-Border Railways*

Recent developments in finalizing the Trans Asian Railway Routes have put Bangladesh in a strategic location. Two possible routes are envisaged: one through Sylhet and the other through Cox's Bazaar. Connecting Thailand, Malaysia and Singapore with India and Central Asia, the route could be an important revenue earner for Bangladesh especially if its existing rail routes are made compatible with international standards.

### **3.5.6. Roads and Highways**

Bangladesh had a road network that extended about 20,799 km in 2001, compared with 14,104 km in 1991. There are 3,086 km of national highways (about 15% of total road length), 1,751 km of regional highways (8%), with feeder roads accounting for the remaining 15,962 km. In addition, local governments maintain more than 16,000 km of rural roads, but only 8,546 km of these are paved. In many parts of Bangladesh animal-driven carts still provide the main means of land-based transport for shorter distances. Despite the problems of road transport, more than 65% of all freight and more than 70% of all passengers are transported by road.

The Dhaka-Chittagong Highway is the country's main transport corridor; it connects Chittagong, the port city in the southeast, to Dhaka, and further up to the Jamuna Bridge linking the eastern and western parts of the country. Comprised primarily of two lanes, it currently is unable to handle the high level of traffic. To accommodate increased traffic demand, the Government of Bangladesh decided to expand it to a four-lane access-controlled expressway.

A bridge that is also to be constructed over the Ganges at Paksey will help facilitate regional traffic, especially from Nepal and Bhutan, wishing to use Mongla port. Besides these two major bridges, as traffic grows, a bridge over Padma near Mawa will need to be planned not only to



reduce distances between the eastern and southern parts of the country but also to halve the distance between Dhaka and Khulna. It too would further increase the level of utilization of the Mongla Port. Some medium scale bridges such as one over Meghna at Bhairab Bazaar, one over Rupsa at Khulna and one over Karnaphuli at Chittagong could bring nearly all parts of the country under a single roads and highways network.

In a major step towards easing traffic congestion in Dhaka (one of the most densely populated and congested cities in the world), the government approved the construction of the country's third and longest elevated bypass. The elevated expressway will run between the Gulistan and Jatrabari areas of the city, and will cost an estimated Tk 7.1 billion (US\$110 million). Construction is due to start in July 2005, and the project is scheduled to be completed in the first half of 2008. It will be the country's first flyover project to be run by private investors.

Despite large investments in the road network, road development in rural areas is insufficient to support rural economic development and the quality and carrying capacity of rural roads remains poor. Only 17,300 km (49%) of subdistrict roads meet all-weather standards and the remaining subdistrict roads need to be improved. The ADB approved a budget in December 2004 for a rural infrastructure improvement project.

### **3.5.7. Waterways**

Outside the major cities, Bangladesh is criss-crossed by a myriad of rivers and waterways used for water-borne transport. Waterways have become less important as a means of transport because of the declining navigability of some rivers and the poor performance of the largely state-operated system. There are about 8,300 km of navigable inland waterways, although this drops to 3,800 km in the dry season. The waterway network is particularly important as a transport link to some of the most remote parts of the country. Badly needed improvements to waterways include more dredging programs, better boat safety regulations and the privatization of some of the ferry and cargo routes. In view of its slow speed, the Inland Waterway Transport (IWT) is no longer attractive for carrying transit traffic, and the tonnage has come down to 2,000 tons per year.

The most crucial problem that IWT faces is the continuous siltation, for which there is urgent need for dredging to keep the rivers navigable. In fact IWT is losing its competitiveness due to the high rate of siltation and loss of navigability. A request has been made to the government to provide adequate funding for effective dredging of these silted rivers. This would have tremendous impact also on flood control, irrigation, drainage, and fishing. With a meager allocation ranging between 1 – 4% of the entire transport sector allocation (the road sector gets about 75%), there is hardly any scope to maintain the navigability of major rivers in Bangladesh.

IWT should be integrated with other surface modes roads, railway and seaports, and efficient logistics support should be provided to make it attractive to the users. With the development of Khanpur Jetty in Narayanganj by the private sector (for which proposals have been invited), container movement between the feeder ship and origin/destination within Bangladesh can be provided by the operator. Based on its success, further initiatives to integrate IWT with other modes are expected to start. The government seeks to emphasize the need for such integrated and multimodal transport system to encourage use of environmentally-friendly transport modes.

IWT routes used for both inter-country and Indian transit traffic are facing certain problems such as lack of year-round navigation, lack of night navigation, the limited number of ports of call, and limited staff to handle increased work loads for registration. Problems in the mechanization of



country boats should be addressed urgently and a provision should be made for building a modest infrastructure for ensuring their safe operation. Private sector involvement in the development of river ports, terminals and provision of cargo handling facilities is encouraged.

Currently there are ten inland river ports through which a substantial proportion of freight and passenger traffic moves: Dhaka, Narayanganj, Chandpur, Barisal, Khulna, Patuakhali, Baghabari, Narsingdi, Bhairab Bazaar and Azmiriganj. According to the World Bank Report on the Vision for Bangladesh in 2020, the future potential of inter-modal regional traffic of Dhaka, Narayanganj, Chandpur, Baghabari and Azmiriganj should be developed as container ports with private sector participation. Some of the trunk routes such as Azmiriganj-Chandpur, Baghabari-Chilmari should also be maintained on a priority basis.

### **3.6. Projects Under Consideration**

#### *Ports*

- (i) Construction of container terminals at Chittagong sea-port and expansion and modernisation of container handling facilities at sea-ports;
- (ii) Development of a new cargo-cum-general container composite port at Dhaka, and inland railway container depots (ICD) at Dhaka, Tongi and Joydevpur;
- (iii) Maintenance of appropriate draft of sea-ports as well as inland navigational channels through appropriate dredging;
- (iv) Development of a deep water sea-port at Chittagong to cater to domestic as well as regional needs;

#### *Airports*

- (i) Development of M.A. Hannan Airport at Chittagong and Osmani Airport at Sylhet up to the standards of international airport; encouraging private sector participation in air transport;
- (ii) Initiation of programs for the addition of a second runway at the international airport at Dhaka and building another airport at Trishal;
- (iii) Development of the airports of Barisal, Khulna, Bogra, Rajshahi, Saidpur and Patuakhali;

#### *Railway*

- (i) Completion of Jamuna Railway Link Project;
- (ii) Undertaking the rehabilitation and maintenance of the core network of Railway, including signaling and telecommunication systems;
- (iii) Development of inland railway container depots (ICDs) at Dhaka, Tongi, and Joydevpur

#### *Roads & Highways*

- (i) Completion of the Jamuna Multipurpose Bridge project along with the access roads;
- (ii) Completion of Dhaka Eastern Bypass;
- (iii) Construction of five major road bridges, two in the Mongla/Khulna - Northwest corridor and one in Dhaka - Sylhet corridor and one over the Dakatia at Chandpur and another over the Laokhali at Patuakhali ;
- (iv) Extension of road network in Chittagong Hill Tracts



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(v) Planning road and railway links and ports to the end of regional and sub-regional co-operation

(vi) Improvement of the urban transport system starting with Dhaka city through construction of new infrastructure and development of mass transit system;

*Waterways*

(i) Critical, ongoing dredging projects to keep rivers navigable

(ii) Undertaking programs for the development of ferry links to off-shore islands between Shariatpur and Chandpur and mechanization of country boats

Credits:

- TERA Mission to Evaluate Transport Sector Projects in Bangladesh (US TDA), June 15, 2005
- ADB Technical Assistance to Bangladesh for Transport Policy Support, December 2004
- Economist Intelligence Unit Country Report, July 2005
- World Bank Country Report
- CIA World Fact Book – Bangladesh
- Bangladesh Ministry of Communications, Land Transport Policy
- National Transport Task Force Report, 2003





## 4. Bhutan Country Profile

### 4.1. Background

Bhutan is a small land-locked country which is about 46,500 square km located in the eastern Himalayas. The capital of Bhutan is Thimphu located at an altitude of 7,700 feet. The population was estimated at 752,000 in 2004.

The country is becoming a constitutional monarchy, and the government is modernizing the legal system to meet the needs of a market economy. The official language is Dzongkha (a Tibetan dialect); Sarchopkha and Nepali are widely spoken in the South and East, respectively.

Although the government of Bhutan has traditionally adopted a very restrictive policy towards tourism, the government has recently decided to allow more tourists into the country and built two new luxury resorts in 2004. This decision led to the increase of tourists from 6,261 in 2003 to 9,259 in 2004, with a greater increase anticipated for 2005.

### 4.2. Recent Economic Performance and Foreign Trade

Bhutan's economy grew by an estimated 7.1% in fiscal year 2004/05 (July-June). This growth was driven mainly by the construction sector and by increased government spending on housing, electricity and transport. The continued growth is projected for the next two years (the last two years of the Ninth Plan period). GDP of 2004 was estimated at \$US 685 million, and a per capita GDP of \$913.

India is Bhutan's most important trading partner, both for imports and exports. In 2004 Bhutan's exports added up to \$US 136 million, and the country's imports to \$US 256 million.

Principal import products are machinery and transport equipment (mostly computers and related goods, road vehicles), food, and refined petroleum. Principal export products are electricity, calcium carbide, ferro-silicon, and cement.

### 4.3. Transport Sector Developments

#### 4.3.1. Sector Policy

The government is aware of the importance of developing physical infrastructure, especially in the transportation sector. The priorities in the area of surface transport for the next two decades are shown in the 5 Year Plans, (The Ninth Five Year Plan was implemented in January of 2001). The following table represents on-going transportation infrastructure projects and their estimated date of completion.

Ensure that 75% of rural population live within half a day's walk from nearest road	2012
Upgrade current national trunk roads to take 30 ton trucks	2007
Construction of a 'dryport' at Phuentsholing	2002
Construction of second 'dryport' at Gaylegphu	2004
Construction of third 'dryport' at Samdrup Jangkhar	2007
Completion of second transnational highway	2017
Introduce domestic air services	2002



Improved external airlinks established with full ILS capacity

2017

**4.3.2. Current Status At A Glance**

Road transport remains the most important mode of transportation, both within the country, as well as to and from the neighboring Indian states. However, the majority of the people in Bhutan live at least half a day's walking distance from roads or highways. Thus, further development of road transport remains a priority. Airport development, both for tourism and commerce, is essential for economic growth. To promote tourism industry and to get competitive advantage from foreign trade, the air transport also should be developed.

<b>Ports and Harbors:</b>	None. The country is landlocked.
<b>Airports:</b>	One paved airport, located in Paro, served by Bhutan's national airline, Druk Air.
<b>Railways:</b>	None
<b>Road and Highways:</b>	<i>total: 4020 km (about 50% of which were paved)</i> <i>Road Density: 73 km per 1000 square km</i>

**4.3.3. Ports**

Although Bhutan has no wet port of its own, the country's commerce largely moves through India's port of Calcutta as an interregional/international gateway.

Also, Bhutan is developing 'dry ports' ("inland ports") at strategic locations to facilitate both imports and exports. By introducing such innovations as containerized freight, expedited customs services and enhanced security screening, thereby increasing the competitiveness of exports as well as reducing the cost of imports.

**4.3.4. Air Transport**

Bhutan relies on just one airport, located in Paro, and is serviced by only one airline, the national airline, Druk Air. Druk Air's services began in March 1983, and today the airline offers flights from Paro five times a week to Bangkok and Calcutta, twice a week to Kathmandu and Delhi and once a week to Dhaka and Yangon. Druk-Air has a fleet of two BAe-146 and two airbus A319s.

The Civil Aviation Division, headquartered in Thimphu and established in January 1986, oversees Druk Air's operations. Flying conditions in Bhutan are difficult: Because Paro is located in a deep valley at an elevation of 7300 ft above sea level and the surrounding hills are as high as 16,000 ft, the approach into Paro airport is entirely by visual flight rules. For several months of the year, dense and often unpredictable cloud cover reduces visibility over Paro. As a result, Druk Air's flights are often postponed or cancelled. Because there is no alternative airport in Bhutan, flights often have to land overnight in Calcutta if weather conditions in Paro prohibit landing.



Further development of airports and air carriers presents opportunities for economic growth and investment.

#### **4.3.5. Railway**

There is no railway in Bhutan. However, the government has placed a priority on collaboration with India in developing an international rail system.

#### **4.3.6. Roads and Highways**

The government continues to improve the road network with an emphasis on maintenance and improved access to remote areas. As Bhutan's major towns are rapidly growing, the government's infrastructure priorities are urban planning, development, road maintenance and improvement. In rural areas, Bhutan is emphasizing better access to basic services in order to enhance the quality of life. The main interventions are improved maintenance of existing roads and developing priority rural roads based on environmentally friendly road construction.

By April 2004 the country's highways totaled of 4020 km (about 50% of which were paved), road density was estimated at 73 km per 1000 square km. Currently the national road network which has more than 150 bridges, with a combined length of more than 4000 meters, links all the district administrative centers, and additional forest or agricultural roads connect some of the villages. Also an additional 300 suspension bridges have been constructed that have served to bring many rural communities out of their isolation and to make it possible for them to market their agricultural surpluses, to acquire goods that were previously unavailable to them, and to obtain access to essential services.

At present, The Surface Transport Division as well as the Driving Training School and Phuntsholing are under the jurisdiction of Ministry of Communications. The ministry regulates public passenger transport in terms of route allocation, fare level, frequency and safety, while operation of both passenger as well as goods transport are private sector activities. Licenses are currently being issued by the Division of Revenue and Customs, Ministry of Finance, for taxis and trucks, but the charges for transportation of goods and passengers are left to market forces. Different organizations are involved in the transport sector in regulating, licensing, legislation and registration of motor vehicles. This seeming lack of coordination has hampered the rational development of surface transport. Only bus transport is at present regulated, leaving taxis and trucks unregulated. Infrastructure in terms of booking offices and bus terminals is not available in many places.

#### **4.4. Projects Under Consideration**

##### Potential Projects

##### ▪ Aviation:

Civil Aviation Master Plan — may still need technical assistance to draft a plan

- Prepare plan for an alternative airport to expand air service;
- Formulate Civil Aviation Master Plan to enable the sector to plan for future air services including the domestic air service; and
- Enhance safety and improve quality of service

*(Source: Ninth Fifth Year Plan)*



- Highways & Roads
  - Over the next three years, Bhutan's Department of Roads is planning to add another 130km of unpaved roads to the existing national highway network.  
(Source: EIU, 2004)
  - Comprehensive road network plan with focus on the existing north-south and east-west highways

Credits:

- Encyclopedia Britannica, World Data, 2004
- Bhutan 2020: A Vision for Peace, Prosperity & Happiness
- Asia Trade Hub, <http://www.asiatradeshub.com/bhutan>
- [http://www.photius.com/countries/bhutan/economy/bhutan\\_economy\\_roads.html](http://www.photius.com/countries/bhutan/economy/bhutan_economy_roads.html)
- EIU, 2004
- Guidelines for Preparation of the Ninth Five Year Plan (January 2001)
- <http://www.dop.gov.bt/>
- Country Report Bhutan, June 2005
- Country Brief, The World Bank in Bhutan, September 2004



## 5. India Country Profile

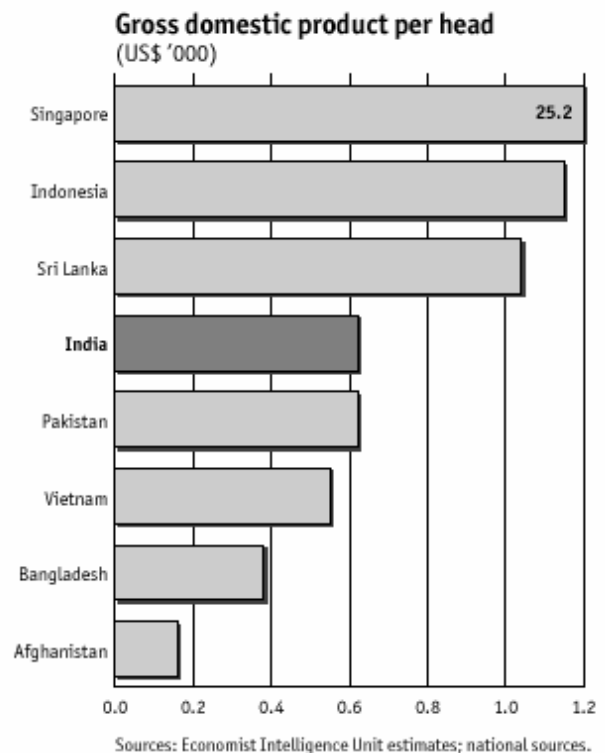
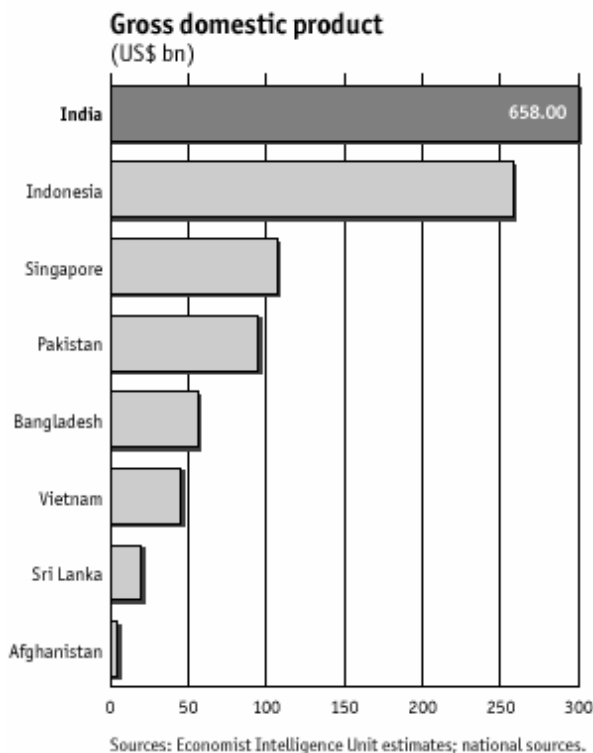
### 5.1. Background

India has a land area of 3.3 million sq km (roughly one-third the size of the US), divided into 29 states and 6 union territories. It is bordered by Bangladesh 4,053 km, Bhutan 605 km, Burma 1,463 km, China 3,380 km, Nepal 1,690 km, and Pakistan 2,912 km.

India has highly arable land (54.4%) and is predominantly rural. The population is 1,080,264,388 (July 2005 est.), growing at 1.8% annually. The urban population constituted 28% of the total in 2004, up from just over 25% in the mid-1990s, and is likely to reach 36% around 2025. There are 35 cities with a population above 1m; the number of such cities is likely to rise to 70 by 2025, when they will contain about one-half of the country's urban inhabitants. Thus, infrastructure for urban, inter- and intra-city mass transit for passenger and freight transport will become increasingly important.

The largest urban agglomerations are Mumbai (16.4 million in 2001), Kolkata (13.2 million), Delhi (Capital; 12.8 million), Chennai (6.4 million), Bangalore (5.7 million) and Hyderabad (5.5 million). In spite of ongoing foreign aid, 29% of the population lives below the poverty line, and GDP per capita was \$620 in 2004. According to the World Bank, actual GDP in 2004 was \$688.7 billion.

### Comparative economic indicators, 2004





## 5.2. Recent Economic Performance

The economy has posted an excellent average growth rate of 6.8% from 1994-2004. India's diverse economy encompasses agriculture, handicrafts, a wide range of manufacturing and industries, and services. Though two-thirds of the labor workforce is in agriculture, services are the major source of economic growth. India is capitalizing on its large numbers of well-educated skilled workers to become a major exporter of software services and software workers.

### STRUCTURE of the ECONOMY

(% of GDP)	1984	1994	2003	2004
Agriculture	35.2	30.4	22.8	21.2
Industry	26.2	27.1	26.4	27.0
Manufacturing	16.4	16.9	15.6	16.1
Services	38.7	42.5	50.7	51.8

Though the non-agricultural economy is enjoying an upturn, including a 10.4% increase in manufacturing and 10.5% increase in tourism, a major tsunami in 2004 slowed agriculture growth. GDP growth is expected to rebound to 7-8% in 2005/06, before moderating to 6.8% in 2006/07.

## 5.3. Trade

Exports totaled \$76.3 billion in 2004 and imports totaled \$99.8 billion. Exports grew 8% and are expected to grow rapidly by 15.8% from 2004-2008, increasing the pressure to develop transport facilities to match foreign trade expansion. Imports grew by 11%, largely due to the country's demand for petroleum products and higher oil prices, widening the trade deficit. Other non-oil imports include capital goods and electronic goods.

India's major goods exports have been textiles and gems, but also ready-made garments (leather), chemicals (pharmaceuticals and plastics), and automotive components (steel/iron ore). Other exports include commodities and dried bulk goods (tea, sugar, rubber). Overall, manufactured items grew to about 80% of exports throughout South Asia, highlighting the need for containerized facilities, in addition to existing dry bulk terminals.

India's largest export partners are: US 18.4% (\$15.56 billion), China 7.8%, UAE 6.7%, UK 4.8%, Hong Kong 4.3%, Germany 4% (2004). Its largest import partners are: US 7% (\$6.09 billion), Belgium 6.1%, China 5.9%, Singapore 4.8%, Australia 4.6%, UK 4.6%, Germany 4.5% (2004)

### *Tariffs and Trade Barriers*

Government controls on foreign trade and investment have been gradually liberalizing, and India has been a WTO member since 1995, removing all quantitative restrictions on import quotas through the Uruguay Round. The tariff system was simplified but tariff rates remain high (averaging 20% in 2004). In 2005, India introduced a value-added tax (VAT), which is intended to simplify the tax structure.

### *Trade Agreements*

India continues to have strong trade relationships with China, despite strong competition in the worldwide lifting of textile import quotas. In addition to expanding trade volumes with developed countries, India is eager to export to ASEAN and Latin American block countries.



The South Asian Association for Regional Co-operation (SAARC), which comprises India, Pakistan, Sri Lanka, India, Nepal, the Maldives and Bhutan, was established in 1985. SAARC's aims include accelerating economic growth and improving relations between member states. SAARC has also proposed the creation of a South Asian Free-Trade Area (SAFTA), which is scheduled to be implemented in 2006. SAFTA is seen as a potential replacement for the 1995 South Asian Preferential Trading Arrangement which had identified more than 2,000 products as eligible for preferential tariff treatment. Issues related to countries of origin on protected products, as well as reparations to less developed countries within the SAARC region still need to be negotiated. Thus, until a regional agreement is implemented, India has signed bilateral free-trade agreements, effectively bypassing SAARC, with Nepal, Sri Lanka, and Bhutan. In 2004, India and Pakistan also discussed ways to facilitate trade by easing customs rules and non-tariff barriers.

#### 5.4. Foreign Direct Investment

Domestically, the government has indicated it will do more to liberalize investment in various industrial sectors. Privatization of government-owned industries has proceeded slowly, and continues to generate political debate.

Given the political constraints to labor market reforms, the government has used export processing zones (EPZs) to foster an internationally competitive environment for exporters. Apart from creating the conditions for a more competitive manufacturing sector, the EPZs have become an important vehicle for pioneering policy and institutional reforms.

Foreign direct investment (FDI) in to India increased by 29.6% to US\$ 4.02 billion in 2004, compared to an inflow of US\$ 3.1 billion in the previous fiscal year.

#### 5.5. Transport Sector

India has an extensive transport system, which includes 2.5 million km of roads, 63 thousand km of railroads, 14.5 thousand km of waterways, 12 major seaports, and 12 international airports.

**Ports and harbors:** Kolkata (Calcutta), Chennai, Haldia, Kochi, Jawaharlal Nehru, Kandla, Mormugao, Mumbai (Bombay), New Mangalore, Paradip, Tuticorin, and Vishakapatnam,

**Airports:** 333 (2004 est.) ; 234 (paved), 99 (unpaved)

**Railways:** total: 63,230 km (16,693 km electrified)  
broad gauge: 45,718 km 1.676-m gauge  
narrow gauge: 14,406 km 1.000-m gauge; 3,106 km 0.762-m gauge and 0.610-m gauge (2004)

**Highways:** total: 2,525,989 km paved: 1,448,655 km unpaved: 1,077,334 km (1999)

**Waterways:** 14,500 km ; 5,200 km on major rivers and 485 km on canals (2004)

Although there is a large private-sector involvement in transportation, government continues to play a large regulatory and developmental role. The central government has ministries to handle civil aviation, railroads, and surface transportation. The country's national reform initiatives include privatization, deregulation, and reduced subsidies.

##### 5.5.1. Sector Policy



The government's public infrastructure expenditure is US\$2.2 billion in 2005/06. Transport privatization in two sectors — aviation and shipping — are ongoing to match the imbalance between transport infrastructure supply and growing demand in traffic.

Since 72% of India's population live in rural areas, the government has committed to poverty-reduction and development of basic infrastructure to rural areas. An estimated 200 million people in rural areas are without all-weather road access. This constrains economic activities in rural areas and prevents the rural population from being fully integrated into the economy. Separately, a rural infrastructure fund (US \$17.7 billion) also was set up, including a \$400 million World Bank project to lower transport costs and speed movement of people and goods in over half of the districts in the most poorly connected states—Himachal Pradesh, Jharkhand, Rajasthan, and Uttar Pradesh.

### **5.5.2. Current Status At A Glance**

The development of transport systems in India is can be characterized by:

- (viii) non-existent or poor road surface transport in vast, rural areas
- (ix) overuse due to high demographic pressure and population growth
- (x) insufficient transport infrastructure in urban areas
- (xi) poor governance on local, state, and federal levels
- (xii) high public debt
- (xiii) prioritization of other essential services, such as health and education

### **5.5.3. Ports**

Maritime transport is by far the main mode of international transport and over 90 % of India's trade volume (77 % in terms of value) is moved by sea. The Indian peninsula, situated in the Indian Ocean, is also strategically located between the Atlantic Ocean in the west and the Pacific Ocean in the east, with a 5,560 km long coastline, and 12 major and 185 operable minor and intermediate ports.

India now has the largest merchant shipping fleet among the developing countries and ranks 17th in the world in shipping tonnage. The Indian maritime services sector not only facilitates the transport of national and international cargoes but also provides a variety of other services such as cargo handling services, ship repairing, freight forwarding, lighthouse facilities and training of maritime personnel.

India has 12 major seaports: Kolkata, Chennai, Haldia, Kochi, Jawaharlal Nehru, Kandla, Mormugao, Mumbai, New Mangalore, Paradip, Tuticorin, and Vishakapatnam, which are managed by the Port Trust of India. An additional 185 minor ports, managed at the state level, account for 15% of total cargo handled.

Cargo volumes remained flat until 1990, when trade liberalization increased cargo traffic through Indian ports significantly. By 2012, the total maritime traffic is expected to exceed 850 million tons. To efficiently handle the forecast demand, an additional 400 berths are required at a projected cost of US \$13.5 billion.





### Estimated Traffic Forecast (Million Tons)

Period	Liquid Bulk	Dry Bulk	Container	General Cargo	Total
2006-07	323.4	170.6	71.8	46.9	612.7
2011-12	496.3	188.4	115.6	65.7	866.0
2016-17	667.2	208.6	169.9	83.8	1,129.50
2019-20	742.8	225.2	208.1	97.1	1,273.20

Source: US Embassy, Delhi

India's largest container port, Jawaharlal Nehru Port (Mumbai), handled roughly 2.3 million TEUs in 2003/04 — about half of the volume handled by the tenth-largest port in the world (Antwerp).

The major ports, which handle 75% of all cargo, handled 345 million tons of cargo in 2003/04. The main commodities handled at the country's major ports were petroleum products and iron ore. Even though crude oil and petroleum remained the key commodities to be handled at the country's ports, there was a steep increase in bulk shipment of coal and liquefied natural gas (LNG).

Due to explosive export growth, the ports of India have been plagued with inefficiency. The average turnaround time is 4.7 days, and pre-berth waiting times were around 0.9 days. At the beginning of 2000, equipment utilization at the major ports was often as low as 30%, in some cases due to poor configurations and layouts.

Poor port governance and inefficient customs clearing also translated into high costs. An identical shipment of textiles to the US from India costs, on average, 20% more than from Thailand and 35% more than from China.

#### *Privatization Policy*

Under the government's emphasis to increase private participation,<sup>1</sup> several expansion and modernization projects were initiated to be implemented under a build-operate-transfer (BOT) scheme to handle almost 9 million TEUs by 2005.

Private-sector incentives included matching loans, an ability to use market pricing for services rendered, automatic approval for up to 100% foreign equity in port and harbor construction projects, establishment of a Tariff Authority for Major Ports (TAMP) to fix port charges, and a Maritime States Development Council (MSDC) to help frame an integrated port development policy.

#### *Chennai Port Trust and Ennore Port Authority*

<sup>1</sup> Examples of successful private sector participation in ports include:

*In 1997, P&O Ports Australia was awarded the contract for setting up a new container terminal in Jawaharlal Nehru Port Trust (JNPT). The same investor won the twin contract to develop container terminals at Chennai and Kochi on a BOT basis. In 1998, another global player, the Port of Singapore Authority, was given the contract for developing and maintaining the container handling facilities at Tuticorin.*

*Various development projects through private participation have been sanctioned in the States of Gujarat, Maharashtra and Andhra Pradesh. The Pipavav and Mundra ports in Gujarat have been developed as joint ventures between the Gujarat Maritime Board (which has a 26 % share), the private sector (25 %), and the public sector (49 %). P&O Ports Australia has been awarded the contract for operating container terminals in Vadhawan (Maharashtra).*



Most of the port modernization initiatives in India are focused on the US \$1.5 billion Chennai Port Project. Chennai is an old port with 23 berths, and faced serious uneven capacity utilization problems. While the berthing capacity for the port's main cargo, crude oil and petroleum, was severely strained, the facilities for fertilizer and general cargo were underutilized. After the Chennai Port Project is completed, the handling capacity of the port is expected to be 1.65 million tons per year of general cargo.

The Chennai Port Trust (CPT) formulated proposals for modernizing the inner harbor berths which are being carried out systematically, including the construction of container terminals, operation of bulk, break-bulk, multipurpose and specialized cargo berths, management of warehousing using container freight stations and storage facilities, the supply of cargo handling equipment, and operation of dry-dock facilities.

To handle excess cargo traffic, a satellite port at Ennore was completed in 2001 with a US \$150.15 million technical assistance loan from the Asian Development Bank. The berths to be created under subsequent stages of development will be through private participation on a build-operate-transfer basis, with the Ennore Port Authority functioning as landlord. Ennore was proposed to focus on coal and LNG cargo, as well as fertilizer, chemicals, and petroleum. It is designed to have common user facilities, such as a dredged channel and basin, heavy lift cargo berth, and other navigational facilities.

#### *Visakhapatnam Port Trust*

Visakhapatnam is India's second largest port in terms of cargo. It is essentially a bulk port, with crude oil and petroleum products, and iron as the principal cargo. The port equipped one of its berths with special container handling equipment with gantry cranes and RTGs with an estimated cost of US \$36 million. It also constructed a container freight station and truck terminal worth US \$2.3 billion.

With an estimated traffic of 47 million tons by 2012, the port has designed a plan to create 11 more berths, which would be dedicated to fertilizer, raw materials, chemicals, coal, and general cargo, with an expected cost of US \$800 million. Construction of a multi-purpose berth for US \$70 million has also been allocated.

#### *Kochin Port Trust – Vallarpadam Project*

Due to its geographical location on the West Coast, Kochin port possesses a competitive advantage in capturing some of the West Coast maritime traffic, as well as some of the Singapore-Suez international traffic. In addition, development of the Konkan rail, which runs along the coastline from Mumbai connecting Kochin, provides better multi-modal sea-rail transport to access the hinterland.

Vallarpadam is targeted to be a container-only port to attract both international and West Coast traffic handled at Rajiv Gandhi Container Terminal (RGCT) at Willington Island. Container traffic throughput across the quay at Kochin is targeted to grow (according to an ADB feasibility study) to 1.38 million TEU in 2007 and 2.6 million TEU in 2017. This includes market capture from Colombo port in Sri Lanka, as well as additional traffic from other ports by rail.

While RGCT will be improved to handle growing traffic, it will be limited to cater to 250,000 TEU only, and gradually, container operations will be shifted entirely to Vallarpadam.

Facility and equipment requirements to provide a world-class port, including equipment transfers from RGCT are expected at:



Year	Berth	Quay Cranes	Rubber-tired Gantry	Cost (\$ million)
2006	1,400 m	8	19	114
2010	2,000 m	10	24	66
2022	2,000 m	15	45	82

The project excludes costs of channel dredging and road and rail links to Vallarpadam, which is expected to cost around US \$104 million. These projects are expected to be offered for private participation as an integrated project on a joint venture basis.

### Other Port Projects

From 2000-2002, port projects with an estimated cost of over \$6.5 billion were undertaken. From 2002-2004, port improvement projects with a capacity of 24.35 million tons of cargo were added. These include the modernization of berths at the country's largest port, Mumbai; construction of additional berths at New Mangalore, Haldia, Jawaharlal Nehru Port, Kandla, and Paradip; the modernization of several berths in Chennai, additional container handling facilities each in Chennai and Tuticorin; and dredging in Tuticorin.

#### *Future Developments*

If one looks at the impact of liberalization and privatization on port productivity there is no doubt that the productivity of Indian ports has increased since liberalization. The average ship turn around (ASTA) time has declined from 11.9 days in 1984-85 to 4.17 days in 1999-2000 and the average ship berth output improved from 2,314 tonnes per day to about 6,321 tonnes per day during the same period.

However, this improvement in performance does not compare favorably with that of other efficient ports in the region. For instance, the ASTA time at the ports of Singapore, Hong Kong, China, and Colombo is only a few hours. The total container cargo handled by all ports in India is much lower than that handled at a single port of Singapore or Hong Kong, China. Hence, much needs to be done in terms of improvement in efficiency and productivity.

The proposed Tenth Five-Year Plan (2002-2007) gives high priority to modernization and the development of port infrastructure through private investment. The budget proposes a reduction in custom duty on equipment used by port and port services. This will enable a reduction in the capital cost for port developer and service providers. The Government has also implemented various schemes to enable the development of special economic zones around the ports, which can also make port investments more attractive.

#### **5.5.4. Air Transport**

India recognizes aviation as playing a significant role in the national economy. The government has viewed air transport as a key infrastructure to facilitate economic growth and sustainable trade and tourism. It provides a fast and reliable mode of transport across long distances in the country and is particularly important for many areas still not adequately connected by rail or road.



The Ministry of Civil Aviation is the agency responsible for the formation of national policies and programs for the development and regulation of civil aviation. It oversees the provision of airport facilities, air traffic services, and the transportation of goods and passengers.

The Ministry identified the quality of airport infrastructure as a vital component of the overall transportation network, contributing directly to the country's international competitiveness, and to the flow of foreign investment. As it is a capital-intensive sector, the government recognizes the need for public and private cooperation, both domestic and foreign, to implement the construction, maintenance, and modernization of airports.

The Indian Policy on Airport Infrastructure (outlined in 1997) is aimed at:

- boosting sustainable trade and tourism
- anticipating capacity to handle increased volume of traffic
- garnering maximum share of air traffic in the region
- providing multi-modal linkages
- providing a market-oriented strategy with private capital and management
- developing infrastructure to reach remote and inaccessible rural areas

#### *Privatization Progress*

To cope with the demand and future traffic growth, the government opened the domestic aviation market to private sector competition. The national carriers, Air India and Indian Airlines, had a monopoly on international routes until 1994 when additional operators were allowed. The result is that India's aviation industry has grown rapidly due to price competition from new private airlines and budget operators.

In addition, the AAI implemented an "open sky" aviation policy for cargo which allowed international airlines to operate cargo flights without restrictions and to charge market rates for cargo. Under this policy, any foreign or domestic airline or association of exporters or private operators can bring freights to India and to lift cargo from any airport with customs and immigration facilities.

The purpose of the open sky policy for cargo was to facilitate the growth of international trade, and stimulate exports in particular. Following this, several private international airlines began to operate air cargo flights to India. The immediate effect was an improvement in the availability of timely cargo services at competitive rates, decline in cargo rates and increase in volumes handled by as much as 15-20 % per year.

As part of the Ninth Five-Year Plan (1997-2002), the Airports Authority of India (AAI) drafted a US \$ 500 million plan to develop six greenfield airports. Three of these international airports were constructed with private-sector participation in Bangalore, Hyderabad and Goa. In addition, the AAI upgraded facilities in 27 airports and developed 12 airports as model terminals.

After some initial delays, the government approved the restructuring of Delhi and Mumbai airports through long-term leases, with equity being shared by the AAI (13 per cent), the State Government (13 per cent) and a joint venture partner (74 per cent). Expressions of interest were solicited in April 2004, in which 10 domestic and foreign companies submitted bids. The entire process of evaluation of bids and handing over of airport to successful bidder is likely to be over by the first half of 2005-06.



In addition, the government began to increase the limits on foreign equity participation for both domestic and international carriers, and also began to divest its stake in the national air carriers, to a strategic partner who can operate, finance, and manage the acquisition of new aircraft.

*Airport Infrastructure & Improvements*

The results of the government’s liberalization policies in the 1990s can be seen in the rapid increase in air passenger traffic, rising from 24.22 million passengers in 1998 to 48.7 million in 2003 - an average annual increase of 20.2 %. In terms of air cargo traffic, the total volume was 462 thousand tons in 1998, and 979 thousand in 2003 – an average annual increase of 22.4%. The latest figures show a robust 22.3% growth year-over-year in passenger traffic from 2004/05, compared to a growth of 11.4% the same period the year before. Similarly, there was a 20.8% growth in air cargo in 2004/05, compared with only a 9.1% growth in the same period the year before, largely due to a rebound in the global economy.

Traffic handled during April to March 2004-05 vs. April to March 2003-04:

Particulars	April to March 2004-05*	April to March 2003-04	% Change
<b>Aircraft Movements (in Nos.)</b>			
International Airports	158191	132934	19.0
Domestic Airports	571827	506042	13.0
Total	730018	638976	14.2
<b>Passengers (in Nos.)</b>			
International Airports	19451146	16624911	17.0
Domestic Airports	40095663	32076530	25.0
Total	59546809	48701441	22.3
<b>Cargo (in tonnes)</b>			
International Airports	824876	683173	19.0
Domestic Airports	465036	375029	24.0
Total	1289912	1068202	20.8

\*Traffic projections based on actual traffic handled for the period April to November 2004.

The country currently has an extensive network of airstrips (over 400), of which only 61 are operational. There are 12 international airports, but the distribution of air traffic is highly concentrated. The top 5 airports (Delhi, Bangalore, Mumbai, Chennai and Kolkata) handle 73.5% of total passenger traffic and 85% of air cargo traffic. The top 10 airports (including Hyderabad, Ahmedabad, Thiruvananthapuram, Goa, and Calicut) carry 85.5% of total passenger traffic.

These figures suggest an uneven flow of traffic of existing airstrips. There are a large number of airports where full infrastructure is available, but only one or two flights a day operate, leading to heavy under-utilization of infrastructure and personnel. Only 9 airports of AAI are profitable. In view of this, the government has halted any new airport construction and focused instead on upgrading and modernizing air traffic services in the major airports to relieve congestion.

In the Tenth Five-Year Plan for Transport Infrastructure (2002-2007), the main objective of the development of the civil aviation sector is to provide world-class infrastructure facilities and efficient, safe and reliable air services to meet the requirements of domestic and foreign trade and tourism. This is expected to be achieved through private sector participation on a much larger scale than before, and the total budget allocated is US \$2.85 billion (Rp 12,928 crore).



The decision to restructure existing airports at Delhi, Mumbai, Chennai and Kolkata through long-term leases in order to make them world-class facilities is a significant milestone towards a favorable private investment climate in India. What this means is that the government, acting as a landlord, will require the lessee to undertake short-term and long-term investments.

The most significant projects of the Ministry of Civil Aviation are:

- a. In the Delhi and Mumbai airports, there will be complete refurbishing of passenger terminals, upgrading of the runways, adding more taxiways and parking spots for airplanes
- b. Modernization of Kolkata and Chennai airports include better passenger facilities, computerized flight information display, construction of an integrated cargo complex, strengthening of the runway and remote parking bays, and a new 20,000 sq m international departure terminal
- c. New communication and navigation facilities for instrument landing to optimize the air traffic management systems
- d. An IT plan for the modernization and automation of security checks and clearances using electronic databases

In light of domestic and foreign incidents (the hijacking of an Indian Airlines flight and the 9/11 attacks in the US), the government has taken special steps to tighten security at the Indian airports for the safety of passengers. These measures will include the IT automation and computerization of ticketing, mobile check-in counters, improvements in immigration and security checks, and more efficient baggage and passenger handling.

#### **5.5.5. Railway**

The country has the world's most extensive rail network, at 63,221 km of which 16,300 km are electrified. Indian Railways operates one of the busiest rail networks in the world, transporting over 5 billion passengers and over 600 million tons of freight annually.

Rail is the principal mode of transportation for carrying bulk freight and long distance passenger traffic. Given India's continental size, geography, resource endowment and diversity, rail plays a key role in not only meeting the transport and defense needs of the country, but also in binding together dispersed areas, thus, promoting national integration. In spite of these inherent advantages, the Railways, which is the sole high capacity transport mode capable of meeting the long-term transport needs of the country, has not maintained its market share.

The railways traditionally suffer from under-investment, insufficient progress on regulatory reform, and cross-subsidization policies. Passenger traffic is heavily subsidized by higher freight charges, increasingly forcing freight onto the roads. Although revenue-earning freight traffic increased from 391m tonnes in 1995/96 to 600m tonnes in 2004/05, extremely low levels of labor productivity have prevented more dramatic rates of growth. The government's implementation of a major road infrastructure upgrade also increased competition between road and rail for freight transport.

In 2005, the Railway Authority announced a US \$5.3 billion modernization plan, expected to be completed over five-years. The overall plan proposes to facilitate a 6% growth in freight traffic (635- 776 million tons per year), and a 3.5% growth in passenger traffic (6.4 billion passengers per year). It proposes to lay 1,372 lines to connect ports and 1,605 km to the hinterlands, and increase rail speeds and capacities for both passenger and freight trains between the major cities (Mumbai-Delhi-Chennai-Kolkata).



### *Multi-Modal Transport for Container Handling*

The Container Corporation of India (CONCOR) was established in 1988 to privatize the handling of cargo transport via railways. The private company manages a network of 40 terminals and supports multi-modal logistics support for domestic and international trade. It has utilized modern methods of container handling operations, including electronic container tracking and tracing, the use of cold-storage containers (reefer services between Delhi and Mumbai), and the use of special containers with rolling floors to facilitate pallet handling and built-in collapsible shelves to increase loadability.

### *Railway Upgrades*

Indian Railways has experienced continuous decline in its position vis-à-vis the road transport system. To some extent, this could be explained by the fact that as the economy progresses, the share of low-volume, high-value commodities increases, and that of high-volume, low-value commodities decreases, which puts rail in a disadvantageous position. However, considering India's continental size, geography and resource endowment, Indian Railways could continue to play a lead role in the transport sector. At present, it carries 65% of the long distance bulk traffic. By increasing the share to 80-85% through an accelerated program of containerization, it could substantially step up its share in non-bulk traffic.

The 2005/06 massive railway budget includes incentives to improve freight efficiency, such as policies to mechanize loading/unloading, introduction of an electronic payment gateway for online tracking of cargo shipments, upgrades of locomotives to increase train speeds and increase traffic throughput in the system, mechanization of train maintenance, and incentives to reduce container storage times. A major focus and priority has been the introduction of IT to freight systems to improve the quality of services substantially.

According to the Tenth Plan Five-Year Plan for India's Transport (2002-2007), the increased use of IT by Indian Railways was suggested as a way to lead to optimal utilization of the existing infrastructure, rolling stock and personnel. In the process, IT implementation could improve the rail's efficiency by substantially reducing operational costs, increase revenue from freight traffic, and improve public image.

In addition, the Rail Land Development Authority is developing surplus land acquisition for more inland container depots. Other improvements include the deployment of an integrated warehouse complex plan, the introduction of double-stack container trains between the port of Gujarat and North India, and the addition of more public-private partnerships for container handling to meet growing demand.

### *Cross-Border Railways*

The Asian Land Transport Infrastructure Development (ALTID), comprising the Trans-Asian Railway (TAR), Asian Highway and facilitation of land transport, was developed in the early 1990s as part of the UN Economic and Social Commission for Asia and the Pacific (UNESCAP).

The preliminary route requirements for the Trans-Asian Railway (TAR) was intended to connect rails between Asia and Europe without interruption - specifically between Southeast Asia and Europe, as well as between Southwestern China and Europe through South Asia. India would play a critical role through its strategic location connecting both East-West and North-South corridors.



The southern corridor of the Trans-Asian Railway (TAR) would run through the territories of five participating countries: Bangladesh, India, Iran, Pakistan and Sri Lanka. Further studies expanded the feasibility of route requirements to cover five additional countries: China, Myanmar, Nepal, Thailand and Turkey to connect Southeast Asia, Central Asia, and Europe.

The regional action program of the New Delhi Action Plan on Infrastructure Development in Asia and Pacific (1997-2006) highlighted the vital role of efficient rail linkages in facilitating bilateral and international trade and tourism in the South Asia sub region, including the Northeast India triangle, which spans Bangladesh, Myanmar, Sri Lanka, and Thailand.

In addition, the TAR multi-modal plan was intended to facilitate trade between hinterland regions of the participating countries and the connecting seaports. The main criteria for routes were to link international capital cities, major industrial and agricultural centers (links to important origins and destination points), connections to major sea and river ports (integration of land and sea networks), and connections to major container terminals and depots (integration of rail and road networks).

Though an initial policy framework has been laid out, a feasibility report on the overall project cost and facilitation has not yet been undertaken. Other factors impacting the implementation of the TAR in the South Asian sub region include:

- (i) lack of automated customs and security control procedures using electronic data interchange (EDI) to facilitate trade documentation
- (ii) lack of modern tracking/locator systems, to permit early advice of consignment status/location data
- (iii) lack of joint railway working agreements to avoid duplication and waste of operational resources and personnel (such as between Malaysia & Thailand)
- (iv) differences in railway gauges, uniform train lengths, and axle load limitations across different countries, with incompatible and inefficient rules for rolling stock exchange between railway systems
- (v) persistence of an additive rail tariff, which would prevent the establishment of international tariffs competitive to alternative modes of transport
- (vi) differences in route preferences (Nepal & Bangladesh preferred the Raxaul-Katihar – Singhabad – Rohanpur route instead of the Raxaul-Patna-Sitarampur-Calcutta-Gede-Darsana-Khulna/Chittagong route suggested by India)
- (vii) insufficient container handling facilities in Kolkata and Mumbai to make international freight transport attractive by railway

#### **5.5.6. Roads and Highways**

Road transport plays a significant role in India's economy, carrying 80% of the land transport demand. The total length of the national highway network is about 65,000 km. This accounts for less than 2% of the total road network, but carries over 40% of the road traffic. As a result of steady economic growth over the last decade, traffic on the national highways has grown by 6 to 7.5% per year.

The National Highways Development Project (NHDP), launched in 1998, seeks to expand more than 13,000 km of highway to between 4-6 lanes between India's metropolitan centers (Delhi, Mumbai, Chennai and Kolkata). The North-South Corridor connects Srinagar in Kashmir to





Kanyakumari in Tamil Nadu, including the Salem to Cochin Spur. The East-West Corridor connects Silchar in Assam to Porbandar in Gujarat.

About 75% of the project had been completed in mid-2005, with the remaining 25% due for completion by the end of the year. The North-South and East-West Corridors are scheduled to come into operation by end-2007.

A Central Road Fund established in November 2000, funded by a levy on petrol and diesel, will help to guarantee funds for the upkeep and development of the road network, including rural roads. Concessions on imports of equipment to construct national highways have been extended to other road construction projects. In an effort to attract private-sector investment, proposals for up to 100% foreign-equity participation in the construction of roads and bridges will receive automatic approval up to a ceiling of around US\$300 million.

In December 2004, the World Bank approved a \$620 million Lucknow-Muzzafarpour National Highway Project to upgrade the East-West corridor. The National Highways Authority of India will administer the project over 6 years, in line with its overall objective in alleviating highway bottlenecks as one of the major constraints to poverty reduction and private sector-led growth.

In order to attract foreign direct investment in its highway system, the government instituted policy changes to facilitate commercial borrowing, including:

- Undertaking all preparatory paperwork for land acquisition and utility removal
- Providing a matching capital grant of up to 40% of the project cost
- Allowing a 100% tax exemption for 5 years, and 30% relief for another 5 years
- Permitting of a concession period of up to 30 years
- Allowing up to 100% foreign equity for construction of roads and bridges

### **5.5.7. Waterways**

In addition to its coastal and ocean trade routes, India has more than 16,000 km of inland waterways. Of that, more than 3,600 km are navigable by large vessels, although slightly more than half are being used. The Inland Waterways Authority of India (IWAI), which was established to develop, maintain, and regulate the nation's waterways, has determined needs for fairway, terminals, and navigational aids to sustain shipping and navigation for cargo.

Currently, most of the waterways are limited in their function due to shallow water and narrow width of the channels during dry weather, siltation, and bank erosion. In addition, a multi-modal infrastructure such as road links to facilitate the smooth transit of cargo has been a constraining factor. Furthermore, less than 400 vessels are available for inland water transport. Other constraints include: diversion of water for irrigation and other uses resulting in the decrease in river levels; erosion of banks leading to heavy sedimentation load; inadequate vertical and horizontal clearances; and inadequate loading/unloading/berthing facilities.

Thus far, three major National Waterways have been constructed:

Allahabad-Haldia stretch of the Ganga Bhagirathi Hooghly river system (1620 kms)

Saidiya Dhubri stretch of the Brahmaputra river system (891 kms)

Kollam Kottapuram stretch of West Coast Canal (168 kms) with Champakara canal (14 kms) and Udyogmandal canal (23 kms)

Several more waterways are under development, including a new waterway terminal at Gaighat:



1. Kakinada-Marakkanam Project
2. Thiruvananthapuram- Kasargode Project
3. Dakshina-Kannada Project
4. Udupi Project
5. Honavar-Gerusoppa Inland Waterways Project
6. Kodibag-Kadra Inland Waterways Project
7. Kochi-Kollam Waterway Project

IWAI took up a number of projects aimed at increasing navigability of selective stretches of national waterways, construction of terminals and provision of a 24-hour navigation facility in the Kolkata-Farakka stretch of National Waterway No. 1, Bangladesh and India in National Waterway No.2, and Kottapuram-Kollam in National Waterway No. 3.

Most of the capital spent was used for the purchase of dredging vessels and the modernization of handling facilities. The Authority also procured hardware like hydraulic survey launches, tugs and floating pontoons. However, the Authority has shown continuous losses and poor productivity.

In the Tenth Five-Year Plan (2002-2007), inland water transport was viewed as playing an important role in the movement of passenger and freight in regions with a considerable length of navigable waterways. It could be developed significantly in regions where traffic originates and terminates at places near waterways. With the development of multi-modal transportation, inland water transport could play an important role in places where the origin and destination are not located at the waterfront, through the development of more infrastructure facilities.

Credits:

- Economist Intelligence Unit Country Report, June 2005
- World Bank Country Report
- CIA World Fact Book - India
- UNESCAP Report on Emerging Issues and Development at the Regional Level: Transport, Communications, Tourism, and Infrastructure, March 2001
- UNESCAP Report on Trans-Asian Railway, May 1999
- Ministry of Surface Transport (MOST) Tenth Five-Year Plan for Transport
- Ministry of Civil Aviation , Aviation Infrastructure Policy and Annual Reports (2003/04, 2004/05)



## 6. Maldives Country Profile

### 6.1. Background

The Republic of Maldives, located south-southern of India, consists of 1,190 coral islands and grouped into 26 atolls in the Indian Ocean. Among these islands, 200 islands are inhabited and 80 islands have tourist resorts. The Maldives is situated at a strategic location along several major sea lanes in the Indian Ocean. The country has a total area of 300 sq km, about 1.7 times the size of Washington, DC., and a population of 349,106 (July 2005 est.).

### 6.2. Recent Economic Performance and Foreign Trade

The GDP of the Maldives has increased average 9% since the late 1970s, with 8.5 % in 2003. 2002 estimated GDP was \$1.25 bn, with \$3900 per capita.

The Maldivian Government has been in the economic reform program since 1989 lifting import quotas and opening some exports to the private sector. It also has liberalized regulations to allow more foreign investment.

Maldives' largest industry is tourism followed by fishing sector. Tourism accounts for 20% of GDP and more than 60% of the Maldives' foreign exchange receipts. Also, tourism is a major source of government tax revenue (90%). The tsunami of 2004 had destroyed most of the infrastructure in the Maldives and the need of reconstruction has significantly increased while tourism dropped dramatically.

Total exports in 2003 amounted to \$ 91 million. Fish and clothing are major export commodities, and the US is the largest biggest export partner, which receives about 40.4% of total Maldivian exports followed by Thailand, 14.6%. the total imports in 2003 amounted to \$393 million and imports commodities include petroleum products, ships, foodstuffs, textiles, clothing, intermediate and capital goods. The major import partners are Singapore (32.9%), Sri Lanka (11%) and India (8.2%).

### 6.3. Transport Sector Developments

#### 6.3.1. Current Status At A Glance

Most of the transportation usage in the Maldives is by boat or seaplane (air taxi). The Maldives has kept reasonably good level of good safety standards for land, sea, and air travel. Transportation on each island is either by foot or by readily-available taxis, and transportation between the airport and Male, as well as to nearby resort islands, is by motorized water taxi and speedboat.

**Ports and Harbors:** Port of Male (international port), Uligamu and Gan

**Airports:** Paved runways: 2, Unpaved runways: 3

**Railways:** None

**Road and Highways:** N/A



### **6.3.2. Ports**

There are three major ports in Maldives. The Port of Male, located in the capital, handles international traffic. This port has been improved by the First Male Port Development Project completed in late 1992.

The other major two ports are Uligamu, located at northern Maldives, and Gan, located at southern Maldives. The port of Uligamu is mainly used by sailing vessels crossing Maldives and for clearance, supplies, bunkering etc. The Port of Gan was once a Military/Air Force Base of the British in the 1970's. Now, it is mostly used by the sailing vessels crossing the Cocos Keeling to reach other ports below the Equator across to Australia/Asia or Africa/Redsea.

In Maldives, "Dhoni," the traditional all-purpose vessel, is the most common transportation within the sheltered waters of each atoll. Although dhonis have sails, most are changing to engine-powered ships. Travel through the open sea from one atoll to another is usually by "vedis" which are larger, square-shaped, and wooden cargo boats.

### **6.3.3. Air Transport**

There are 5 airports in the Maldives, two with paved runways and three with unpaved runways in Male, Gan, Hanimaadhoo, Kaadhedhdhoo, and Kadhdhoo. Maldivian Airline operates regularly between Male and four other airports, and between resorts and Male are "Sea Plane" companies such as Maldivian-Air-Taxi, Trans Maldivian Airways, Sun Express Airlines.

According to an open-skies agreement between US and Maldives, US and Maldivian airlines will be able to operate air services between the two countries without restrictions on how often the carriers can fly, the prices they charge and the kind of aircraft they use. This agreement gives more benefit to the US business people who want to invest air transportation in Maldives.

### **6.3.4. Railways**

There are no railways in the Maldives

### **6.3.5. Roads and Highways**

Most of islands are not big enough to support automobiles, and only few roads are available on Male and the airport. The road are generally made of bricks and are well maintained. On resort islands, one usually finds dirt roads. The primary forms of road traffic are bicycles and motorcycles. Passenger cars on Male are primarily status symbols for the Maldivian elite.

### **6.3.6. Projects Under Consideration**

The Government of Maldives has infrastructure development plans that present new business opportunities for US companies. Commercial ports, Fisheries harbors, airports, new residential and resort islands, and land bridges are now being under considered. In addition to general post-tsunami repairs, the tourism sectors is again expanding, which means more transportation infrastructure will be needed.

#### Credits:

- Encyclopedia Britannica, World Data, 2004



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- 
- CIA - The World Fact Book
  - Country Brief, The World Bank in Maldives, September 2004
  - Country Study and Guide, <http://reference.allrefer.com/country-guide-study/maldives>
  - Island Sailors, [http://www.islandsailors.com/sub/ports\\_of\\_maldives.htm](http://www.islandsailors.com/sub/ports_of_maldives.htm)
  - US Department of State, [http://travel.state.gov/trade/cis\\_pa\\_tw/cis/cis\\_961.html](http://travel.state.gov/trade/cis_pa_tw/cis/cis_961.html)
  - <http://strategis.ic.gc.ca/epic/internet/inimrri.nsf/en/gr127187e.html>



## 7. Nepal Country Profile

### 7.1. Background

Nepal Adhiraya, located between India and China, has a total area of 147,181 sq km, and a population of 25.2 mn in 2003. There are three key domestic players in politics – the king, the political parties and the army. At present, Nepal is revising its constitution and since 2002, the king has been appointing prime ministers by royal decree and had dismissed the prime minister.

Due to the country’s geographic position, sandwiched between two regional powers, India and China, Nepal has conducted its external relations pragmatically. A policy of nonalignment, globally as well as regionally, has persisted, but close historical links with India have made Nepal more susceptible to pressure from the south than the north. It is a member of World Trade Organization, the South Asian Association for Regional Co-operation (SAARC) and the BIMST-EC (Bangladesh, India, Myanmar, Sri Lanka, Thailand Economic Co-operation) group.

### 7.2. Recent Economic Performance and Foreign Trade

Nepal has GDP of \$6.7 billion, a per capita income of \$240 per year, with 3.6% estimated GDP growth in 2004/05. In recent years, the level of poverty has decreased sharply and the government’s revenue collection has been high.

Agriculture is Nepal’s main economic sectors and it contributed around 39% of GDP in 2003/04. The manufacturing sector, accounting for 8% of GDP, does not seem to be very successful although governments have pursued a policy of planned industrialization since the 1960s. The construction sector, relatively underdeveloped, contributed 10% of GDP and the financial sector made up around 11% of GDP in 2003/04. The tourism sector has suffered since December 1999, but it has recovered slowly, showing 9% increase in tourists’ arrivals by air in 2003/04.

Over the past three decades, Nepal has traded with the rest of the world, especially, India, which is Nepal’s leading trade partner accounting for 55.6% of Nepal’s total trade in 2002/03.

<b>Main trading partner, 2003/04<sup>a</sup></b> (US\$ '000)			
<b>Exports to:</b>		<b>Imports from:</b>	
India	470	India <sup>b</sup>	1,225
US	146	Singapore	131
Germany	55	China <sup>c</sup>	82
UK	25	Thailand	65
Italy	9	Malaysia	55
France	9	Indonesia	49
Canada	8	South Korea	46

<sup>a</sup> Provisional figures. <sup>b</sup> Including petroleum product imports. <sup>c</sup> Excluding imports from Tibet.  
Source: Trade Promotion Centre, using exchange rate as of October 10, 2005

Although their dominance is decreasing, carpets and garments are Nepal’s main exports, still accounting for 70% of total exports in 2003/04. For the imports goods, gold was a major import but its importance has fell since 1997. Among regular imports, the major items are machinery, vehicles (including aircraft spares), manufactured goods, chemicals and pharmaceuticals.



### 7.3. Transport Sector Developments

#### 7.3.1. Current Status At A Glance

\$86.5 million out of total \$424.5 million of current lending to Nepal by the World Bank in 2005 is used for the transportation sector, which is the second largest sector (the largest one being the financial sector accounting for \$91.5 million annually). Currently, there is sufficient opportunity for development in the transport sector.

<b>Ports and Harbors:</b>	None. It is land-locked.
<b>Airports:</b>	Major airport: Tribhuvan International Airport (TIA) 47 Airfields, 34 private airline companies
<b>Railways:</b>	53 km – Birgunj, Nepal to Calcutta, India 51 km – Janakpur, Nepal to Jayanagar, India
<b>Road &amp; Highways:</b>	4,658 km paved road out of total 16,042 km of roads

#### 7.3.2. Ports

Although Nepal is land-locked, it has three "Inland Clearance Depots" (ICDs) in Biratnagar, Bhairahawa, and Birgunj. The Birgunj dry port complex has pavement, warehouse, administrative office building, goods shed, electric lighting system, utilities, and railway tracks that interchanges with an extension of 5.4 km from Raxaul, India. These rail tracks were funded entirely by India as a part of an economic cooperation between the two countries.

Soon after the Nepal-India treaty on railway service was finalized in 2004, the Nepali government contracted out the management of the Birgunj port for ten years to Himalayan Terminal (P) Ltd., a company 60% owned by CONCOR Ltd (a state-owned Indian company) and 40% by Nepal Transit and Warehousing Management Company Ltd (a Nepali government-owned company) and Inter-State Multi Model Transport Company (P) Ltd. (a private sector undertaking in Nepal).

#### 7.3.3. Air Transport

Nepal has 47 airfields, of which only 12 are suitable for large aircrafts. Nepal has only one international airport, Tribhuvan International Airport (TIA) in Kathmandu, and four domestic hubs with modest amount of facilities. The national air carrier is Royal Nepal Airlines Corporation (RNAC). In addition, there are approximately 15 private airlines operating out of TIA. As more international carriers began flying to Nepal in recent years, air traffic has increased and competition has increased for Nepalese airlines. For example, two Indian airlines, Jet Air and air Sahara began scheduling passenger flights to Kathmandu in 2004. In response, a private Nepalese airline, Cosmic Air, began flying from Kathmandu to New Delhi. Other international traffic include direct flights from and to Malaysia and Singapore. In addition to passenger traffic, significant amount of cargo travel between Nepal and Thailand and the Persian Gulf. The Nepalese government has plans to break the national carrier, RNAC, into separate domestic and international operations before privatizing it.

In addition to the international airport, over 120 helipads help to provide access to many of Nepal's remote mountainous areas.



#### **7.3.4. Railways**

Nepal owns and operates a portion of a 51-km railway connecting Janakpur with Jayanagar in Bihar, India built in 1936, and a 53-km railway connecting Nepal's inland container depot in Birgunj with India's rail network completed in 2001. In 2004, Nepal and India signed a treaty for railway service that allows Nepal to transport cargo via rails directly in and out of the port in Calcutta, India. In June of 2004, A Nepal Railway Company was set up to manage and oversee expansion of the rail network.

#### **7.3.5. Roads and Highways**

Fifteen districts out of 75 districts in Nepal do not have roads suitable for motor vehicles to connect them with the rest of the country. Most of the Nepal's roads are frequently washed away during raining season and the hill and mountain trails are not suitable for motor vehicles. requiring significant additional investments.

Most of Nepal's road is usually built by foreign aid. In addition, China helped build the highway on the Chinese border and India assisted building Nepal's main East-West Highway in the plains.

#### **Credits:**

- Encyclopedia Britannica, World Data, 2004
- EIU-Nepal Country Report 2005
- Country Brief, The World Bank in Nepal, July 2005





## 8. Pakistan Country Profile

### 8.1. Background

Pakistan has a land area of 796,095 sq km in 4 provinces, with 2 federally-administered regions (Jammu and Kashmir) which cover an additional 84,159 sq km. It is bordered by several countries: 2,430 km of Afghanistan to the west, 523 km of China to the north, 2,912 km of India to the east, 909 km with Iran to the southwest, and 1,046km of coastline on the Arabian Sea.

The terrain varies from rugged and mountainous, including eight of the ten highest peaks in the world in the Northern Areas. Through these mountainous regions, Pakistan includes a major transport routes from Central Asia to the Indian Subcontinent. The rest of the terrain is the flat and alluvial Indus Plain on the east.

There are limited natural fresh water resources, and only 28% of the land is arable. Other natural resources include 325.5 million barrels of oil-proven reserves, including oil production of 61,000 barrels/day in 2004, and 695.6 billion cubic meters of natural gas-proved reserves in 2004 estimates.

The population is estimated at 162.4 million in 2005 and the average density is 187.2 persons per sq km. The population is distributed with 38% in urban areas, and 62% in rural areas. The major cities are Islamabad (capital), Karachi, Lahore, Faisalabad, Rawalpindi. Cotton and textile are the largest exports but a large contributor to foreign exchange earnings is from steady remittances of overseas workers. About 32% of the population is still living below poverty line. Per capita income is estimated at \$650 in 2004.

### 8.2. Recent Economic Performance

Pakistan's economy in 2004 — with GDP amounting to \$88.4 billion — was one of the five fastest-growing economies in Asia, following a decade of uneven performance. Real GDP growth was 8.4% in 2004/2005, a record 20-year high compared to 6.4% in 2003, and is projected to grow by 6.6% next year. This growth has been partly fueled by macroeconomic policies of the international community — including a \$1 billion "debt forgiveness" package by the US government in 2003 — and of the Government of Pakistan, as well as continued expansion of the textile and manufacturing sectors.

Economic activity has gradually transformed, being less dependent on agriculture, as the manufacturing sector has shown recently a double-digit growth. In 2004, the burgeoning manufacturing sector contributed 28% to GDP growth, in contrast to the traditional sectors of agriculture (7.5%) and services (7.9%). This growth in turn has necessitated a rapid increase in imports of petroleum products, machinery and raw materials. In particular, a significant increase in cotton export contributed to the overall economic performance; it in turn has boosted the textile industry and has had a large bearing on the total exports. Historically, Pakistan has been one of the world's largest producers of raw cotton, but value added in cotton production was minimal. Recent increases in export quotas for higher-end textile products have raised exports of higher-value textile products. The overall economic activities are poised for further expansion in the near term and sustainable growth in the medium term



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Origins of gross domestic product 2003 <sup>a</sup>	% of total	Components of gross domestic product 2003 <sup>a</sup>	% of total
Agriculture	23.6	Private consumption	72.7
Manufacturing	18.4	Government consumption	11.7
Electricity, gas & water supply	3.4	Fixed investment	13.1
Construction	3.3	Exports of goods & services	20.5
Services	51.2	Imports of goods & services	-20.4

Principal exports 2002 <sup>b</sup>	US\$ m	Principal imports 2002 <sup>a,b</sup>	US\$ m
Ready-made garments	1,723	Petroleum & products	2,810
Cotton cloth	1,128	Machinery	1,576
Cotton yarn	930	Chemicals	1,339
Rice	448	Transport equipment	498
Synthetic textiles	411	Iron & steel	401

Main destination of exports 2003	% of total	Main origins of imports 2003	% of total
US	21.2	China	14.3
UAE	8.4	UAE	13.6
UK	6.7	Saudi Arabia	12.6
Germany	5.0	Kuwait	7.8
Hong Kong	4.8	US	6.6

<sup>a</sup> Fiscal years ending June 30th. <sup>b</sup> Customs basis.

### 8.3.Trade

Total exports amounted to \$14.5 billion in 2004 while total imports, 18.8 billion in the same period. The US was the largest destination of exports in the amount of \$2.9 billion as against the imports of \$1.8 billion. Pakistan's other trading partners are China, Saudi Arabia, United Arab Emirates, Kuwait, and Germany.

Despite strong growth in exports by 11.9% in 2004, even higher import growth of 25.7% — largely driven by high international oil prices — caused a larger trade deficit than the previous year; the current account deficits is estimated at 4.3% of GDP in 2004 as against the surplus of 1.6% of GDP in 2003.

#### *Tariffs and Trade Barriers*

The Government of Pakistan has, in the last few years, pursued a policy that encourages private sector participation which caused the private sector to begin to thrive. The government also has reduced tariffs substantially. The tariff structure is below WTO commitments, and the weighted average of tariffs is 16.7%, down from 56% in 1994.

Pakistan reached an agreement with the WTO in 2000 to phase out quantitative restrictions on textile imports. In 2005, textile exports are expected to show a strong growth due to the abolition of textile and garment export quotas for WTO member countries. However, the government still reserves the power to grant sector-specific duty exemptions, concessions, and protections under Statutory Regulatory Orders (SROs), though in recent years, the use of SROs has decreased.

#### *Trade Agreements*

Exports will be further boosted by government efforts to strengthen trade links, including bilateral and regional trade arrangements. Pakistan and Sri Lanka created a Free Trade Agreement (FTA)



that will double exports between the two countries, and talks are also underway with Malaysia and Singapore. Pakistan is keen to reduce tariffs to export its products to Southeast Asian countries.

A lack of regional trade cooperation has prevented the South Asian region from benefiting from economic stimulation and growth by the trade expansion, but this is now changing. With the implementation of the South Asian Association of Regional Cooperation (SAARC) — which is expected to replace the SAFTA (South Asian Free Trade Agreements) in 2006 — regional trade will likely increase significantly. Consequently, there will be pressure for new infrastructure investments and efficient facilities to handle increased trade volumes. The two largest members of SAARC, India and Pakistan, had virtually no bilateral trade in the 1990s. Both countries discussed ways to facilitate trade by easing customs rules and non-tariff barriers. In the first half of 2004, total trade between the two countries amounted to US\$381 million, up from US\$155 million the corresponding period of the previous year.

#### **8.4. Foreign Direct Investment**

The Government of Pakistan's market-oriented economic reform — supported by multilateral and bilateral financial institutions — has enhanced macroeconomic stability and promoted private sector and export-led industrial development. Considerable progress has been made, though the country had low investor confidence due to political risk. The Asian Development Bank (ADB) recently provided risk guarantees to foreign investment in order to attract more foreign direct investment (FDI). FDI rose by 25.3% to US\$793 million in the first nine months of 2004/2005 (less than 1% of GDP).

#### **8.5. Transport Sector**

The transport sector accounts for 10% of the GDP and is apportioned approximately 20-25% of the annual public sector development (capital) budget. The geopolitical situation in the region offers an opportunity for Pakistan to become a regional hub for international and transit trade and act as a bridge between Central and South Asia. This is only possible if the transport system in Pakistan is efficient and economical and is competitive with alternatives in the region.

##### **8.5.1. Sector Policy**

While the recent economic performance in the economy is largely attributable to the private sector-and export-driven policy, deficiencies in the transport sector, remain a major constraint to growth. A World Bank estimate shows the sector's inefficiencies penalizing the economy by approximately 8.5% of GDP annually.

To date, the government has pursued a strategy of gradual deregulation, reducing the public sector role and opening the economy to international investors. Privatization of state-owned enterprises is a key element of economic reform program, and this includes invitations for public-private partnership and international joint ventures in all modes of transport. However, the absence of an integrated transport planning and policy directives across responsible agencies as well as legacy legislative and regulatory frameworks has resulted in an inefficient, costly, and strategically under-funded sector. The performance of the transport system, while operational, has been slow with high economic losses from congestion, poor infrastructure quality, and an insufficient system to meet demand.

Despite these problems, there have been operational success stories such as the Karachi port container terminals and Port Qasim. The Government of Pakistan is implementing a range of



measures to improve efficiencies and facilitate private sector participation. Looking forward, the challenge for the sector is to quickly improve its performance and institutional capacity to meet the needs of an increasingly dynamic private sector-led economy.

### 8.5.2. Current Status At A Glance

The transport sector in Pakistan can be characterized to have (i) deteriorating infrastructure due to inadequate investment and lack of maintenance, (ii) expensive and inefficient ports, (iii) a loss-incurring railway system, (iv) a very high modal share of roads compared with railways, and (v) a recent transfer of large road assets from provincial to district governments.

**Ports and harbors:** Total: 41 million tons of cargo; Karachi, 25 m; Port Qasim, 16 m (2003)

**Airports:** 131 (2004 est.) ; 6 international airports , Paved: 92 Unpaved: 39

**Railways:** *total:* 8,163 km

*broad gauge:* 7,718 km 1.676-m gauge (293 km electrified)

*narrow gauge:* 445 km 1.000-m gauge (2004)

**Highways:** *total:* 257,683 km

*paved:* 152,033 km (including 339 km of expressways)

*unpaved:* 105,650 km (2001)

### 8.5.3. Ports

Annual maritime traffic is forecast to increase from its present 41 million tons to 120 million tons by 2020. Two major international seaports — Karachi and Port Qasim — currently handle over 95% of international trade cargo, with the Karachi port about 75% of the total. A third port (Gwadar) is under construction.

Deficiencies in port facilities are one of the major impediments for exports. Port operations are one of the most expensive because trade facilitation reform measures have not been implemented. According to the World Bank, there is an annual average of about \$310 million in “surcharges” to shippers and clearance of customs takes 17 days in average.

#### *Port of Karachi*

The Port of Karachi handles the majority of international trade through Pakistan’s ports. In 2003, Karachi handled 25 million tons of cargo - 19 million tons were imports and 6 million tons exports, and 615,646 TEU of containerized cargo.

In order to alleviate congestion in Karachi, massive improvements were needed. The Karachi Port Trust, a state-owned enterprise, has undertaken several modernization projects at a cost of \$350 million, including an \$80 million container terminal, \$36 million bulk cargo handling terminal, and a \$60 million multi-purpose terminal. Since the port container traffic was growing at 5% annually, to improve throughput, a \$35 million off-dock terminal to handle containers was established, with an annual capacity of 100,000 TEU. The projects are under various stages of implementation after having been opened for bids to private sector to participate under a build-operate-transfer scheme for 20 years.

While Port Karachi’s container terminals have met international standards, performance in other areas has been less positive. Nonetheless, Karachi port and its container terminals have



implemented many of the navigational and security improvements recommended in a US TDA Definitional Mission in 2002.

*Port Qasim*

Located 100km away is Pakistan’s second most important port: the Muhammad bin Qasim Port. In the past decade, traffic through Port Qasim nearly doubled, from 7.4 million tons of cargo in 1993 to 15.8 million tons in 2003. Port Qasim still need to implement several key additional measures to comply with international security standards.

**20.3 Cargo Handled at Sea Ports**

(Thousand tonnes)

Year	Imports			Exports			Total		
	Karachi Port	Port Qasim	Total	Karachi Port	Port Qasim	Total	Karachi Port	Port Qasim	Total
1993-94	17610	6766	24376	4980	676	5636	22570	7442	30012
1994-95	17580	8003	25583	5625	1196	6821	23205	9199	32404
1995-96	18720	8814	27534	4860	834	5694	23580	9648	33228
1996-97	18361	9895	28256	5114	690	5804	23475	10585	34060
1997-98	17114	12930	30044	5571	320	5891	22685	13250	35935
1998-99	18311	11103	29414	5744	640	6384	24055	11743	35798
1999-00	18038	12194	30232	5388	570	5958	23426	12764	36190
2000-01	20063	11146	31209	5889	964	6853	25952	12110	38062
2001-02	20329	10931	31260	6363	2295	8658	26692	13226	39918
2002-03	19392	12083	31475	5995	3733	9728	25387	15816	41203

Source: Karachi Port Trust and Port Qasim Authority.

*Port Gwadar*

Though Karachi and Qasim were modernized to handle increased traffic, the government approved a third international deep-water port in Gwadar, at a cost of \$700 million to \$800 million, to be built in phases. Approximately 100 km from the Iranian border and over 600km from Karachi, Gwadar is being developed as an international port that will provide more direct access to Aftghanistan and Central Asia via the existing Nushki-Quetta-Chaman rail line.

Gwadar will serve as a regional hub, handling traffic to and from over 20 countries, including Sri Lanka, Bangladesh, the Middle East, and Central Asia. It is also designed to provide an alternative and economical access to maritime trade for the Northern areas of Pakistan via Afghanistan and the land-locked states of Turkmenistan, Uzbekistan, and Tajikistan.

Phase I (\$248 million) of construction for Gwadar is nearly completed and is expected to be ready for commercial vessels by mid-2006. Construction was largely built by Chinese contractors. China helped to finance and fund the majority of costs (\$200 million in loans and grants), with the remainder from the Government of Pakistan. During the visit of the Chinese Premier in early April 2005, a Phase II funding agreement was signed between China and Pakistan for an additional \$70 million soft loan for dredging and channel improvements at Gwadar Port.



While the government will construct and procure cargo handling equipment, port infrastructure and support facilities, private sector participation is expected in construction, loading/unloading systems, specialized cranes, and other equipment for container terminals, bulk terminals, oil terminals, channel dredging, and security measures.

#### **8.5.4. Air Transport**

The Civil Aviation Authority of Pakistan operates and manages 42 airports, which includes 10 international and 32 domestic service airports. Of these, the five main international airports are at Islamabad, Lahore, Karachi, Peshawar and Quetta. The Civil Aviation Authority (CAA) is a state-owned authority under the Ministry of Defense which is responsible for airport management and development, including planning airport infrastructure demand, negotiations on air services agreements for commercial aviation, and air traffic control and regulation.

The total air traffic in the country was approximately 10.6 million passengers in 2003, both domestic and international. The majority of the traffic – about 77.6% of commercial aircraft movements, 89.5% of passenger, and 97.9% of cargo were accounted for by the six major international airports – Karachi, Islamabad, Lahore, Peshawar, Quetta, and Gwadar.

The growth in passenger air traffic has been steadily declining, but the freight cargo traffic has increased by 16% domestically and by 30% internationally from 1995 through 2003.

<b>Year</b>	<b>Domestic (tons)</b>	<b>International (tons)</b>	<b>Total (tons)</b>
<b>1995</b>	80,774	133,137	215,512
<b>2000</b>	76,442	148,714	225,156
<b>2003 *est</b>	94,034	173,215	267,249

#### *Policy*

To cope with the demand and future traffic growth, the government opened the domestic aviation market to private sector competition.

The Pakistan government and CAA are trying to quickly develop the aviation infrastructure necessary for Pakistan to become a more important player in the region's transport sector. As part of this plan, civil aviation is being restructured so that the sector can become a growth engine for trade, tourism and development. Operating entities for airports are corporatizing and greater accountability is expected. Attention is being given to making the airports more competitively priced in terms of landing fees, parking charges, and air navigation charges. While CAA is committed to financing infrastructure projects, its financial resources are constrained; therefore private participation in financing, executing and operating near-term projects through BOT or joint ventures is heavily encouraged.

CAA National Aviation Policy envisages selective Open Skies Policy and has executed agreements on the principle of reciprocity and bilateralism with maximum number of countries. As regards cargo operations, Pakistan allows open skies policy for foreign airlines, while simultaneously trying to convert the unilateral policy into bilateral open skies with major destinations of the world. At the same time, private sector is also encouraged to establish links based on bilateral open skies policy with major destinations of the world and to establish all cargo airlines including charter service.



To support the growth in the aviation sector and airport infrastructure, the CAA has also undertaken a program for the modernization of air navigation facilities. Thus far, CAA Pakistan has installed an integrated radar and extended range VHF communication network which covers almost the entire airspace of Pakistan. This has enhanced flight safety and availability of more direct and economical routing while operating within and across Pakistan airspace.

#### *Pakistan International Airlines*

Pakistan International Airlines (PIA) is the national passenger and cargo carrier. Its cargo network directly serves 40 international destinations and indirectly serves remaining global destinations through interline carriage arrangements. The 2004 opening of the Pakistan-India border allowed PIA to re-launch of its direct flight routes between the two countries and enhanced competition among routes from both countries and then onto other destinations. PIA's average cargo revenue is around US \$82 million per year, with a system uplift of approximately 75,000 tons, for an average system wide yield of \$1.30 per kg.

During the last decade PIA has systematically automated its cargo reservations, warehouse and terminals at all major stations. Currently, approximately 80% of PIA cargo activities are automated, using the FAST-IV system through SITA.

Though the primary commercial carrier is Pakistan International Airways, which is owned and operated by the CAA, as part of the general liberalization of aviation policy, the aviation market was opened to 3 private companies operating both domestical and international services (Shaheen Air, Aero Asia, and Bhoja Air).

#### **Airport Infrastructure – Snapshot Summary**

The two major airports in Pakistan — Jinnah International Airport in Karachi and Allama Iqbal International Airport in Lahore — are two of the best airports in South Asia. The construction of a third major airport — the new Islamabad International Airport — also to be equipped with state of the art and sophisticated facilities is presently in the planning phase. In addition, the Prime Minister in the summer of 2005 announced the need for to establish a new international airport at Gwadar as a top priority of the government. The highest priority aviation infrastructure projects for the CAA included a \$200 million construction of a new Islamabad airport to relieve congestion, a new international airport at Gwadar, and a \$50 million international airport in Sialkot.

#### *Islamabad International Airport (Rawalpindi) — Existing*

For nearly half a century, the CAA has operated the Islamabad International Airport in Rawalpindi city. It is an important gateway to Pakistan leading further to a number of destinations around, particularly to Central Asia and Western China, besides Northern Areas of Pakistan. However, this airport's facilities, terminal building, aprons, taxiways etc. are now heavily congested because of increased air traffic. Due to its location in a densely populated region, physical expansion is limited.

The airport handles around 25,000 commercial aircraft movements, 2.5 million passengers and 27,000 metric tons of cargo every year. The traffic had a stable growth rate in the past, which has been tentatively affected by recent security issues and capacity limitations.

#### *Islamabad International Airport (Pind Ranjha) — Proposed*

CAA has decided to build a new airport at Pind Ranjha outside the twin cities of Islamabad and Rawalpindi to shift its airport operations. The cost of the New Islamabad International Airport (NIIAP) project is expected to be around US\$ 250 million. The operations of the existing



Islamabad airport will be shifted to the new location. BOT proposals with 100% financing are being sought to complete the project.

The CAA has already invested much of its resources into this project. More than 3200 acres of land conservatively valued at over US \$40 million has already been acquired. CAA has also invested in early stage planning & design.

**MAJOR TRAFFIC FLOWS BY AIRPORT FOR THE YEAR 2002-03**

Airline	Commercial A/C Movements		Total Passenger		Total Cargo	
	Numbers	Share	Numbers	Share	M.Tons	Share
<b><u>Airports with International Traffic</u></b>						
Karachi	37,232	35.42	4,220,943	40.39	152,043	56.56
Islamabad	18,993	18.07	2,275,644	22.07	38,266	14.24
Lahore	21,941	20.87	2,280,769	22.12	64,288	23.92
Peshawar	7,463	7.10	654,867	6.35	9,621	3.58
Quetta	2,072	1.97	218,563	2.12	1,145	0.43
Gwadar	1,289	1.23	30,013	0.29	80	0.03
Pasni	328	0.31	4,501	0.04	15	0.01
Faisalabad	1,522	1.45	107,714	1.04	1,123	0.42
Multan	3,596	3.42	202,891	1.97	1,326	0.49
Turbat	1,111	1.06	23,547	0.23	88	0.03
<b>Sub Total - International:-</b>	<b>95,547</b>	<b>90.89</b>	<b>10,019,452</b>	<b>97.15</b>	<b>267,995</b>	<b>99.70</b>
<b>Sub Total - Domestic:-</b>	<b>9,576</b>	<b>9.11</b>	<b>312,446</b>	<b>2.94</b>	<b>814</b>	<b>0.30</b>
<b>Total :-</b>	<b>105,123</b>	<b>100.00</b>	<b>10,624,746</b>	<b>100.00</b>	<b>268,809</b>	<b>100.00</b>

*Sialkot Airport*

Being a major dry port in Pakistan, commercial movement to and from Sialkot is extensive. The CAA identified a suitable site for the new airport in Sambrial, 6km north of the Sambrial Dry Port, which cost \$4.6 million in land acquisition of 1,000 acres. At the opening of the airport, the annual passenger traffic is expected to be around 220,000, and is expected to increase to 328,000 by the year 2010. Approximately, 50,000 tons of cargo is expected to be exported from Sialkot and the surrounding areas once the airport becomes operational. This figure is expected to increase to 75,000 tons by 2010.

*Gwadar International Airport*

In August 2005, Prime Minister Shaukat Aziz announced a plan for an international airport in Gwadar and said that till such time the airport is built, the Civil Aviation Authority will upgrade the existing airport for routine flights. Mr. Aziz said the government attached high priority to the development of Gwadar Port as it was a vital link in the logistic chain and essential to opening up new vistas of economic cooperation in the region.

Anticipated project costs for the new airport are \$200 to \$250 million. Thus far, 3000 acres of land has been earmarked for the project. 1500 acres of land are anticipated for aviation-related activities, including:

- Runway/ parking bays for wide body aircraft
- Terminal building





- Spaces for airline operations, etc.
- Other allied services

The other 1500 acres of land is anticipated to be used for commercial development, including:

- Four-star hotel
- Duty-free shopping plaza
- Business center
- Food courts
- International convention center
- Shopping plaza
- Cargo village
- Other commercial projects
- Housing complex

#### *Lahore (Allama Iqbal) International Airport*

Lahore — located in capital of Punjab Province — is the international gateway of the major industrial centers of the country, which are famous for textiles and manufactured goods (surgical, sporting, leather, etc.).

The recently inaugurated Lahore Airport was constructed at a cost of Rs 10.3 billion at a new site, and can handle 6.5 million passengers per annum. It still has approximately 174 acres of land available for commercial development. Aside from the need for a cargo village, the opportunities are largely oriented towards commercial real estate activities (such as hotels, international conference center, shopping malls, office buildings, etc.)

#### *Karachi (Jinnah) International Airport*

Built in 1924, the Karachi International Airport was the first airport in the Indo-Pakistan sub-continent and served as the "Gateway to the East." Terminal I was the first building to be constructed. Terminal 2 & 3 were built in the early 80s to handle the increasing volume of passenger movement.

The present modern Jinnah Terminal was built in 1992 and caters to all international and domestic passenger movement. It is multi level facility with two satellites and has been conceived for development in phases. The terminal can handle over eight million passengers annually, including all domestic and international arrivals and departures. The complex can be further expanded to meet the growth in passenger traffic. After final expansion, it will be almost three times its present size, and will have altogether four satellites with 32 aircraft parking positions. It is anticipated to be able to handle over 10 million passengers per annum by 2015. The cargo complex handles around 140,000 tons of cargo per year. This terminal was built exclusively for handling of all types of export cargo including dry and perishable goods.

#### *Peshawar International Airport*

After Karachi and Islamabad, Peshawar is the third airport that generates huge revenue for the CAA. The existing airport, which is being used for civil aviation and an air base, was commissioned in 1927. The airport was given international status in 1976. A unique aspect of the Peshawar airport is that a broad-gauge railway track also passes through its runway.

CAA plans for expansion of the airport appear to have met local opposition from the provision government, who prefers that an expanded airport be located outside of the city. While it is unclear where developments stand for this expansion project, the CAA has stated its intention to acquire 2000 acres of land, of which 1000 acres would be used towards aviation-related activities



(i.e., runway, terminals buildings, airline operation offices, etc); the remainder would be used towards a cargo village and other commercial real estate activities.

#### **8.5.5. Railway**

The railroad system is owned and operated by the Pakistan Railway Authority — an autonomous agency under the Ministry of Railways. The network is estimated to carry 72 million passengers annually (2003). However, rail carries only 10% of the passenger traffic and 5% of freight. The rail system is based on broad-gauge track except for the meter-gauge Mirpur Khas-Indian border route and scattered narrow-gauge lines connecting to industrial processing facilities. The rail system includes 11,515 kilometers (km) of track and 7,791 km of routes, of which 7,346 km are 1.676 meter broad gauge and 544 km are electrified (broad-gauge totals 10,960 track km), and 445 km of meter gauge (meter gauge track totals 555 km); 625 stations; and, 592 locomotives, 1,865 passenger coaches, and 21,812 freight wagons.

The deteriorating infrastructure of railways and outdated rolling stocks, burdened by an inefficient and significantly large staff, restricts the railroad's competitiveness with road transport, even in carrying long-haul bulk freight where the railroad should have clear advantage.

Although truck and bus transport charges are higher, the unreliability and inefficiency of the rail network have led to a distinct preference away from rail to road. Railways have lost their modal share of 42% of passengers and 73% of freight over the last 50 years.

In spite of the local difficulties in the railroad sector, development efforts have been made in a regional transportation hub between Central Asia and the Arabian Sea, including 3 regional rail corridors to connect Pakistan with its neighboring countries of Afghanistan, India, and China, to replace or supplement the current deficiencies largely in the land transport system.

##### **8.5.5.1. Multi-Modal Transport Facilities**

In a noticeable development for the sector in 2005, the Ministry of Railways and the Pakistan Railway Authority invited bids for a public-private partnership joint venture to operate multi-modal transport and container freight stations with approximately 92,000 sq ft of dry dock space in Lahore. The successful bidder has to build its own stacking and handling area at Karachi port to handle 12,000, 20 ft. containers per year.

Two other multi-modal transport systems, including transshipment, customs, and security capabilities are also being invited for private partnership in the Northern region areas of Landi Kotal-Peshawar and Chaman-Quetta, to facilitate cross-border rail transport to Afghanistan, on through Central Asia and China. The bulk of Afghanistan-Pakistan trade moves to and from the Karachi or Port Qasim by truck, instead of rail.

##### **8.5.5.2. Regional Rail Corridors**

###### *(Quetta to) Kandahar-Herat-Kushka (Pakistan - Afghanistan)*

As security in Afghanistan improves, developing the rail and road corridor from Quetta to Chaman-Spin Boldek-Kandahar-Herat and then on to Turkmenistan would be a logical option for the Afghan government to consider. If this were to proceed, consideration could then be given to building a line to Kabul and the plains area to its north, which is one of Afghanistan's most productive agricultural regions.



Although transport infrastructure is very limited in Afghanistan, international assistance is being directed to its improvement. Afghanistan has to decide whether a rail link from Chaman to Turkmenistan and/or from Landi Kotal to Jalalabad-Kabul is the best use of its international assistance. Pakistan would have obvious interest in supporting the development of these rail corridors as it would enable the transit of goods and passengers to Central Asia.

Gwadar-Nushki (northern Pakistan)

The port of Gwadar is connected to Karachi by a recently upgraded road, but a more direct access to the Northern areas via the existing Nushki-Quetta-Chaman rail line could be established by a new rail between Gwadar-Nushki. Gwadar is slated for completion by mid-2006 with funding by China, which is eager to extend its existing rail network to provide an alternative route for its exports via Pakistan.

Kasur-Pakhpatan-Lodran (to Amristar; Pakistan – India)

A new rail line connecting Kasur-Pakhpatan-Lodran near the border with India is being considered. Although detached at the border, a rail line already exists on this route and extends to Amristar, a key industrial city in India. Other rail lines between India and Pakistan are Lahore-Amristar line, a potentially heavily trafficked route as it would connect two major industrial centers, and a route from Hyderabad to Mirpur Khas and on to the Indian border, which could connect with cities along India’s west coast including Mumbai (Bombay).

**8.5.6. Roads and Highways**

The road system in Pakistan covered 257,863 kilometers in 2003, of which about 60% were paved. There is a 339 km express highway between Lahore and Islamabad. Roads, the major mode of transport, carry 95% of the freight volume and 90% of the passenger traffic.

Low levels of road maintenance combined with heavy traffic have resulted in considerable deterioration of the road network. The over-used system requires rehabilitation, reconstruction, and upgrading at national, provincial, and district levels. A policy framework comprising tolls and road safety is being implemented, improving institutional capacity. In June 2005, the government approved a PKRp20 billion program to expand and improve roads and highways.

Following graduation from the IMF Poverty Reduction and Growth Relief facility in October 2004, the Government further stepped up the growth-oriented policies, allocating a 35% increase or \$ 343 million equivalent in budget for the Public Highway transport.

**8.5.7. Projects Under Consideration**

The Government accorded high priority on the transport sector for foreign assistance. Projects in asterisks were recommended projects as part of a study by the US TDA.

Mode	Description
Ports	Transportation Security for Ministry of Ports and Shipping* The Project consists of equipment and services based on transportation security implementation for three international seaports - Karachi, Port Qasim, and Gwadar Institutional strengthening includes assessing the organizational structure for outsourcing or streamlining Total US export potential is \$17 to \$31 million or more, based on the number of locations that adopt security measures



Airports	<p>Islamabad International Airport* Groundbreaking at the new airport is scheduled for mid-2005. The current airport was developed over 40 years ago. The site is in a heavily congested urban area that constrains further expansion. The Civil Aviation Authority proposed the airport terminal be built at a total capital cost of \$250 million to \$300 million; US export potential could be \$75 to \$90 million</p> <p>Gwadar International Airport Saikot international Airport [???</p>
Rail	<p>Intermodal Facilities* The Project is aimed at improving containerized transport securely and efficiently Construction of three railway terminals with inter-modal transport in Lahore, Landi Kotal-Peshawar, and Chaman-Quetta, with US export potential of \$48 million</p> <p>Regional Rail Corridors* The Project consists of new construction of railways to improve cross-border trade with China, India, and Afghanistan (and Central Asia) by linking existing tracks for port-railway connectivity (Gwadar-Nushki), cross-border connection (Kasur-Pakpattan-Lodrahan), and via truck-railway connectivity (Kandahar-Herat-Kushka) respectively Total Project cost for Gwadar-Nushki is estimated at US\$1 billion; the cost of the other two is not available and will be determined later</p>
Other	<p>Karachi Urban Transport* Karachi has a population of more than 14 million and is the largest city in the world without a mechanized mass transit system Implementation of a \$600 million mass-transit system, of which foreign components and services could total \$250 million Contracts for communication and signaling equipment, engineering management services, and gate control and ticketing machines alone would total \$50 million</p>

Credits:

- TERA Mission to Evaluate Transport Sector Projects in Pakistan (US TDA), June 15, 2005
- ADB Technical Assistance to Pakistan for Transport Policy Support, September 2004
- Board of Investment, Government of Pakistan ([www.pakboi.gov.pk](http://www.pakboi.gov.pk))
- Airports Council International – Asia Region ([www.aci-asia.org](http://www.aci-asia.org))
- Economist Intelligence Unit Country Report, June 2005
- World Bank Country Report
- CIA World Fact Book – Pakistan
- Economic Survey, Ministry of Finance  
<http://www.finance.gov.pk>
- Statistics Division: Government of Pakistan <http://www.statpak.gov.pk>
- Federal Bureau of Statistics, Pakistan  
[http://www.statpak.gov.pk/depts/fbs/publications/yearbook\\_2004/transport\\_communication.pdf](http://www.statpak.gov.pk/depts/fbs/publications/yearbook_2004/transport_communication.pdf)



## 9. Sri Lanka Country Report

### 9.1. Background

Sri Lanka is an island nation of 65,610 sq km (slightly larger than West Virginia), divided into 8 provinces. It has 1,340 km of coastline on the Indian Ocean and the country is prone to cyclones and tornadoes, land degradation, depletion of forests, and coastal erosion.

Sri Lanka has very little arable land (14%). The population is 20,064,776 (July 2005 est). Sri Lanka has a low level of urbanization, with over two-thirds of the population living in rural areas. Population distribution is rather uneven, with over half of the population concentrated in the south-western and central zones, where most cultivated land is located.

Roughly one-third of the population is classified as poor, earning less than US\$15 per month. Poverty is predominantly a rural phenomenon, owing to sluggish agricultural growth and the lack of physical infrastructure (roads, electricity, irrigation, and communications), which has prevented the rural population from benefiting from industrialization. GDP per capita was \$1,026 (2004) - higher than other South Asian nations.

#### Comparative economic indicators, 2003

	Sri Lanka	India	Pakistan	Singapore	Bangladesh
GDP (US\$ bn)	18.6	592.0	69.0	91	51.9
GDP per head (US\$)	971	558	456	21,790	354
GDP per head (US\$ at PPP)	3,346	2,690	1,970	27,860	1,270

### 9.2. Recent Economic Performance

Sri Lanka's GDP was US \$20.1 billion in 2004. The economy grew at an above average rate of 4.7% from 1990-2003, but has been subject to external shocks. The lagged effect of the September 11<sup>th</sup> attacks in the US impacted the tourism sector, and the global slowdown affected export demand. In late December 2004, a major tsunami took nearly 40,000 lives in Sri Lanka and caused massive destruction of property and reduced tourism-related trade services. However, GDP growth is expected to recover and rebound to 6% in 2006.

The primary source of economic activity is the services sector, with 54.7% of GDP. Manufacturing contributes 26.2% of GDP and agriculture contributes 19.1% of GDP (down from 70% in 1970).

Of 7.26 million working Sri Lankans, 38% are employed in the agriculture sector, 45% are in the services sector, and 17% are in the industrial sector. The most dynamic sectors are food processing, textiles and apparel, food and beverages, telecom, and insurance and banking.

### 9.3. Trade

Exports totaled US \$ 5.31 billion in 2004 and imports totaled US\$ 7.265 billion in 2004. Trade accounts for 63.4% of GDP. Unlike its northern neighbor India, which has a diversity of economic sectors, Sri Lanka's export base remains narrow—it is dependent on plantation crops (tea, rubber, coconuts) and garment exports to provide the impetus to economic growth with nearly two-thirds of all exports. Sri Lanka's major agriculture commodities are rice, sugarcane, grains, oilseed, spices, plantation crops, dairy and cattle products. Its other major exports are diamonds and jewelry, leather goods, machinery and mechanical equipment, and fish products. Its major imports are textile yarns and fabrics, petroleum and mineral products, foodstuffs, machinery and transportation equipment. Sri Lanka's growing manufacturing sector remains heavily dependent



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on the import of capital goods and industrial inputs, which account for three-fourths of all imports. In addition, Sri Lanka experienced an oil import shock in 2004, increasing 44% in total value from \$838 million in 2003 to \$1.2 billion in 2004.

<b>Principal exports 2004<sup>a</sup></b>	<b>US\$ m</b>	<b>Principal imports 2004<sup>a</sup></b>	<b>US\$ m</b>
Textiles & garments	2,818	Textiles	1,517
Tea	740	Mineral products	1,320
Diamonds & jewellery	247	Machinery & transport equipment	1,114
Petroleum	100	Chemicals	207

<b>Main destinations of exports 2004<sup>a</sup></b>	<b>% of total</b>	<b>Main origins of imports 2004<sup>b</sup></b>	<b>% of total</b>
US	32.4	India	18.0
UK	13.5	Singapore	8.7
Germany	4.8	Hong Kong	7.7
Japan	2.7	Japan	5.1

Sri Lanka's largest export partners are: US 32.4% (\$1.8 billion), UK 13.5%, Germany (4.8%) and Japan (2.7%). Its largest import partners are: India 18% (\$1.1 billion), Singapore 8.7%, Hong Kong 7.7%, and Japan 5.1%.

#### *Tariffs and Trade Barriers*

Sri Lanka liberalized its economy in the late 1970s ahead of other developing countries. The pace of economic reform accelerated and significant progress was achieved in deregulating and liberalizing the economy. Several large privatizations including the telecoms, power generation, and port sectors were opened to private participation, and foreign-equity limits in previously regulated sectors were completely liberalized in 2002.

Sri Lanka follows an export-oriented industrialization strategy. A wide range of incentives, including lower tax rates, tax holidays and duty-free imports of raw materials and capital goods are available for export industries. The progressive rationalization of tariffs and the reduction in protection levels included phasing out of the import surcharge by January 2005 (originally 40% in 2001, and halved to 20% in 2002), accompanied by a simplified three-tier tariff structure. The two-tiered value-added tax (VAT) was simplified to a single VAT rate of 15% in 2004.

#### *Trade Agreements*

Since the garment industry generates more than 50% of Sri Lanka's exports, the country faces a large trade challenge with the phasing out of the Multi-Fibre Agreement in 2005, which will lift global quotas on textile imports, and expose the country to intense competition. Existing free-trade agreements (FTAs) and special concessions granted by the US to Mexico through NAFTA, together with increased supply from low-cost manufacturers in eastern Europe and China, have already resulted in some loss of Sri Lanka's share in the global garment market.

The Sri Lankan government initiated discussions for an FTA with the US in 2002. However, it takes 90 days for goods to reach the US market from Sri Lanka, compared with 30 days from Mexico. Lower labor costs from other Asian countries such as Vietnam and Bangladesh will continue to put pressure on increased competitiveness for export-led growth in garments.

Sri Lanka continues to have strong trade relationships with India, with a bilateral free trade agreement in 2000 that doubled the volume of trade between the two countries. Although Sri Lanka is a member of the South Asian Association for Regional Cooperation (SAARC), which is planning to implement a South Asian Free Trade Agreement (SAFTA) beginning in 2006, the



benefits in terms of increased exports from Sri Lanka may be negligible, as is clear from the huge trade deficit with India. Sri Lanka is pursuing similar bilateral FTAs with Pakistan and Egypt in a bid to increase tea exports.

#### **9.4. Foreign Direct Investment**

Although Sri Lanka has one of the most liberal and foreign-investor friendly regimes in Asia, FDI inflows have remained well below potential, due to an uncertain political climate. Annual FDI inflows averaged 0.8% of GDP in the 1980s, increasing to 1.2% of GDP in the 1990s. FDI peaked at US\$430 million in 1997 but fell back in 1998-2001. In 2003, the IMF formally approved a US\$567 million aid package to Sri Lanka, under its poverty reduction and growth facility fund (PRGF) which will be disbursed in equal tranches by February 2006.

In recent years, privatization has helped to shore up FDI inflows. Total capital inflows and direct investment grew by 8.6% to US\$241.5 million in 2003. Although FDI fell to US\$171 million in 2003 from US\$181 million a year previously, this was offset by a 500% increase in inflows from privatization, which rose from US\$5 million in 2002 to US\$30 million in 2003. Following the tsunami in 2004, according to the Annual Report of the Central Bank of Sri Lanka, an estimated US\$1.8 billion in aid for relief, rebuilding, and reconstruction is needed.

In a June 2005 report compiled jointly by the Asian Development Bank and the World Bank, foreign investors continue to cite political instability, poor access to financing, and weak infrastructure facilities (fuel, electricity, port and freight rates), and poor transport (in particular, road conditions) as principal constraints for rural businesses that undermine Sri Lanka's investment climate relative to other Asian countries.

#### **9.5. Transport Sector**

Low public investment by successive governments has led to a poor and dilapidated infrastructure that has been a main constraint for high growth and a contributor to regional income disparity. The physical infrastructure in Sri Lanka is inadequate across all transport and utilities sectors. Public investment has declined as a % of GDP due to budget constraints, though expenditure on transport and communications increased from LKRp 20.2 billion (US \$ 209.3 million) to LKRp 38.4 billion (US \$ 379.5 million), according to the 2004 Annual Report from the Sri Lanka Central Bank.

The government is promoting private investment in infrastructure, largely on a build-own-operate or build-own-transfer basis. An important step in 2002 was the establishment of a multi-sector regulatory body (Strategic Enterprise Management Agency, or SEMA) to overlook all utilities, including the Sri Lanka Ports Authority (SLPA), the Sri Lanka Railways (SLR), the Airport and Aviation Authority of Sri Lanka (AAASL), and the Sri Lanka Central Transport Board (SLCTB).

**Ports and harbors:** Colombo, Galle, Jaffna, Trincomalee

**Airports:** 14 (2004 est.) ; 13 paved, 1 unpaved

**Railways:** total: 1,449 km broad gauge: 1,449 km 1.676-m gauge (2004)

**Highways:** total: 11,650 km paved: 11,068 km unpaved: 582 km (2002)

**Waterways:** 160 km (primarily on rivers in southwest) (2004)



### 9.5.1. Current Status At A Glance

The development of transport systems in Sri Lanka is suffering from:

- (xiv) non-existent or poor road surface transport to rural areas
- (xv) financial losses and heavy subsidization of government-operated transport facilities
- (xvi) lack of rational pricing for transport services
- (xvii) lack of maintenance and a need for substantial improvements in all modes of road and rail
- (xviii) air transportation is subject to fluctuations in tourism
- (xix) serious supply shortages and regional disparities
- (xx) lack of infrastructure investment to keep pace with other Asian countries

#### Transport statistics

	1999	2000	2001	2002	2003
<b>Road</b>					
New vehicle registrations					
Private transport					
Motorcycles	42,497	39,987	34,119	54,762	86,877
Cars & jeeps	29,678	29,403	20,836	28,332	45,458
Public transport					
Buses & coaches	2,611	2,298	1,310	1,429	1,949
Three-wheelers	14,706	11,656	10,274	20,876	36,204
Goods transport	13,361	8,585	6,013	7,952	11,014
<b>Total incl others</b>	<b>102,853</b>	<b>91,929</b>	<b>72,634</b>	<b>113,351</b>	<b>181,502</b>
<b>Rail</b>					
Passenger traffic ('000 passenger-km)	3,104	3,208	3,979	4,079	4,258
Freight traffic (m tonne-km)	103	88	109	131	129
<b>Sea</b>					
Vessel arrivals (no.)	4,339	4,232	4,014	4,062	4,032
Colombo	3,968	3,832	3,570	3,787	3,838
Trincomalee	274	303	327	199	121
Galle	97	97	117	76	73
Total container volume ('000 TEUs)	1,704	1,733	1,727	1,765	1,959
Transshipment container volume ('000 TEUs)	1,153	1,181	1,195	1,218	1,370

Source: Central Bank of Sri Lanka, *Annual Report*, 2003.

### 9.5.2. Ports

Despite its strategic advantage at the crossing point of major sea routes, Sri Lanka ranks very low in international maritime competitiveness and investments in port infrastructure could add favorably to the country's economic growth and sustainability. Average service turnaround time (ASTA) for a non-containerized ship was 5.7 days in 1998, improving to 4.21 days in 2003. For containerized ships, ASTA was 36.7 hours in 1998, improving to 15.4 hours in 2003. By contrast, in Singapore, ASTA is 6-8 hours, and as little as 2 hours in some cases.

The Ministry of Ports and Aviation was formed in April 2004 to improve competitiveness and efficiency of port services. Its vision is to develop Sri Lanka as a leading international maritime and aviation center through sustainable policies and regulatory mechanisms to create highly efficient and productive ports as transshipment centers, and airport hubs with sufficient capacity equipped with modern state-of-the-art technology.

The main port of Colombo has two container terminals -- the state-owned Jaye Container Terminal (JCT), operated by the Sri Lanka Ports Authority (SLPA), and the South Asia Gateway



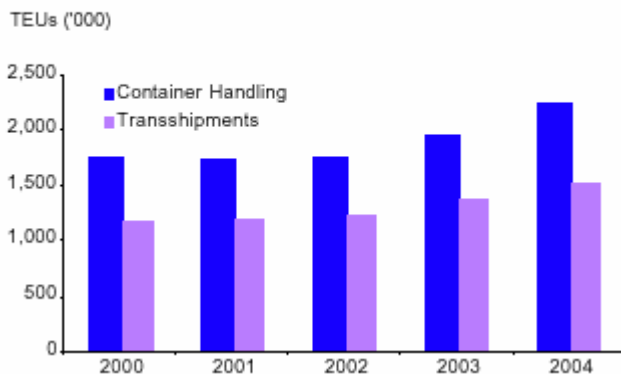


Terminal (SAGT), operated by P&O of Australia. Cargo handling efficiency at Jaye Container Terminal (JCT) of Sri Lanka Ports Authority (SLPA) improved during 2004 with additional worker training and cooperation with laborers.

Port services recorded a healthy growth in 2004, having benefited from the growth in international trade. The total cargo handling, inclusive of container handling, grew by 11% in 2004, while the container throughput increased by 13%, reaching the highest ever number of containers handled. The domestic container throughput increased by 17 % and transshipments increased by 12 %.

Additionally, the removal of the “war-risk” insurance surcharge (imposed by global insurers in 2002 following a 2001 rebel attack at the Sri Lankan international airport) boosted shipping industry volumes to an unprecedented 1.8 million TEUs (twenty-foot equivalent units) in 2003 and nearly 2.5 million TEUs in 2004. The delisting was expected to benefit trade by lowering freight charges for break-bulk (non-containerized) cargo calling at the Colombo port.

Chart 3.5  
Total Container handling and Transshipments



Source: Central Bank of Sri Lanka Annual Report 2004

Ongoing and completed port projects in Sri Lanka include:

- The development of the Colombo South Harbour, with deeper depths to serve mega ships carrying over 8,000 – 9,000 containers is expected to commence in early 2006 and be completed by 2009, when mega ships are expected to put in for servicing. The proposed harbor will have 4 terminals of over 1200 m in length to accommodate 3 berths each. Phase 1 of the infrastructure development is being carried out with public funds (US \$350 million), and Phase 2 for terminal construction is anticipated through private sector participation (US \$700 million)
- The Galle port was earmarked for urgent expansion in 2005 by constructing two berths with deeper draft in the outer harbor at a cost of Rp 1.2 billion (US\$ 11.85 million) funded by the Japanese government. An appraisal mission was completed in February 2005, and funds are pledged in March 2006.
- New North Pier development including construction of a 3<sup>rd</sup> berth and Unity Container Terminal (UCT), providing an additional container handling capacity of 230,000 TEUs per



year was opened for cargo handling in June 2004; improvements included the installation of 3 quay-side gantry cranes and 8 RTG cranes, 50 Prime Movers and Terminal Tractors, and implementation of a computer system

- A two-and-a-half year project for the upgrading of the Colombo North Channel dredging was completed in January 2005 at a total cost of Rs. 1.1 billion (US \$ 10.9 million) and procurement of a new 300 cbm Self Propelled Grab Hopper Dredger for maintenance of water depths at a cost of Rs. 454 million (US \$4.5 million)
- Deepening of the harbor basin through dredging to accommodate Super Post Panamax container ships was completed at a cost of Rp 1.2 billion (US \$11.86 million)
- Construction of a new 180m additional feeder berth at Colombo port, completed in December 2004 for Rs 726 million (US \$7.17 million)
- In October 2004, a Rp 1 billion investment (US \$9.9 million) single-point integrated port service was set to begin operation at Orugodawatta
- The Trincomalee port will be developed as a 'port city' focusing on the development of tourism, as well as providing services to regional industries. Construction of a new 253 m pier for 40,000 DWT ships was completed at a cost of Rp 1.294 billion (US \$12.78 million)
- The Hambantota port was expected to be developed as a bunkering centre and a feasibility report was drafted in 2001. However, this plan may be scrapped, given the rapid decline in number of ships calling for bunkering, bypassing Colombo in favor of Singapore, where fuel costs were \$80-100 cheaper per metric ton.

The port services continued to face new challenges from regional competition, specifically, the new ports developed in the Middle East and South India. Currently, most of the feeder network includes the Indian ports of Tuticorin, Chennai, Kochin, Mumbai, and Kolkata, and the Bangladeshi port of Chittagong. The technological advancements that contribute to the efficiency of port services are taking place at a rapid pace and the government is eager to develop the port services that take consideration of the future expansion requirements.

Sri Lanka is one of 20 countries that informed the UN-affiliated International Maritime Organization that it will adopt the US Container Security Initiative (CSI), in which foreign ports must notify US customs of contents, 24 hours before the container is loaded for shipment. Colombo has not officially been declared an overseas operational CSI port.

The US export potential includes dredging and container-handling equipment, loading and unloading equipment, construction management of jetties and additional berths, port operations re-engineering, information systems (EDI) for logistics and marketing, and consulting services to obtain ISO certification of existing container facilities.

### **9.5.3. Air Transport**

The development of airport infrastructure is vital to establish trade, commerce, and social links with the rest of the world for the economic growth of the country. There are 13 airports in Sri Lanka but only one (Bandaranaike International Airport-BIA) is paved and serves as the international gateway and domestic hub. BIA is undergoing a \$100 million capital improvement project to improve and widen its taxiways, new construction of a 52,000 sq ft pier with boarding



bridges, moving sidewalks and elevators and a 40,000 sq ft cargo facility. Private Japanese companies are currently working on this project with a loan from the Japanese Bank for International Cooperation (JBIC).

Long-term development of a second runway, a second international airport, and upgraded domestic airport facilities could favorably affect Sri Lanka’s growth and development, in particular as it relates to a burgeoning tourist business in the south of the island.

Several factors adversely affect the growth of Sri Lanka’s civil aviation industry and its ability to compete with international airports in the South India (Cochin and Bangalore), which could fill the void and serve as aviation hubs in the Indian sub-continent:

- (i) Absence of a Civil Aviation Policy
- (ii) Non-existence of Civil Aviation Development Master Plan
- (iii) Capacity limitations at Bandaranaike International Airport (BIA)
- (iv) Lack of an in-country alternate international runway
- (v) Non-availability of some of the existing domestic airfields for operations of civil flights
- (vi) Public unawareness of the potential of aviation
- (vii) Embargoes placed on domestic civil flights due to security reasons

The Civil Aviation Authority of Sri Lanka (CAASL) was established in 2002 to regulate civil air operations within Sri Lanka, while being responsible for formulating aviation policies, preparing aviation development plans and strategies, enforcing aviation safety requirements and coordinating with international civil aviation organizations. Aviation reforms including deregulation and bilateral agreements aimed at attracting more international passenger and freight traffic and competitive operators were put in place in 2004.

The total number of international passengers at BIA passed 4 million, growing at 26% rate in 2004, which exceeded the previous year’s growth of 17%. Domestic passenger travel also increased rapidly during 2004. Cargo volume increased nearly 18% to nearly 147,000 metric tons, and is expected to grow at the same rate in 2005. By contrast, Singapore’s Changi airport operates a center with a handling capacity of 2.5 million tonnes of cargo per year.

	Passengers			Cargo (metric tons)		
	Loaded	Unloaded	Total	Loaded	Unloaded	Total
2003	1,630,292	1,602,470	3,232,762	76,140	48,475	124,515
2004	2,050,974	2,053,737	4,069,716	92,704	54,160	146,890
2005 (Forecast)	2,580,000	2,540,000	5,123,000	113,000	61,000	173,000

Of the total volume of export air freight of 93,000 metric tons, Sri Lankan Air carried 44%, with the other top carriers being Singapore, Qatar, and a competing domestic carrier (Expo Aviation). Of the total volume of import air freight of 54,000 metric tons, Sri Lankan Air carried 55%, with the remainder being carried by Singapore, Emirates, Cathay Pacific, and Expo Aviation.

**Air Traffic Statistics Estimates**



Year	Actual		Forecast Growth			
	2002	2003	2005	2010	2015	2020
Description						
Passengers (mil.)	2.77	3.23	3.56	5.11	7.24	10.15
Growth Rate	5.3%	16.9%	7.9%	7.5%	7.2%	7%
Cargo (X 1000 tons)	112.3	125.7	160	270	455	733
Growth Rate	10.6%	11.9%	12.1%	11%	11%	10%
Total Aircraft	25,276	27,937	33,400	43,700	56,300	71,800
Growth Rate	-4.1%	10.5%	6.1%	5.5%	5.2%	5.0%

Source: US TDA Definitional Mission on Civil Aviation in Sri Lanka

Insufficient terminal capacity has limited the airport's handling capacity. Although there are enough parking slots to handle 25 aircraft per hour, BIA cannot handle more than 12 aircraft per hour, due to limited baggage carousels and limited passenger holding rooms. In addition, the CAA turned down requests from foreign carriers for charter flights due to insufficient aircraft parking space for prolonged periods of time, and airport congestion was highlighted during the humanitarian efforts for tsunami aid relief.

Phase I of an airport development project, including the construction of a domestic terminal at the Bandaranaike International Airport (BIA) commenced in March 2005. Phase II of the airport development project was to expand passenger capacity to 5 million per year by August 2005, including consideration for a second runway, although capacity is set to exceed that almost immediately.

For the convenience of the travelers to the Jaffna peninsula, a terminal facility at the Palaly Airport was built at a cost of LKRp. 4 million. Other major aviation developments include plans for a second, alternate international airport about 90-120 miles south of Colombo, near Kogalla, and the upgrade of Ratmalana airport, which is near Colombo, to build an internal domestic air network. Finally, the CAA mentions building a multi-modal sea-air cargo transport hub to attract mega cargo carriers, though no specific outlays were announced. The US export potential includes consulting engineering services, airport construction management, air traffic management and communications systems, airport and runway lighting, ground handling equipment, airport maintenance systems, and information systems.

In light of domestic and foreign incidents (a rebel attack on the international airport in July 2001, and the September 11<sup>th</sup> attacks in the US), the government has taken special steps to tighten security at the Sri Lankan airports for the safety of passengers. These measures include the acceptance of the Universal Safety Oversight Audit Program by the ICAO, adopted at an Aviation Safety Summit held in Washington, DC. The CAA made progress on fulfilling 12 out of 23 deficiencies in safety oversight, with ongoing plans to correct the remaining 11 areas.

#### 9.5.4. Railway

The Sri Lankan Railways (SLR) has suffered serious dilapidation, and represents only 7% and 2% of national passenger traffic and goods transport, respectively. Although it operates as a government monopoly, lack of market pricing and poor management has led to declining quality and heavy operational losses, subsidized heavily by the government. These financial losses hindered the development of railway tracks, and prevented strengthening and maintenance of available rolling stock, which is at only 85% of the required levels to operate satisfactory service.



Although the SLR has 1,445 track kilometres, it operates only on 1,200 track kilometres as services beyond Vavuniya on the Northern Line and beyond Madawachchiya on Talaimannar Line have been suspended due to extensive damages. About a half of the available track is below the minimum standards and is subject to a very low maximum speed limit and high accident risks. Most of the locomotives are over 25 years old, and 75% of the coaches are over 15 years old.

When the SLR was commercialized to run as a private enterprise in 2003, rail fares were raised by 50% in 2004, but higher oil prices and labor wages increased operational expenses. Freight tonnage has been stagnant and the increase in passenger traffic has been negligible. As a result, SLR was restructured as a government department in January 2005 due to continued problems and labor requests.

#### **9.5.5. Roads and Highways**

Road transport is the weakest link in Sri Lanka's infrastructure, but it carries 80% of the land transport demand. Though there is an extensive road network, the quality of its roads needs substantial improvements, as the majority of roads consist of single-lane roads. The major problems associated with road development are a combined result of increased traffic, an inability to secure sufficient funds for new projects, and a lack of funds for the maintenance of the existing road network. The situation has been exacerbated by even less spending on the rail network, resulting in the road as the primary means for transporting cargo. The result is that Sri Lanka's road network has become increasingly incapable of handling additional traffic.

The Central Bank proposed a Road Fund through a gas tax and tolls to help finance road maintenance and prevent a drain on federal reserves, but this has not yet been enforced. The Road Development Authority (RDA) spent LKRp. 11.2 billion (US \$110.68 million) in 2004, and most of the highway development projects for new construction were funded by foreign lending institutions. However, the road sector moved decisively to a greater private sector approach as the road construction company owned by the government's Road Development Authority (RDA) was disbanded in early 2004. The total value of road maintenance projects for private bids was Rp 2.7 billion in 2004 (US \$26.7 million).

#### Ongoing and Upcoming Highway Projects:

- The Southern Highway project is being constructed with LKRp 29 billion (US \$286.6 million) from the Asian Development Bank and the Japanese Bank for International Cooperation. The construction of the ADB funded section of the Southern Highway (Kurundugahahetekma – Godagama), commenced in early 2003 and is expected to be completed by 2006. The JBIC funded section (Kottawa –Kurundugahahetekma) is scheduled to be commenced in 2005.
- The proposed Colombo-Katunayake expressway project, which was commenced in 2000 and later suspended, is planned to be recommenced on a public-private partnership basis. In June 2005, the Ministry of Finance announced that China's Exim Bank agreed to soft loans to link the capital city with Katunayake, an oil-tank farm in the south.
- The Colombo Outer Circular Highway with an estimated project cost of around Rs. 17 billion (US \$168 million) is at the stage of completing the survey map. The Colombo-Kandy expressway is expected to be implemented on a BOT basis with the assistance of the Malaysian government at an estimated cost of Rs. 29 billion (US \$286.6 million)



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- The RDA also implemented the Road Network Improvement Project (RNIP), which includes the rehabilitation of 345 km of roads and the improvement of 47 bridges with the assistance of the ADB and JBIC.
- The rehabilitation and improvement of the Balangoda –Bandarawela road with Korean assistance commenced in 2004
- To address the problem of road congestion in Colombo and its suburbs, the RDA has identified a number of projects, including the Marine Drive Project, the Duplication Road Project and flyovers at Nugegoda, Gampaha, Pannipitiya and Orugodawatta, but all of these projects have been delayed due to budgetary constraints.
- Under the 'Maga Neguma' program, several rural roads were improved at a cost of LKRp. 57 million (US\$563,296) in 2004, but this was inadequate, compared with the requirements. Several other road improvement projects were implemented with local funds.
- Several road sections in the Western, Southern, Eastern and Northern coastal belt of the country were severely damaged due to the tsunami. The reconstruction cost of damaged roads and bridges has been estimated at Rs. 1.035 billion (US \$10.23 million).

Credits:

- Economist Intelligence Unit Country Report, August 2005 and Country Profile Report July 2004
- World Bank Country Report
- CIA World Fact Book – Sri Lanka
- Central Bank of Sri Lanka, Annual Report 2004
- Ministry of Ports & Aviation website ([www.ports-aviation.gov.lk](http://www.ports-aviation.gov.lk))
- Civil Aviation Authority of Sri Lanka Annual Report 2004
- Sri Lanka Ports Authority (<http://www.slpa.lk/>)