South Asia
Development and Cooperation
Report 2004

RIS
Research and Information System for the
Non-Aligned and Other Developing Countries
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The Report Team has received valuable encouragement and inputs from the National Focal Points of the SAARC Network of Researchers on Global Financial and Economic Issues. A draft of the Report was discussed at the Sixth Meeting of the Network of Researchers held in Islamabad on 8th December, 2003, and benefited from the feedback.

The production of the Report was managed by Tish Malhotra with DTP assistance from Pradeep Kumar.

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FOREWORD

The South Asian countries have made substantial progress over the past 4-5 decades. With the average growth rates of sustained 5.5 per cent over the past two decades, South Asia has emerged among the fastest growing regions of the world. The near-term outlook suggests a further step up in growth. Since the early 1990s, the region has also moved ahead with reforms and integration of its economies with the global economy more closely and has also begun to liberalise the intra-regional trade. Despite such rapid strides in terms of development, South Asia continues to be the home to 44 per cent of the world’s poor. Large sections of our population do not have access to education, health, nutrition and such basic amenities as safe drinking water and sanitation. Therefore, the challenges we face are enormous. Economic analysis has made it clear that for realizing any meaningful improvement in the welfare of the people of South Asia, the growth rates of 5-6 per cent are not adequate. The region needs to grow at the rate of 8 per cent or above to bring about the desired reduction in the levels of poverty and improved living conditions of the masses.

Therefore, South Asia faces enormous challenge for expediting the pace of development and strengthening its place in the comity of nations, in terms of different indicators of socio-economic development and well-being. Regional cooperation can facilitate achievement of these objectives by the South Asian countries by enabling the exploitation of their synergies for mutual benefit. Developed as well as developing countries in different parts of the world have looked to regional economic integration as a means for strengthening their international competitiveness and as an engine of growth. The European countries have formed a single European market that keeps expanding and have gone as far as to give up their national currencies. North American countries have formed NAFTA and are moving ahead with plans for a larger Free Trade Area of Americas (FTAA). In the South America, there are MERCOSUR and the Andean Pact, and in Sub Saharan Africa COMESA and SADC. In Asia, ASEAN is emerging as an important regional economic grouping with the implementation of ASEAN Free Trade Area (AFTA). In fact, ASEAN expedited the implementation of AFTA in the wake of the East Asian crisis in 1997 and has now set before itself a goal of creating an ASEAN Economic Community.

In the South Asia region, we have made a beginning with SAPTA in 1995. However, the progress since then has been rather slow especially when it is viewed against the backdrop of worldwide trends. I hope that the forthcoming SAARC Summit will be able to give the much-needed impetus towards the programme of deeper economic integration in the region.

The South Asia Development and Cooperation Report 2004 prepared by RIS on the eve of the 12th SAARC Summit presents an analysis of the economic performance of the region; highlights the challenges it faces and makes several proposals for regional economic cooperation in different areas. I believe that the contents of the Report will be found useful by the leaders and policy makers of the region.

[Signature]
Chairman, RIS
Preface

The South Asia Development and Cooperation Report 2004 is the third in the series of Reports launched by RIS to provide an analysis of the macro-economic performance of South Asian economies against the background of global trends and the policy challenges being faced by them with a special focus on the role that regional economic integration could play. Since the launch of the first Report in the series in 1999, these Reports have become among the very few sources of comprehensive economic analysis available for the South Asia region as a whole. The SAARC Network of Researchers on Global Financial and Economic Issues at its first Meeting held in Colombo in early 1999, appreciated the launch of the series by RIS and gave a mandate for preparation of such Reports on a regular basis. Therefore, the present Report, like its predecessor issued in 2002, has been prepared by RIS under the auspices of the SAARC Network of Researchers. An early draft of the present Report was presented and discussed at the Sixth Meeting of the SAARC Network of Researchers held in Islamabad on 8th December 2003.

RIS has an active programme of research on regional economic cooperation in South Asia since the early 1990 when a report on Economic Cooperation in the SAARC Region: Potential, Constraints and Policies, was prepared. RIS also hosted the Meeting of SAARC Experts for finalization of the regional study on Trade, Manufacturers and Services that laid out the road map for economic cooperation in the framework of SAARC. Subsequently, studies on Indo-Sri Lanka economic cooperation and sub-regional cooperation in South Asia were prepared. RIS also hosted the Tripartite Group of Experts on SAARC Vision in the late 1990s. As the National Focal Point (NFP) for the SAARC Network of Researchers in India, RIS has been coordinating a number of seminars and conferences on the challenges faced by the region and on the potential of regional economic cooperation. RIS has also launched the South Asia Economic Journal, in 2000 jointly with the Institute of Policy Studies of Sri Lanka, Colombo under the aegis of SAARC Network of Researchers.

In preparation of this Report, we have benefited from the overall guidance of Chairman of the RIS Governing Council, Honourable Shri K.C. Pant, Deputy Chairman, Planning Commission. Ambassador Shri S.T. Devare, Vice-Chairman, RIS has been a constant source of encouragement and advice throughout.

This Report has been prepared by a Research Team of RIS comprising senior faculty members, as listed elsewhere. I would like to place on record my appreciation for their sincere efforts and hard work put in the preparation of this Report. I would also like to thank the members of the RIS administrative staff for providing conducive environment and constant support.

31 December 2003

Nagesh Kumar
Director-General, RIS
Executive Summary

South Asia has sustained an average growth rate of 5.5 per cent per annum over the past two decades, despite many external and domestic shocks such as East Asian crisis, slow down of the world economy, Afghan and Iraq wars, oil price hikes, failure of monsoons, ethnic conflicts and threats of terrorism, among others, making it one of the most dynamic regions in the world. With more than a decade of reforms behind them, the region’s economies are more intensively integrated with the global economy, growth of income and exports display promising outlook and inflation rates are in check. Despite such achievements in terms of economic performance, however, the region continues to be home for more than two-fifths of the world’s poor. The region also fares very poorly in terms of different indicators of human development such as education, health, nutrition, among others. Therefore, the region needs to further accelerate its growth process with an emphasis on human development and strengthen competitiveness to deal with the daunting challenges of alleviation of poverty, hunger, illiteracy, and disease.

The South Asia Development and Cooperation Report 2004 (SADCR 2004) argues that the region can face these challenges much more effectively as a group rather than individually. The regional economic integration can, by exploiting the synergies, expand the economic opportunities available and strengthen the growth prospects. The recent experiences with economic integration in the region suggest that it leads to expansion of trade and development in a balanced and sustainable manner. In the light of these experiences and against the backdrop of mushrooming regional trading blocs in different parts of the world, the Report finds a compelling case for the region effecting its transition into an economic and monetary union by implementing SAFTA, forming a SAARC Customs Union and introducing a South Asian parallel currency, as an intermediate step to a single currency, in an expeditious manner.

Among the key sectors presenting opportunities for mutually beneficial cooperation, SADCR 2004 selects transport infrastructure for a detailed analysis. Transport infrastructure is not only an important determinant of economic development but is also critical in exploiting the gains of economic integration resulting from geographical proximity. Earlier SADCR 2002 focused on energy sector for a detailed analysis of the potential and challenges of cooperation. Among the core technologies that have emerged as the key drivers of development, the present Report selects biotechnology for detailed analysis in view of its tremendous promise for promoting food security and hence alleviation of poverty and hunger in the region. SADCR 2002 has already covered the potential and challenges for cooperation in the other core technology, viz. information and communication technologies.

These are some of the issues addressed by the Report. In what follows we recapitulate some major highlights arising from the contents of the Report.

Improved global economic outlook but challenges remain
The global economic outlook turned optimistic towards the end of 2003, after a hesitant recovery in 2002 and early part of 2003, from the slowdown that had set in motion towards the third quarter of 2000. Helped by robust recovery of the US economy and strong growth in China and India, among other Asian economies, the world economy is likely to grow at 3.2 per cent in 2003 and at 4.1 per cent in 2004. The long-term growth outlook of the region also appears robust and India and China are likely to emerge among the world’s three largest economies by 2050, enabling Asia to regain her place in the world economy that it had until the beginning of the nineteenth century.

However, risks and challenges remain including those arising from currency realignments, resulting from a sharp decline of the US dollar against Euro, creeping protectionism especially in the western world in the context of failure of the Cancun Ministerial Conference of WTO, and the rise of terrorism in different parts of the world. The past decade has seen the emergence of strong regional trading blocs in different parts of the world nearly 60 per cent of the world trade being conducted on a preferential rather than on an MFN basis. The countries that are not part of any trade blocs face the risk of discrimination of their exports and loss of competitiveness. Thus, in the light of the global trends, an immediate challenge for South Asia is to expedite the move towards its own FTA and further vision of deeper economic integration.
South Asia’s Reforms and Global Economic Integration

South Asian countries have carried forward the process of reforms started during the early 1990s. The trends suggest that the focus of reform initiatives in the recent years has shifted to domestic sectors of the economies which aim at bringing about greater competition in the domestic economy and also on fiscal management.

As a result, the South Asian economies today are much more open and deeply integrated with the world economy than in 1990s. While this has given them an opportunity to take advantage of the trends in international specialisation and absorb the spillovers of knowledge-creation in different parts of the world, it has also made the region’s economies more vulnerable to external economic shocks, as is clear from the growing synchronisation of business cycles.

Macroeconomic Performance and Outlook of South Asian Economies

The growth performance of the region suffered over the past few years on account of both difficult external environment as well as domestic problems. However, the growth outlook in 2003/04 and 2004/05 appears promising with South Asian GDP expected to grow at 6.9 and 7.2 per cents respectively. This growth performance makes the region the second fastest growing in the world after China. Another interesting development is the broad based nature of growth with all the economies displaying growth dynamism. In particular, the least developed economies in the region like Bangladesh showed markedly superior industrial dynamism in terms of development of manufacturing industries and improved competitive industrial performance. In other words, there is an evidence towards a convergence of economic structures in the region.

Service sector has emerged as the key driver of growth in the region contributing nearly half of its income and more than half of its growth. The region’s economies have also built-up substantial foreign exchange reserves to provide exchange rate stability and have been successful in bringing down inflation rates even though more needs to be done in the area of fiscal management.

Trade Performance and Competitiveness

The export performance of the South Asian countries has suffered over the past few years on account of falling global demand resulting from the East Asian crisis and the world economic slow down. In the first two years of the millennium, the export growth rates of most of the countries in the region turned negative. With the recovery of the world economy, the export prospects in the near-term have turned optimistic and region’s exports are likely to grow at a robust rate of about 12 per cent in 2003/04 and 2004/05. Furthermore, the trade growth rates across the countries of the region are converging. While the developed countries continue to be the principal markets, the integration of the region with East Asian countries over the past decade is quite visible. Trade in commercial services of the region has also increased substantially over the past decade. However, South Asia’s performance in terms of product and market diversification has been relatively poor. South Asian countries have also not been able to upgrade the skill and technology profile of their exports which has implications in terms of value addition and competitiveness. The region needs to pay attention to innovative activity to upgrade the technology profile of exports.

The Report underlines the role of regional cooperation in strengthening the export competitiveness of the region for third country exports. For instance, in the context of sustained decline in commodity prices, the Report calls for promotion of joint ventures of regional commodity exporters to undertake packaging and marketing on behalf of joint venture partners to increase the value-addition in traditional commodity exports such as tea, coffee, jute, cardamom, rice, etc. which are currently exported in bulk and are subject to low unit value realisation.

For South Asian countries, one of the major challenges is to prepare their textiles and garment industry for the phase-out of MFA quota regime by 2005 which would expose them to competition from, among others, China, and Southeast Asian countries. The Report finds the role of regional cooperation in improving the competitiveness of the South Asian garment industry by increasing vertical integration, capturing economies of scale, horizontal specialisation, incorporating innovative designs and taking a stake in the global marketing networks. The South Asian countries should consider setting up of South Asia level textiles and clothing groups to foster an integrated South Asian textiles sector. This approach could avoid the intense inter-se competition that prevails today. In order to secure their markets overseas and to realize a greater proportion of value added, the consortia of South Asian exporters should also consider taking over a few marketing and distribution chains in their lines of production in developed countries.

Regional cooperation can also be fruitful for dealing with emerging environment and food safety related non-tariff barriers in developed countries, such as sanitary and phytosanitary (SPS) measures and technical barriers to trade that are potentially very damaging for South Asian exports. South Asian countries could consider launching a regional eco-label to make their products more visible and acceptable than individual labels besides conserving resources on its promotion. Regional cooperation could also be fruitful in compliance with new emerging standards.
**Regional Cooperation with respect to WTO**

The Report also finds substantial scope for regional cooperation in areas such as building a world trading system responsive to region’s development needs. The Cancun Ministerial Conference has demonstrated the importance of coordinated positions by developing countries in achieving their objectives. South Asian countries have played a key role in evolving and strengthening the coalitions of developing countries. The failure of Cancun also provides an opportunity for the WTO membership to seek a redressal of the emerging asymmetries in the world trading system before they move forward. Drawing from the *World Trade and Development Report 2003* by RIS, the Report proposes an agenda for reform of the world trading system that developing countries in general and South Asian countries in particular may take up in the interest of building a development-friendly world trading system. The main elements of this agenda include development assessment of the multilateral trading system by an independent commission, reform of the decision-making process, broadbased and more representative Secretariat, setting up of a WTO Watch Dog of developing countries, strengthening the provision of technical assistance, emphasis on outstanding implementation issues rather than expansion of negotiating agenda, proactive framework agreements on special and differential treatment, movement of natural persons and on transfer of technologies. It also presents an agenda for cooperation among South Asian countries in the implementation of WTO commitments.

**Foreign Direct Investment and Global Production Networks**

FDI inflows to South Asia have grown over the past decade in response to policy liberalization. South Asian countries have also been able to increase their share in FDI inflows received by developing countries especially since the year 2000. However, their share is still rather marginal which is attributed to a number of factors such as low-income levels, poor quality of infrastructure and geographical and cultural distance with major sources of capital in the West or the East. They have also not exploited the potential of intra-regional FDI inflows that account for the bulk of FDI inflows received by the Southeast Asian countries.

South Asian countries have also not been able to integrate themselves with global production networks of multinational corporations and emerge as bases for export-oriented production for them in a significant manner except for growing participation of India in business process outsourcing and global R&D activity of MNCs. Participation in regional economic integration schemes emerges as a major determinant for hosting such offshore production bases by MNCs. In this context, South Asia could take lessons from experiences of ASEAN that are trying to attract export-oriented FDI through ASEAN FTA and ASEAN Investment Area. Regional economic integration in SAARC will enable the region not only to emerge as a more attractive destination for FDI inflows in general but also for export-oriented FDI besides promoting intra-regional FDI.

**Regional Economic Integration: Lessons from Recent Experiences**

The South Asian region has attempted to intensify regional economic integration over the past decade through regional, sub-regional and bilateral approaches. The progress of SAPTA in terms of tariff liberalization has been rather slow because of product-by-product or positive list approach adopted. Trade liberalization in the region has also been attempted under bilateral FTAs such as between India-Sri Lanka, besides India-Bhutan and India-Nepal. Several new bilateral FTAs are currently underway involving Maldives, Pakistan, Bangladesh, Sri Lanka and Nepal. In addition a number of South Asian countries and Southeast Asian countries are participating in BIMST-EC that is moving towards an FTA.

Even the limited experience with trade liberalization under SAPTA has produced encouraging results in terms of trade expansion. The bilateral FTAs in the region appear to have led to equitable expansion of trade flows with exports from smaller and lesser developed partners growing faster. The FTAs have also led to investment flows and trade-creating joint ventures which facilitate development of supply capabilities of lesser developed partners. These experiences have prompted the governments to expand the scope of India-Sri Lanka FTA to cover trade in services and investments in the framework of a Comprehensive Economic Partnership Agreement. The studies suggest that SAFTA could lead to substantial expansion of mutual trade and efficiency-seeking investment in the region.

The research shows that the region satisfies many of the criteria for an optimal currency area and could benefit from adoption of a single currency. However, the Report recommends that a single currency may be evolved in a phased manner beginning with a parallel currency (South Asian Rupia or SAR) as a unit of account backed by a SAARC Reserve Fund. This step will not only facilitate intra-regional trade but will also create a mechanism for funding of joint infrastructural development projects. Eventually, the SAR could replace national currencies.

In light of the existing experiences with economic integration in the region and in view of the global trend of adoption of regionalism as a strategy for growth, the Report recommends that SAARC completes its transition towards SAFTA, the SAARC Customs Union and the South Asian Monetary and Economic Union in an expeditious
manner. The region should also adopt a SAARC Agreement on Promotion and Protection of Investments and move towards harmonised investment policies across the region to facilitate intra-regional investments. It has been argued that these steps will help facilitate efficiency-seeking restructuring of industry in the region, thus, enabling them to exploit economies of scale and specialisation. Thus, Sri Lanka may emerge as the region’s hub for rubber-based industries, Bangladesh for energy-intensive industries and Bhutan, forest-based industries, and so on. The regional economic integration will also make member countries, especially the smaller ones, more attractive destinations for third country investments by obviating the constraint of small domestic market.

**Cooperation in Transport Infrastructure**

Given the primacy of infrastructure in promoting economic development on the one hand and regional integration on the other, the Report undertook a detailed analysis of the present state of infrastructure development and the potential for cooperation among different South Asian countries. It has been shown that adverse impact on account of the relatively low level of infrastructure development in the region is compounded by limited interlinking of transport infrastructure across different countries in the region. This in turn has the effect of increased transportation cost and undermining competitiveness and growth in a context of integration with the world market. Much could be gained by regional cooperation and a concerted effort to learn from each other in all the modes of transportation.

The Report calls for an active approach towards infrastructure development at the national levels and a ‘Common Transport Policy’ in South Asia for optimum utilisation of existing utilities as well as expansion of new facilities in the region. The possible elements of a Common Transport Policy could be harmonization of technical standards such as truck size and weight regulations; railway gauge and rolling stocks across the region; simplification of documentation and clearance procedures; standardisation of cabotage rules and regulations on the movement of certain goods. In addition, the Report calls for an Open Sky Policy in South Asia for airlines originating from within the region, facilitation of movement of container trains and goods vehicles within the region subject to fulfillment of individual countries’ road transportation rules and regulations. Report also discusses a number of possibilities for improving transport linkages through development of inland waterways, shipping links, highways and railway lines.

Finally, the Report suggest that South Asian countries also need to pay more attention to their telecommunications infrastructure and readiness for electronic commerce (e-commerce) that is becoming a critical factor in international competitiveness.

**Biotechnology and Development in South Asia**

Biotechnology’s potential in addressing food security concerns, poverty reduction and development at large is now well recognised in South Asia. In spite of the constraints of resources, facilities and talent, almost all the countries in the region have initiated some programmes in biotechnology over the past decade. The focus of these programmes is generally on agriculture and food security. South Asian countries also face a major challenge in terms of evolving the regulatory norms for biotechnology. A number of countries have evolved biosafety norms but some times they are not consistent with international treaties such as Cartagena Biosafety Protocol. There are also challenges in dealing with trade, in genetically modified organisms and products (GMOs).

The Report proposes an agenda for regional cooperation in harnessing biotechnology for development. The elements of the agenda include member countries using the forum of SAARC for evolving the guidelines for biosafety norms, for regulations governing trade in genetically modified organisms and products in addition to exchange of experiences, knowledge and expertise. The Report also calls for a common position concerning the conservation of biodiversity and the Convention of Biological Diversity (CBD), IPRs regime with respect to biotechnology, among other issues. It calls for joint research to address issues like increasing vitamin A, iron and other nutrients in the edible portion of various plants and crops, and for integrated nutrient management and development of biofertilizers and biopesticides. Joint research could also address salinity and drought resistance in some important crops as many parts of South Asia are affected from these problems. Cooperation in human resource development could also be instrumental in removing constraints faced by some South Asian countries in harnessing even the first generation of biotechnology. The cooperation could also extend to pooling of resources for joint facilities and databases for common use. In order to facilitate regional cooperation between enterprises of the region including provision for inputs for policy-making, a South Asian Forum of Biotechnology Enterprises could be formed. Finally, the Report recommends establishment of a South Asia Biodiversity Conservation Fund (SABCF) for meeting the long felt need of a financial mechanism required for the conservation and management of biodiversity.

**Human Development**

Finally, the Report discusses challenges and prospects for regional cooperation in the area of human development. Along with liberalized policy reforms and greater integration with the world
economy, South Asian countries have recorded considerable progress in human development indicators like poverty reduction, educational attainment, improved health facilities, etc. Yet, the levels of achievement have varied across countries and the challenging task of further improving the quality of life of people still remains. Given the fact that the growth of investment in human development in most of the countries has not been commensurate with their economic growth, the Report underlines the need for greater focus on social sector investments such that the countries are able to achieve the UN Millennium Development Goals. On the optimistic side, the Report highlights some of the initiatives undertaken by different countries in the region to improve the living conditions of targeted groups and calls for scaling up and sharing of such successful experiences among the South Asian countries. Strengthening of regional cooperation efforts towards human development in general and poverty reduction in particular, initiated under the aegis of SAARC, have also been emphasised by the Report.
1 Global Economic Trends and South Asia

1.1 Introduction

With reforms in trade and investment regimes undertaken during the 1990s, the South Asian economies today are far more integrated with the world economy than they were earlier. Global economic integration enables them to benefit from the emerging international specialization, obviates the constraints on their development by the size of domestic market and allows them to absorb the spillovers of knowledge creation in different parts of the world. The global integration also means that the South Asian economies are influenced by the emerging international trends in a more fundamental manner than earlier both positively and negatively. The global trends and prospects affect the South Asian economies not only through trade, but also through growing integration of capital markets.1

Against this backdrop, this Chapter examines the recent trends in the world economy and the prospects for the coming years (Section 2). In the subsequent section, the recent developments concerning the world trading system are reviewed against the background of the collapse of the Cancun Ministerial Conference of WTO and lessons drawn are from that for the South Asian countries. It also outlines an agenda of South Asian cooperation on WTO-related issues.

1.2. Global Economic Outlook

The global economic outlook towards the end of 2003 turned optimistic after uncertain recovery in 2002 and early part of 2003 from the slowdown that had set in motion towards the third quarter of 2000. Although the world economy seemed to have turned the corner in 2002 there were uncertainties about the outlook for 2003 caused by the Iraq War in the early part of the year and then from the outbreak of Severe Acute Respiratory Syndrome (SARS) in the first half of 2003 that affected a number of economies, especially in East Asia. The growth forecasts for the different regions have been revised upwards in the light of a robust recovery reported by the US economy in the third quarter; Europe turning the corner and China forging ahead with strong growth. The third quarter GDP growth in the US at an annual rate of 8.2 per cent represents the highest quarterly growth in 20 years. The US economy is now expected to record a 2.9 per cent growth of GDP in 2003 compared to earlier forecast of about 2 per cent. Europe has also started to show signs of a gradual turn around after stagnating in the first half of 2003.

Japanese economy also seems to be coming out of the long drawn recession. Helped by aggressive monetary policy initiatives, banking reforms and corporate restructuring, business investment is registering a healthy rise. In light of these developments, the growth forecast of Japanese GDP for 2003 have been revised up sharply from 0.9 per cent to 2.4 per cent.

Given these trends in the major industrial economies, the G-7 economies are expected to experience a GDP growth rate of 2.1 per cent in 2003 compared to 1.6 per cent in 2002. The forecast for 2004 has been stepped up to 3.1 per cent (Table 1.1). The world economy is likely to grow at 3.2 per cent in 2003 and at 4.1 per cent in 2004. The step-up in the growth outlook in the advanced economies also tends to have a positive effect on the growth of developing economies (Fig. 1.1) which are likely to grow at 5.1 per cent in 2003 and at 5.9 per cent in 2004.
The developing Asian countries are projected to record a robust growth performance of 7.4 per cent in 2003 and 7.8 per cent in 2004, largely on account of strong growth in China and South Asia. The Chinese economy is expected to grow at 8.2 per cent in 2003 despite being one of the worst affected economies from the SARS epidemic. Major ASEAN economies are also likely to improve their growth performance to 4.5 per cent in 2003 and further to 5.9 per cent in 2004 compared to 4.3 per cent recorded in 2002. Among the ASEAN countries, the star performers are Vietnam growing at 7 per cent followed by Thailand at 6 per cent. The fact that China and ASEAN economies are able to improve their performance in the second half of 2003 suggests that they were able to contain the adverse effects of SARS epidemic that affected them in the first half of the year.

The South Asia region, as discussed in greater detail in Chapter 3, is likely to improve its growth performance to a robust 6.9 per cent in 2003 and further to 7.2 per cent in 2004 compared to 4.2 per cent recorded in 2002 helped by good monsoon and industrial recovery in the biggest economies of the region, namely, India and Pakistan.

The dynamism of Asian economies especially China and India, has attracted much attention worldwide. Recent projections have shown that China and India will emerge among the largest economies in the world in the coming 50 years and will regain their share in the world GDP that they had until early nineteenth century (Box 1.1).

**Box 1.1: Reemergence of Asia in 21st Century: China and India to Lead the Way**

With rapid growth of major countries such as China, India among others, Asia is expected to become the center of gravity of the world economy that it was in the eighteenth century. An OECD study by Angus Maddison shows that in 1000AD, Asia (except Japan) accounted for more than two thirds of world GDP based on the strengths of the Chinese and Indian civilizations. China and India were the leaders of the world in terms of technological and economic development during the most of the period from 500AD to 1500AD. By early 15th century India had evolved into a sophisticated agrarian economy that sustained a large empire. Textile industry was fairly well developed, overseas trade was impressive, and the talent in science and mathematics were well known. By fifteenth century, China had also established first unified and a centralized political administration and early emergence of a commercial society helped by temperate climate, rapid population growth, and alluvial agriculture and voyages. In terms of innovation, they invented the compass, gunpowder, printing press, and paper currency. In 1500, China and India alone accounted for 50 per cent of world GDP with each sharing roughly 25 per cent. Because of rising incomes of western Europe, by 1820 AD Asia’s share in world GDP had come down but was still substantial at 56 per cent. Asian incomes stagnated during the period 1820 to 1950 bringing its share in world GDP down to only about 20 per cent. However, led by the dynamism of Japan, China, and India, Asia’s share in the world GDP has risen and today it stands at around 40 per cent.

A recent study by Goldman Sachs shows that Asia is on its way to regain its lost share in the world economy by 2050. As recording to these estimations share of China, India and Japan in world GDP is expected to reach 57 per cent by 2050. Goldman Sachs expect that by rapid growth, ‘India’s economy, for instance, could be larger than Japan’s by 2032, and China’s larger than the US by 2041’. ‘In US dollar terms, China could overtake Germany in the next four years, Japan by 2015 and the US by 2039. India’s economy could be larger than all but the US and China in 30 years’.

Using the latest demographic projections and a model of capital accumulation and productivity growth, Goldman and Sachs find that ‘India has the potential to show the fastest growth over the next 30 and 50 years. Growth could be higher than 5 per cent over the next 30 years and close to 5 per cent as late as 2050 if development proceeds successfully’.

devaluation of renmibi vis-a-vis other currencies.

These have implications for South Asia too. Indian rupee, for instance, had also risen against the dollar for most part of 2003, gaining about 8 per cent which is eroding competitiveness of Indian exports. The exchange rate realignments in turn are caused by large and growing current account imbalances in the US.

The other concern is the creeping protectionism in the world economy, especially in the developed countries, in context of the failure of Cancun Ministerial Conference of WTO. In different parts of the world regional and bilateral free trade agreements (RTAs and FTAs) have multiplied. As a result of these RTAs, nearly 60 per cent of the world trade is conducted on preferential basis and not on MFN basis.

The countries that are not part of any trade blocs face the risk of discrimination against their exports and loss of competitiveness. Thus, in the light of the global trends, an immediate challenge for South Asia is to expedite the move towards its own FTA and concretize the vision of deeper economic integration.

### 1.3. World Trading System: Post-Cancun Scenario

#### Multilateral Trade Negotiations and Developing Countries: Growing Asymmetries

The completion of the Uruguay Round with the setting up of WTO in 1995 marked an important turning point for the world economy. What started as a process of trade liberalization under GATT has come to embrace broader parameters of policy hitherto subject to decision-making at the national levels.

The Ministerial Conferences of WTO generated a lot of interest among the policy makers and the civil society, given the importance of decisions taken for the development prospects of the member countries.

The express purpose and objective of the multilateral trade negotiations (MTNs) is to liberalize trade so that efficiency gains become available to the world economy at large. However, it has been recognized that there are unequal players in the game and developing countries are constrained by their financial and physical capabilities to undertake equal commitments. They need flexibilities, to pursue their development policy objectives, that have been available to developed countries in the early stages of their development.

Hence, the concept of special and differential treatment (S&DT) to developing countries on a non-reciprocal basis was built into the process.

The Uruguay Round (UR) also placed substantial obligations on developing countries in terms of the liberalization of trade and their policy regimes with respect to intellectual property rights, investments, and trade in services. Developing countries undertook commitments to expand tariff bindings to cover 61 per cent of their imports compared to 13 per cent earlier and have offered $15 billion worth of concessions by way of reducing their trade-weighted average bound tariff on imports from industrialized countries by 28 per cent.

Developing countries were lured into accepting these substantial commitments by the promise of additional market access to them by developed countries through liberalization of agricultural trade, textiles and clothing and movement of natural persons. The gains from the UR proposals of liberalization in these areas were estimated to the tune of US$ 213 to US$ 510 billion-a-year rise in world income with developing countries benefiting to the tune of $86 to $122 billion. Contrary to these claims, it has now been empirically shown that much deeper commitments have been undertaken by developing countries in the UR and the mercantilist balance resulting from trade liberalization has been in favour of developed countries.

The UR Agreements, such as TRIPs and TRIMs, are leading to significant income transfers from developing countries besides reducing the policy space for development. The S&DT provisions have been considerably diluted and reduced to just longer transitions for implementation.

The developed countries, while preaching the virtues of free trade to developing countries, have been resistant to bringing down peak tariffs, high specific duties, and tariff escalation that affect imports from developing countries. A startling example is the fact that tariffs collected by the US on $2 billion worth of imports from Bangladesh are higher than those imposed on imports worth $30 billion from France.

The market access commitments in textiles and clothing have been backloaded and only about 20 per cent of imports under specific quota restrictions have been liberalized in the seven years of implementation till 2002. The agriculture trade liberalization in developed countries has been undermined by dirty tariffication. The average applied tariff rates applicable to agricultural products compared to those on industrial goods have been higher by 641 per cent in Japan, by 353 per cent in the EU, and by 100 per cent in the US.

Despite the promise of improved market access in the services of interest to developing countries, very few commitments have been made by developed countries in Mode 4. Furthermore, almost all these commitments are subject to limitations, such as economic needs test that usually render them ineffective. New barriers to movement of natural persons are being evolved in different parts of the world, such as legislations outlawing business process outsourcing. Studies have found staggering welfare losses for the world economy from the protected markets for labour. Even a limited liberalization of labour markets covering just 3 per cent of work force has the potential to generate welfare gains of US$ 156 billion per year, according to recent studies.
There has been continued resort to quotas and other non-tariff barriers (NTBs). As many as 30 per cent tariff lines in basic metal industries in the US (and 34 per cent in Japan), for instance, are subject to core NTBs. There has been a proliferation of NTBs in the form of environmental and food safety standards much higher than the internationally agreed norms and contingent protection against developing countries. Moreover, proliferation of regional and bilateral free trade arrangements in the developed world are diverting trade and investments away from developing countries.

In addition, there seems to be a protectionist backlash in the developed countries inspired from the strategic trade policy aimed at strengthening the competitiveness of their national champions at the cost of sustainable and equitable growth of world trade. While heavy subsidization of developed country agriculture has become well known from the ongoing debates in the context of WTO’s Agreement on Agriculture, the continued and rising subsidization of industrial sector remains virtually unnoticed. Not only have developed countries exploited the grey areas available in the multilateral rules, they have also included exceptions for the kind of policies and practices that they wish to make use of, such as R&D subsidies and huge financial incentives for investment that are as distorting as other actionable subsidies. The US has been giving US$ 4 billion in subsidies to the exporting enterprises under the Foreign Sales Corporations (FSC). These subsidies have been deemed illegal by the WTO’s Panel on a complaint brought by the EU. However, these are now being replaced by even bigger tax cuts worth US$ 120 billion over the ten years for companies having manufacturing bases in the US.

The agricultural subsidies too are growing despite the promises of reduction made in the Uruguay Round and the Doha Declaration. The US has announced the most generous farm subsidy package, in history, in its Farm Bill 2002. Arguments like multifunctionality are made to justify the ever increasing agricultural subsidies in the EU. Even export subsidies (called export credits in the US) are not reduced. While trade related performance requirements such as local content regulations have been phased out under TRIMs Agreement, developed countries extensively resort to policies like screw driver regulations, rules of origin, buy-local regulations that are akin to local content regulations.

The process is not leading to the growth of world trade either. Quantitative studies do not find the process of GATT/WTO to be leading to either trade liberalization or growth of trade. The developing countries, with the exception of China, have not been able to increase their shares in world trade. The terms of trade of developing countries have deteriorated. As a result of these trends, the growth rates in a large number of countries in 1990s have been lower than in the 1980s and inequalities have risen in a large number of developing and transition economies.

This situation is in sharp contrast to the avowed goals of the WTO as set out in the preamble to the Marrakesh Agreement recognizing the ‘need for positive efforts designed to ensure that developing countries... secure a share in the growth in international trade commensurate with the needs of their economic development... mutually advantageous arrangement directed to the substantial reduction of tariffs and other barriers to trade and to the discriminating treatment in international trade’.

**Doha Development Agenda and the Cancun Ministerial**

The Doha Ministerial Conference attempted to restore the emphasis on development in the WTO. The Doha Declaration called for positive efforts to ensure developing countries benefiting from enhanced market access and balanced rules. In substantive terms the highlights of the Doha Agenda included a commitment in the area of agriculture to substantially improve market access, progress towards phasing-out of all forms of export subsidies and substantial reduction of trade distorting domestic support. It also accepted the primacy of public health concerns and offered to provide flexibility to poorer countries from the provisions of TRIPs Agreement to import cheaper generic medicines. In the area of market access for industrial products, commitments were made to eliminate or reduce peak tariffs, high tariffs, tariff escalation and NTBs, in particular, on products of export interest to developing countries. Commitments were also made to review the S&DT provisions for developing countries to make them more precise, effective and operational.

However, the progress since the Doha Ministerial has been far from satisfactory. Almost all the deadlines proposed, that were important from the point of view of developing countries, have been missed. On the other hand, developing countries were pushed to give the negotiating mandate on the Singapore Issues at the Cancun Ministerial. The draft modalities for market access in agricultural and non-agricultural goods that were proposed by developed countries suggested that the principle of less-than-full-reciprocity as enshrined in the Doha Mandate had been undermined.

The Fifth Ministerial Conference of WTO held in Cancun in September 2003 was to advance the Doha Agenda. However, it collapsed as it could not adopt a Ministerial Text. It was not the first time that a Ministerial Meeting in GATT/WTO failed to reach a consensus. However, there was a qualitative difference. This time it collapsed because of a sharp polarization on the North-South lines. Developed countries had shown their resistance to phase out the billions of dollars of export subsidies and domestic assistance that they give to protect their
farm sector while seeking to extract new concessions from developing countries in the form of negotiating mandate on Singapore Issues.

The developing countries had got their act together much better this time, thanks also to a lot of work done by South Asian negotiators in the preparatory process and in Cancun, by building an effective coalitions that held together. The widespread backlash against the high-handed attitude of developed countries was highly visible in Cancun.

On the Singapore Issues, a Group of 16 Countries led by Malaysia and India, with the support of 30 least developed countries in a submission to the Conference sought further clarification rather than agreeing to give a negotiating mandate. The group of 74 African, Caribbean and Pacific (ACP) countries also sought to continue the clarificatory process without a negotiating mandate. In utter disregard to these submissions by nearly 70 developing countries, the revised draft Ministerial Text issued on 13 September 2003, wanted to give negotiating mandate on all of these issues except for the issue of ‘competition’. Competition was dropped because of unwillingness of the US to negotiate it. From a development point of view, the Draft Ministerial Text proposed the worst possible combination, viz. to have binding international rules on investment but not on competition. Expectedly, developing countries heavily criticized the draft Ministerial Text with the main demandur of negotiations on these issues. As a result, the EU found itself increasingly isolated which began to soften its demand towards the end of the Conference.

On agriculture, developing countries led by Brazil, India, and China formed an effective coalition of 17 countries that had submitted a counter proposal in Geneva to the US-EU proposal. Not only that they held together but kept growing to become a group of 20 (G-20) at the start of the Ministerial. By the second day the group had grown to 23 and before the end of the Ministerial 10 more countries were supporting this coalition despite the attempts by the US and EU to break these with both carrots and sticks. In addition, a group of four West and Central African countries was seeking elimination of extensive subsidies given in the US to cotton farmers that was leading to starvation of cotton farmers in these countries. This group also received support from a number of countries including India.

The draft Ministerial Text of 13 September 2003, while disregarding the demand by G-20 for phasing out subsidies by developed countries, tried to break their ranks by offering phasing out of export subsidies for select products. It also tended to follow the US-EU proposals in most part completely ignoring the alternative proposals put on the table by G-20. It received protests from developing countries.

With none of the sides willing to relent, the collapse was inevitable. The Conference was called off with a six-point Ministerial Statement seeking the continuation of the process at the General Council’s senior officers level meeting on 15 December 2003. The subsequent consultations in Geneva in the Green Rooms on each of the contentious issues suggest no movement forward to expect an early revival of the negotiations. Developed countries have actually hardened their positions. For instance, EU had agreed to drop its demand for a negotiating mandate on three of the four Singapore Issues in the face of opposition from developing countries. However, in the Green Room consultations it has gone back to its pre-Cancun position of seeking a negotiating mandate on all the four issues. As a result, the General Council Meeting of 15-16 December, 2003 ended without any substantive progress. The process may be revived in late February 2004.

**Lessons from Cancun**

Cancun will be remembered for the ability of developing countries to hold together till the end despite heavy pressure exerted by the world’s biggest economic and political powers. It heralds the beginning of a new phase in the multilateral trade negotiations even though the talks collapsed. Developed countries henceforth would not be able to take developing countries for granted, as they have so far been. Therefore, it may serve the cause of development in the future negotiations.

It is clear that developing countries can secure their interests in the multilateral trade negotiations much better by building effective issue-based coalitions. They should continue to hold together and build a world trading system more responsive to their needs.

**Need for a Reform of the World Trading System**

The failure of Cancun also provides an opportunity to the WTO membership to seek a redressal of the emerging asymmetries before they move forward. In its *World Trade and Development Report 2003* RIS has proposed an inventory of reform of the world trading system that developing countries in general and South Asian countries in particular may take up in the interest of building a development-friendly world trading system. The main elements of this agenda that are of particular interest to South Asian countries could include: systemic reforms seeking a development review of the multilateral trading system by an independent commission, reform of decision-making process, creation of a broadbased and representative secretariat, creation of a WTO watch dog of developing countries, and strengthening the provision of technical assistance.

In terms of substantive issues, South Asian countries could emphasize on outstanding implementation issues
rather than expansion of negotiating agenda and take proactive initiatives seeking a framework agreement on movement of natural persons, a framework agreement on S&DT, and transfer of technology. They may work for recognition of economically active population dependent on agriculture (EAPA) as a criteria in the Agreement on Agriculture besides food security concerns and seek to preserve the less-than-full-reciprocity in the modalities for tariff reduction as enshrined in the Doha Declaration.

**An Agenda for Cooperation among South Asian Countries on WTO-related Issues**

The emerging WTO regime is important for the national development, trade, investment and technology policies of member countries. The ongoing round of negotiations will have an important bearing on the development process of the developing countries. Therefore, the developing countries need to deliberate over the mandate given by the Ministerial Meetings and prepare themselves to take part in the ensuing negotiations effectively to safeguard their interests. Issues of preparedness on their part would also include taking advantage of the emerging multilateral trade regime rather than passively implementing their commitments. This calls for strategic thinking and concerted action at different levels.

The developing countries in general lack strong analytical capabilities in fully comprehending the developmental implications of the commitments implicit in the negotiations. The situation is further complicated by the misinformation that is promoted by developed countries to achieve their strategic objectives. Very often the training courses offered by international organizations in the name of technical assistance are also influenced by the view-point of the donors, viz. the developed countries and fail to highlight the concerns of developing countries.

The technical cooperation among developing countries could cover the followings:

**Exchange of Experiences in Implementation of Commitments:** Developing countries should fully exploit the policy spaces that may be available in the WTO Agreements. An example in this regard is the TRIPs Agreement, where several flexibilities are available to be exploited to moderate the potential adverse effect of the Agreement such as provisions for compulsory licensing, research exception, Bolar provisions, grey market imports, anti-trust regulations, breeders exceptions, among others. Exchange of experiences and professional expertise among developing countries may facilitate such possibilities.

**Technical Assistance and Cooperation in Implementation or Compliance of Commitments:** Compliance with some SPS standards require huge technical and financial costs. Cooperation among developing countries may take the form of sharing the services of experts, setting up the common testing and verification laboratories, translations of standards, etc.

**Effective Coordination of Positions:** WTO negotiations are power games. Any coordination between developing countries at the issue level or regional levels would be more effective than individual country positions. Cancun has demonstrated the importance of developing countries coalitions. South Asian countries should establish communications between their respective trade ministries and their missions at WTO to facilitate such coordination.

**Vigilance and Active Participation in the Proceedings:** Given the high stakes involved, developing countries need to participate in the negotiations effectively and with extreme vigilance. They need to back up their preparations with adequate legal and analytical expertise. Introduction of small phrases, which may appear innocuous, may eventually lead to some burdensome commitment, as is clear from how a reference to counterfeit goods in the Punta del Este Declaration snowballed into the TRIPs Agreement.

**Endnotes**

1. See RIS, South Asia Development and Cooperation Report 2001/02 for evidence on growing synchronization of the region’s stock markets with global ones.
2. This discussion is based on the RIS, World Trade and Development Report 2003: Cancun and Beyond.

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2.1 Introduction

Economic historians of the coming centuries might describe the shift in policy paradigm of the developing countries from import substitution to outward orientation during the closing decades of the 20th century as a major landmark in the history of the developing world. The South Asian economies were not mere passive spectators to this whirlpool but joined the process quite earnestly. The underlying rationale was to harness the powers of market, to make the economy internationally competitive, by increased efficiency and productivity, vibrant in growth and to bring about overall socio-economic transformation. Inter-country differences in the extent and timing notwithstanding, there have been comprehensive policy reforms in the 1990s, covering different sectors of these economies, especially liberalization of trade and investment regimes with deliberate initiatives to integrate their economies with the rest of the world. The early years of the new millennium have been marked by acceleration in the pace of reform as also the integration with the world market.

2.2 Policy Reforms: An Overview

The 1990s witnessed comprehensive reform programmes in almost all the countries in South Asia. With possible exception of Sri Lanka, which began opening up of trade and capital flows in 1977, all the other countries in the region have initiated major policy reforms with respect to the external sector which, inter alia, included reduction in the level and dispersion of tariffs and quantitative restrictions and removing regulations on foreign investments. Reforms were not confined to the external sector alone. There have been significant reform measures with respect to the domestic sectors of the economy like the industrial de-licensing to do away with entry barriers, reforms in agricultural prices, removal of subsidies and fiscal consolidation. The early years of the new millennium witnessed further initiatives to consolidate the efforts made during the last decade. The period also witnessed the launching of new plans in Bhutan (9th plan), India (10th plan) and Nepal (10th plan) (see Box 2.1 for the highlights). Since there was inter-country variation in the focus as well

Box 2.1: Highlights of the New Plans initiated by Bhutan, India and Nepal

Ninth Plan of Bhutan (2002-07)
The plan was launched on 1st July 2002 with the major development objectives as improving the quality of life especially of the poor, ensuring good governance, promoting private sector growth and employment generation, preserving and promoting cultural heritage and environmental conservation, and achieving rapid economic growth and transformation.

Emphasis has been placed on strengthening the infrastructure, improving the quality of social services, preserving and promoting culture and environment. A special mention needs to be made to the decentralization programme under which all development plans are to be framed at the local level with local communities determining plan priorities and strategies. Government has approved the establishment of industrial estates; FDI policy has been adopted allowing foreigners to own up to 70 per cent joint venture companies. To strengthen the financial system new prudential regulations have been introduced including risk weighted capital adequacy, professional requirements for appointees.

In case of the external sector the focus is on to expand the existing sub-regional economic cooperation in order to expand the economic resource base and to diversify exports; and rationalize the import tariff structure and export duties.

Box 2.1 continued
Emphasis was also placed on the development of the energy and power sector, construction and transport (the primary drivers of growth), etc. as a means of providing employment to 70,000 individuals. But since this may not suffice, the role of the private sector has also been given attention.

Rural infrastructure and wider coverage of social services form an essential element to decrease rural poverty.

**Tenth Five Year Plan of India (2002-07)**

India’s 10th Five Year Plan (2002-07) aims at achieving a growth rate of 8 per cent especially in the employment intensive areas to ensure rapid and well-distributed growth of income to sustain the pace of poverty reduction accomplished over the past decade.

To attain these objectives two strategies are proposed: broad development targets be broken down into state level targets to arrest regional imbalances and emphasis is being laid on the agricultural and employment generating sectors ensuring equity in quality of growth. The key to the formulation of the plan lies in the clear demarcation between the ‘income poverty’ and ‘human poverty’. The text suggests that human well being should not be restricted to consumption of goods and services alone but should also include in its ambit the provision of basic material requirements for all sections especially the provision of social services like health and education. In the social sector, some specific monitorable targets are listed as follows:

- Reduce poverty by 5 per cent by the end of the plan;
- Provide gainful employment to the additional workforce;
- All children should be in school by 2003;
- Decreasing the gender gaps in literacy and wages by 50 per cent and increase literacy to 75 per cent;
- Decrease population rate of growth to 16.2 per cent by 2011. Reduce the maternal and infant mortality rates; and
- Lay stress on afforestation and cleaning rivers to increase the supply of potable water.

Creation of infrastructure and upgradeing of the existing infrastructure is also an important issue where special emphasis is being laid on the power sector in terms of cost recovery and financial viability.

**Tenth Plan of Nepal (2003-07)**

The main goal of the plan is to bring about a substantial, positive and sustainable change in the living standards of Nepalese people. To achieve, this four main strategies are being adopted:

- High, sustainable and broad based economic growth with the aim of resurgence of broad-based economic activities. This will be centered around the following:
  - Agriculture development, sustainable management of natural resources and biodiversity.
    - Growth of agricultural productivity
    - Food production
    - High value horticulture
    - Animal related production, fish production
    - Agricultural technology
  - Development of tourism, water resources, information technology, industry and commerce sector with an important role for private sector.
    - Growth in productivity and income in industry and commerce
    - Export orientation
    - Industrial restructuring and trade promotion
    - Employment generation
    - Growth of tourism
  - Development and expansion of private sector
  - Development of infrastructure at national and local levels.
- Social sector and infrastructure development
  - Human resources development and women empowerment
  - Promotion of education at all levels
  - Enhancement in quality of health services
  - Development of rural infrastructures and rural energy
  - Population management, social services and basic social security
  - Innovation of rural technology and appropriate use of existing technology
  - Environmental conservation.
- Use of targeted programmes for enhancement of productive capacity of marginalized, deprived, and ignored, remote, weak and alienated communities and regions in a sustainable way. This will include emphasis on employment, self-employment and empowerment of the underprivileged.
- Good governance that will require the establishment of transparency, accountability, multifaceted decision process and decentralization, which will aid the process of national development.

**Sources:**

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**Bangladesh**

Policy reforms in Bangladesh, which had its beginning in the 1980s, accelerated in the 1990s. Though Bangladesh, being a least developed country, was exempted in the Uruguay Round Agreements from making commitments regarding tariff reduction, rationalisation of the tariff structure has been one of the key elements of trade policy reforms in Bangladesh. Prior to 1986, there were 24 tariff slabs, which have been rationalised to 12 by 1993-94; 6 by 1996-97; and 4 by 1999-00. Preferential rates of duties applicable to public sector enterprise were eliminated in 1989. As a part of the rationalisation measures, the maximum tariff rate was reduced from a level of 350 per cent in 1991-92 to 50 per cent in 1995-96, 42.5 per cent in 1997-98 and further down to 37.5 per cent in 1999-00. As a result, the average nominal protection fell from 89 per cent in 1990-91 to 25 per cent in 1995-96 and further down to 17 per cent in 2003. In 2002, the government also replaced the national Security Levy (NSL) and the Goods and Services Tax (GST) on imports with VAT at the general rate of 20 per cent.1

To enhance export competitiveness, Bangladesh shifted from a fixed exchange rate regime to a ‘managed’ system of floating exchange rate in 1979. In 1996-97, the Bangladesh government accepted the conditions of Article VIII of IMF by making the Taka fully convertible for current account transactions. In addition to trade liberalization, FDI inflows were encouraged by setting up special economic zones. In 1989, a Board of Investment was established in Bangladesh to encourage foreign investment. The foreign investment policy was revised in 1991 and it removed the limit on foreign equity participation and obligation for joint venture or ban on fully owned foreign
companies to sell shares through public issues. In addition, the 1991 policy allowed foreign investment through working capital loans equivalent to the foreign equity amount and participation of foreign investors in stock exchanges, formulated rules for IPR protection, and exempted tax on royalties, technical know-how, interest and capital gains.

In early 2002, in the context of declining foreign exchange reserves to a level of $ 1.1 billion (just sufficient for 1.5 months imports) Taka was devalued by 1.6 per cent against dollar and regulatory duties on non-essential imports were imposed. Since these steps were not in conformity with the earlier reform measures, all such restrictions were withdrawn in 2003 and further reforms in the import duty structure implemented.

At present, the major elements of the trade policy, among others, are:

(a) Liberalized import and import procedures with no need of licensing.
(b) Rationalisation of the tariff structure with a maximum rate of 37.5 per cent import duty in 1999-2000.
(c) Reduction in quantitative restrictions (QRs.), the coverage of which has been reduced from 42 per cent in 1985 to only 2 per cent per cent of imports in 1996.
(d) The exchange rate policy regime is more unified, flexible and market-based. Local currency Taka is freely convertible for current account transactions.
(e) IMF consistent counter trade/ Special Trading Arrangements are allowed.
(f) Export promotion measures are specific and transparent.

Reforms also aimed at making use of market based instruments to manage liquidity and bring about a more realistic interest rate. In 2001, to encourage lending to the private sector, the central bank reduced the bank rate from 7 per cent to 6 per cent. In 2002 the government made it mandatory for the commercial banks to meet their cash reserve ratio only through local currency and not through their foreign currency balances as the later weakens monetary control. Government also undertook measures to tighten budgetary discipline and set up a Public Expenditure Review Commission and a Revenue Reform Commission in 2002.

**Bhutan**

During 1990s a series of structural reform measures were initiated to enhance growth and increase private sector participation in economic activity. The privatisation programme is progressing steadily and the legal support for the financial system is being strengthened. Personal income tax was introduced in 2001 as a first step to strengthen the tax structure and diversify government revenue, which continues to be heavily reliant on the production and exports of electricity. The monetary authorities are taking steps to increase the flexibility of financial institutions in setting their interest rates, to promote competition in the financial sector and to encourage private investments.

Bhutan decided to join WTO and hopes to complete the process of accession by 2007. The government is gearing up for the necessary legislative and regulatory changes in a phased manner to comply with WTO requirements. Bhutan also undertook measures to tighten budgetary discipline and set up a Revenue Reform Commission in 2002.

**India**

While the move towards a more open and market oriented economy could be traced back to the mid-1980s, a comprehensive package of reforms covering trade, industrial and exchange rate policy regimes had to wait till the early years of 1990s. The policy reforms pertaining to the external sector included, but not limited to, dismantling of the import licensing system, phasing out of almost all of the non-tariff barriers (NTBs) except for consumer goods in early years of 1990s and that of quantitative restrictions (QRs) by March 2001 – two years ahead of the original WTO schedule. The QRs on imports of around 2300 items from SAARC countries had been removed unilaterally in 1998. The peak tariff rates have been brought down to a maximum of 50 per cent from upto 355 per cent and average weighted tariff rates have come down from 87 per cent to just 20 per cent by 1999. Tariff rates on most of the commodities had been brought well below the bound rates by 1998/99 except for 40 commodities.

More recently, policy measures announced in the Union Budget 2002-03 entailed a reduction in peak customs taxes, liberalized import and export procedures with no need of licensing, rationalised the tariff structure with a maximum rate of 37.5 per cent import duty in 1999-2000, reduced quantitative restrictions (QRs.), the coverage of which has been reduced from 42 per cent in 1985 to only 2 per cent per cent of imports in 1996, the exchange rate policy regime is more unified, flexible and market-based, local currency Taka is freely convertible for current account transactions, IMF consistent counter trade/ Special Trading Arrangements are allowed, export promotion measures are specific and transparent.

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**Reforms and Global Economic Integration of South Asia**

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duty from 35 per cent to 30 per cent and also provided an indication of further reductions/rationalisation in these duties into only two slabs of 10 per cent (for raw material, intermediate and components) and 20 per cent (for final products) by 2004-05. 

Furthermore, trade liberalization and promotion measures included removal of Quantitative Restrictions (QRs) on Balance-of-Payments (BOPs) grounds by dismantling restrictions on the remaining 715 items. Agri-economic Zones were set up for promoting agricultural exports on the basis of specific products and geographical areas.

The reform package of 1991 also covered a far-reaching liberalization of industrial policy. The New Industrial Policy (NIP) accords a highly liberal attitude to foreign direct investments (FDI) than ever. For speedy clearance of FDI proposals the policy allowed for an automatic approval system subject to the fulfilling of specified equity norms. A Foreign Investment Promotion Board (FIPB) has been set up to consider all other proposals that do not qualify for automatic clearance. For investment facilitation, Foreign Investment Implementation Agency was set up in 2001. Foreign ownership upto 100 per cent is permitted in most manufacturing sectors – in some sectors even on automatic basis. The dividend balancing requirement imposed on 22 consumer goods was also withdrawn in 2000. The policy governing outward FDI has also been liberalized. The revised guidelines, amended in 2002, provide for automatic approval of outward FDI proposals by Indian companies to the extent of US $100 million. A Competition Act was passed in 2002 and a Competition Commission has also been set up. A phased programme of disinvestment of public ownership in public sector corporations has been launched.

In 2001 government announced a comprehensive programme of second-generation reforms mainly aimed at fiscal consolidation. This amounted to a two prolonged approach comprising both revenue generating measures like a 5 per cent surcharge on all tax paid and expenditure management measures like containing growth in public sector employment and reduction in subsidies. The 2001 budget also introduced measures to link administered interest rates to the market rate of interest on government securities of equal maturities with a view to bring down the overall level of interest rates in the economy. The financial sector reforms in the year 2001 also focused on strengthening the banking and non-banking sector. This called for upgrading norms for capital adequacy, income recognition provisioning for Non-Performing Assets (NPAs), disclosures and transparency in accounting and risk management.

In 2003 the government considered the wide ranging recommendation made by the Task Forces on direct and indirect taxes and began a phased implementation of some of the proposals starting with a major reform of tax administration - both direct and indirect taxes. An important expenditure consolidation measure has been the debt restructuring announced in 2003 budget. This involved an early repayment of all high interest public debt. About $3 billion external debt to Asian Development Bank (ADB) and the World Bank has also been repaid. Government also announced a $21 billion debt swap scheme for the states to restructure the debt to the central government. This implies that the states could now borrow from the market at the low rate of interest to repay the high cost debt to the central government. These measures are expected to have a significant impact in terms of reducing the debt burden of the government.

**Maldives**

The Maldivian Government began an economic reform programme in 1989 initially by lifting import quotas and opening some exports to the private sector. Subsequently, it has liberalized regulations to allow more foreign investment. On account of the constraints set by the limited availability of cultivable land and the shortage of domestic labour, agriculture and manufacturing play only a minor role in the economy. In the exchange rate front Rufiyaa, pegged to the dollar under a defacto fixed exchange rate policy, was devalued in 2001 by about 8 per cent. This has been induced by stress in the foreign exchange market on account of a premium of about 10 per cent in the parallel market over the official exchange rate. The devaluation has had the effect of almost totally eliminating the parallel market.

There is an interesting dilemma prevailing in Maldives not only in the realm of trade policy reforms but in terms of a general approach towards shedding its LDC status (Box 2.2). While graduation from the LDC is an indicator of development, this is also perceived as foregoing some of the special preferences that the country has been able to enjoy so far.

In the context of deteriorating fiscal balance the government is in the process of initiating a new public accounting system with a view to have more comprehensive and updated control over public expenditure. In addition, the government is in the process of introducing a new tax regime to expand the tax base. In the context of financial constrains faced by the private sector, government permitted foreign banks like HSBC to enter the local market. Also keeping in view of the long term development of the financial sector, a stock-trading floor was opened in 2002. All these initiatives, including the rationalisation of interest rates initiated in 2001, are expected to take a long way towards the development of the financial sector in the country.

**Nepal**

Similar to other South Asian economies, Nepal also opened up its economy in the early 1990s with the adoption of
reforms. The reform measures have since covered almost all sectors of the economy including trade and investment, fiscal and monetary policies, financial and capital markets and other economic and social sectors. The import licensing system and quantitative restrictions were eliminated and tariff rates and structure were reduced and rationalised to make the trade sector competitive. The average rate of protection has declined from about 111 per cent in 1989 to 22 per cent in 1993 and to 14.7 per cent in 2000. Additional measures initiated to promote international trade include the introduction of a bonded warehouse, duty-drawback scheme, initiation of the multi-modal facility (dry port) and an export-processing zone. Until 2002 Nepal had no restrictive import taxes other than custom duties. In 2002 a security tax was introduced on imports to help financing extra government expenditure resulting from the domestic conflict between the government and Maoist Guerillas.

Nepal’s trade reform programme was complemented by the bilateral trade-treaty signed with India in 1996, which allows Nepal to export manufactured products to India free of customs duty and quantitative restrictions. Similarly, in order to improve the environment for investment, the Industrial Enterprise Act (1992) and the Transfer of Technology Act (1992) were enacted in line with the open, liberal and market-oriented policy. Financial sector reforms have also been carried out to support the trade and industrial reforms. Interest rates were deregulated and joint-venture banks were allowed to open up. Nepal also introduced full convertibility of the Nepalese rupees on the current account. In addition, various sectoral strategies have been introduced to attract investment. For example, the Hydropower Policy (1992) has opened up new avenues to develop the hydropower of the country by motivating national and foreign private investors in this sector. The liberalized aviation policy has helped the tourism industry significantly. Road, airport construction and telecommunication services have also been opened to the private sector to attract more domestic as well as foreign investments and to improve service delivery. Nepal was admitted to WTO at the Cancun Ministerial Conference in September 2003 upon successful completion of all the conditions.

Recent reforms in the monetary sector included the enactment of Nepal Rastra Bank Act in 2002 granting Central Bank greater autonomy. Another important development related to the restructuring plan for the two largest state-owned commercial banks Rastriya Baniya Bank and Nepal Bank Limited. Reforms in the governance front included installation of the computerised civil service personal information system in 2002 to improve accountability and transparency of the service and the elimination 7500 out of 17500 vacant posts. The 10th plan (2003-07) aims at reducing poverty

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**Box 2.2:** Graduation of Maldives from LDC status

One of the Maldivian Government’s major concerns with LDC graduation is the adverse impact it may have on the country’s preferential access of certain exports to key developed markets. On graduation, the main exports likely to be affected would be fish to the EU and to Sri Lanka. Its other main export commodity, clothing, would be largely unaffected.

The share of Maldivian exports, most notably canned and some fresh fish, to the preferential EU market has fallen substantially from 21 per cent in 1997 to 24 per cent in 2001. Graduation from LDC status would make these fish products ineligible for GSP treatment and subject to MFN tariffs, of up to 24 per cent. Clothing exports would not be affected because, unlike fish, they do not satisfy the EU’s rules of origin for preferential access. While non-preferential clothing exports to the EU have shown little growth and account for less than 10 per cent of total exports to the EU, they have grown strongly to the United States. Clothing exports to the United States and EU are not subject to quotas, regardless of development status.

Graduation would also remove preferences under SAFTA whereby additional tariff margins of preference are provided for certain products imported from LDC members. Imports of dried fish by Sri Lanka have grown substantially under these arrangements. The margin of preference on such imports is 35 per cent. The Maldives would lose the entire margin on fish exports following graduation. The share of the Maldives’ fish exports sold under SAARC preferences, mainly dried fish to Sri Lanka, has increased substantially: they accounted for 4 per cent of total fish exports in 1997, while in 2001 the share was 30 per cent. Clothing exports to SAARC members would be unaffected as no member provides preferences on these products. The Maldives would lose access to more generous rules of origin extended by SAARC countries to LDC members.

Fish exports, especially of canned tuna to the EU, would be hit hardest by graduation. Canned exports involve the highest degree of processing, receive large preferences and are exported to no other market. However, sole reliance on this market, and the difficulties faced by Maldivian fish products competing in the EU with other suppliers, including MFN dutiable imports, such as from Thailand, raises serious questions about the economic efficiency of this activity for the Maldives. If fish canning is not internationally efficient, these resources could be used more efficiently in alternative activities. Access to LDC preferences in the EU market is unlikely to prevent Maldivian canned fish exports from being displaced by other more competitive suppliers in the longer run, unless the industry’s efficiency is improved significantly. Continuing to shelter these exports from world competition in the preferential EU market and in the home market, by tariffs and other protectionist measures, is unlikely to help the industry achieve these efficiency gains. The progressive relaxation and recent termination, in 2000, of the state-owned MIFCO’s tuna export monopoly at national level were important but incomplete steps towards improving efficiency by injecting greater competition among processors.

LDC graduation would put the Maldives at a disadvantage in the EU market for fish products compared with ACP non-LDC developing countries, such as Papua New Guinea and Fiji, which could continue to export fish products duty free to the EU under the Cotonou Agreement.

level from 38 per cent to 30 per cent by 2007. The plan focuses on broad-based and sustainable development with focus on social sector and targeted programme for the poor and disadvantaged.\(^8\)

**Pakistan**

The reform measures of the 1990s continued in the early years of new millennium as manifested in the trade and tariff reforms wherein maximum tariffs were reduced from 35 per cent to 30 per cent.\(^7\) The average tariff rate declined from over 50 per cent in 1995 to 20.6 per cent in 2001 and further declined to 18.2 per cent in 2002-03. Decision has also been made to phase out quantitative restrictions on textile imports (see Box 2.3).

The salient features of the existing trade policy are summarised below:\(^10\)

- Freight subsidy up to 25 per cent for new products and new markets.
- Registration requirement for exporters and importers has been waived and monetary limits on exports of samples enhanced from $5,000 to $10,000.
- Export of wheat and its milling products has been allowed.
- Import duty of 15 per cent on import of finished leather has been abolished to facilitate leather exports.
- To make export of gems and jewellery easier, the condition of purchase up to $10,000 and provision of encashment certificate has been removed, as well as value addition requirement of export of bangles reduced to 5 per cent.
- Export of old machinery allowed subject to no refund of import levies or duty drawback.
- Amount of security deposit with Export Promotion Bureau for export of cotton reduced from 3 per cent to 2 per cent.
- Pakistan Export Finance Guarantee Agency has been set up in the private sector to facilitate SMEs to access financing for working capital.
- The maximum tariff rate has been brought down to 25 per cent and the number of tariff slabs have been reduced from 5 to 4.
- Industrial consumers have been allowed to import machinery and parts up to value of $30,000 against bank draft without opening of letter of credit.

In December 2001 IMF approved a three year arrangement for Pakistan under the Poverty Reduction and Growth Facility (PRGF) of about $1.32 billion. As part of PRGF conditionalities the government is expected to reduce the budget deficit to 3.2 per cent of GDP by 2004 in addition to implementation of key sector and governance related reforms. The year 2003 was marked by major reforms on the fiscal front. The reforms aimed at (a) simplification of the tax regime, by gradually eliminating with holding taxes and reducing a number of statutory regulatory orders; (b) reform of income tax; (c) expansion of the general sales tax base; and (d) continuation of trade reform through tariff reduction.

Government also undertook a series of banking sector reforms which aimed at improving corporate governance through implementation of directives to regulate appointment of board members and chief executive officers of commercial banks as well as more stringent review of audit procedures. Moreover, the minimum paid up capital requirement of banks has been raised from PRs 500 million to PRs one billion. At the instance of the Securities and Exchange Commission of Pakistan various measures were undertaken to reform the stock market. The Board of Directors was reconstituted to include directors nominated by the commission, prescriptions of adequate capital base for each brokerage house, permission for future trading in selected shares, prescription of the code of corporate governance for listed companies are some of the important ones to be mentioned. Privatisation also picked up momentum in 2002 with one of the nationalised commercial banks (United Bank Limited) was privatised in September 2002. Also about 20 per cent of government’s stake in the National Bank of Pakistan was divested through stock market. Government also set up the Oil and Gas Regulatory Authority in 2002 to encourage competition and private sector growth in the oil and gas sector.\(^11\)

The period also witnessed the continuation of the reforms in trade and investment policies with focus on doing away with anti export bias by trade and

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**Box 2.3: Import Policies of Pakistan**

The Pakistani Government has committed itself to liberalize further its trade regime as presented in its IMF/World Bank Policy framework paper of December 1998. Consistent with this commitment, on June 30, 2002, the maximum import tariff was reduced from 30 per cent to 25 per cent. The government established three tariff categories with duty rates of 25 per cent, 15 per cent, and 5 per cent. The tariff on most consumer goods was reduced to 25 per cent, for most intermediate goods to 10 per cent, and for most raw materials to 5 per cent.

In November 2000, following a delay of several years, Pakistan reached an agreement with the WTO Balance of Payments Committee to phase out quantitative restrictions on textile imports. The government removed all textile products from its “negative list,” including woven cotton fabrics, woven synthetic fabrics, bed linens, curtains, certain knitted fabrics and apparel items, tents, carpets and textile floor coverings. Many of these items are key Pakistani export products. All textile products can now be imported into Pakistan. However, Pakistan’s trade policy in 2002 continued to ban the import of 30 items, mostly on religious, environmental, security, and health grounds. Automobiles continue to face high duties ranging between 80 per cent and 200 per cent.

tariff liberalization. Also there was a cut in the number of statutory regulatory orders governing tariff exemptions. Further procedural requirements for imports and exports were minimised with a view to facilitate trade.

**Sri Lanka**

In Sri Lanka, two phases of liberalization are noticeable. The first round of reforms carried out during 1977-89, replaced QRs on tradeables with revised tariff structure and provided incentives for non-traditional exports. Apart from realignment of exchange rates, the reforms included devaluation of the currency to more than 100 per cent in nominal terms. The second phase of reforms during the 1990s included further tariff cuts and simplification, removal of exchange controls on current account transactions and flexible exchange rates.

In Sri Lanka also the focus of the reforms in the last two years seems to have been on achieving fiscal prudence and containing budget deficit. The Budget 2001 aimed at reducing the overall deficit, excluding grants and privatisation proceeds, to 8.5 per cent of the GDP from about 10 per cent in 2001. The Budget 2002 also focused on stabilisation through fiscal consolidation. With a view to contain deficit, wide ranging changes were made to simplify tax administration and widen the tax base. However, on account of the slow growth in trade there was a short-fall in customs receipts. This has forced the government to resolve the expenditure cut to keep the deficit under control. The 2003 budget aimed at reducing the deficit further to 7.5 per cent of the GDP from 9 per cent in the previous year. To address the issue of under-utilisation of foreign aid in 2002 the government introduced a ‘Pool Fund’ for capital expenditure through which projects that disbursed more quickly than expected could draw on these counterparts funds without having to wait for a supplementary budget passed by Parliament.

Since the floating of Sri Lankan rupee in 2001, substantial foreign reserves have been accumulated both through official sources such as IMF and direct purchases from foreign exchange market. This has enabled the government to relax the restrictions on foreign exchange transactions. With a view to avail IMF assistance under Poverty Reduction and Growth Facility (PRGF), the government has prepared its poverty reduction strategy paper in consultation with different stakeholders. The PRGF is expected focus on structural reform in labour and financial market.

### 2.3 Reforms and Global Economic Integration

On the whole, the foregoing discussion suggests that all the countries in South Asia have undertaken unprecedented reform initiatives during past decade. A general trend appears to be one wherein the focus of reforms has been on the external sector. The process of opening up of the economies seems to have accelerated momentum as the Uruguay Round of negotiations placed substantial obligations which, *inter alia*, included liberalization of their trade regime with the hope of getting increased access to the developed country market. The extent of such liberalization is evident from the reduction in tariff rate over the years across all the countries in the region (see Fig. 2.1).

The dismantling of restrictions on trade has had the effect of greater integration of the South Asian economies with the world market. This is manifested in an unprecedented increase in the trade-GDP ratio of all the countries in the region. Table 2.1 and Fig. 2.2 shows that the trade GDP ratio has increased in all the countries and the highest increase has been in the case of India wherein it more than doubled to reach a level of nearly 30 per cent in 2000-01. At the same time it is also to be noted that India marks lowest trade GDP ratio in the region given its large domestic market (see Fig. 2.2).

#### Table 2.1: Proportion of Trade in GDP of South Asian Countries (in per cent)

<table>
<thead>
<tr>
<th>Year</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Maldives</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
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<tr>
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<td>168.94</td>
<td>55.06</td>
<td>35.84</td>
<td>85.42</td>
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</table>


*Note:* * indicates the figure of the year 2000 and 1990 respectively for Bhutan and Maldives.
2.4 Concluding Remarks

This chapter has overviewed the patterns of economic reforms in the South Asian economies to provide a background to the analysis of economic performance attempted in the later chapters. The discussion suggests that in all the South Asian countries the process of reforms, started in the early 1990s, has been carried forward to the new millennium. As a result, the South Asian economies in 2004 are much more open and deeply integrated with the world economy.

The available evidence also suggests that the focus of reform initiatives in the recent years has been more on domestic sectors of the economies which aimed at, doing away with traditional state-monopolies, bringing about greater competition in the domestic economy and fiscal consolidation. What has been the return to these reform initiatives, especially in terms of bringing about the much needed growth and structural transformation along with international competitiveness and quality of life of the people? Subsequent chapters of the report is an attempt to seek answers to these and other related issues.

Endnotes

7. See Box 2.1.
8. For an account of the reform measures undertaken in the 1990s see RIS, 2002.

References

3.1 Introduction

As observed earlier, the South Asian economies have embarked upon major reform initiatives during the last twelve years. The reforms, which began with the external sector during the early 1990s, slowly but steadily spread over to domestic sectors in the later years with greater focus on stabilization and fiscal prudence. Against this background the present chapter examines the trends and patterns in growth and structural change in South Asian economies. This Chapter begins with an exploration of the overall growth trends in the region and individual economies (Section 2). Third section examines the performance of three broad sectors of these economies namely agriculture (primary sector), industry (secondary sector) and services (tertiary sector). Effects of economic reforms in terms of structural changes are the focus of discussion in Section 4. Final section sums up the discussion and delves upon the outlook for the near future.

3.2 Growth Performance over the Past Decade and Outlook

After growing at a robust rate of 7.1 per cent on an average per year during the period 1994/95 to 1996/97, the growth rates of South Asian economies in the last three years of the 1990s i.e. 1997 to 2000 declined to 5.2 per cent (see Table 3.1 and Figure 3.1). The decline in growth performance of South Asian economies in these years was due to the adverse effect of the East Asian financial crisis and partly due to slackening of industrial growth resulting from fiscal tightening. In the years 2001/02 and 2002/03 the growth performance of the region deteriorated further to 4.6 per cent because of the slow down of the world economy particularly in the United States, a major market for exports of the region and adverse weather conditions in countries like India, Bangladesh and Nepal which affected the agricultural output. Agricultural growth rates in the region

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### Table 3.1: Growth Rates of GDP in South Asian Countries

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<tr>
<td>Pakistan</td>
<td>3.9</td>
<td>5.2</td>
<td>6.8</td>
<td>1.7</td>
<td>3.5</td>
<td>4.2</td>
<td>3.9</td>
<td>2.2</td>
<td>3.4</td>
<td>5.5</td>
<td>5.7</td>
<td>5.3</td>
<td>3.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>5.6</td>
<td>5.5</td>
<td>3.3</td>
<td>6.3</td>
<td>4.7</td>
<td>4.3</td>
<td>6.0</td>
<td>1.5</td>
<td>4</td>
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<td>5.8</td>
<td>4.8</td>
<td>5.3</td>
<td>1.3</td>
</tr>
<tr>
<td>South Asia</td>
<td>7.0</td>
<td>6.8</td>
<td>7.5</td>
<td>4.5</td>
<td>6.0</td>
<td>5.7</td>
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<td>6.9</td>
<td>7.2</td>
<td>7.1</td>
<td>5.2</td>
<td>4.6</td>
</tr>
</tbody>
</table>

**Source:** RIS based on ADB and IMF Data.

**Note:** p represents RIS projections.

© 2004, Research and Information System for the Non-Aligned and Other Developing Countries (RIS), New Delhi, India.
have also been affected by declining commodity prices in international markets (see Box 3.1). The overall growth performance was also significantly affected by continued industrial recession, rising oil prices, which in turn were provoked by to 9/11 and related events such as the Afghan war, among other factors.

The region’s economy is expected to turn corner in the year 2003/04 to achieve a growth rate of 6.9 per cent and improve its performance further to 7.2 per cent in 2004/05. The recovery in 2003 has been assisted by industrial recovery in India, Pakistan and other countries on account of good monsoon and healthy agricultural growth. The recovery of the world economy is also likely to help in reinforcing the spurt in growth.

Table 3.1 also shows considerable variation in the past performance and outlook across countries. In what follows, the growth performance and outlook in individual South Asian countries are reviewed.

3.3 Growth Outlook Across Countries

**Bangladesh** was able to improve its growth performance on account of the better performance of both agriculture and industrial sectors even during the years of the East Asian financial crisis. The overall GDP growth at 5.9 per cent in 2000 was robust. The global slowdown in 2001/02 and 2002/03 leading to decline of exports and overseas workers’ remittance has had the effect of reducing growth rates in these years to 5.3 and 4.4 per cent, respectively. In addition to the external factors, internal factors like the stagnant agricultural output resulting from adverse weather conditions, depressed wholesale and retail trade in turn due to subdued level of export-oriented manufacturing and transport and communication activities also seem to have played their role.

With the sign of positive development in both domestic and external demand, the economy is expected to pick up and hence the projected growth rates for 2003/04 and 2004/05 are 5.5 and 5.9 per cent, respectively. In 2003/04, export performance and workers’ remittance are increasing with the recovery of the world economy. The GDP growth is likely to pick up further in 2004/05 due to a measured recovery in external demand particularly in the US and EU, and the pick up in the private sector economic activity due to the progress with the country’s structural and economic reforms.

**Bhutan** has consistently improved its growth performance and achieved a robust growth rate of 7.2 per cent on average during 2001/02 and 2002/03. Deeper integration with India insulated Bhutan from the adverse effects of slowdown of the global economy in 2001. Construction of hydro-power plants and power exports to India remained the key factor in Bhutan’s GDP growth in the recent years. The prudent macro economic management over the years also contributed towards the rapid growth of the economy.

With the current high non-inflationary GDP growth, the short-term outlook is upbeat with projected growth rates of 7.8 and 7.9 per cent for 2003 and 2004 respectively.

**India**’s growth performance during the late 1990s suffered after a robust 7.7 per cent growth averaged during 1994-96. Besides crisis in the East Asian countries which have emerged as important trade partners of India, India’s growth performance during late 1990s also suffered due to a deepening industrial recession. The industrial recession was provoked by declining public investment resulting from fiscal squeeze. In the years 2001/02 and 2002/03, the slowdown of the US economy adversely affected the demand for exports of IT software industry among other products. The poor monsoon and rising oil prices in the wake of September 11 and Afghan War further compounded the situation. Despite these adverse factors, the Indian economy was able to grow at an average rate of 5 per cent during these two years compared to 5.5 averaged during 1997-2000.

With rapid growth in exports, particularly in the service sector, and capital inflows, substantial foreign exchange reserves of US$ 100 billion have accumulated. Despite the sharp appreciation of rupee in 2003, the exports are growing by about 10 per cent. The outlook is bullish at 7.2 per cent growth rate in 2003/04 and a further improvement to 7.5 per cent in 2004/05.

**Maldives** has been among the best performing economies in the region with 8.1 per cent growth rate during to 1997-2001/02. However, the growth rate slowed down in the early years of the...
new millennium to 3.4 per cent in 2001/02 before recovering to 6 per cent in 2002/03. A major contribution to the growth of the economy comes from tourism industry. The tourism sector, which had shown annual growth of about 6 per cent in recent years, was seriously affected to the extent of 50 per cent in 2001 mainly due to the September 11 events. The downturn of the sector had spillover effects on the rest of the economy. Transport and communications, the second largest sector grew fairly strongly at 6.3 per cent but even this was lower than the double-digit annual rates in the second half of the last decade. Other sectors, including fisheries financial and business services, real estate, and retail trade were weak and growing at 1 per cent or less. The further liberalization of financial sector and devaluation of domestic currency in 2001 might have strengthened the external sector to some extent. The weak performance continued in 2002 and beyond.

Progress in accelerating growth will depend to some extent on developments in the global economy and on security conditions in South Asia. Though the tourism remained weak in 2002, a significant increase in the disbursement of official assistance was expected to help offset the weakening current account. The gradual recovery in tourism is expected to continue in 2003-04 due to a better world economic outlook. The growth outlook in 2003/04 is put at 6.2 per cent.

Nepal experienced a very disturbing growth experience with its growth rates coming down during the late 1990s and turning negative in 2002/03 for the first time in 20 years. In addition to the external factors, the internal factors like the death of members of the royal family in June 2001 and a rise in insurgency also contributed to the slow down. Tourism related services were hit by the escalating insurgency and the shocking circumstances surrounding the deaths of royal family members. Tourism recorded a 34 per cent decline in the revenue in 2002. The overall growth fell also due to decline in manufacturing activity, sluggish development activities and low aid inflows.

Outlook for 2003/04 is expected to be a cautious recovery to 4 per cent which may further improve to 4.5 per cent in 2004/05 depending upon political conditions and peace.

Pakistan’s growth performance had suffered severely in 2001 and 2002 an account of the severe drought that caused the agriculture sector to contract, though the rest of the economy registered strong expansion. The output growth in 2001/02 fell to 2.2 per cent from 3.9 per cent in 2000/01. The overall growth has been maintained at 3.4 per cent in 2002/03 as compared to 2.2 per cent in 2001/02, mainly on account of the performance of non-agriculture GDP growth of 4.3 per cent in 2002/03 from 3.1 per cent in the previous year. Better performance in 2002/03 has also been attributed to improvement in the macro economic fundamentals achieved through stabilization policies pursued despite the continuation of drought and deteriorating external surroundings.

A current account surplus resulting from surging remittances from overseas Pakistanis and booming exports thanks to preferential quota regimes offered by

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**Box 3.1: Declining Growth Rates of Agriculture: Role of Commodity Prices**

All the countries in South Asia have seen a decline in their agricultural growth rate. To illustrate; the rate of growth of agricultural production in Pakistan declined from 4 per cent in the 1980s to 3.7 per cent during 1991-2002. Similarly in the case of India the decline was from 3.1 per cent to 2.7 per cent. The situation was not much different in the case of Nepal and Sri Lanka either. It appears that the decline was highest in the case of those countries, which are having strong export oriented agriculture. As is evident from (Box Fig 3.1) the period since mid 1990s was marked by a drastic decline in the price of most primary commodities. The magnitude of decline is evident from the fact that the price of most commodities in 2002 is much lower than their level in 1970. In the case of tropical beverages like tea and coffee, which are important crops in countries like Sri Lanka and India, the price decline has been much more drastic.

---

**Box Fig. 3.1 Trend in the Price Index of Primary Commodities (1990=100)**

The observed performance of the agricultural sector therefore, cannot be de-linked from the less than friendly world market conditions that these countries were faced with during the last decade especially since the formation of WTO. In the post Uruguay Round phase, developing countries have undertaken substantial commitments to provide of market access in agriculture (see RIS 2003). On the other hand, expanded access to market of industrialized countries promised to developing countries after WTO under the Agreement of Agriculture has failed to materialize. RIS (2003) shows that there have been tendencies to either under implement the commitments or to implement them in a manner that makes the fruits of liberalization unavailable to developing countries. The ‘dirty tariffication’ of non-tariff barriers, peak tariff rates applicable to agricultural commodities have led to very little market access in effective terms, if at all Developed countries continue to provide substantial domestic support to agricultural production along with considerable export subsidies.

**Source:** RIS.
the US and EU have led to accumulation of forex reserves to nearly $12 billion.

The outlook for 2003/04 and 2004/05 suggests a turn around in growth rates to 5.3 per cent and to 5.5 per cent respectively.

Sri Lanka’s growth performance sharply deteriorated in 2001 to -1.5 per cent from a healthy 5.3 per cent averaged during 1997-2001. This poor performance was largely due to external factors with the slowdown in global growth dampening for the country’s manufacturing exports, high oil prices leading to increased cost of production and shipping. The problems got compounded with a serious drought lowering agricultural yields and hydropower generation. LTTE attack on the country’s only international airport in 2001 hampered the tourism; a hefty war risk insurance surcharge on ships docking at the country’s ports damaged the shipping industry leading to contraction in GDP growth. The growth outlook for 2003/04 is likely to be an improvement over 4 per cent recorded in 2002/03 to 5.1 per cent and further to 5.8 per cent 2004/05 due to rising external demand from industrial countries and the recovery of tourism and shipping.

### 3.4 Structural Transformation: Service Sector Emerges as the Key Driver of Growth

Most of the South Asian economies have traditionally been dominated by agriculture or primary sector. The focus of the development strategy pursued by the governments over the past fifty years has been to industrialize the economies and reduce their dependence on agriculture. As a result of these policies the share of agriculture has come down steadily over the period. Agriculture accounted for nearly 40 per cent of South Asian GDP at the end of the 1970s and nearly 31 per cent even at the end of 1980s. However, its share has come down to less than a quarter by 2002 (Table 3.2).

The share of agriculture has declined in all the South Asian countries. However, the extent of decline varied across countries. Agriculture now accounts for less than a quarter of GDP in all the South Asian countries except for Bhutan and Nepal. In Nepal and Bhutan too the share has declined but still higher than a 25 per cent of the GDP.

### Table 3.2: Sectoral Composition of Production in South Asia (as per cent of GDP)

<table>
<thead>
<tr>
<th>Country</th>
<th>Agriculture</th>
<th>Industry</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Asia</td>
<td>30.7</td>
<td>24.6</td>
<td>43.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>29.5</td>
<td>21.9</td>
<td>25.5</td>
</tr>
<tr>
<td>Bhutan</td>
<td>4.3</td>
<td>31.9</td>
<td>37.4</td>
</tr>
<tr>
<td>India</td>
<td>31.3</td>
<td>25.0</td>
<td>25.9</td>
</tr>
<tr>
<td>Maldives</td>
<td>20.6</td>
<td>9.5</td>
<td>17.1</td>
</tr>
<tr>
<td>Nepal</td>
<td>48.6</td>
<td>40.6</td>
<td>17.9</td>
</tr>
<tr>
<td>Pakistan</td>
<td>25.7</td>
<td>24.2</td>
<td>22.4</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>22.2</td>
<td>20.1</td>
<td>26.6</td>
</tr>
</tbody>
</table>

Source: RIS based on ADB, Asian Development Outlook, 2003 & World Development Indicators 2003

Notes: South Asia share refers to the years 1991 and 2001. Data for Maldives are for the years 1993 and 2000.
The service sector has emerged as the major contributor of income in South Asian countries accounting for as much as 49 per cent of region’s GDP. While the high share of services in economies where tourism plays an important role, viz. Maldives, Sri Lanka and Nepal can be expected, it is striking to find that even economies of Bangladesh, Pakistan and India have been dominated by service sector. With the rising share of industry and in particular of modern manufacturing (see Box 3.2) in the late-industrializers and of services across the region, the economic structures of South Asian economies seem to be converging.

Not only the service sector accounts for a predominant share of GDP, due to robust growth rates the sector has been contributing an ever increasing proportion of growth. As Table 3.3 shows, service sector contributed nearly 55 per cent of growth of India during the 1995-02 period compared to just 41 per cent during the late 1980s. Except for Bhutan and Nepal, service sector contributed for more than half of total GDP growth during the 1995-2002 period in each of the South Asian countries. The contribution of services even in the case of Nepal and Bhutan is substantial at 34 and 44 per cent. In almost all the South Asian countries, service sector’s contribution to growth has been higher than the substantial at 25 per cent in 1990 has actually declined to 22 per cent. In the case of Sri Lanka too, the share of machinery and chemicals have risen. It would appear from this that economic structures in South Asia are converging and the late starters are catching up with the countries that started earlier.

**Box Table 2: Changing Composition of Manufacturing Sector, 1990/2000 (% share of total manufacturing value added)**

<table>
<thead>
<tr>
<th>Food, beverage and Tobacco</th>
<th>Textile and Clothing</th>
<th>Chemicals</th>
<th>Machinery and Transport Equipment</th>
<th>Other Manufacturing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>24</td>
<td>22</td>
<td>38</td>
<td>33</td>
</tr>
<tr>
<td>India</td>
<td>12</td>
<td>13</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Nepal</td>
<td>37</td>
<td>n.a.</td>
<td>31</td>
<td>n.a.</td>
</tr>
<tr>
<td>Pakistan</td>
<td>24</td>
<td>16</td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>51</td>
<td>39</td>
<td>24</td>
<td>30</td>
</tr>
</tbody>
</table>

*Source: RIS based on World Development Indicators 2003*

Competitive Industrial Performance

Yet another indicator of the industrial dynamism especially in an international comparative perspective can be had from the performance of South Asian countries in relative rankings among 87 countries in 1985 and 1998 in terms of a Competitive Industrial Performance Index.

**Box Table 3: Competitive Industrial Performance Index**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>74</td>
<td>0.008</td>
<td>73</td>
<td>0.011</td>
</tr>
<tr>
<td>India</td>
<td>50</td>
<td>0.034</td>
<td>50</td>
<td>0.054</td>
</tr>
<tr>
<td>Nepal</td>
<td>79</td>
<td>0.001</td>
<td>79</td>
<td>0.006</td>
</tr>
<tr>
<td>Pakistan</td>
<td>55</td>
<td>0.028</td>
<td>60</td>
<td>0.031</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>71</td>
<td>0.008</td>
<td>69</td>
<td>0.017</td>
</tr>
</tbody>
</table>


UNIDO constructed a scoreboard of industrial performance based on the simple average of the four indicators of performance: manufacturing value added per capita, manufactured exports per capita, share of medium and high tech activities in manufacturing value added, and the share of medium and high tech products in manufactured exports.

Most of the South Asian countries get poor ranks in terms of the index as is apparent from Box Table 3 with India taking the 50th rank in the world. In terms of changes over the two points of time for which the index has been computed, while India’s rank at 50 stagnates, Bangladesh (73 from 74) and Sri Lanka (69 from 71) are able to improve their ranks.

*Source: RIS.*

Another striking observation from Table 3.2 is that loss in the share of agriculture in South Asian countries has not led to rising share of industry. In fact the share of industry in most cases has stagnated and even declined in India and Pakistan. An appreciable rise has been observed in the cases of Bhutan (from 25 to 37 per cent) and in Bangladesh (from 21 to 25.5 per cent), and Nepal (from 18 to 22 per cent) over the 1991-2002 indicating the strides made by these countries in their industrialization (see Box 3.2). In other countries it is the service sector that recorded the highest increase in the share.

**Table 3.3: Contribution of Different Sectors to Output Growth of South Asian Countries (per cent)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Maldives</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985-90</td>
<td>Agriculture</td>
<td>26.12</td>
<td>34.37</td>
<td>29.01</td>
<td>9.6</td>
<td>51.57</td>
<td>22.73</td>
<td>21.41</td>
</tr>
<tr>
<td>1990-95</td>
<td></td>
<td>19.48</td>
<td>37.85</td>
<td>26.32</td>
<td>n.a.</td>
<td>32.75</td>
<td>26.27</td>
<td>14.86</td>
</tr>
<tr>
<td>1985-90</td>
<td>Industry</td>
<td>20.78</td>
<td>31.18</td>
<td>30.41</td>
<td>13.0</td>
<td>17.16</td>
<td>28.61</td>
<td>27.72</td>
</tr>
<tr>
<td>1990-95</td>
<td></td>
<td>28.79</td>
<td>42.97</td>
<td>26.77</td>
<td>n.a.</td>
<td>28.70</td>
<td>22.65</td>
<td>28.85</td>
</tr>
<tr>
<td>1995-02</td>
<td></td>
<td>27.87</td>
<td>39.17</td>
<td>23.76</td>
<td>20.8</td>
<td>20.77</td>
<td>21.17</td>
<td>24.73</td>
</tr>
<tr>
<td>1985-90</td>
<td>Services</td>
<td>53.10</td>
<td>34.75</td>
<td>40.58</td>
<td>77.40</td>
<td>34.11</td>
<td>28.61</td>
<td>50.87</td>
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<tr>
<td>1990-95</td>
<td></td>
<td>53.73</td>
<td>22.80</td>
<td>46.91</td>
<td>n.a.</td>
<td>41.45</td>
<td>51.08</td>
<td>56.13</td>
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<tr>
<td>1995-02</td>
<td></td>
<td>54.57</td>
<td>33.57</td>
<td>54.87</td>
<td>72.0</td>
<td>43.89</td>
<td>56.49</td>
<td>53.99</td>
</tr>
</tbody>
</table>

*Source: RIS estimates based on ADB data.*
sector’s share in GDP. This suggests that service sector has emerged as the most dynamic in the South Asian economies and is likely to increase its share even further in future.

### 3.5 Performance in terms of Economic Stabilization

Discussion in Chapter 2 on the policy reforms in South Asian countries has shown that one of the areas of focus has been attaining fiscal consolidation. Fiscal deficit is an indicator of the mismatch between government revenue and government expenditure. Large fiscal deficit could have an adverse effect on the level of money supply and hence on the inflation trends in the economy. Also a rising fiscal deficit could adversely affect the current account balance of the economy. More pronounced are the inter-linkages between fiscal deficit, money supply and inflation. If the fiscal deficit gets monetised and the resultant money supply exceeds the demand for cash balances with the existing price level, there will be an excess demand for output and hence rising prices. On the other hand, fiscal deficit need not necessarily be inflationary as it depends on the nature of government spending. But the monetisation of budget deficit may lead to higher inflation in the economy. Even in the absence of monetisation, if fiscal deficit is financed by government borrowings then it may lead to inflationary situation through crowding out private investment.

The trends in overall fiscal deficit of the South Asian countries are presented in Table 3.4. In general it appears that fiscal deficit has been showing an increasing trend in almost all the countries. Yet, there are inter-country differences. The increase has been notable in the case of Bhutan, Maldives, India and Sri Lanka. In Pakistan there has been a declining trend since 1998, whereas in the case of Bangladesh the decline is evident in the last two years. Country level variation in the rate of change notwithstanding, the fiscal deficit in 2002 remained higher than 5 per cent in most of the countries, the exceptions being Pakistan and Bangladesh.

Table also reveals that in 2002, among South Asian countries, India has the highest fiscal deficit to the tune of 10 per cent. This has been also on account of the deficits of state governments because the fiscal position of the Central Government as presented in Table 3.5 reveals that the fiscal deficit has only been of the order of 5.5 per cent.

Has the increased fiscal deficit led to higher rate of growth of money supply? Data on the rate of growth of money supply (see Table 3.6 and Fig. 3.2) across different countries may enable us to reflect on the extent to which the increasing fiscal deficit is being monetised. Table 3.6 shows that while the countries vary in terms of the rate of growth in money supply, the general trend is one wherein the rate of growth has been showing a declining trend. To illustrate, in 1991 the rate of growth of money supply was as high as over 29 per cent in Bhutan and nearly 25 per cent in Maldives. The lowest growth rate was recorded in Bangladesh (12.1 per cent). When it comes to 2002 the rate of growth of money supply in Maldives declined to 19 per cent and that of Bhutan declined to 17.6 per cent. More pronounced decline was recorded in Pakistan and Sri Lanka (see Table). In India also there has been a 3-per cent decline in the rate of growth of money supply from 19 per cent in 2001. Another notable development is that there has been a reduction in the inter-country variation in the growth of money supply, leading towards a convergence in the growth of money supply across different countries (see Fig. 3.2) On the whole, if the available empirical evidence is any indication, increase in fiscal deficit has not been accompanied by corresponding increase in money supply. This points towards the decreasing monetisation of fiscal deficit.

What has been the experience of these countries with respect to price...
trends? To provide an answer to this question we shall present the data on the consumer price index across different countries (see Table 3.7 and Fig. 3.3). From the table and the figure one could safely conclude that there has been a steady decline in inflation rate in all the countries. The decline has been dramatic in the case of Maldives and Bangladesh. In case of Sri Lanka the rate of decline has been much lower as compared to others. Table 3.7 also indicates that in 2002, with the exception of Sri Lanka, the inflation rate has been lower than 4 per cent, whereas in 1991 the lowest inflation rate in South Asian countries was 8.3 per cent (Bangladesh).

Moreover, it is also observed that, similar to the trend observed in money supply, there is a convergence in rate of inflation across different countries (see Fig 3.3).

To sum up, it appears that the South Asian countries have been able to record remarkable success in stabilization and containing inflation. More importantly, the decline in the rate of inflation and rate of growth of money supply has been accompanied by a pattern of regional convergence. The fact that increased in fiscal deficit has not impacted upon money supply tend to suggest that these countries have been able to bring about fiscal innovations such that deficit is not getting monetised. At the same time, when it comes to fiscal deficit, the success of most countries remains far from satisfactory. Nonetheless, it is heartening to note that almost all the countries have taken note of the situation and have initiated measures to contain fiscal deficit by cutting down government expenditure on one hand and exploring new sources of revenue coupled with efficient tax administration on the other.
3.6 Concluding Remarks

This Chapter reviewed the macroeconomic performance of South Asian countries in the recent years and made some projections for the coming years. The growth performance of the region suffered over the past few years on account of difficult external environment and domestic problems. However, the growth outlook for 2003/04 and 2004/05 appears upbeat with South Asian GDP expected to grow at 6.9 and 7.7 per cent, respectively. This growth performance makes the region the second fastest growing in the world after China.

Another interesting development is the broad based nature of growth with all the economies displaying growth dynamism. The chapter also noted the remarkable industrial performance of countries like Bangladesh. Service sector has emerged as the key driver of growth in the region contributing nearly half of income and more than half of growth. The region’s economies have built up substantial foreign exchange reserves to provide exchange rate stability. The region has also been successful in bringing down inflation rates even though more need to be done in the area of fiscal management.

Endnotes

1 See Chapter 6 for details.
2 Though the definitions of fiscal deficit vary from country to country, broad comparisons are possible.

References


4.1 Introduction

Countries of the South Asian region have intensified trade reforms during the 1990s leading to greater integration with the world market. Along with various policy reforms especially dealing with trade and investment, there have also been attempts at fostering bilateral trading agreements. In the light of these developments, this Chapter examines the trade performance in terms of growth composition, direction and competitiveness.

4.2 Trends and Patterns in Trade Performance

Growth in Exports and Imports

Table 4.1 presents the annual growth rate in exports and imports of South Asian countries since 1991. Looking at the table it appears that both exports and imports move in the same direction in almost all the countries. For South Asia as a whole, the early years of 1990s, particularly the period since 1992, was marked by unprecedented growth rates in both exports and imports. This may be seen in the context of wide-ranging reforms especially with respect to trade and investment that these countries initiated in the early 1990s. The period of high trade growth rate however has been followed by a period of marked deceleration in the rate of growth since the mid-1990s. To be more specific, the double digit growth rates of the mid-1990s (above 20 per cent) were followed by a period of persistent slowdown including negative growth rates during 1998. The slowdown in trade may be seen in the context of

<table>
<thead>
<tr>
<th>Year</th>
<th>South Asia</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>India</th>
<th>Maldives</th>
<th>Nepal</th>
<th>Pakistan</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Export</td>
<td>Export</td>
<td>Export</td>
<td>Export</td>
<td>Export</td>
<td>Export</td>
<td>Export</td>
<td>Export</td>
</tr>
<tr>
<td>1991/92</td>
<td>5.2</td>
<td>-11.8</td>
<td>12.7</td>
<td>-7.4</td>
<td>-14.4</td>
<td>-1.1</td>
<td>-24.5</td>
<td>1.9</td>
</tr>
<tr>
<td>1992/93</td>
<td>8.0</td>
<td>9.2</td>
<td>16.1</td>
<td>0.5</td>
<td>9.6</td>
<td>14.0</td>
<td>3.3</td>
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<td>14.3</td>
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<td>4.9</td>
<td>50.4</td>
<td>20.2</td>
<td>15.1</td>
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<tr>
<td>1994/95</td>
<td>21.3</td>
<td>38.7</td>
<td>6.3</td>
<td>2.9</td>
<td>-4.1</td>
<td>-25.7</td>
<td>18.4</td>
<td>34.3</td>
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<tr>
<td>1995/96</td>
<td>20.2</td>
<td>21.6</td>
<td>37.1</td>
<td>39.2</td>
<td>10.2</td>
<td>4.6</td>
<td>20.3</td>
<td>21.6</td>
</tr>
<tr>
<td>1996/97</td>
<td>6.5</td>
<td>12.5</td>
<td>11.8</td>
<td>19.1</td>
<td>39.6</td>
<td>14.1</td>
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<tr>
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<td>2.3</td>
<td>14.0</td>
<td>-7.5</td>
<td>1.7</td>
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<tr>
<td>1998/99</td>
<td>-0.1</td>
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<td>11.6</td>
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<tr>
<td>2000/01</td>
<td>15.5</td>
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<td>17.0</td>
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<tr>
<td>2001/02</td>
<td>1.1</td>
<td>-1.8</td>
<td>11.4</td>
<td>11.3</td>
<td>-12.9</td>
<td>6.1</td>
<td>0.1</td>
<td>-2.8</td>
</tr>
<tr>
<td>2002/03</td>
<td>7.0</td>
<td>2.5</td>
<td>-7.6</td>
<td>-8.7</td>
<td>-1.8</td>
<td>-4.0</td>
<td>11.4</td>
<td>6.3</td>
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<tr>
<td>2003/04</td>
<td>11.5</td>
<td>11.0</td>
<td>9.5</td>
<td>3.5</td>
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<td>8.5</td>
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<td>12.0</td>
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<tr>
<td>2004/05</td>
<td>12.5</td>
<td>11.5</td>
<td>10.5</td>
<td>7.5</td>
<td>8.5</td>
<td>9.3</td>
<td>13.3</td>
<td>13.8</td>
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</tbody>
</table>

unfavorable international environments particularly due to East Asian financial crisis (Table 4.1 and Figures 4.1 and 4.2). The low growth phase continued even in the early years of the new millennium mostly on account of sluggish world demand. Thus, as the South Asian economies got integrated with the world market, their export performance became highly susceptible to world export market. This in turn, as seen in Chapter 3, has had its implications on the overall growth performance of these economies. In the light of recent upswing in the world economy the prospects for the near term appear to be bright. The exports of the region are expected to grow by about 14 per cent in 2003/04 and 2004/05 which is indeed robust especially considering the appreciation of some currencies in the region. Another trend that can be observed from the figures is the growing convergence across South Asia in terms of growth rates of exports as well as imports.

**Direction of Trade**

An analysis of the direction of trade suggests that the South Asian countries continue to depend on developed country markets for their exports. However, the importance of the developing countries has also been growing over the past decade (1990-2001) especially in the East and Southeast Asian region and China (Figure 4.3 and RIS 2002).

The major sources of imports into the South Asian region have also experienced some change during the period under consideration. Though industrial countries continue to be predominant suppliers of the South Asian imports, the shares of developing country trade partners have gone up during the 1990s. A large proportion of these growing imports came from such developing countries of East and Southeast Asia and China. While the proportion of imports from East Asia and China is high for most countries in South Asia, it has increased significantly for India during the decade. A large proportion of imports to the South Asian countries is also from the Middle East, comprising mostly oil and gas.

Overall, it may be stated that the direction of trade which has undergone a shift in recent times in favour of developing countries and more specifically East and Southeast Asian countries has been continuing although there are country specific variations in this respect.

**Composition of Merchandise Trade**

We have seen that some of the South Asian countries have been successful in diversifying into manufactured goods. To what extent have such changes in the domestic production structure got reflected in trade? Data presented in Table 4.2 tends to suggest that the export basket of the South Asian countries is primarily dominated by manufactures. This indicates a shift from primary commodities exports to manufactures, which has important positive implications for income and employment generation opportunities in these countries. In this respect, Bangladesh and Sri Lanka showed a better performance as compared to others. In Bangladesh the share of manufacturers increased from 77 per cent in 1990 to 91 per cent in 2000. In case of Sri Lanka the increase was from 54 per cent to 77 per cent. It is also to be noted that in most of the South Asian countries the manufactured exports comprises of one or two commodities like textile and clothing. Hence, the need for diversifying into other manufactured goods cannot be over emphasized. However, primary commodities still have an important role in South Asian countries’ exports. Some of the notable primary products include jute in the case of Bangladesh, tea for Sri Lanka and India, rice for India and Pakistan, iron ore for India, etc.

The import structures of the South Asian countries show that manufactured goods account for more than 50 per cent of imports in all the countries. Here
again, Bangladesh and Sri Lanka reported remarkable increase in the share of manufactured imports. The increasing import and export intensity of the countries may be seen in the context of increased trade and investment liberalization which in turn enables these countries to be part of global production networks. The import structure, in general, reflects the gaps between domestic production and demand with some of the countries importing food grains, while others depend upon imports to meet the domestic demand for energy (Table 4.3). These countries also source their respective requirement of industrial intermediates, machinery and capital equipment and even durable consumer goods from abroad in various proportions.

**Composition of Trade in Services**

It is a well-known fact that the global trade in services has been growing at a rapid pace in recent times. The global trends are also reflected in the case of the South Asian countries. Trade in services or invisibles in the South Asian region grew substantially during the 1990s.1 Except Bangladesh, the South Asian countries registered phenomenal growth of commercial service exports (Table 4.4). From the same table it is evident that in terms of composition of services, the South Asian region has made strides in the areas of travel and transport services.

<table>
<thead>
<tr>
<th>Table 4.2: Structure of Merchandise Exports</th>
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<tbody>
<tr>
<td>Merchandise</td>
</tr>
<tr>
<td>exports ( $ mn.)</td>
</tr>
<tr>
<td>Bangladesh</td>
</tr>
<tr>
<td>Bhutan</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td>Maldives</td>
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<tr>
<td>Nepal</td>
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<tr>
<td>Pakistan</td>
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<tr>
<td>Sri Lanka</td>
</tr>
</tbody>
</table>

**Note:** * refers to 2000 data.

**Source:** RIS based on World Bank, World Development Indicators, 2002 and 2003.
However, in case of India, the recent growth has been largely owing to “other commercial services” that have contributed over 71.4 per cent of India’s services exports in 2001 as compared to around 45.4 per cent in 1990. This category includes India’s growing exports of IT (information technology) software and related services that have grown at a compound rate of over 50 per cent over the past five-six years. In case of Sri Lanka also other commercial services have become vibrant in growth and more than half of the services exports are emanating from this sector. In case of Bangladesh, transport sector recorded remarkable increase in its share.

The South Asian countries’ imports of services have also grown in recent times. Transport services are the leading item in their import basket (Table 4.5). In Bangladesh, India, Pakistan and Sri Lanka, transport services accounts for around 60-70 per cent of total imports of commercial services during the 1990s. However, in 2001 it appears that imports of transport services in the case of India and Sri Lanka have slowed down. For Nepal, imports of travel services have been quite prominent.

4.3 SouthAsia’s Export Performance in a Comparative Global Perspective

To get a more comprehensive picture of their trade performance an attempt has been made to analyze the trade performance of South Asian countries by referring to the trade performance index as developed by the ITC. It is difficult to have an all-embracing definition of successful trade performance. Some developing countries, for instance, record high growth rates by specialising in niche markets and concentrating their export markets, while other developing countries record more moderate rates of growth with a well diversified array of products and partner countries. In other cases, successful performance is the result of a favourable product or market penetration since the beginning. Successful performance can also be gauged in terms of a country’s ability to adapt its export profile to changing patterns of world demand. The last approach is the most dynamic and demand-driven trade policy stance. The Trade Performance Index (TPI) designed by ITC aims to tackle the complex and multidimensional nature of trade patterns.

It is evident from Table 4.6 that the trade performance of the South Asian countries at the global level has been dismal in relative sense. This is clear from the fact that in the area of basic manufactures, out of 184 countries in the world, the rank of South Asian ranged between 122 and 129. Similar is the situation in various other sectors such as fresh food, processed food, textiles, chemicals, etc. However, data for these sectors are not reported here for shortage of space. During some of the recent years (in most cases the period is 1997-2001) in terms of exports of basic manufactures some countries of the South Asian region such as Bangladesh, India and Pakistan have shown dynamism as compared to other countries in the world.

However, in terms of rate of per capita exports only Nepal and Pakistan appeared to have fared better as compared to other South Asian
countries. This indicator is important because it may be argued that the level of exports is determined by the demand for a country’s products in world markets and a country’s ability to satisfy that demand, which can be related to its size. Hence, the value of per capita exports shows how outward looking is a country, and the extent to which the population produces for the world market. The change in per capita exports reflects changes in a country’s outward looking stance and performance for the group of products considered.

In terms of share in global market in basic manufactures except India other countries have not performed very well (Table 4.6). While India’s rank has been 34, other countries have ranked in the range of 83-121. There are two more aspects that need to be taken into account while assessing the trade performance, viz. product diversification and market diversification. Skill and Technology Content of South Asian Exports

The South Asian exports are widely perceived to lack dynamism in terms of their skill and technological content. Recent studies have analysed the South Asian export structure in terms of skill-intensity of exported products and technological capability. One of the studies divides all (merchandise) exports into two broad categories – manufactured and primary – each of which is further divided in two, with manufactures being split between skill-intensive and labour-intensive items, and primary exports between processed and unprocessed items. Thus, while textiles, clothing, leather manufactures and footwear, and wood products are classified as labour-intensive manufactures, cut diamonds, chemicals, machinery and transport equipment, and instruments are skill-intensive. The second study on the other hand, classifies the exported items as resource based, low, medium and high technology products.

It was shown that South Asia has an unusual merchandise export pattern, concentrated on labour-intensive manufactures, with few primary exports (particularly processed ones) and few skill-intensive manufactured exports. All three of these distinctive features of South Asia’s export structure are explained largely by the distinctive composition of its resources. This pattern can be explained in terms of the South Asian resource structure, viz. low skill per worker and low land per worker.

Though manufactured/primary export ratios tend to increase with their skill/land ratios across countries, South Asia exports a higher proportion of manufactures than would be predicted from its skill/land ratio. Further, the fact that South Asia exports only a small share of its primary exports in processed form appears to be well explained by its low level of skill per worker. Thus, the exceptionally small share of processed primary items in South Asia’s total exports is explained by its unique combination of low levels of both skill per worker and land per worker. In trying to explain the proportion of skill-intensive to labour-intensive

<table>
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<tr>
<th>Table 4.5: Structure of Service Imports</th>
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<tbody>
<tr>
<td><strong>Commercial service imports ($ mn.)</strong></td>
</tr>
<tr>
<td>Bangladesh</td>
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<tr>
<td>Bhutan</td>
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<tr>
<td>India</td>
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<td>Maldives</td>
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<td>Nepal</td>
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<td>Pakistan</td>
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<td>Sri Lanka</td>
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<table>
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<tr>
<th>Table 4.6: Trade Performance Index in Basic Manufactures in South Asian Countries</th>
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<tbody>
<tr>
<td><strong>INDICATORS</strong></td>
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<tr>
<td>Relative Rankings among 184 countries</td>
</tr>
<tr>
<td>Trend of exports</td>
</tr>
<tr>
<td>Average annual change in per capita exports</td>
</tr>
<tr>
<td>Share in world market</td>
</tr>
<tr>
<td>Product diversification</td>
</tr>
<tr>
<td>Product spread (concentration)</td>
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<tr>
<td>Market diversification</td>
</tr>
<tr>
<td>Market spread (concentration)</td>
</tr>
</tbody>
</table>

Source: RIS based on Market Analysis Section, International Trade Centre, UNCTAD/WTO.

Note: Data Year for Bangladesh is 1997-2001, Data Year for Bhutan is 1995-1999, Data Year for India is 1997-2001, Data Year for Nepal is 1995-1999, Data Year for Pakistan is 1995-1999, Data Year for Sri Lanka is 1997-2001.

* Data is for Miscellaneous Manufacturing.
manufactures by the level of skills in South Asia, it is found that South Asia exports an even smaller share of skill-intensive items than would be predicted from its low level of education. Thus, South Asia has a large pool of labour, relative to its supplies of both skill and land, and so its exports are concentrated on types of goods, which use large inputs of labour and small inputs of both skill and land.

Developing countries are found specialized in labour-intensive processes within technology-intensive activities, but manufactured exports from South Asia suffer deterioration of their small share, despite a substantial industrial base. The South Asian export structure is significantly reliant on low technology products. At the same time, South Asia is found to have reduced its dependence on resource based manufactures by marginally increasing its reliance on medium and high technology products.

In case of exports of resource based manufactures, South Asia’s share of other resource based products increased indicating changes in structure, though there is not much change in total resource based products between 1985 and 1998. South Asia shows modest gains in share in both categories of low-technology manufactures, but with little diversification over time for textiles or otherwise for products like toys, sports goods and light engineering products. In fact, the lack of diversification from clothing is an important trend for successful clothing exporters like Sri Lanka, Bangladesh, and Pakistan, among others. On the other hand, in case of medium technology exports, South Asia’s tiny market share shows small increase over time. In South Asia, auto and engineering exports lose market share as against the gains made by process industries. In case of the largest and fastest growing exports of high technology products, South Asia has a small and declining presence.

The analysis further shows that the highest revealed comparative advantage (RCA) for South Asia is in low technology manufactures and primary products, with resource based manufactures close to the latter. While RCA is lowest in high technology products, the region has the highest revealed comparative advantage in low technology ones, bearing out its heavy dependence on textile-related exports and its slow technological upgrading. Thus, South Asia’s export performance contrasts the findings that the largest and most successful exporters in the world specialize in high and medium technology manufactures and that specialization in the former is increasingly related to export success.

The above review shows that simple two-factor trade models assume away such phenomena by taking as given that enterprises operate on universally known and well-behaved production functions. The introduction of capital mobility and skills into the explanation makes the theory more realistic, and scale and agglomeration economies lead countries, ceteris paribus, to establish cumulative edge by being first movers and adding to their advantages over time. Above all, comparative advantage depends (again cumulatively) on technological capability, which in a way depends on national ‘learning systems’. Since learning costs and risks rise with technological complexity, interventions may be called for. The systemic, path-dependent and policy-based nature of comparative advantage helps explain why export success across products is so concentrated in the developing world. This is even true for the South Asian countries. The ability to absorb technologies efficiently and react competitively to changing technological conditions depends on the ‘learning system’ in place.

4.4 Challenges for Improving Export Competitiveness

In this section certain measures to improve export competitiveness are presented. While some of them could be undertaken by individual countries, others involve cooperative action by different countries of South Asia. This is particularly important because in the event of a more globalized trading regime on the one hand and increase in protectionist tendencies in the industrialized world, on the other, pose a particularly complex and paradoxical situation in which firms from the South Asian region would have to compete globally and improve their trade performance.

Forging Public-Private Partnership

In order to ensure that South Asian firms become more competitive in relation to other entities in the global market it is imperative to set in place appropriate institutions. It has been observed that in the era of globalization wherein the roles of markets and governments have tended to be redefined, often the role of government is unclear and one of its manifestations is in an inadequate investment environment. In this context, it may be pointed out that institutional infrastructure which affects how firms develop entrepreneurial and technological capabilities requires emphasis. Therefore, emphasis has been laid upon a working partnership between the state and the market as well as the building-up of institutions. In order to find out as to what kind of harmony is required in a public-private partnership, often recourse is taken to what is known as the O-Ring Theory of economic development (Box 4.1).

It was argued that production is often the result of a series of tasks as to be found on an assembly line kind of production. These tasks can be performed at different levels of “skills”, where the latter refers to the probability of successfully completing the task. For the final product or service to be successfully sold in the market, every single task needs to be completed accurately. This implies interdependence in as much as the value of each worker’s efforts depends on the quality of all other workers’ efforts. One of
the implications of Kremer’s theory is that it explains why workers of similar skills have strong incentives to match together, i.e. highly skilled workers will attempt to work with other highly skilled workers; likewise, low-skilled workers. The consequence is that highly skilled workers complement each other, giving rise to increasing returns to skills with the result that productivity will be even higher. Similar is the situation in the case of unskilled workers.9

It is in this spirit in which a public-private partnership needs to be forged and a higher level of competitiveness be achieved by utilizing the complementarities among labour force at different levels of the skill-spectrum.

Upgrading the Technology Profile of South Asian Exports

As observed earlier, South Asian export structures continue to be dominated by relatively simple technology and labour intensive goods.10 The South Asian countries have not been able to upgrade their export profile in favour of relatively more skill and technology intensive goods unlike the Southeast Asian countries such as Malaysia and China. The low skill and technology intensive goods are not only low value adding compared to knowledge intensive goods but are also slow moving because of increasing price competition.11 Therefore, the inability of these countries to diversify their export-structure in favour of more modern products has cost them dearly in terms of slower export growth and lower value realization.

A part of the explanation lies in the relative neglect of science and technology and R&D activity by these countries that is the key to international competitiveness in knowledge intensive industries. All South Asian countries presently spend much less than one per cent of their national income on R&D and its proportion has actually gone down in the 1990s. In contrast, the proportion of R&D activity in GNP in developed and newly industrializing countries is much higher at about 2.5 per cent and has been going up.12 Among the South Asian countries, India has made limited attempts to build local technological capability with cumulative investments in development of infrastructure for higher technological education, public funded national innovation system and other policies to spur innovation including a softer patent regime that has facilitated a rapid absorption of spillovers of innovations. These investments have led to India’s growing presence in the chemicals and pharmaceutical industry and in computer software industry in recent years. Given the critical importance of R&D activity for international competitiveness, especially in the knowledge intensive industries, the South Asian countries need to augment the resources for this, especially in areas of their core competence.

Box 4.1: The O-Ring Theory of Development

Why are wage and productivity differentials between industrial and developing countries so large? An O-ring is a donut-shaped rubber seal. The O-ring metaphor was applied by Kremer (1993) to explain why such large differences in income exist between industrial and developing countries. The implications of his theory are very important since they seem to contradict a great deal of conventional wisdom, especially regarding the implications of the theory of comparative advantage.

The model has very important applications for both economic development and labor markets. It explains, for example, why highly skilled workers want to migrate to industrial countries, giving rise to the brain drain. They will be much more productive after they have migrated, even though their individual skills remain the same. Migration allows them to match up with the skilled labor force in the industrial country. Conventional economic theory would suggest that surgeons are a scarce factor of production in, say, India, compared with, say, the US, their marginal products and pay would be commensurately higher than their US counterparts. In fact, their wage rates are much lower.

Financial capital will also flow to the richest countries since increasing returns imply that the rate of return is higher where it is already abundant. The model is also consistent with the evidence that rich countries specialize in the production of complicated products; that firms are larger in industrial countries; and that firm size and wages are positively correlated.

Differences in product quality are associated with differences in workers’ skills, and explain why Italian bicycle manufacturers can compete with their PRC counterparts, despite the difference in labor costs. The matching story also offers and explanation of income differences among countries. A small difference in workers’ skills leads to a proportionally larger difference in wages and output, so wages and productivity differentials among countries with different skills levels are huge.

Arguably, O-ring effects exist across firms. Suppose one firm builds roads and another cars. The additional value to drivers of an improvement in the quality of cars most likely will be smaller if the roads happen to be of poor quality, and vice versa. When tasks are performed sequentially (as in global value chains), highly skilled workers will perform the tasks at the later more complex stages of production, which explains why poor countries have higher shares of primary output in GDP, and why workers are paid more in industries with high-value inputs. Also, under sequential production, countries with highly skilled workers specialize in products that require expensive intermediate goods, and those with low-skill workers specialize in primary production. In other words, there is nothing natural about the international pattern of specialization: comparative advantage in primary goods, manufactures, and services is itself endogenously determined.

vertical integration, capturing economies improve the competitiveness of the South exports. Therefore, the challenge is to of its export earnings from garment instance, now derives some 60 per cent established producers. Bangladesh, for example, now derives some 60 per cent of its export earnings from garment exports. Therefore, the challenge is to improve the competitiveness of the South Asian garment industry by increasing vertical integration, capturing economies of scale as also focusing on horizontal specialization, incorporating innovative designs, and taking a stake in the global marketing networks.

Preparation the Textiles and Clothing Industry to Face the Post-MFA Scenario

Textiles and garments have emerged as one of the most important items of exports for all the South Asian countries. The biggest challenge is to prepare their textiles and garment industry for the post-MFA regime. Under the Agreement on Textiles and Clothing, the MFA quotas will be phased out by AD 2005. The South Asian countries will then be freely competing with China, and Southeast Asian countries, among others, in the textiles and clothing market. Paradoxically, protectionism in the form of MFA quotas has helped some of the South Asian countries, such as Bangladesh, Nepal and Sri Lanka, to develop their export-oriented garment industries by insulating them from direct competition from established producers. Bangladesh, for instance, now derives some 60 per cent of its export earnings from garment exports. Therefore, the challenge is to improve the competitiveness of the South Asian garment industry by increasing vertical integration, capturing economies of scale as also focusing on horizontal specialization, incorporating innovative designs, and taking a stake in the global marketing networks.

Realizing the Potential of Regional Economic Cooperation in South Asia

Liberalization of trade and investments regimes at the regional level that would facilitate efficiency-seeking restructuring of the region’s enterprises by making them more competitive, as discussed later in the chapter on regional cooperation. This could help the South Asian exporters face the challenges of international markets much better. As it has been observed, one characteristic of the South Asian countries’ exports to outside the region is the low realization of value added. The bulk of their products are exported at a rather early stage of processing. Much of the value addition in garments, for instance, takes place at the stage of branding and marketing. The South Asian countries should consider setting up South Asia level mega-companies to foster an integrated South Asian textiles sector. This approach could avoid the inter-se competition that prevails today causing mutual disadvantages. In order to secure their markets overseas and to realize a greater proportion of value added, the South Asian exporters should consider taking over a few marketing and distribution chains in their lines of production in developed countries. Given the scale of resources involved in such takeovers, it may be beyond the capacity of individual exporting companies or individual member countries. However, this could be done by forming a regional consortia of the South Asian exporters.

Similarly, joint ventures of regional commodity exporters could undertake their packaging and marketing on behalf of joint venture partners. This approach could be fruitful for tea, coffee, jute, cardamom, basmati rice, etc. which are currently exported in bulk and are subject to low unit value realization.

Dealing with the Emerging SPS Measures and TBTs

Regional cooperation can also be effective in dealing with emerging environment and health related non-tariff barriers in developed countries, such as sanitary and phyto-sanitary (SPS) measures and technical barriers to trade that are potentially very damaging for South Asian exports. For instance, cooperation among the South Asian countries to launch a regional ecolabel could make it more visible and acceptable than individual labels besides conserving resources on its promotion. 14

A Coordinated Approach to WTO Negotiations

The WTO process has an increasingly important role in shaping the patterns of trade. Hence, South Asian coordination is important for securing their common interests. Owing to the consensual approach adopted in WTO negotiations, a coordinated response by the South Asian countries would be more effective in realizing their objectives. The South Asian countries have already begun extensive consultations on WTO issues under the SAARC umbrella.

Endnotes
1. RIS, 2002.
12. See RIS, 1999; Kumar and Siddharthan, 1997: Chapter 2; Kumar, 1998; Chapter 2.

References


5.1. Introduction

Foreign direct investment (FDI) flows are widely seen as catalysts of development which bring, together with technology, other scarce and critical developmental resources such as entrepreneurship and capital. Most developing countries, therefore, seek to attract FDI flows with different policy instruments. Since the mid-1980s considerably more emphasis has been placed on FDI in the current scenario of drying up of soft credits and accumulation of huge external debt by developing countries which has affected the flow of commercial credit to them. FDI inflows received by developing countries have risen steadily from an annual average of US$ 30 billion in the second half of the 1980s and to a peak of $ 246 billion in 2000 before declining to $ 162 billion in 2002. The trend of rapid rise in FDI inflows in developing countries tends to be a cause of optimism because it is associated with multiple benefits such as technology transfer, market access and organisational skills. The trend of rising importance of arm’s length licensing as an alternative channel of technology transfer has also been reversed since the mid-1980s and FDI has emerged as the principal channel of technology transfer again.¹ Multilateral financing agencies have generally included liberalization of policy towards FDI among the conditionalities attached with structural adjustment financing support provided by them to developing countries. As a result, most developing countries attempt to attract FDI inflows with liberalization of policies, promotion and incentives.

As observed in Chapter 2, South Asian countries have also liberalized their policy regimes towards FDI since the early 1990s. This Chapter examines the experiences of South Asian countries in attracting FDI and patterns and trends in these flows.

5.2. FDI Flows in South Asia

FDI inflows attracted by South Asia have steadily grown over the 1990s from an annual average of US$ 1.7 billion during the first half of 1990s to US$ 4.6 billion in 2002. However, the magnitude of inflows is yet to scale the peak of US$ 4.9 billion achieved in 1997.

In terms of the relative attractiveness of the region for FDI vis-à-vis its peers, viz. other developing countries over time, we examine the trends in the share of South Asia in FDI inflows received by developing countries and the share in FDI inflows received by developing Asia. These shares, as plotted in Figure 5.1, suggest that even though South Asia has been a relatively small destination for FDI inflows with only less than 5 per cent of inflows attracted by developing Asia, its share is clearly increasing especially in the period since 2000.

As is clear from Table 5.1, there is considerable variation in the magnitudes of FDI received by different South Asian countries. This variation is expected, given the different sizes of their economies. In order to examine the relative position, we look at the patterns in terms of the share of FDI inflows in gross fixed capital formation across countries. This proportion summarized in Table 5.2 suggests that generally the relative importance of FDI as a source of capital investment is much smaller in South Asian countries compared to the Southeast Asian countries or developing countries in general where the FDI contributed about 10 to 15 per cent of total gross fixed investments. In South Asia this proportion ranges between negligible for Bhutan (and of...
late in Nepal as well) to around 6-7 per cent in Sri Lanka and Maldives. In the case of Pakistan, it has ranged between 5-6 per cent except for a substantial rise in FDI inflows in 2002 to US$ 823 million from $ 385 in the previous year, resulting in a hefty rise in the share of FDI in capital formation from 4.9 per cent to 10.7 per cent. This makes the importance of FDI in Pakistan quite comparable to that in developing Asian countries.

The other trend that is discernible from Figure 5.2 is the fact that the proportion of FDI in the gross fixed capital formation is rising in most of the countries over time especially since 2000.

### 5.3 Explanations for Small Share of South Asia in FDI Inflows

Although FDI inflows to South Asia have grown steadily over the 1990s, relatively small share of the region in inflows, despite a sufficiently large market comprising 1.3 billion people, needs an explanation.

In that context, one turns to the empirical studies on determinants of FDI inflows conducted in cross-country framework. A recent study of determinants of penetration of US and Japanese FDI across 74 countries over three points of time and across seven branches of industry, conducted in the framework of an extended model of location of foreign production, has found that a country’s attractiveness to FDI is influenced by structural factors such as market size (income levels and population), extent of urbanization, quality of infrastructure, geographical and cultural proximity with major sources of capital, and policy factors, viz. tax rates.

<table>
<thead>
<tr>
<th>Table 5.1: FDI Inflows in South Asian Countries, 1991-2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Millions of dollars)</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>World</td>
</tr>
<tr>
<td>Developing economies</td>
</tr>
<tr>
<td>Developing Asia</td>
</tr>
<tr>
<td>Bangladesh</td>
</tr>
<tr>
<td>Bhutan</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td>Maldives</td>
</tr>
<tr>
<td>Nepal</td>
</tr>
<tr>
<td>Pakistan</td>
</tr>
<tr>
<td>Sri Lanka</td>
</tr>
<tr>
<td>South Asia</td>
</tr>
<tr>
<td>South Asia’s share in Developing Asia</td>
</tr>
<tr>
<td>South Asia’s share in Developing Countries</td>
</tr>
</tbody>
</table>

*a Annual average from 1993 to 1996.

**Source:** RIS based on UNCTAD data.

<table>
<thead>
<tr>
<th>Table 5.2: FDI Inflows as a Percentage of Gross Fixed Capital Formation in South Asia, 1991-2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>---------------------------</td>
</tr>
<tr>
<td>World</td>
</tr>
<tr>
<td>Developing countries</td>
</tr>
<tr>
<td>Asia</td>
</tr>
<tr>
<td>South, East and South-East Asia</td>
</tr>
<tr>
<td>Bangladesh</td>
</tr>
<tr>
<td>Bhutan</td>
</tr>
<tr>
<td>India</td>
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<tr>
<td>Maldives</td>
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<tr>
<td>Nepal</td>
</tr>
<tr>
<td>Pakistan</td>
</tr>
<tr>
<td>Sri Lanka</td>
</tr>
</tbody>
</table>

**Source:** RIS based on UNCTAD data.
investment incentives, performance requirements. In terms of these, while South Asia’s large population base (especially of countries like India, Pakistan and Bangladesh) may be an advantage, their low income levels, low levels of urbanization and relatively poor quality of infrastructure are disadvantages. Furthermore, South Asian countries also are at a disadvantage in terms of the relative geographical and cultural proximity with major sources of FDI such as the US, Europe or Japan.2 It also suggests that the potential for intra-regional FDI needs to be exploited more fully. In Southeast and East Asian countries, the bulk of FDI inflows are actually intra-regional inflows. ASEAN countries have adopted several measures to complement their attempts to evolve an ASEAN Free Trade Area (AFTA) (see Box 5.1).

Secondly, FDI inflows are also affected by the trends in the macroeconomic performance of a potential host economy. In particular, the growth rate of an economy or of industrial sector may act as a signaling device on the potential of the economy and pull more FDI. A recent analysis for India has found a broad correspondence between the industrial growth rates in a year and FDI inflows received in the following year (see Figure 5.3). Apparently, good industrial performance tends to crowd-in FDI inflows as well. This means that, in the light of recent improvement in the growth outlook for the South Asian region as projected in Chapter 3, FDI inflows to the region should be rising in the coming years.

Finally, it has been observed that South Asian countries may be under-reporting the FDI inflows received by them. For instance, the recent discussion on comparisons between India and China as the destinations of FDI has highlighted the measurement differences. Despite the recent increase in FDI inflows received by India following the reforms, India’s share would appear too small, especially if it is compared with that of other countries in the region such as China. In 2001, India’s reported inflows of about $3.4 billion represent a mere 1.7 per cent of total inflows attracted by developing countries. In contrast, China received an estimated $46.8 billion of inflows representing nearly 23 per cent of total developing country FDI inflows.

It has been pointed out, however, that the figures of FDI inflows in India and China are not comparable because of several differences.3 Firstly, the Indian figures of inflows do not follow the IMF’s BOP Manual that is followed internationally. The principal difference is that Indian figures only count the fresh inflows of equity and do not take into consideration the reinvested earnings by foreign affiliates in the country nor the inter-corporate debt flows that are generally included while computing the FDI figures as per the IMF Guidelines. Therefore, the Indian figures tend to underreport the inflows. Secondly, FDI inflows in China are believed to be overestimating the real FDI inflows in view of round-tripping of Chinese capital to take advantage of more favourable tax treatment of FDI. Therefore, the figures of India and China are not strictly comparable and tend to overplay the difference between the intensity of inflows between the two countries. The reported figure of FDI inflow in China in 2000 as a proportion of GDP is 3.6 per cent compared to 0.5 per cent in the case of India. However, when the Indian figures are revised by taking into account the reinvested earnings and inter-corporate debt and Chinese figures are moderated on account of possible round-tripping of FDI inflows (using the estimates provided by the International Finance...
indicates the decline in FDI coming to Bangladesh over the period. The countries from which the foreign direct investment was received were the U.S., U.K., Hong Kong, Norway, Malaysia, India, Germany.

Table 5.4 shows the sectoral allocation of FDI for India for the period 1991 to 2002. From the table we see that the highest recipient sector of FDI in Bangladesh are the service sector, followed by chemicals, textiles and food sector. The table also indicates the decline in FDI coming to Bangladesh over the period. The countries from which the foreign direct investment was received were the U.S., U.K., Hong Kong, Norway, Malaysia, India, Germany.

Table 5.4 shows the sectoral allocation of FDI for India for the period 1991 to 2002. From the table we see that the highest recipient sector of FDI in the period 1991 to 2000 has been the electrical equipment sector which includes computer software and electronics. This is followed by the telecommunication sector and transportation sector. Thus, in India also the service sector has emerged as a major recipient of FDI. The countries from which the FDI flows have originated include the United States of America, Japan, United Kingdom and Germany.

Unlike Bangladesh and India, wherein service sector attracts substantial FDI, in Pakistan this sector is not prominent (see Table 5.5). For example, in 1999-00 the sectors receiving the largest FDI were chemicals, pharmaceuticals and fertilizers. However, in 2000-01 trade, transport, storage and communication sector held the largest share. In the last year as shown in Table 5.5, mining, quarrying and oil and gas have received the largest share. The countries from which the FDI was
received include the United States, United Kingdom and the U.A.E.\(^7\)

### 5.5. FDI and Global Production Network in South Asia

The recent literature has shown that all the flows of FDI do not benefit their host countries in a similar manner. There is indeed a great variation in the extent of capital, entrepreneurship, technology, market access brought by them. Some may actually bring pretty little, if at all. Therefore, the quality of FDI is equally important as the quantity of inflows.\(^8\)

In particular, export-orientation of FDI inflows could be an indicator of the quality of FDI especially for developing regions like South Asia, among many others. Evidently, the East and Southeast Asian countries have been able to expand their manufactured exports by serving as the base for export-platform production by MNEs or being part of the production sharing networks of multinational companies or transnational companies (TNCs) (see Box 5.1). For instance, MNEs account for as much as 45 per cent of all manufactured exports in China and as much as 81 per cent of high technology exports. MNEs, on the other hand, play a marginal role in South Asia’s exports. Another respect in which they have failed to exploit the potential of FDI is to serve as a base for export-platform production by MNEs. Export-oriented FDI is a special type of FDI and is known to be of a footloose nature. It moves from place to place as the comparative advantage of countries changes, as argued in the flying geese theory. A recent study has looked at the prospects of South Asia becoming a favoured destination for Japanese FDI, especially one that is export-oriented in the light of an analysis of determinants of their location. It has been found that besides low levels of development, urbanization and poor quality of infrastructure, geographical and cultural distances with major source countries of FDI, the South Asian countries suffer from not being part of any regional economic integration scheme or having preferential trade arrangements with one of the sources of FDI\(^9\) (see Box 5.1).

However, intensification of regional economic integration with a quick implementation of SAFTA and eventually a customs union may help the region improve its attractiveness to FDI inflows from the outside world besides unleashing the potential of intra-regional flows.

#### 5.6. Concluding Remarks

This chapter has reviewed the performance of South Asia in terms of its attractiveness for FDI inflows and their quality. FDI inflows to South Asia have grown over the past decade in response to policy liberalization. South Asian countries have also been able to increase their share in FDI inflows received by developing countries especially since the year 2000. However, their share is still rather marginal which is attributed to a number of factors such as

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### Box 5.1: Production Sharing in East Asia

Intraregional trade in East Asia is increasingly characterized by “production sharing”, defined as the decoupling of previously integrated goods into their constituent parts, components and accessories (PCAs) which in turn are distributed across countries on the basis of comparative advantage.\(^10\) Other terms sometimes used in the international economic literature to describe this phenomenon include “intra-product specialization”, “international product fragmentation”, “delocalization”, “disintegration of production”, “Heckscher-Ohlin (HO) plus production fragmentation”, “slicing the value chain” and “super-specialization”.\(^11\) The international business literature has used terms such as “global commodity chains” or “fragmentation of value chains” to describe this phenomenon. This sort of cross-border multi-staged production process has in turn been facilitated immensely by major improvements in transportation, coordination and information communication technologies (ICTs).

While production sharing has been used extensively in commodity trade (consumer goods like garments, footwear, toys, handicrafts) for decades\(^2\), it is now being applied more intensively to trade in airliners, computers, semiconductors, automobiles, and many other products.\(^3\) This said, there are some important distinctions between “old” or “buyer-driven” production sharing and “new” or “producer-driven” production sharing (see Table 1).

The growth of PCA trade involving developing economies has outpaced growth in manufactured trade in general and aggregate trade as well. Thus, PCA exports involving developing economies rose from 13.2 per cent of total exports in 1981-90 to 18.5 per cent in 1990-2000. The share of developing economies in global PCA exports increased from a mere 4

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**Table 5.5: FDI Received by Pakistan 1999-00 to 2001-02 (US $ Mn.)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>1999-00</th>
<th>2000-01</th>
<th>2001-02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>67.4</td>
<td>40.3</td>
<td>36.4</td>
</tr>
<tr>
<td>Chemical, pharma and fertilizers</td>
<td>119.9</td>
<td>26.3</td>
<td>17.8</td>
</tr>
<tr>
<td>Construction</td>
<td>21.1</td>
<td>12.5</td>
<td>12.8</td>
</tr>
<tr>
<td>Mining and quarrying, oil and gas</td>
<td>79.7</td>
<td>84.7</td>
<td>274.8</td>
</tr>
<tr>
<td>Food, beverage and tobacco</td>
<td>49.9</td>
<td>45.1</td>
<td>-5.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>4.4</td>
<td>4.6</td>
<td>18.4</td>
</tr>
<tr>
<td>Trade, transport, storage and communication</td>
<td>38.6</td>
<td>94.7</td>
<td>68.3</td>
</tr>
<tr>
<td>Machinery other than electrical</td>
<td>4.6</td>
<td>2.5</td>
<td>10.5</td>
</tr>
<tr>
<td>Electronics</td>
<td>2.3</td>
<td>2.8</td>
<td>15.9</td>
</tr>
<tr>
<td>Financial business</td>
<td>29.6</td>
<td>-34.9</td>
<td>3.6</td>
</tr>
<tr>
<td>Petrochemical and refining</td>
<td>12.0</td>
<td>8.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Cement</td>
<td>0.1</td>
<td>15.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Others</td>
<td>40.3</td>
<td>20.0</td>
<td>25.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>469.9</strong></td>
<td><strong>322.4</strong></td>
<td><strong>484.7</strong></td>
</tr>
</tbody>
</table>

**Source:** Economic Survey of Pakistan 2002-03.
Box 5.1 continued

per cent in 1981 to 21 per cent in 2000. As noted by the World Bank\(^4\), developing economies' involvement in global production networks has offered them the opportunity to raise their share of the world's fastest-growing export products (transistors and semiconductors, computers, and computer and office machine parts) from 2.4 per cent in 1980 (about the same as the share of those products in global exports) to 16.3 per cent by 1998 (almost 7 percentage points higher than the share of such products in global exports).

Nonetheless, trade of PCAs involving developing economies is highly concentrated, far more than total trade or manufactured goods trade in general (Figure 1). According to the World Bank\(^5\), nine of the top ten developing economies are from East Asia (except Brazil). South Asia, Sub-Saharan Africa, and the Middle East and North Africa together account for only 2 per cent of developing economies’ PCA exports (and two-thirds of that involves just two countries, India and South Africa), compared with 11 per cent of developing economies’ total manufactured exports.

To a large extent this concentration of PCA trade in a handful of countries in East Asia is not altogether surprising, being a reflection of the concentration of export-oriented foreign direct investment (FDI) in core countries. After all, production sharing has been facilitated immensely by the expansion of the global operations of transnational corporations (TNCs) and consequent FDI. According to the UNCTAD\(^6\), global markets increasingly involve competition between production systems that are organized by TNCs. This is not to suggest that cross-border production sharing always requires TNCs. In cases where there are no obvious benefits from “internationalization”, outsourcing could also be conducted at “arm’s-length” between independent actors, i.e. separation of ownership. TNCs play a major role in production sharing involving semiconductors, automobiles and the like, while arms-length transactions are more common in the case of textiles and footwear and related products (see Table 1 again).

<table>
<thead>
<tr>
<th>Table 1: Main Characteristics of Producer-driven versus Buyer-driven Production Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drivers</td>
</tr>
<tr>
<td>Core competencies</td>
</tr>
<tr>
<td>Barriers to entry</td>
</tr>
<tr>
<td>Economic sectors</td>
</tr>
<tr>
<td>Typical industries</td>
</tr>
<tr>
<td>Ownership of Manufacturing firms</td>
</tr>
<tr>
<td>Main network lines</td>
</tr>
<tr>
<td>Predominant structure</td>
</tr>
</tbody>
</table>


The importance of production sharing is that by reducing the costs of production of a product it makes the entire set of countries that participates in the integrated production system more attractive as export markets and investment destinations — a win-win arrangement for all participants. Lower income developing economies are not only able to gain a comparative advantage in lower-end light industries, but also in the lower-end production stage of higher-tier industries. Middle and higher income developing country are able to graduate to higher ends of the value-added chain, i.e. more advanced stages of the Original Equipment Manufacturing (OEM) and eventually into Original Design Manufacturing (ODM). Countries could also move horizontally, e.g. improve product quality and serve higher value added market segments. This so-called Original Brand Manufacturing (OBM) essentially involves moving from selling under a foreign label to developing and selling under their own label, hence allowing them to capture brand name rents. Hong Kong has done this effectively in the case of apparels, with many labels being produced by Hong Kong brands. Other economies in the Asia-Pacific region are developing their own “brand names” in computers and electronics.

On the plus side, the splitting of goods into finer sub-parts which are then outsourced is a means of including more countries in the production network (i.e. multiplication of supplier networks). On the minus side, in view of the footloose nature of such production, there are well-founded concerns that small variations in costs could lead to large swings in comparative advantage thus necessitating large and sudden domestic adjustments.

Production sharing is not limited to trade in goods as TNCs have fragmented and dispersed various services functions worldwide to take advantage of marginal differences in costs, resources, logistics and markets. In the Asia-Pacific region, Singapore and India have benefited significantly as many TNCs have used the former as a regional headquarters (RHQ), given the city state’s excellent infrastructural quality, political stability, low tax regime and strategic location; while they are increasingly using the latter for their backroom and related operations in view of the ready availability of excellent, low cost, high quality skilled labour.

The growing significance of production sharing emphasizes the need for governments seeking export-oriented FDI “to go beyond trade and FDI policies and assess their locational advantages in the international production system context”\(^7\). It is in this sense that regional integration efforts that lower the costs of cross-border transactions can be an especially attractive tool to promote trade, FDI and technological progress. Indeed, it is not surprising that Japanese and other businesses have been among the most enthusiastic proponents of the ASEAN Free Trade Area (AFTA) and ASEAN Investment Area (AIA).

as low income levels, poor quality of infrastructure, their geographical and cultural distance with major sources of capital in the West or the East. They have also not exploited the potential of intra-regional FDI inflows which account for the bulk of FDI inflows which received by the Southeast Asian countries.

South Asian countries have also not been able to integrate themselves with global production networks of multinational corporations and emerge as bases for export-oriented production for them in a significant manner. Participation in regional economic integration schemes emerges as a major determinant for hosting such offshore production bases by MNCs.

In this context, South Asia could take lessons from experiences of ASEAN that are trying to attract export-oriented FDI with the help of AFTA and ASEAN Investment Area. Regional economic integration in SAARC will also enable the region not only to emerge as a more attractive destination for FDI inflows in general but also export-oriented FDI as well as intra-regional FDI.

Endnotes

1 Kumar, 1998.
2 See Kumar, 2000; 2002, for details.
3 It was first noted by IFC, Washington in 2002; see Pfefferman, 2002.
5 From www.gobfinance.org/economic/index.html
6 Economic Survey 2002-03, Government of India
7 Economic Survey 2002-03, Pakistan
8 See Kumar, 2002 for a discussion on the patterns and determinants of quality and quantity of FDI.
9 See Kumar 1998 for an empirical evidence.
11 For references, see R. Rajan, 2003a; 2003b.
12 For instance, see G. Gereffi, 1999; 2003.
13 In line with the increasing significance of production sharing, there is a growing body of analytical literature on the subject. See the collection of papers in S. Arndt and H. Kierzkowski (eds.) 2003.
15 ibid.
16 UNCTAD, 2002.

References

6.1. Introduction

During the past decade and a half, regional economic integration has been adopted as a strategy for development and strengthening external competitiveness by both developed and developing countries. Thus, strong trade blocs have emerged, viz. EU, NAFTA, MERCOSUR, COMESA, SADC, SACU, AFTA, among others. South Asia has also evolved a SAARC Preferential Trade Arrangement (SAPTA) since 1995 under the framework of SAARC as a transition to SAARC Free Trade Area. This has been complemented by several attempts at bilateral and sub-regional levels to liberalize trade in the region. Therefore, slow progress in SAARC need not be misconstrued as lack of intra-regional trade and investment dynamism in the South Asian region.

An important point emerging from the analysis in this Chapter is that there is a tendency of trade-investment linkages getting strengthened in the region. This is expected in a region like South Asia wherein imbalances on trade account, due to limited export supply capabilities in some countries, get compensated by investment inflows on the capital account.

The formation of FTA with liberalization of investment regime and other facilitating measures can help in exploitation of the potential of efficiency-seeking restructuring of industries within the region. This includes rationalization of industries on the basis of overall efficiency by taking into account the special advantages of different locations across the region in terms of availability and relative cost of labour and skills, natural resources, and other factors.1

The regional trade liberalization under the aegis of SAARC is documented and analyzed in Section 2. The sub-regional approaches are dealt with in Section 3. The contours of bilateral economic cooperation in the region are analyzed in Section 4. Section 5 highlights broad contours of monetary cooperation. Some of the lessons from the regional cooperation initiatives so far and policy implications for inducting greater trade and investment dynamism in the South Asian region are laid down in the last section.

6.2. Regional Economic Integration under SAARC

The process of trade liberalization under the SAARC framework has been rather slow as compared to the progress made at the bilateral and sub-regional fronts. This is despite the fact that SAARC has recognized the rationale for regional economic integration (Box 6.1) and has set for itself quite ambitious targets in terms of achieving a dynamic SAPTA to begin with and further transitioning to SAFTA and ultimately an Economic Union in future. An attempt has been made in this section to review the trends in intra-SAARC trade and investment, progress in the policies for SAPTA and SAFTA as well as the move towards an Economic Union.

Intra-SAARC Trade

The trade cooperation under SAARC has been subjected to severe criticism as intra-SAARC trade as a proportion of SAARC’s total trade has remained low at around 4 per cent. However, it has been pointed out that this share appears low due to the fact that a substantial part of intra-SAARC trade is at present taking place as informal trade or is routed through third countries. If share of informal trade could be taken into account, the share of intra-regional trade could be easily twice as much as revealed by official trade figures.2 Secondly, intra-regional
Regional Economic Integration in South Asia

**Box 6.1: The Logic of Cooperation in South Asia**

Enhanced regional cooperation, including regional integration, is an imperative if the South Asian countries are to strengthen their competitive position, both individually and as a group, so as to attract foreign private capital from outside and even within the region to widen and diversify their production base. Such a process would help reduce the vulnerabilities of their individual economies in the face of the inexorable and accelerated pace of globalization, and to maximize the benefits and minimize the costs of this process.

There is an increasing convergence in the macro-economic policy regimes of the South Asian countries, with an enhanced emphasis on the role of the private sector. All these countries have embarked upon the path of liberalisation of their economies as a means of improving productivity and efficiency, with expectations of gains in competitiveness. The liberalization process has demonstrated the comparative advantage these countries have in trading with each other and has proved to be a powerful engine for the expansion of intra-regional trade.

However, this expansion has been unequal in its scope in that the more developed members of SAARC have been able to dramatically expand their exports within the region. In contrast, the export growth within the region of the least developed countries has been modest, limited as they are by their narrow production structures and supply constraints. There is a legitimate apprehension that the recent spurt in intra-regional trade may thus be unsustainable and the potentialities for future growth may not be realized unless this imbalance in the trade flows is at least partially redressed. This can be best achieved by an integration of the markets and coordinated restructuring of the economies of the member states.

South Asian countries have certain inherent advantages in regional cooperation. They have the advantage of geographical contiguity and shared economic, social and cultural characteristics, which should serve to reduce the transaction costs. They also have an inherited development infrastructure, even if it has not been upgraded over the years. With its combined population of 1.3 billion, South Asia commands a huge potential market. If these countries are able to sustain the current dynamism in their economies and raise the purchasing power of the large proportion of their populations who live below the poverty line, such a market could grow exponentially to a point where it would be coveted by the rest of the world, and could thereby, attract significantly larger flows of foreign capital and technology than has thus far been possible. Production for such an enlarged market will yield economies of scale and improve the competitive advantage of the countries of the region. The least developed members states would, in particular, be the biggest gainers through their access to an integrated and expanded regional market, which will provide them with opportunities to attract FDI to service the regional market. What is needed is to enlarge, integrate and unify this market by removing barriers to trade and to take other measures for ensuring greater regional integration.

The structural changes brought about in the production pattern in the member states through coordinated development of the region’s immense natural as well as human resources, its strong traditional knowledge base and its enormous land, water and other natural resources will stimulate growth and employment within the respective economies, thereby enhancing the welfare of the people of South Asia.

In order to realize the full potential of regional cooperation, SAARC will need to move forward to avail of the vast opportunities of deeper regional integration which are beckoning the South Asian countries. Recent studies conducted by research institutions and business organizations of the region have brought out the colossal cost of non-cooperation in the core economic areas. This cost is rising with every passing day. In the meantime, the basic parameters and paradigms driving the integration of the South Asian countries with the outside world have changed beyond recognition in ways which have imposed asymmetric costs and benefits on the member states. The South Asian countries can cope with these changes more effectively if they can address some of these issues as a cohesive regional group rather than as individual countries. They, therefore, cannot afford to lose any more time in taking more decisive steps towards regional integration and deepening regional cooperation.

Given the above reality, the goal of the SAARC member states should be to establish a South Asian Economic Union by the year 2020.


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**SAFTA**

Although SAFTA has been a recent experiment in liberalizing intra-regional trade, the results are significant. It is worth noting that under SAFTA it is the smaller countries that have experienced trade gains as the studies have observed. For instance, during the period 1996-97 to 2000-01 it has been found that import liberalization by India under SAFTA has stimulated preferential imports from Bangladesh both in value and share terms. In case of Maldives, the share has improved even though the value has declined during the same period. It has also been observed that the preferential trade basket under SAFTA is increasingly getting diversified.

As we shall observe later in this chapter, trade-buoyancy is also manifested in the Indo-Sri Lanka and Indo-Nepal relationships due to trade liberalization measures under the bilateral framework. In short, trade liberalization has resulted in gains to smaller countries of the region whether the liberalization is effected through the bilateral route or regional process. This is contrary to the understanding that regional cooperation/bilateral cooperation leads to larger gains to bigger countries.

The Second Meeting of the Inter-Governmental Group on Trade Liberalization to Conclude the Fourth Round of Trade Negotiations under SAFTA was held at the SAARC Secretariat, Kathmandu on 30 October-1 November 2002. At this meeting the Fourth Round of SAFTA negotiations were finalized. Though the deliberations focused on sector-wise, chapter-wise and across-the-board negotiations, the outcome has been in terms of mutually agreed concessions between India and Bangladesh and India and Maldives at HS-6 Digit Level. India offered tariff concessions in 107 items to Bangladesh and on 4 items to Maldives at HS-6 digit level. On the other hand,
Bangladesh has given concessions to India on 29 items whereas Maldives has extended concessions on 4 items. In a recent development, India and Pakistan are also planning to negotiate and conclude their fourth round of bilateral commitments under the SAPTA.

**SAFTA**

The Committee on Economic Cooperation (CEC) in its Eleventh Meeting in Kathmandu during 26-27 October, 2002 considered the Report of the Committee of Experts (COE) on Drafting a Comprehensive Treaty Regime for a South Asian Free Trade Area that was held at the SAARC Secretariat on 15-17 July 1999.

The Committee underlined the urgency of finalizing the text of the Draft SAFTA Treaty Framework by the end of 2002 as mandated by the Eleventh SAARC Summit. The SAFTA Treaty is in the final stage and it is likely to be taken up at the Summit Meeting of the SAARC which is scheduled to be held in Islamabad from January 4-6, 2004.

In terms of substantive issues, anti-dumping measures, rules of origin and revenue compensation mechanism still require to be sorted out within the SAFTA Treaty Framework. In addition, product negotiation modalities and identification of sensitive and negative list of items to safeguard trade interests are yet to be finalized.

However, it must be pointed out that while the SAFTA process has been not only slow but various deadlines for launching it have been missed, other regions in the world have been moving on a fast track basis in terms of freeing their trade and customs regimes like in the case of ASEAN Free Trade Agreement (AFTA) the schedule for achieving it has been preponed from 2008 to 2003 and further to 2002 for the six original signatories.

**Gains from SAFTA: Some Estimates**

SAFTA is expected to expand intra-regional trade not only by legalizing the substantial unofficial trade in the region but it is also expected to generate substantial new trade (trade creation). However, such gains are considered in the literature as static gains. Within a dynamic framework it is argued that due to economies of scale effect ultimately the manufacturing processes experience gains in terms of cost reductions.

Studies conducted in the framework of gravity model have estimated that complete elimination of tariffs under SAFTA may increase the intra-regional trade by 1.6 times the existing level. Furthermore, it has been found that in the dynamic framework the gains from liberalization are substantially (at least 25 per cent) higher than the static gains. It is also important to highlight that such scale effects would largely accrue to the smaller member countries of the SAARC due to the possible expansion in their scale of operation by getting access to relatively larger markets of the larger member countries.

The above projections need to be viewed against the cost of non-cooperation which was estimated by an earlier RIS study which worked out to be about $266 million for Sri Lanka. This was on account of Sri Lanka’s imports from outside SAARC region despite the fact that those items were available within the South Asian region. Similarly, for Pakistan the estimated cost of non-cooperation was to the tune of $511 million. It may be stressed that the available difference in unit values of items between the SAARC-sources of imports and extra-SAARC sources is not necessarily due to quality differences and it could be interpreted as trade creation effects. To illustrate this point one may cite the example of the Indian made Hero-Honda motorcycle which can be purchased in the Sri Lankan market at Sri Lankan Rs. 73,665 and the latter costs Sri Lankan Rs. 1,60,000.

**Intra-SAARC Investment Linkages**

As highlighted in the beginning of this chapter in a regional grouping like the SAARC strengthening of trade-investment linkages is a pre-requisite for achieving economic success because of the fact that trade deficits between bigger and smaller countries need to be compensated by capital account surpluses wherein outward-FDI from bigger to smaller countries takes place. This kind of linkage helps improving export supply capabilities of the smaller countries and in the second round there are favourable trade effects.

It has been empirically demonstrated that the transfer of resources and technology through South-South joint ventures is more appropriate and cost effective for the receiving country than similar transfers effected by TNCs based in the industrialized countries. For instance, the technology transferred to joint ventures has been found to be appropriately scaled down to smaller size, made more appropriate to factor endowments of developing countries, and adapted to local raw materials and market conditions. They have been found to depend less on imported capital goods and raw materials and result in significantly lower foreign exchange outgo on account of servicing. Furthermore, joint ventures can supplement and promote South-South trade. Joint ventures with buy-back arrangements with the home country can help in correcting the perennial balance of trade imbalances which may emerge because of limited export capabilities of host countries.

However, the intra-SAARC investment linkages are very low and the situation suggests that the SAARC cooperation must focus on this...
dimension to take advantage of trade-investment relationship by enhancing the production and trading capabilities of the SAARC countries. On the other hand, the potentials for investment cooperation in the South Asian region appear to be quite high due to investment complementarities and reforms in the investment regimes in the countries of the region.

Scope for intra-South Asia Investment Cooperation

The scope for intra-South Asia investment cooperation for augmenting regional investment flows is immense. Box 6.2 presents the results of an exercise in this direction by taking the case of textile and clothing. There are discussions for ‘developing South Asian region as the lowest-cost manufacturing hub in the world’. In order to achieve this objective some of the areas identified are trade, investment and services including health, education, entertainment and communication.

6.3. Subregional Initiatives

Complementing the regional, bilateral and unilateral initiatives in the South Asian Region are two important subregional initiatives, viz. Bangladesh-Bhutan-India-Nepal Quadrilateral Growth Initiative (BBIN) and Bangladesh-India-Myanmar-Sri Lanka-Thailand Economic Cooperation (BIMST-EC). Earlier RIS studies have highlighted that the Growth Zones Approach adopted for the development of a sub-region can become an important mechanism in achieving higher levels of regional integration in South Asia. The Growth Zones Approach provides the necessary flexibility to exploit the economic complementarities within a specific sub-region. They have proved to be important export bases in other parts of Asia. A major advantage of the approach is in terms of creating linkages with the rest of the economy as well as with the rest of the region but with the aim of targeting the global market.

Since Growth Zones are export-oriented, the size of the domestic market does acts as a limiting factor in the pursuits of harnessing economic complementarities of different countries in the region.12

Box: 6.2: Regional Cooperation in Textiles and Clothing: Possibilities of Horizontal Specialization

It has been observed that while the WTO Agreement on Textiles and Clothing aims at MFA phasing out, its implementation process so far has not resulted in adequate integration of products belonging to this sector. Moreover, the ATC is back loaded and this keeps the entire integration process under serious doubts. Even if the phasing out schedule is met adequately it is apprehended that due to non-availability of an assured market in developed countries through quotas, the South Asian countries would have to take concerted policy and business decisions so as to meet the global competition from other developing as well as developed countries since this is one of the most important sectors of the South Asian countries.

In order to help the South Asian countries meet the global challenges of competition in this sector, it is suggested that they aim for regional integration of this sector, especially with the help of strengthening trade-investment linkages. In order to find out the possibilities of efficiency-seeking industrial restructuring in this sector (RIS, 2003a) an attempt is made to identify products for this purpose. The argument is to induct horizontal integration, i.e. cooperation in the same or similar lines of production and exports, among the South Asian countries. As per the industrial restructuring on a pan-South Asian basis, a particular South Asian country which has gained export specialization in certain textiles and clothing product lines in recent times, could become the host of relocated plants of the other South Asian countries. In this manner, the textiles and clothing sector could become regionally integrated as countries would vacate certain lines of production and gain in other lines of production according to their relative comparative advantage in the global market. Such a restructuring would engender intra-South Asian investment flows that would be trade-creating vis-à-vis the global and regional markets. So that South Asian countries do not lose out on the value-addition chain, focus has to be given on horizontal specialization to begin with. In subsequent phases, vertical integration in this sector could also be contemplated.

The products amenable for horizontal specialization in different lines of production and exports from one South Asian country to other partners of the region are identified by analyzing the trends in the revealed comparative advantage of each country at the SITC 4-digit level during 1996-2000. In so doing, different stages of processing were kept in mind, i.e. from raw cotton and fibres to yarn and fabrics; and further to clothing. The analysis has been undertaken at a three-dimensional level. First, products were identified where a particular South Asian country has gained comparative advantage during the period under consideration. Second, products were identified where a particular South Asian country has lost comparative advantage in the global market for the same period. And third, products were identified where major other developing country-competitors have also gained comparative advantage during the same period. This included countries like China, Hong Kong, Indonesia, Thailand, Turkey, Mexico, Tunisia, etc.

Finally, a matching of three vectors of products for each South Asian country was undertaken and the possible direction of industrial relocation from one country of the region to other partners was identified. The results of this exercise reveal that each South Asian country is amenable for such a restructuring in terms of horizontal specialization. Each country can become a host of industrial relocation as well as it is also required to shift some of its manufacturing bases to other partners. While the focus of analysis has been to identify products for horizontal specialization, it was also shown these are possibilities of vertical integration as well from one stage of processing to another according to comparative advantage in the value-addition chain.

The upshot of the above is that regional cooperation for bringing trade-investment linkages into the policy-focus can induct a spate of efficiency-seeking industrial restructuring through intra-South Asian FDI flows in the textiles and clothing sector. Resultantly, the overall competitiveness of this sector would be enhanced to meet the challenges of MFA-phasing out.

Source: RIS based on RIS Discussion Paper by Ram Upendra Das (forthcoming).
Bangladesh-Bhutan-India-Nepal Growth Quadrangle Initiative (BBIN-GQ)

Sub-regional cooperation, based on launching of specific projects, involving three or more member states is being pursued under the SAARC, in terms of the Growth Quadrilateral Initiative comprising Bangladesh, Bhutan, India and Nepal (BBIN).

The prime objective of the BBIN-GQ is to create an enabling environment for rapid economic development through the identification and implementation of specific projects. The following sectors have been identified for priority attention: multi-modal transportation and communication, energy, optimal and sustainable utilization of natural resource endowments, trade and investment facilitation and promotion, tourism and environment.

It has been found by a recent study that there is immense trade and investment potential among the BBIN countries that could serve as instruments for the development of the sub-region. The study has recommended to propel growth and development in the BBIN sub-region such as establishment of a BBIN-Free Trade and Payments Arrangement, BBIN Investment Area, BBIN Integrated Sectors, BBIN HRD Centre/Human Resource Bank, BBIN Banking Enclave, BBIN Information Hub and Statistical System, and a BBIN Secretariat. This study has formed the basis for intensifying cooperation especially in the transport and transit sectors among these countries by the Asian Development Bank under its South Asia Sub-regional Economic Cooperation (SASEC) Programme.

BIMSTEC

The initiative to establish Bangladesh-India-Sri Lanka-Thailand Economic Cooperation (BIST-EC) was taken by Thailand in 1994 to explore economic cooperation on a sub-regional basis involving contiguous countries of South East and South Asia bound by the Bay of Bengal. With the admission of Myanmar in December, 1997 the economic cooperation was renamed as BIMST-EC (Bangladesh-India-Myanmar-Sri Lanka-Thailand Economic Cooperation) which added a new dimension to the South-Asian paradigm of cooperation. It is the first grouping which brings three South Asian members of SAARC (India, Bangladesh and Sri Lanka) in a cooperative arrangement with two members of ASEAN (Thailand and Myanmar). It is seen by all members as providing an opportunity for optimizing complementarities through economic, trade and investment linkages.

The first meeting of Economic/Trade Ministers of BIMST-EC which was held in Bangkok in August, 1998 imparted a new dimension to economic cooperation between the member states. It was agreed that BIMST-EC should aim and strive to develop into a Free Trade Arrangement, and should focus on activities that facilitate trade, increased investment and promote technical cooperation among member countries. It was further reiterated that BIMST-EC activities should be designed to form a bridge linking ASEAN and SAARC.

At the Second Meeting of the BIMST-EC Trade and Economic Ministers, held on 27th April, 2000 in New Delhi, the Ministers stressed the importance of a time-bound work programme for establishing Free Trade Area and acknowledged the efforts of the Inter-Government Group (IGG) for preparing the Concept Paper and agreed to set up a Group of Experts (GOE) led by the government officials which should include members of the academia and the private sector to study in greater detail the pros and cons of the two approaches recommended by IGG. Since then the meetings, the GOE has made steady progress for establishing a BIMSTEC FTA (Box 6.3). Furthermore, in the recent meeting in November 2003, BIMSTEC is contemplating on finding ways and means for augmenting investment flows among the BIMSTEC members as well as studying in-depth the possibilities of sectoral cooperation. It is also worth mentioning that two of the major economic partners of the BIMSTEC, viz. India and Thailand have already signed a Draft Framework Agreement for India-Thailand FTA and launched an ‘early-harvest’ scheme on the basis of a Feasibility Study on the subject. This is expected to further provide an impetus to the proposed BIMSTEC FTA.

It is worth mentioning that the BIMSTEC process is also on its way to widen its membership. During its forthcoming Heads of State Summit to be held in Thailand in February 2004,
Regional Economic Integration in South Asia

6.4. Bilateral Economic Cooperation in South Asia

The South Asian region has been characterized by more intensive bilateral trade and investment linkages in recent years which may be partly a response of the member states to a rather slow progress of trade liberalization in the framework of SAARC. A brief analysis of the experiences with India-Bhutan, India-Nepal and India-Sri Lanka bilateral FTAs is presented in this section. It is further corroborated by the fact that India and Bangladesh as well as Pakistan and Sri Lanka are also moving towards signing bilateral FTAs. Similarly, Bangladesh-Pakistan and Maldives-Sri Lanka FTA are also being contemplated.

India-Bhutan Economic Cooperation

While the basic framework of trade relations is covered by Article V of the 1949 Treaty, which provides for “free trade and commerce” between the two countries, periodical bilateral agreements have strengthened trade relations between Bhutan and India. Almost 90 per cent of Bhutan’s import and export trade is with India. Thus, India is Bhutan’s biggest and most important trading partner. Even Bhutan’s third country exports and imports must pass through India. Therefore, highest importance is attached on the bilateral trade and commerce arrangements with India. It may be mentioned that various trade and transit arrangements with India are working to mutual satisfaction. There are minimum problems relating to customs.17

Bhutan mainly exports electricity, mineral and mineral based products such as gypsum, coal, dolomite, cement, calcium carbide, ferro alloys, etc. Agricultural and wood-based products are also exported to India. India contributes in a big way to its total imports. These include fuel, consumer goods and machinery.

However, the economic relations between India and Bhutan have not been confined only to the realm of trade. The economic cooperation between the two is both intensive and extensive. While assistance from the Government of India (GOI) in the social sectors continues to be substantive, cooperation is increasingly moving towards mutually beneficial projects, such as in hydro-power development and industrial projects. Economic relations have been evolving over the last four decades from a donor-recipient relationship into one that is increasingly symbiotic. It was with the support of India that Bhutan launched its First Five-Year Economic Development Plan in 1961. Since then, India continues to be Bhutan’s most important development as well as economic partner.

India assisted Bhutan in harnessing her enormous hydropower potential with large projects, viz. Chhukha Hydroelectric Project and Tala project. Electricity generated by these projects is exported to India. The availability of cheap and reliable Chhukha power, has

Box 6.3: Framework of BIMSTEC FTA: Recommendations of the BIMSTEC Group of Experts (GOE):

Two meetings of the Group of Experts have been held to discuss and finalize the approach to be adopted for establishing a Free Trade Arrangement in the BIMSTEC region, the first meeting of the GOE was held on 17-18th January, 2002, in New Delhi. Group of Experts was set up to consider the outline of a report presenting possible guidelines for establishing a BIMSTEC free trade area; to study, analyze and prepare the report in accordance with the established outline including the identification of the pros and cons adopting a positive list or negative list approach, and make recommendations on the possible guidelines for establishing a BIMSTEC free trade area; to present a report of the study, including recommendations to the Senior Trade/Economic Officials within the specified time frame; The GOE of each country must submit information that would benefit the study and analysis, as well as in preparing the report.

The GOE recommended that BIMSTEC should opt for “Negative List Approach” for the FTA. The positive list approach is a more lengthy process than the negative list approach since bilateral negotiations need to be held for each sector/product. For the negative list approach, products not identified in the negative list can be immediately subjected to tariff reduction. Yet, whether or not the negative list approach is preferred to the positive list approach depends largely on the number of sensitive products withheld by each country. For this approach to be effective for trade expansion, the number of items in the sensitive/negative list should be reasonable.

The negative list approach is a more transparent approach towards trade liberalization, as the domestic stakeholders are clearly aware of the liberalization programme which gives them time to make necessary adjustments.

Considering the economic condition of member countries along with the advantages and disadvantages of the two approaches discussed, the negative list approach would be more appropriate for establishing the BIMSTEC free trade area since this approach would enhance the intra-regional trade amongst the member countries far more effectively. To optimize the benefits of trade amongst the Member Countries, the Trade and Economic Ministers may consider inclusion of Services and Investments in the FTA.

The Group of Experts was of the view that through market enlargement and liberalization as well as measures for trade facilitation, the FTA in the BIMSTEC region will create an environment conducive to the improvement of efficiency and competitiveness of firms and industries in member countries. It will also help in establishing a conducive framework for intra-regional investment flows and attracting investments from outside the region. The adoption of simple and transparent rules, and recognition of the need for flexibility in the context of existing diversities in the development stages of its members will ensure that the benefits of the proposed FTA are shared equitably by all its member countries thereby contributing to the economic well-being of the people of the region.

Source: RIS based on GOE, 2002.
facilitated the industrial development of Bhutan and has led to setting up of several plants such as: Bhutan Carbide & Chemicals Limited, Pasakha; Bhutan Ferro Alloys Limited, Pasakha; Bhutan Board Products Limited, Tata; Penden Cement Authority Limited, Gomtu; and many other factories, workshops and industries.

Conceived as a project for the mutual benefit the project has truly lived up to fulfill this important dream. Since commissioning, it has greatly contributed in alleviating the power shortages in the Eastern Grid of India. The states of West Bengal, Assam, Bihar, Orissa, Sikkim, etc. are the main beneficiary states of India that get cheap and reliable hydroelectric power from Chhukha.

The Indo-Bhutan cooperation has also covered cooperation between Bhutan Telecom Corporation and TCIL in India in the area of mobile telephony and international networking.

Summing up, it may be stated that Indo-Bhutan economic partnership has not only benefited in terms of strengthened trade relations at the bilateral level but it has also given way to investment cooperation as per the relative comparative advantages of the two countries.

India-Nepal Economic Cooperation

The Indo-Nepal economic relations are governed by the bilateral Treaties of Trade and Transit and Agreement for Cooperation to Control Unauthorized Trade. During 1996, amendments were made to Treaty of Transit and Trade with Nepal according to which India would import goods from Nepal free of customs duty and quantitative restrictions if the goods are manufactured in Nepal. However, the rules of origin requirements were removed and the eligibility of goods for trade was decided by a technical committee. This implies that except for a negative list, India and Nepal moved to a freer trade regime with respect to imports from Nepal into India. The impact of such initiatives has been very positive especially for Nepal as it has been able to appropriate significant trade and investment gains. It has also helped Indian companies to reach the North Indian market by setting up plants in Nepal.18

However, some of the effects of relaxed rules of origin have been a matter of concern for the Indian policy makers. The phenomenon of trade deflection was observed whereby third country goods were finding entry into the region through preferential basis.

Hence, at the time of renewal of the Indo-Nepal trade treaty for a period of five years with effect from March 6, 2002, revisions were made to take care of mutual concerns of the two partners. The basic framework of the Treaty has been preserved and continued access is provided for Nepalese manufactured goods into the Indian market on a non-reciprocal and duty-free basis. However, the important modifications that have been made in certain clauses of the protocol to the Treaty include modifications in rules of origin, entry of certain sensitive items into India free of customs duties on the basis of a fixed quota and import of these items beyond the specified level to be allowed only on MFN basis.

The Indo-Nepal bilateral economic cooperation treaties have important policy implications for economic cooperation in the South Asian region at large. It has helped enhanced trade propensities between the countries as a result of the freer trade regime. In particular the freer trade regime and investment relations between India and Nepal appear to have contributed to export diversification in Nepal vis-à-vis India, especially through efficiency-seeking joint ventures set up in Nepal. A large number of joint ventures have been set up in the readymade garments sector and have contributed to Nepal’s export dynamism. The share of Indian joint venture in total authorized capital in joint ventures in the textiles and garments sector in Nepal was 54.32 per cent as of year 2000.19

Furthermore, the Treaty has prompted some Indian enterprises to locate production based to serve North Indian markets as is revealed by joint ventures set up by Dabur, Hindustan Lever, colgate, Kodak, among others (see Box 6.4)

An important highlight of recent trade trends is the fact that the trade deficit of Nepal vis-à-vis India has declined sharply and has turned into surplus in 2002.

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**Box 6.4: Indo-Nepal Treaty Boosts Trade**

Nepal’s exports to India grew by a third last year which is the third consecutive rise after the amendments to the Indo-Nepal Trade Treaty that were made in 1996. Nepal’s central bank reported a 32 per cent increase in total exports, totaling roughly $534 million between 1998-99 and 1997-98. Exports to India reached about $192 million during 1998-99 from $91.6 million in 1996/97. Nepal’s exports to India account for almost 36 per cent of Nepal’s total exports. The Trade Treaty between the two countries presently allows Nepal-made products, except alcohol, tobacco, cosmetics, etc. duty-free access to India.

The eligibility for duty-free access is a Certificate of Origin guaranteeing that at least two manufacturing processes were done in Nepal. The provision has increased Indian investment, which according to banking estimates rose from $44m in 1996 to reach about $59m in 1998. One prime reason given for this trend is that the Treaty has made access to India’s northern markets from factories in Nepal both cheaper and easier for Indian companies, especially for companies whose only Indian factories are in the south of India. For instance, the northern-most factory of India’s Colgate-Palmolive is located in Bombay. It also has a plant in Nepal. The Bank’s export figures show that toothpaste exports from Nepal have increased from $11m (1997-98) to about $61m (1998-99). Among newcomers now eyeing the north Indian market is Kodak Nepal, an undertaking of Eastman Kodak Company of the US and Kodak India, that is ready to begin commercial production.

**Source:** RIS based on Financial Times, August 26, 1999.
The above trends suggest that the India-Nepal trade treaty and the joint ventures have helped in building the export supply capabilities and strengthening the trade-investment relationships between the countries.

India-Sri Lanka Economic Cooperation

The signing of the India-Sri Lanka Free Trade Agreement (ISFTA) in 1998 and its operationalisation in 2000 is considered an important policy step to tap the economic complementarities between the two countries. The RIS study on the basis of in-depth analysis of different dimensions of Indo-Sri Lanka Economic Cooperation had recommended such an initiative.

More recently, during the negotiations between India and Sri Lanka the following dimensions of the FTA have been discussed and acted upon:

- In terms of Sri Lanka’s inability to fulfill its tariff rate quota in the Tea and Garment Sectors, the proposal of Sri Lanka to provide additional Indian ports has been accepted.
- The Indian side wanted tariff concession for its cement exports to Sri Lanka which has been agreed to by Sri Lanka.
- Given their import dependence in various sectors the Sri Lankan proposal was to make downward revision of the Rules of Origin within the framework of bilateral FTA with India. Since the Agreement provides for adopting a sectoral approach in this matter it has been decided that both the countries would exchange a list of sectors wherein downward revision of the existing ISFTA is deemed necessary.

Since the implementation of ISFTA there has been a phenomenal increase in India-Sri Lanka trade. Exports of Sri Lanka more than doubled from US$ 71 million in 2001 to 168 million in 2002. India’s export to Sri Lanka increased from $604 million in 2001 to $831 million in 2002 thus crossing the one billion dollar mark for the bilateral trade turnover. More importantly, the ISFTA has helped in narrowing the trade-deficit for Sri Lanka from 8.6:1 to 4.9:1. Furthermore, although the agreement does not address investment, it has stimulated new FDI for rubber-based products, ceramics, electrical and electronic items, wood-based products, agricultural commodities and consumer durables. Because of the Agreement, 37 projects are now in operation, with a total investment of $145 million. India emerged as the third largest foreign investor in Sri Lanka with total investment over the last decade approximating US$ 400 million.

From the Indian investors’ point of view the liberal environment for investments in Sri Lanka has made it an attractive location both for manufacturing as well as exports. This perception has got instilled in the business communities of both the countries and consequently, there has been a spurt of investment initiatives from the Indian side in Sri Lanka such as those presented in Box 6.5 in the fields of information technology, tyres, rubber products, etc.

Within one year after the implementation of FTA (31.3.2000 to

### Box 6.5: Indian Investments in Sri Lanka: Some Illustrations

**John Keells Institute of Information Technology (Pvt) Ltd**

The John Keells Institute of Information Technology (JKIIT) is a member of John Keells Holdings, the largest blue chip conglomerate in Sri Lanka. JKIIT’s technical collaboration partner is Tata Infotech, a subsidiary of the Tata Group, India. JKIIT commenced operations in 1999 with an initial investment of Rs 25 million. Today, the company is equipped to train 1,000 students annually in both career and professional courses. JKIIT has also introduced special courses to re-train non-IT graduates as software professionals. The present curriculum, which is recognized by British universities, will be expanded to include university degrees in affiliation with prestigious international universities.

**CEAT-Kelani Associated Holdings Ltd**

CEAT-Kelani Associated Holdings Ltd is a joint venture between CEAT India, which is a member of the RPG Goenka Group, India, and the Associated Motorways Group, Sri Lanka. Associated CEAT Pvt Ltd (ACPL) manufactures cross ply rubber tyres for trucks, buses and three-wheelers at their factory at Nagoda, Kalutara District. CEAT India holds 60 per cent equity of ACPL and dominates the local truck tyre market with a 45 per cent market share. ACPL commenced operations in 1992 with an initial investment of Rs 111 million. By the end of June 2000, the company had implemented three expansion programmes; aggressively moved into export markets in Pakistan, Bangladesh, Africa and the Middle East; and forged a joint venture with the former state owned corporation, Kelani Tyres Ltd. Through this new venture, CEAT-Kelani Associated Holdings Ltd, ACPL intends manufacturing steel radial tyres for both local and international markets with an output capacity of 100 metric tonnes of tyres of various types daily. At present, ACPL employs 230 and enjoys an average annual turnover of Rs 900 million. In 1997 the company was also awarded ISO 9002 quality assurance certificate-the first tyre manufacturer in Sri Lanka to obtain this distinction-and by the end of June 2000 the total investment stood at Rs 259 million.

**Bensiri Rubber Products (Pvt) Ltd**

Bensiri Rubber Products is a wholly owned subsidiary of Bengal Waterproof Ltd, Calcutta, India. The company’s ‘Duck Back’ brand portfolio also include rainwear, school bags and hospital clothing. It is located at the Katunayake Export Processing Zone (EPZ). Utilizing local rubber, the company manufacturers hot water bottles and household gloves exclusively for export markets in Western Europe, the UK and South America.

Bensiri Rubber Products was one of the first Indian companies to invest in Sri Lanka due to the country’s streamlined import/export processes, attractive fiscal incentives and developed infrastructure facilities. At present, Bensiri Rubber Products employs 130, and by the end of June 2000, total investment stood at Rs. 46 million.

**Source:** [http://www.boisrilanka.org/web/india.phtml](http://www.boisrilanka.org/web/india.phtml)
1.5.2001), Sri Lanka had received investment in as many as 41 projects.\textsuperscript{24} The total value of these projects is aggregated to be Sri Lankan Rs. 8,878 million with employment potential of 2260 in number. The BOI initiated projects under FTA falls in a wide variety of industries from light engineering to paper products.

Furthermore, Indian manufacturers, Tata, Hero and Godrej were expected to establish plants in Sri Lanka during 2003 for catering to Sri Lankan market and for re-export to India and worldwide market. Infosys, one of the biggest IT companies, is also expected to recruit Sri Lankan IT specialists for its operations in Mauritius. Tata would manufacture light engineering products and motor accessories. Hero will establish facility to manufacture cycles and motor cycles. Godrej plans to manufacture products ranging from refrigerators to door locks.\textsuperscript{25}

The upshot of the above is that in the context of India-Sri Lanka bilateral economic linkages, efficiency seeking industrial restructuring process is underway and investment flows from India to Sri Lanka on the capital account appear to be counter-balancing the trade deficit which Sri Lanka has had vis-à-vis India. This is yet another example of strengthening of trade-investment linkages in the South Asian region.

Encouraged by the successful functioning of the ISFTA, the two governments have now decided to extend the scope of cooperation to investment and services as well in the framework of a Comprehensive Economic Partnership Agreement. Joint Study Group (JSG) set up by the two Governments has submitted its Report to them in October 2003. JSG has made several proposals to further cooperation in such areas as infrastructure development, banking cooperation, trade facilitation through strengthened transport linkages. An immediate step has been taken to allow domestic private airlines to fly to Sri Lanka as a part of an open sky policy in October 2003.

Pakistan-Nepal and Sri Lanka-Nepal Economic Cooperation

More recently, there has been an intensification of efforts to forge economic linkages with Nepal by other SAARC members like Pakistan and Sri Lanka (Box 6.6). The proposal to establish Pakistan-Nepal FTA as well as Sri Lanka-Nepal FTA has been based on the fact that while Sri Lanka could be a good market for small but high-valued goods including agriculture products, while Pakistan is a huge market for Nepali tea among others. Chandi Raj Dhakal, officiating President of the Federation of Nepalese Chambers of Commerce and Industry (FNCCI), meanwhile, viewed that the country should not hesitate to enter into bilateral free trade agreement if it offers business potentials. “As Nepal’s trade with Pakistan and Sri Lanka is minimal, this could be a good opportunity in expanding the market,” he said. This would, open new market avenues to at least some of the Nepali products, he added.


Box 6.6: Pak, Lanka Offer FTA Proposal to Nepal

Recently, Pakistan and Sri Lanka have separately proposed to establish a bilateral preferential trading regime with Nepal. “Both the South Asian neighbours recently lodged formal letter of interest in establishing the bilateral FTA with Nepal,” Purushottam Ojha, Joint Secretary at the Ministry of Commerce, Industry and Supplies told The Kathmandu Post. The proposals of Pakistan and Sri Lanka suggest of establishing the bilateral preferential trading regime on product-by-product basis. Ojha said that these are currently studied at the ministerial level and would be forwarded to higher authorities after some time.

If Nepal accepts the proposals, it will require signing a framework agreement each with proposing countries and exchange products lists to negotiate for duty free trade. “At present, the ministry is evaluating the impact of establishing FTAs and identifying goods of competitive advantage that the country could export in these countries,” said officials. Studies have shown that Sri Lanka could be a good market for small but high-valued goods including agriculture products, while Pakistan is a huge market for Nepali tea among others. Chandi Raj Dhakal, officiating President of the Federation of Nepalese Chambers of Commerce and Industry (FNCCI), meanwhile, viewed that the country should not hesitate to enter into bilateral free trade agreement if it offers business potentials. “As Nepal’s trade with Pakistan and Sri Lanka is minimal, this could be a good opportunity in expanding the market,” he said. This would, open new market avenues to at least some of the Nepali products, he added.


Box 6.7: Pak-Lanka FTA before Year End

The much awaited Free Trade Agreement (FTA) between Sri Lanka and Pakistan is likely to be finalized before year end, Commerce and Consumer Affairs Minister Ravi Karunanayake has said. The Minister made this disclosure when a 10-member trade delegation from Pakistan currently in Colombo, called on him this week. He said that forwarding two years of Market intelligence to the customs authorities in Karachi has failed in lowering certain custom duties imposed on number of Sri Lankan imports to Pakistan, according to Sri Lankan Consul General P.D. Fernando who is in Colombo with a Pakistan delegation. “All these things will be sorted out when the FTA would come in to force in coming December,” Minister Karunanayake said. The Pakistani visitors are due to meet the members of Ceylon Chamber of Commerce and senior officials of the Coconut Development Authority during their stay. The majority of the delegation are coconut friendly and are looking for coconut by-products such as deccicated coconut, coconut oil, and copra.

The delegation will highlight joint studies to find ways to improve the trade balance free investment flow between the two countries, possibilities of networking new industries to face global competition, with particular reference to agriculture, food, textiles, rubber and plastics.

The Pakistan delegation is expected to uplift the image of Pakistan as a positive and progressive business partner to Sri Lanka. “The recent economic achievements of our country should be considered as signs of better future for both countries,” stated delegate.

The delegation also invited Sri Lankan counterparts to reciprocate by sending a similar delegation to from Sri Lanka, to built stronger economic ties with their regional partner to form alliance to maximize gains from the globalization of the world trade. The leader of the delegation Mr. Jaffar Kudia the Chairman of the Karachi Chamber of Commerce stressed the fact that the reopening of direct air links between the two countries should be exploited by business communities of Pakistan and Sri Lanka.

Box 6.8: Bangladesh Plans to Hold FTA Talks with Pakistan, Sri Lanka

Bangladesh, which is scheduled to hold negotiations with India on the free trade agreement (FTA) next month, wants to also hold talks with Pakistan and Sri Lanka on the subject.

The foreign secretary Mr Shamsher Mobin Chowdhury said that Bangladesh wants to have discussions with Pakistan and Sri Lanka on FTA and hope to “come to a conclusion within the next few months”. Negotiations between Dhaka and Delhi on FTA are scheduled to be held next month.

Source: http://www.expresstextile.com/20031002/foreigntrade02.shtml

Box 6.9: Sri Lanka’s FTA with Maldives

Sri Lanka will sign a Free Trade Agreement with Maldives to further strengthen the economic and trade ties between the two countries.

“The agreement will be concluded before the end of the year and will help further promote and strengthen regional trade,” said Minister of Commerce and Consumer Affairs Ravi Karunanayake in an exclusive interview with the Sunday Observer. The Minister will lead a delegation to Maldives next week where he is expected to meet Maldives’ President Maohammed Abdul Gayoom, Trade, and Industry Minister Abdulla Yameen, Planning and National Development Minister Ibrahim Hussain Zaki and other government officials to discuss matters relating to the FTA.

Maldives has order and peace and the two countries have enjoyed friendly ties for years. Sri Lankans invest in Maldives while Maldivians invest in Sri Lanka. “Brisk trading is going on as usual and there is no disturbance at all. We have gone through bad experiences for 23 years, but we do not want our neighbour to go through that experience. Therefore, we will extend our fullest cooperation and support to them,” he said. Sri Lanka is the second most important export market for Maldives and Maldives is Sri Lanka’s 19th largest trading partner. The trade balance between the two countries has always been favourable towards Sri Lanka. Sri Lankan companies do business in Maldives in the areas of tourism, banking, insurance, credit cards, management consulting and manufacturing.

A large number of Sri Lankans have gained employment in many of these ventures and elsewhere. Close to 9000 Sri Lankans work in Maldives and they together with Lankan businesses in Maldives contribute to the Lankan economy. The biggest investors too have invested substantially in Sri Lanka in areas such as the hotel industry, education and manufacturing.


Pakistan-Sri Lanka FTA

Pakistan-Sri Lanka FTA is being envisaged on a fast track basis among others that are in the pipelines. As evident from Box 6.7 this FTA is being viewed as a forum for sorting out various bilateral economic issues between the countries. The proposed FTA is expected to be comprehensive in nature by including various dimensions of economic interactions such as improving the trade balance, promoting freer investment flow between the two countries, possibilities of networking for new industries to face global competition, with particular reference to agriculture, food, textiles, rubber and plastics.

India-Bangladesh FTA

In recent times, efforts have been on to intensify economic interactions between India and Bangladesh. Preparations are being made to negotiate an FTA between India and Bangladesh. The FTA is considering provisions for duty free entry for all goods except those included in a short negotiated negative list. It will also provide for the elimination of all non-tariff barriers in a time-bound framework.

Concerns have been raised over the issue of trade imbalance between Bangladesh and India. However, it may be pointed out that while negotiating the Bangladesh-India FTA the perspective of efficiency seeking industrial restructuring needs to be kept in mind whereby Indian investments in Bangladesh could build supply and export capability to address the trade imbalance as the experiences of FTAs between India and other South Asian countries suggest.
Box 6.10: Potential JVs between India and Pakistan

A study commissioned by FICCI has come up with a number of areas of potential joint ventures between Pakistan and India a select is given below:

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Project Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology (IT)</td>
<td>Software Exports Training Centre/Centre for Software Training &amp; Management (CSTM) Software Development Center (SDC). Pakistan has the potential to become an important software exporting and training center. India can become a role model and both the countries should cooperate and collaborate to tap the large global market for software.</td>
</tr>
<tr>
<td>Fish Processing</td>
<td>Processed Frozen/Canned Fish Products Future thrust should be on valve added canned products exports to the developed countries.</td>
</tr>
<tr>
<td>Drugs &amp; Pharmaceuticals (DAP)</td>
<td>Bulk drugs: expansion of formulation sector (tablets, capsules, ointment, injections, etc.) and expansion of health care products (IV fluids, disposable syringes, diagnostic kits etc.). Indian pharma industry can provide the necessary support and assistance to Pakistan for the expansion of its Industry.</td>
</tr>
<tr>
<td>Agro-Chemicals</td>
<td>A pesticides manufacturing unit in Pakistan. With the expansion of agri business, demand for agro chemicals will grow in future. Indian major players can play an important role through transfer of technology.</td>
</tr>
<tr>
<td>Chemicals</td>
<td>Dyes and pigments manufacturing unit in Pakistan has a strong manufacturing base for textiles and leather. Indian players and multinationals can assist Pakistan in developing the sector.</td>
</tr>
<tr>
<td>Auto mobile Ancillary</td>
<td>Integrated auto component complex. Next to India, Pakistan is the only country in the SAARC Region to Manufacture &amp; Assemble Passenger Cars. Pakistan may also consider assembly of HCV &amp; LCV in collaboration with TELCO/Ashok Leyland from India.</td>
</tr>
</tbody>
</table>


meeting, and another round of talks will be held in Islamabad probably in 2004 to list the items to be mutually offered for concessional trade.27

Recently, in November 2003 negotiations were held for Bangladesh-Sri Lanka FTA whereby the Bangladesh side proposed special and differential treatment from Sri Lanka, after the free trade agreement is signed and implemented. Sri Lanka has already shown interest in playing a positive role in removing trade gap between Dhaka and Colombo.

During the first half of the 2002-2003 financial year, Bangladesh exported goods worth Tk 1.61 million to Sri Lanka, while it imported from Sri Lankan goods valued at Tk 4.23 million. The trade gap with Sri Lanka stood at Tk 2.62 million. It may be mentioned that two sides are considering the draft of the FTA between Sri Lanka and India as a model, in the process of discussion.28

Sri Lanka-Maldives FTA
In order to provide impetus to the existing bilateral economic linkages between Maldives and Sri Lanka, the two countries are contemplating on a bilateral FTA (Box 6.9). Various manufacturing and services sectors are being considered for preferential trading arrangement between the two countries.

India-Pakistan Trade and Investment Cooperation
Recently, India and Pakistan have successfully concluded bilateral negotiations on additional lists of products for preferential market access to each other under the fourth round of trade negotiations of SAPTA at a meeting held at the SAARC Secretariat in Kathmandu on December 2, 2003. India and Pakistan agreed on inclusion of additional 500 tariff lines under SAPTA basket of tariff concessions, which, though bilaterally negotiated, will also be available to all other member states. The depth of preferential tariff concessions extended by both sides ranges from 10 to 25 per cent.29

There is also immense scope for investment cooperation in terms of joint ventures (JVs) between India and Pakistan as enlisted in Box 6.10.

Road Map for SAARC
The Group of Eminent Persons (GEP) of SAARC had set before the Association a bold vision and road map to go beyond SAFTA by 2010 for all the SAARC countries to South Asian Customs Union by 2015, and South Asian Economic Union by 2020. This indeed is a road map of progressively deepening economic integration in view of the changed context global among the SAARC countries. In view of the changed accomplish this vision in an expedited manner.

6.5. Monetary Union in South Asia: Prospects and the Way Forward
Monetary cooperation can act as a catalyst in promoting cooperation among countries in a wide range of areas and growth of all the economies in the region. The first and immediate step that can be taken is to introduce a parallel currency and utilize that instrument effectively to promote regional cooperation in trade and investment, which can eventually prepare the ground for a common currency.

Benefits of a Common Currency Regime in the Region
The common currency regime, when achieved, can confer substantial benefits to the region. With uncertainty about exchange rates removed, and
transaction costs reduced, trade and investment in the region is likely to get a big boost. Also with money creation under regional guidelines, there would be better prospects of synchronization of inflation, interest rates and GDP growth, all of which could contribute to accelerated growth and poverty reduction. In fact, a common currency regime can eventually play an important role in convergence towards a target of 7-8 per cent annual GDP growth for all countries of the region, which is essential for virtual elimination of absolute poverty in the region within a generation or so.

The spirit of enhanced monetary cooperation is very much in the air in Asia today. In 1997, in the wake of financial crisis in 1997, the Japanese authorities made a proposal for an Asian Monetary Fund (AMF). It was basically a sound proposal but was discarded immediately, partly because of the inadequate technical preparation and partly because of the conflict of interest with the major power in the global financial infrastructure. Since then, some of the basic ideas of AMF have resurfaced in other garbs. Chiang Mai Initiative has been able to put together a contingency fund of over $ 30 billion, which can be activated, though under somewhat difficult rules and regulations, to help in balance of payments difficulties of member countries in East Asia. The Asian Bond Fund created under the leadership of Thailand also has a major potential for financing regional investments through public as well as private sector. South Asia should not lag behind in the area of monetary cooperation.

Importance of Parallel Currency as the Initial Step
For effective progress in regional currency reforms, it is important to make a distinction between parallel currency and common currency. Common currency means that individual countries do not have their own currency and whole task of currency creation and monetary policy is agreed at a regional level with agreements on national component of currency and money creation. Interest rate and exchange rate policies are also centralized. That system thus requires surrender of monetary sovereignty and of seigniorage associated with currency creation and monetary expansion.

Parallel currency on the other hand requires no such surrender of sovereignty. It requires little more than what has been achieved at the global level through creation of Special Drawing Rights (SDRs) under the International Monetary Fund. Individual countries will retain control of their currencies and monetary policies. But in addition there will be a currency created jointly according to certain rules and allocated among the member countries. There are important questions about the weightage of different currencies in the basket, about predictability of the value of the composite currency and about the extent of its usage by the general public. However, these are technical problems, which can be solved, even in the current context of South Asian cooperation efforts. In the context of European integration movement, the first stage was introduction of European Currency Unit (ECU), a composite monetary unit consisting of a basket of European Community currencies and the process of consolidation under European Monetary Union (EMU) before gradual evolution to the single currency, EURO.

It is interesting to note that Robert Mundell, the Nobel Laureate and an authority on global monetary matters (sometimes called “Father of Euro”) in his recent lecture at Asian Development Bank argued that while Asia may not be ready for common currency it might be for a parallel currency. The same goes for South Asia. We can start immediately with a parallel currency which will be a currency composite of South Asian currencies and may perhaps be called SAR (South Asian Ruapia).

Characteristics of a South Asian Parallel Currency
The parallel currency SAR will be fully convertible into any international currency and will be fully backed by reserve fund. It will be legal tender for cross country transactions within South Asia and will be increasingly used as unit of account for trade and investment transactions within the region. The issue of stability of SAR will of course be important. However, it should be noted that relative values of currencies in South Asia in the last ten years have been more stable than those between the three major world currencies, US$, Euro and Yen which dominate the SDR. And with increasing cooperation in macro-economic policies including exchange rate policies, South Asian can do even better. The policies followed in India and the relative stability of India’s real effective exchange rate is perhaps a model to draw upon. At the initial stage, it is not necessary to enter into strict criteria on macro-economic policies. However, a recent study has shown that there is a convergence of important macroeconomic indicators like inflation and exchange rates besides patterns of external shocks faced by them among different countries of South Asia which enhances the feasibility of monetary cooperation.

Conditions for Regional Integration and Eventual Common Currency
South Asian countries can create a pool of foreign exchange reserves of say 10 per cent of their current reserves (which will amount to more than $11 billion equivalent) in an institution to be called, say, South Asian Reserve Fund (SARF). Backed with these reserves, SARs equivalent of a multiple of basic reserves can be created for giving loans or buying bonds issued by South Asian governments or corporations as appropriate. The lending rates on these loans will be higher (say 5 per cent per year at present) than the interest paid on reserves (say 3 per cent per year at present) which will be higher than what
most reserves banks in the region are getting today from their dollar reserves.

As the SAR gets accepted, the SARF can earn profits which will be distributed among members as grants for development purposes. The principle of creation and utilization of SDRs for development purposes has been advocated by a long line of economists. Most recently, Amartya Sen, Joseph Stiglitz and George Soros made a joint call for further issuance of SDRs for facilitating world economic recovery and development. At a regional level, these proposals can be implemented for the benefits of the region and beyond, without waiting for approval by any non-regional entity.

Parallel Currency can facilitate regional integration by funding the creation of regional public goods in the area of transport and communication, energy, information technology, biotechnology, food security, tourism and science and technology. The improved provision of regional public goods can be a powerful supplement to programmes of regional free trade areas, which are often frustrated by inadequate infrastructure for regional trade and investment.

The profits of the SARF (the seigniorage from the parallel currency) can be used to accelerate the process of convergence in the region as it happened in the European context. With respect to the allocation of profits of SARF, the less developed parts of the region can be given special and preferential treatment, which will help achieving a shared prosperity in the region.

Provision of regional public goods and concessional assistance for the lagging regions will help to build confidence in the region and facilitate bolder programmes such as open borders, labor mobility and common currency. The manner in which the bigger countries in Europe won the confidence of the smaller countries and helped to accelerate their development could be a model for South Asia to learn from.

**The Next Steps**

The steps involved in the proposed process are: (a) creation of a parallel currency and associated agreements for its stability, (b) setting up of a reserve fund, (c) funding of regional public goods to promote trade and investment, (d) special and differential treatment of lagging parts of the region to help the convergence process in the region, and (e) building of mutual trust and confidence among the partners in the region. These steps will create conditions, which are usually necessary for a common currency area.

SAARC Summit could take steps to set up a Working Group comprising of Central Bank Governors to evaluate the feasibility of the proposal and take it forward.

**6.6. Lessons from South Asian Regional Cooperation Initiatives**

The major lessons that have emerged from the South Asian regional economic integration process can be summarized as below:

- The South Asian region has displayed economic growth dynamism in the recent past. Such a trend is getting manifested in increased trade and investment flows on an intra-regional basis through an ongoing efficiency-seeking industrial restructuring process due to trade liberalization and investment facilitation measures. This has come about both under the SAPTA process as well as the bilateral FTAs in the region.

- The progress of SAPTA in terms of tariff liberalization has been rather slow and marred with discriminatory practices as compared to the progress made under bilateral FTA regimes like India-Bhutan, India-Nepal and India-Sri Lanka. This is because the bilateral FTA negotiations and implementation have been on a faster track, more far-reaching in terms of trade coverage and investment-facilitation. It is evident that even the limited trade liberalization under SAFTA has produced encouraging results in terms of trade expansion. Studies suggest that SAFTA could lead to substantial expansion of mutual trade.

- Bilateral FTAs in the region have led to equitable expansion of trade flows with exports from smaller and lesser developed partners expanding faster. The FTAs have also led to investment flows and trade-creating joint ventures which facilitate the supply capabilities of lesser developed partners.

- Still there exists immense potential for trade and investment cooperation within the region, efficiency seeking industrial restructuring, horizontal specialization in one of the most important sectors like the textiles and clothing (especially to meet the global challenges in the post-MFA scenario).

- In the light of the global trend of adoption of regionalism as a strategy for growth, there is a compelling case for the region effecting its transition into an economic and monetary union by expeditiously implementing SAFTA, forming a SAARC Customs Union and introducing a South Asian parallel currency, as an intermediate step to a single currency. The region should also adopt a SAARC Agreement on Promotion and Protection of Investments and move towards harmonised investment policies across the region to facilitate intra-regional investments. It has been argued that these steps will help facilitate efficiency-seeking restructuring of industry in the region, thus, enabling them to exploit economies of scale and specialisation. Thus, Sri Lanka may emerge as the region’s hub for rubber-based industries, Bangladesh for energy-
intensive industries and Bhutan, forest-based industries, and so on. The regional economic integration will also make member countries, especially the smaller ones, more attractive destinations for third country investments by obviating the constraint of small domestic market.

Endnotes
1 RIS, 2003.
2 See RIS, 2002.
5 See also Ramasamy, 1995; Mehta and Mohanty, 2001; Fisher and Voulsen, 2001; and Krueger, 1999.
6 See Mehta and Bhattacharya.
8 RIS, 1999. SADCR.
10 Kumar, 1986.
11 Panchamukhi, 1995a; Panchamukhi and Das, 1997; RIS, 1999. SADCR.
12 Thant et al., 1995.
13 See RIS, 2002a.
14 See GOE, 2002.
16 http://meaindia.nic.in
18 RIS, 2002.
19 RIS, 2002.
21 RIS, 2002.
23 UNCTAD 2003.
24 RIS, 2003b.
27 Asia Pulse, 2003.

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7.1. Introduction

The level of infrastructure development is one of the important determinants of economic performance of a nation/region. Availability of transport infrastructure is crucial for providing an impetus to economic activities, especially international trade. In the context of intra-regional trade, quite often the imperatives for developing transport infrastructure necessitate transcending geographical boundaries. Therefore, adopting a regional approach for augmenting intra-regional trade and development activities becomes a pre-requisite.

Analytically, there are two prime effects of transport infrastructure, among others, on intra-regional trade. First, its development could be viewed as a trade facilitation mechanism in terms of movement of tradeables among the members of a regional grouping. Secondly, the evolution of an efficient and low-cost transport infrastructure could contribute towards improving export competitiveness, resulting in trade-creation on a regional basis. Adequacy of infrastructure helps determine one region’s success and another’s failure – in diversifying production, expanding trade, coping with population growth, reducing poverty, and improving quality of life. Such effects need to be viewed in a broad perspective of a two-way causality running between trade and economic growth on one hand, and income and infrastructure on the other (Box 7.1).

It is with this analytical backdrop that this Chapter presents a profile of transport infrastructure in the South Asian region, in the realms of road, rail, port, air and inland waterways networks. The Chapter further attempts at identifying the contours of the potentials for intra-South Asian

Box 7.1. Income-Infrastructure Relationship in South Asia

Using 11 important infrastructure variables over four cross-section points, De and Ghosh (2003) have shown that South Asia has failed to foster a balanced regional development even after a long period of planning and protected industrial regime. The available evidence of this study shows inter-South Asia disparity in both basic infrastructure facilities and per capita income has been rising over the years. The relative positions of the countries have remained unchanged during last quarter century in terms of any definition of development.

Note: IDI and PCI refer Infrastructure Development Index and Per Capita Income. Source: De and Ghosh (2003).
cooperation in the aforesaid areas. Towards the end, some policy perspectives are presented in this context.

7.2. Transport Infrastructure Profile of South Asia

The adequacy of transport infrastructure is one of the important determinants of growth. For instance, the transport infrastructure has immensely helped the EU to grow fast. The present status of road, rail, air, water, and port networks in South Asia has been summarised below.

Road Network in South Asia

With 3.82 million km road network in 2002 (Table 7.1), SAARC countries account for 10 per cent of the world road network. Although there are doubts over the quality of roads in South Asia, each sq. km of area is now served by one km of road in some of the countries in South Asia like Bangladesh, India and Sri Lanka. Good quality roads are also now been found in rural belts in aforesaid three countries. In last 10 years, roads in South Asia have grown in prominence as a means of moving goods and people. This has partly reflected the greater innate flexibility of road transportation in South Asia.

In South Asia, India has an extensive 3.3 million km road network making it one of the largest in the world. In India, National Highways, the prime arterial routes, span about 58,112 km throughout the country (2 per cent of total road lengths) and cater to about 45 per cent of the total road transport demand. In view of rising freight and passenger transport, Government of India has been implementing its ambitious National Highway Development Project (NHDP) quite successfully (Box 7.2).

Rail Network in South Asia

Railway network in South Asia is one of the largest railway systems in the world. It has an extensive network which is spread over 77,248 km, comprising 69 per cent of broad gauge network (Table 7.2). India, Pakistan and Sri Lanka have quite large network of broad gauge railway system. However, only about 25 per cent of railway network in Bangladesh is broad gauge which is far below the South Asia average.

Although, railway network historically played an important integrating role in the social and economic development in South Asia, currently this facility is losing out to the road sector. At present, approximately 30 per cent of freight and 20 per cent of passengers are being carried by the railway sector in South Asia whereas the same for road sector are 70 per cent and 80 per cent. Railway system in India is running in losses primarily due to cross-subsidization and high non-performing assets. The losses incurred on passenger services are cross-subsidized by profits earned through freight services as also earnings from higher classes of passenger travel. In addition, cross-subsidization exists within the freight services since certain commodities such as salt, fruits, vegetables, etc. are being carried at much below cost of operations. Taking note of such anomalies would contribute to the efficiency of the rail network in the region as Indian railways account for the major proportion of the region’s railway network.

Air Network in South Asia

The civil aviation sector in South Asia has made significant strides in coping with the growth of international and domestic traffic. It is now increasingly acknowledged that aviation sector makes an important contribution to the economic development of this region and is crucial for sustainable development of trade and tourism.

A glance at Table 7.3 makes it clear that airlines in South Asia have carried more passengers than freights in 2001 compared to that of 1991. Rise in passenger traffic is high in small countries like Bhutan and Maldives. Since domestic airline industry is partly liberalized in most of the South Asian countries, phenomenal rise in passenger traffic is perhaps an effect of such liberalization. Over and above, most of South Asian countries now have allowed

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**Table 7.1: Road Network in South Asia in 2002**

<table>
<thead>
<tr>
<th>Countries</th>
<th>Road Length (km)</th>
<th>Paved Roads (% of total roads)</th>
<th>Road Density (km per sq. km of area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>201543</td>
<td>9.50</td>
<td>1.40</td>
</tr>
<tr>
<td>Bhutan</td>
<td>2580</td>
<td>80.00</td>
<td>0.05</td>
</tr>
<tr>
<td>India</td>
<td>3315231</td>
<td>53.20</td>
<td>1.01</td>
</tr>
<tr>
<td>Nepal</td>
<td>7967</td>
<td>39.20</td>
<td>0.05</td>
</tr>
<tr>
<td>Pakistan</td>
<td>190532</td>
<td>55.30</td>
<td>0.24</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>104563</td>
<td>40.70</td>
<td>1.59</td>
</tr>
<tr>
<td>South Asia</td>
<td>3822416</td>
<td>46.30</td>
<td>0.73</td>
</tr>
</tbody>
</table>

**Source:** RIS based on World Development Indicators CD ROM 2003.

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**Table 7.2: Railway Network in South Asia in 2002**

<table>
<thead>
<tr>
<th>Countries</th>
<th>Total Railway Lines (km)</th>
<th>Share of Broad Gauge Lines to Total Railway Lines (%)</th>
<th>Railway Density (km per sq. km of area)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>4980</td>
<td>25</td>
<td>0.03</td>
</tr>
<tr>
<td>India</td>
<td>63140</td>
<td>72</td>
<td>0.02</td>
</tr>
<tr>
<td>Pakistan</td>
<td>7791</td>
<td>89</td>
<td>0.01</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>1449</td>
<td>90</td>
<td>0.02</td>
</tr>
<tr>
<td>South Asia</td>
<td>77248</td>
<td>69</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**Source:** RIS based on World Development Indicators CD ROM 2003.
Inland Waterways Network in South Asia

Waterways have been found as cheapest mode of movement of goods and passengers in remotest parts of the South Asia. Most of South Asian countries have been taking greater interest in strengthening inland waterways system way back since 1980s. Today, though Bangladesh, India, Nepal, Pakistan and Sri Lanka have approx. 25,000 km of navigable waterways consisting of a variety of rivers, canals, backwaters, etc., only 10,740 km in the major rivers and 700 km of canals are suitable for operation of mechanized crafts (see Table 7.4). Perhaps, due to lack of proper water transportation infrastructure, inland water transport in South Asia constitutes a very small part of the total transport network of the region. In other words, inland water transport (IWT) is still not the preferred mode of transport in South Asia. Out of a total freight traffic of about 900 million tonnes by all modes of surface transport in 2001-02, IWT accounts only 25 million tonnes and shares 3 per cent in total South Asian freight traffic in the same year. In terms of tonnes kilometers, the share of IWT is even less than 1 per cent.

If absence of all weather navigability is a cause of low freight traffic in IWT then lack of awareness towards preserving and reprocessing of energy by IWT is too a reason to blame. There is no doubt that waterway is the cost effective mode of transport. IWT traffic has cost advantage and fuel savings compared to rail and road transport systems. It was estimated by the National Council of Applied Economic Research (NCAER) that in India road transport cost is Re. 1 per tonne km whereas IWT is Re. 0.55 per tonne km inclusive of user and operating costs (see Table 7.5). The initial capital investment on track for one km of waterway and its maintenance cost is much lower than that of railways and more foreign airlines to fly within the countries.

Box 7.2: India’s National Highways Development Project (NHDP)

Road construction is capital intensive and so is its maintenance. Current estimates suggest that the cost of a four-lane highway works out to roughly INR 45 million per km, and the cost of a protected access, six-lane expressway works out to roughly INR 85 million per km. As of today, the experiences with tolling suggest that there is limited scope for obtaining user charges through tolls. Instead of charging toll fees for every construction, the Government of India has created Central Road Fund (CRF) through Central Road Fund Act, 2000 to fund construction of national, state and rural roads. This was the financial foundation of India’s ambitious National Highway Development Project (NHDP).

Box Figure 1. National Highway Development Project (NHDP)

As National Highways in India comprise about 2 per cent of the total road length in the country and yet carryover 40 per cent of total freight, the first and the foremost task mandated to the National Highway Authority of India (NHAI) is the implementation of NHDP comprising the Golden Quadrilateral (5,846 km) and North-South & East-West Corridors (7,300 km), which entails expansion of the existing two-lane highways to four/six-lanes. In addition to the projects under NHDP, the NHAI is also currently responsible for about 1,000 km of highways connecting major ports and also on National Highways 8A, 24, 6, 45 and 27.

Box Table 1. Status of NHDP as on September 30, 2003

<table>
<thead>
<tr>
<th>Particulars</th>
<th>GQ</th>
<th>NS-EW</th>
<th>PC*</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length (km)</td>
<td>5846</td>
<td>7300</td>
<td>363</td>
<td>653</td>
<td>14162</td>
</tr>
<tr>
<td>Already 4-laned (km)</td>
<td>1408</td>
<td>557</td>
<td>56</td>
<td>153</td>
<td>2093</td>
</tr>
<tr>
<td>Under implementation (km)</td>
<td>4354</td>
<td>423</td>
<td>113</td>
<td>162</td>
<td>5133</td>
</tr>
<tr>
<td>Contracts under implementation</td>
<td>90</td>
<td>24</td>
<td>4</td>
<td>4</td>
<td>123</td>
</tr>
<tr>
<td>Balance length for award (km.)</td>
<td>84</td>
<td>6294</td>
<td>194</td>
<td>338</td>
<td>6962</td>
</tr>
</tbody>
</table>

Note: * Port Connectivity.

Approximately 2093 km, consisting of the 1408 km of GQ, 557 km of NS-EW and 56 km of PC and 135 km of other highway projects, have already been four lanced, and 5133 km are under implementation (see table above ). At present, NHAI is operating 130 civil works related contracts for both GQ and NW-ES projects. Out of these, 84 are with domestic contractors, 11 with foreign contractors and 35 with joint ventures between India and foreign companies. Financing of NHDP is based on funds from CRF, multilateral funding agencies like World Bank, Asian Development Bank, Japan Bank for International Cooperation, market borrowing and private sector contribution. In terms of implementation, innovative contractual agreements are being explored, involving methods such as annuities.

Source: RIS based on National Highway Authority of India.
Table 7.3: Air Network in South Asia

<table>
<thead>
<tr>
<th>Countries</th>
<th>Air Freight Transported (million tonnes per km)</th>
<th>Passengers Carried (No)</th>
<th>Aircraft Departures (No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>99.40</td>
<td>169.60</td>
<td>1020800</td>
</tr>
<tr>
<td>Bhutan</td>
<td>8000</td>
<td>8000</td>
<td>35100</td>
</tr>
<tr>
<td>India</td>
<td>493.10</td>
<td>517.70</td>
<td>10717400</td>
</tr>
<tr>
<td>Maldives</td>
<td>12.60</td>
<td>9400</td>
<td>311100</td>
</tr>
<tr>
<td>Nepal</td>
<td>23.90</td>
<td>16.20</td>
<td>633900</td>
</tr>
<tr>
<td>Pakistan</td>
<td>373.30</td>
<td>371.30</td>
<td>5977700</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>100.70</td>
<td>217.70</td>
<td>892700</td>
</tr>
<tr>
<td>South Asia</td>
<td>218.08</td>
<td>217.52</td>
<td>18479900</td>
</tr>
</tbody>
</table>

Source: RIS based on World Development Indicators CD ROM 2003.

Table 7.4: Total and Navigable Length of Rivers in South Asia

<table>
<thead>
<tr>
<th>Countries</th>
<th>Length of Rivers (km)</th>
<th>Navigable Length (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2950</td>
<td>1890</td>
</tr>
<tr>
<td>India</td>
<td>16000</td>
<td>6000</td>
</tr>
<tr>
<td>Nepal</td>
<td>23.90</td>
<td>16.20</td>
</tr>
<tr>
<td>Pakistan</td>
<td>373.30</td>
<td>217.70</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>100.70</td>
<td>217.70</td>
</tr>
<tr>
<td>South Asia</td>
<td>218.08</td>
<td>217.52</td>
</tr>
</tbody>
</table>

Source: RIS.

Table 7.5: Operating Costs of Railways, Roadways and Waterways

<table>
<thead>
<tr>
<th>Distance (km)</th>
<th>Railways*</th>
<th>Roadways</th>
<th>Waterways**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coal</td>
<td>Fertilizer</td>
<td>Coal</td>
</tr>
<tr>
<td>50</td>
<td>23.60</td>
<td>23.40</td>
<td>2700</td>
</tr>
<tr>
<td>100</td>
<td>14.60</td>
<td>14.30</td>
<td>21.00</td>
</tr>
<tr>
<td>300</td>
<td>8.60</td>
<td>8.40</td>
<td>15.00</td>
</tr>
</tbody>
</table>

Notes:**Diesel traction single line operation wagons load movement factor.
**Self-propelled vessels/capacity at 75% load.
Source: RIS.

Transport Infrastructure

road. It is therefore, ideal for low value, high volume, non-perishable bulk items like food grains, fertilizers, fertilizer raw materials, stone chips, coal, etc. It is more cost effective when origin and destination of cargo are located on/near to the waterways. With the advent of modern cargo handling system and cargo carriers, developed world has shown us how efficiently and cost effectively container boxes can even be transported through waterways. Today, approx. 5 million containers per annum move through waterways in The Netherlands.

India established the Inland Waterways Authority of India (IWAI) in 1986 by promulgating the Inland Waterways Authority of India Act in 1985 for regulation and development of inland waterways for the purpose of shipping and navigation. At present, IWAI is responsible for development and maintenance of India’s following three National Waterways.


- National Waterway 2: The river Brahmaputra connecting Dhubri-Pandu (Guwahati)-Tezpur-Neamati-Dibrugarh-Sadiya was declared as National Waterway 2 in the year 1988. It covers a length of 891 km. National Waterway 2 also connects Northeastern region with Kolkata and Haldia through Bangladesh.

- National Waterway 3: The West Coast Canal from Kollam to Kottapuram (168 km) along with Champakkara Canal (14 km) and Udyogamandal Canal (23 km) was declared as National Waterway 3 in 1993. The total distance of National Waterway 3 is 205 km.

In South Asia, movement of goods by IWT system is yet to gain momentum. Against the share of IWT in the level of 8 per cent to 20 per cent of total inland cargo for countries like USA, Netherlands, China, etc. share of IWT in South Asia is around 0.1 per cent only.

Port Network in South Asia

South Asia is endowed with approximately 9,000 km of coastline dotted with more than 250 ports. Although there are large number of ports in South Asian coast, only 25 are in operation and can be treated as prominent ports of this region. At present, these 25 ports together handle 366.22 million tonnes of traffic including 5.85 million TEUs of container (see Table 7.6).

Ports are a key component of infrastructure in South Asia, where recent policy initiatives have ushered in new institutional arrangements, and have yielded results in terms of measurable outcomes such as quick clearance of vessels at ports. Most of the busy ports in South Asia have been partly privatised like Jawarlal Nehru (in India), Karachi (in Pakistan), Colombo (in Sri Lanka), resulting in higher efficiency in operation. Some of the world’s leading port companies are now running terminals in Pakistan, Sri Lanka and India. Over and above, private companies are also running captive terminals in this region.

In view of the above analysis, it is clear that South Asian countries depend on transport infrastructure in a major
way but there is clear absence of interlinking points within the region. While India and Bangladesh have cooperation in IWT, the same between India and Pakistan is absent. Similarly, in the road sector, even if there is a treaty among Bangladesh, India and Nepal for allowing free flow of trade overland, it is not functioning properly. There are also possibilities to connect India and Sri Lanka through a bridge, but the project is not going ahead due to some unknown reasons. Though Karachi port is very near to port of Mumbai, there is no direct call between the two ports. Trade between India and Pakistan normally is transhipped through a third country.

Thus, a well coordinated approach for an integrated transport system along with the sharing of experiences would lead to a better provision of transport infrastructure in the region.

### 7.3. Potential for Infrastructure Cooperation among South Asian Countries

The South Asian region, with its geographical contiguity, has great potential for transport cooperation within the region. Over the years a number of initiatives have been taken by the South Asian countries to liberalize intra-regional trade at unilateral, bilateral and regional levels. Despite these initiatives the intra-South Asia trade is not growing at the expected pace. There is need for strengthening trade instruments such as transport linkages among the members. In today’s world where competitiveness is the key factor for a region’s success or failure, strengthening of infrastructure networks in South Asia will pave the way for enhancement of regional integration. To attain any sort of competitiveness, countries in South Asia have to cooperate with each other and share their experiences in building and operating infrastructure facilities such as rail, road, airport, port, waterways, power stations, etc. For example, cooperation in the field of energy will help Bangladesh to restructure its competitiveness by selling its surplus gas reserve to neighbouring South Asian countries. Similarly, cooperation in the field of road network will help Nepal, using Indian soil, to access Bangladeshi ports. Likewise, India, using Bangladeshi soil, to access its Northeastern region. Cooperation in infrastructure sector is thus very much important for the integration of South Asia.

### Cooperation in the Inland Waterways Sector

Since West Bengal is sharing a long border with Bangladesh where Kolkata is just 80 km away from the Bangladesh border and due to absence of competitive and effective modes of transportation, exporters find it easier to send their goods by roads to Bangladesh. However, sea traffic will go up in this route once these ports take coordinated efforts to improve their terminal productivity and IWT connectivity, failing which trading regions will become more inefficient, products will lose markets and finally consumers will suffer most.

Although year-wise movement of containers between Kolkata/Haldia and Chittagong is pretty low, the same between western coast Indian ports and Chittagong is encouraging. Table 13.7 indicates that ports located at/near to West and North India share larger business of Indo-Bangladesh sea trade. In 2000-01, India exported 553,000 tonnes using sea routes to Bangladesh and imported 102,000 tonnes from the same country. Since further disaggregated break-up of India-Bangladesh sea traffic is not available, one can presume that most of traffic in the India-Bangladesh sea route handled at Kandla, Mumbai and Jawarlal Nehru

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**Table 7.6: Port Network in South Asia in 2002**

<table>
<thead>
<tr>
<th>Countries</th>
<th>No of Major Ports*</th>
<th>Traffic (Million Tons)</th>
<th>Container (Million TEUs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>2</td>
<td>12.46</td>
<td>0.50</td>
</tr>
<tr>
<td>India</td>
<td>25</td>
<td>287.57</td>
<td>3.01</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2</td>
<td>39.92</td>
<td>0.58</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2</td>
<td>26.27</td>
<td>1.76**</td>
</tr>
<tr>
<td>South Asia</td>
<td>32</td>
<td>366.22</td>
<td>5.85</td>
</tr>
</tbody>
</table>

* It does not consider small/intermediate ports.  ** Inclusive of transhipment traffic.  
Source: RIS.

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**Table 7.7. Port-wise Throughput (All Commodities) between India and Bangladesh**

<table>
<thead>
<tr>
<th>Ports</th>
<th>1998-99</th>
<th></th>
<th>2000-01</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Export</td>
<td>Import</td>
<td>Total</td>
<td>Export</td>
<td>Import</td>
<td>Total</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------</td>
<td>-------</td>
<td>---------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Kandla</td>
<td>184</td>
<td>0</td>
<td>184</td>
<td>190</td>
<td>5</td>
<td>195</td>
</tr>
<tr>
<td>Mumbai</td>
<td>77</td>
<td>30</td>
<td>107</td>
<td>80</td>
<td>15</td>
<td>95</td>
</tr>
<tr>
<td>Jawarlal Nehru</td>
<td>160</td>
<td>67</td>
<td>227</td>
<td>145</td>
<td>50</td>
<td>195</td>
</tr>
<tr>
<td>Mormugao</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>New Mangalore</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cochin</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Tuticorin</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chennai</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Vizag</td>
<td>42</td>
<td>2</td>
<td>44</td>
<td>38</td>
<td>5</td>
<td>43</td>
</tr>
<tr>
<td>Paradeep</td>
<td>23</td>
<td>0</td>
<td>23</td>
<td>30</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>Kolkata</td>
<td>30</td>
<td>12</td>
<td>42</td>
<td>46</td>
<td>12</td>
<td>58</td>
</tr>
<tr>
<td>Haldia</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>18</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>522</td>
<td>111</td>
<td>633</td>
<td>553</td>
<td>102</td>
<td>655</td>
</tr>
</tbody>
</table>

Source: Basic Ports Statistics of India, various issues, Ministry of Shipping, Government of India.
ports are containerized. Naturally, containers shipped to Bangladesh from West coast ports are transshipped at Colombo or Singapore due to absence of direct calls. Data of Container Corporation of India (CONCOR) (given in Table 7.8) reveals this further. According to CONCOR, at present, approx. 8,000 container boxes are moving from India to Bangladesh through sea. The port-wise break up of this shipment is given in Table 7.8. Basically, yarn, electrical goods, spare parts, machinery, chemicals, etc. are the major export items which are sent in containers to Bangladesh. Most of the North Indian exportable like electrical goods, garments, chemicals, food products, etc. amounting to 2000 boxes per annum are exported from Kandla, JNP and Mumbai to Chittagong via Colombo/Singapore. Since this route is long and not cost effective, transportation costs are rising day-to-day. Again, some of the break-bulk items generated in the North India such as cycle parts, paper (of Khanna Paper Mills) and spare parts, originating at Ludhiana amounting to approx. 1440 tonnes per month, are at present transported to Bangladesh by roads. Approx. 1305 tonnes of denim and related products, originating at Ahmedabad region, are transported by roads every month to Bangladesh. Ideally, this entire cargo can easily be transported by rail with the help of CONCOR to Kolkata/Haldia and then by using IWT it can be transported to Narayanganj in Bangladesh.

Thus, looking at the present trend of movement of containers between India and Bangladesh, it can be concluded that there is demand to start container operation in IWT mode between Kolkata/Haldia and Narayanganj.

In the previous sections we have shown that there is scope for container operation by barges in IWT mode from Kolkata/Haldia to Bangladesh and India’s Northeast. Cost of movement of boxes is very much required to ascertain business potentialities. As per the estimation made by the Central Inland Water Transport Corporation (CIWTC), in case of transportation of container from Kolkata to Haldia in IWT, it will cost as much as INR 7600/TEU. Table 7.9 indicates estimated transportation cost of container in three routes in NWs 1 and 2.

In case of direct operation, i.e. loading/shipment of containers direct from barge to ship and vice versa using ship’s equipment, handling cost will be INR 650.00 per TEU in place of current terminal handling charges (INR 1980.00/TEU) of Haldia port. This brings down the operational cost further and works out much cheaper than the other two modes, as the number of lifting will be less in IWT mode. Again, since there is no maintenance cost for NWs1 and 2, spillover burden will be less. There are also many advantages in moving containers in IWT such as it saves energy, protects environment, cuts substantial transaction costs, protects from pilferage and generates business for private sector.

To begin in this direction, the Government of India shall reconstruct a concrete jetty at Pandu in Assam. Mobile equipment can be safely placed on the jetty. Bangladesh Inland Water Transport Authority (BIWTA) shall ascertain the feasibility of handling container at Khanpur. Since Rail-IWT interface has very high potential for multimodal operation, Bangladesh and India shall take policy decision towards facilitation of such multimodal operation. In view of more concrete and meaningful cooperation, Indo-

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### Table 7.8: Container Throughput from India to Bangladesh in 2001-02

<table>
<thead>
<tr>
<th>Origin/Cargo</th>
<th>Loading Port</th>
<th>Unloading Port</th>
<th>Containers (TEUs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From North India</td>
<td>Haldia, Jawarlal Nehru</td>
<td>Chittagong</td>
<td>3660</td>
</tr>
<tr>
<td>Yarn, Electrical transformers, Mixed commodities</td>
<td>Kandla, Jawarlal Nehru</td>
<td>Chittagong</td>
<td>720</td>
</tr>
<tr>
<td>From Ahmedabad</td>
<td>Chittagong</td>
<td>600</td>
<td></td>
</tr>
<tr>
<td>Milk products, Starch, Pharmaceuticals</td>
<td>Kolkata</td>
<td>Chittagong</td>
<td>1800</td>
</tr>
<tr>
<td>From Kolkata</td>
<td>Chittagong</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td>From Hyderabad</td>
<td>Chittagong</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>Engineering goods, Slates, Chemicals</td>
<td>Kandla</td>
<td>Chittagong</td>
<td>420</td>
</tr>
<tr>
<td>From Kandla</td>
<td>Chittagong</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>Tiles, Soda ash, Laminates, DSL engine</td>
<td>Chennai</td>
<td>Chittagong</td>
<td>900</td>
</tr>
<tr>
<td>From Chennai</td>
<td>Chennai</td>
<td>Chittagong</td>
<td>900</td>
</tr>
</tbody>
</table>

Total 8820

*Source: RIS based on CONCOR.*

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### Table 7.9: Estimated Cost of Movement of Containers in IWT

<table>
<thead>
<tr>
<th>Route</th>
<th>Cost in IWT (INR./TEU)</th>
<th>Sailing Time (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolkata – Haldia</td>
<td>7,600.00*</td>
<td>2</td>
</tr>
<tr>
<td>Haldia – Narayangunge</td>
<td>11,300.00</td>
<td>8</td>
</tr>
<tr>
<td>Kolkata – Pandu</td>
<td>15,000.00</td>
<td>15</td>
</tr>
</tbody>
</table>

* Averaging costs of movement of container by flotilla and SPC.

*Source: RIS based on CIWTC.*
Success of India – Bangladesh IWT Treaty can be a useful example for more cooperation among the members of South Asian countries such as between India and Pakistan, and India and Nepal where such potentiality exists in the IWT sector.

**Cooperation in Port Network Sector**

Since most of the international trade of South Asian countries is routed through seaports, due to rising handling costs at ports coupled with operational inefficiency South Asian exportable are loosing out in the international market. One of the major obstacles to intra-SAARC integration is the poor transport infrastructure. Specifically, ships moving from Bangladesh to the ports of India’s east coast levy higher freight charges than for the movement to Singapore or Hong Kong. Similarly, there is no direct shipping links between ports of India and Pakistan.

Due to the locational advantage and better navigational aids, Colombo port is the hub port of this region. Although there are regular feeder services between Colombo and most of South Asian ports, there are no direct regular call among the ports of Bangladesh, India and Pakistan (see Figure 7.1).

If lack of sea borne cargo is the prime cause for low presence of container traffic in this route then advancement of road networks between India and Bangladesh has taken away most of the sea borne traffic. The ocean shipping industry has been dramatically transformed in the past 25 years. Ships have generally become faster and larger, and intermodal container shipping has replaced breakbulk cargo vessels on many routes. Due to advancement of road network coupled with global alliance of shipping companies and expansion of fleet sizes, India-Bangladesh shipping sector has appeared as least preferred business area for liner shipping agencies. However, if the two countries take coordinated efforts for the improvement of terminal productivity and back up logistic networks then liner business might come back again.

Economic performance of a region is increasingly shaped by both technological advances and by its capacity to participate in the global production system characterized by extensive outsourcing, “just-in-time” deliveries, and the ever-more common shipment of semi manufactured goods, spare parts and final goods between production and assembly centres scattered across the globe. The deciding factor for sustainability of any infrastructure utility under the liberal economic regime is the ability to cope with newer developments. Due to poor performance of Kolkata port, cargo has been diverted to Vizag (located 650 km away from Kolkata on the east coast) and even to Jawaharlal Nehru (located 1780 km away from Kolkata on the west coast). When the port of Singapore or Laem Chabang (in Thailand) clears a vessel within couple of hours, ports in Bangladesh take 2 to 3 days by applying mixed pool of skilled and unskilled labour forces and semi-advanced technology. Ports of this part of the globe are over employed and

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**Box 7.3. Making Efficient Port: Lessons from Port of Colombo**

Before Sri Lanka began reforming port operations in 1995, her ports were costly and inefficient. Restrictive trade practices coupled with restrictive labour regulations led to high terminal and labour costs. Colombo port was open rather than terminal based, leading to inefficient operating practices and unnecessary costs for cargo handling and storage. Port was overregulated by the Government with overlapping responsibilities. As a result of all these problems, Indian exporters and importers, who share a large portion of total trade of Colombo port, were suffering. There was no alternative to Indian traders to send their goods abroad. Colombo is ideally situated on East-West main shipping route and located nearest to the Indian coast. Due to rising costs and inefficient operating practices, Colombo’s share in global transhipment traffic went down to 69 per cent in 1995 from 72 per cent in 1991. The port was started loosing business of Indian traders; 50 per cent of Indian west-bound transhipment container traffic was passed through Colombo in 1995 whereas the same was 70 per cent in 1991.

Reforms undertaken by the Sri Lankan Government in 1995 led to improve cost reduction and technical efficiencies at the port of Colombo and conversion of the port into terminal-
based landlord port. This perfect timely decision paid heavily to this port in next few years. In 1997, the Sri Lankan Government brought out National Ports and Shipping Policy committing to convert Colombo as the gateway port to South Asia. Colombo’s share in global transshipment traffic increased. In 1997, the port handled 1.27 million TEUs of transshipment traffic which is still marked as the highest transshipment traffic that the port has ever handled till date. In the same year, Colombo attracted 67 per cent of South Asian total box traffic; more than a million TEUs originated from South Asia passed through Colombo which also marked the highest box traffic that the Colombo port has ever handled. Gradually, Colombo has emerged as the gateway port for South Asia. Now the Colombo has three dedicated terminals for main line vessels - South Asia Gateway Terminal (SAGT), run by P&O Ports, Jaya Container Terminal (JCT) and Unity Container Terminal (UCT), run by the Sri Lankan Ports Authority (SLPA). JCT has even two additional feeder berths to handle feeder vessels which serve South Asian coast.

SLPA, the regulator of the Colombo port, never waited in leasing out the terminal to private operators soon after SLPA realised that they can not run the port as efficiently as Singapore due to their cemented bureaucracy and other geo-political compulsions. Negotiations resumed with private terminal operating companies and finally a portion of Queen Elizabeth Quay (QEQ), now known as SAGT, was leased out to P&O Ports lead consortium in 1999. In 1999, SAGT started operation at the QEQuay.

The performance indicators of the port of Colombo suggest a vast improvement since initiation of the reform process. Now, one mainline vessel is cleared within 12 hours from the port whereas it was more than 2 days a decade back. Having invested a considerable amount in the port technology, SLPA is now witnessing the benefits of improved performance. SLPA knows that efficiency benefits all. Today, we have seen rising congestion and port handling charges at some of the Indian container ports. In sharp contrast, port of Colombo offers guarantee of clearance of any vessel within a day at much lower handling charges. SLPA offers considerable discounts to South Asian cargoes. Normally, the transshipment charge for South Asian cargoes is just US$ 50 per TEU which was more than US$ 75 a year back.

Any South Asian container port/terminal will envy Colombo’s SAGT. This year SAGT completes four years. With an annual capacity of over 1 million TEUs, SAGT runs 940m linear berth just opposite of JCT with 15m water depth. SAGT is placing itself as South Asia’s first e-Port. SAGT’s web site is packed with information that will meet the customers’ most advanced needs. SAGT customers have access to more sophisticated services through the e-Port. Shippers, consignees and shipping lines can track their cargo movements on a real time basis, including demurrage charges up to a given date. Inquiry options, custom report generation facilities, real time vessel operations and productivity monitoring are other features of the SAGT e-Port. The web site incorporates some of the best security features to protect against unauthorised access and maintain data integrity. There is also SAGT’s e-Port capability to provide a total ‘Business-to-Business’ (B2B) solution framework, where customers and suppliers get access to services such as electronic invoicing and payment, credit inquiries and electronic delivery processing. SAGT has also introduced terminal service agreements with performance guarantees. Further improvements attributable to SAGT have been the use of computerised Vessel and Yard Planning Systems and Terminal Management Systems. SAGT has introduced very innovative window berthing programs. This terminal runs 24 hours in a day and 365 days in a year. Shipping lines are better served with the introduction of direct billing to main line operators leading to more benefits for all partners. SAGT also meets the highest standards laid forth internationally for maintaining occupational health, safety and environment protection criteria. Still port of Colombo needs productivity enhancement measures combined with the aggressive marketing approach for JCT and SAGT.

To compete in the global market and to serve South Asia better, SLPA has really reformed the Colombo port over the last 5 years. Approx. 2232m quay line (SAGT+JCT) equipped with 23 post-Panamax gantry cranes (including 12 super post-Panamax) and 67 rubber tyred gantry cranes is ready to serve South Asian ports efficiently and effectively. South Asia needs such a facility at its doorstep when the world is becoming borderless. Virtually, for every 100m of quay line, SLPA has kept one ultra modern quayside gantry crane ready. Looking ahead, excellent connectivity, the wealth of value-added services provided to shippers and shipping lines, and a pro-business environment have appeared as the strengths that make Colombo as the transhipment hub for South Asia.

Source: De (2003b).

Cooperation in Road Network Sector

Lack of adequate road transport links among the South Asian members poses serious problems for the expansion of intra-regional trade. Also in the road sector, a trade consignment takes minimum four to six days for clearance from Indian border to Bangladesh side and vice versa. The present legal arrangement between India and Bangladesh prohibits Indian vehicle (or Bangladeshi vehicle) to cross each other’s border for delivering the consignment to the ultimate user(s). Generally, a consignment needs minimum 22 documentations, more than 55 signatures, and minimum 116 copies for the final approval taking into account both sides. Due to this complex and primitive procedure, pilferage is rising which often changes the composition and direction of trade. Procedural complexities very often work mostly running with unskilled laborers.
as deterrent to India-Bangladesh trade. Some of such obstacles may be noted from Table 7.10.

South Asian economies need to develop regional transportation and transit system that offers efficient transportation options and low ‘transaction costs’ that are competitive with those found elsewhere. As the ‘shelf life’ of many new products becomes shorter and shorter and the spatial distribution of supply and demand points changes rapidly what is transported, how it is transported, and to where and from where transported, are all rapidly changing. The price of admission for a region to this dynamic global system is a transportation and transit system that offers competitive ‘transaction costs’ and low ‘shelf life’ of many new products.

<table>
<thead>
<tr>
<th>Road Routes</th>
<th>Transit Time (Days)</th>
<th>Border Crossing Delays (Days)</th>
<th>Transfer Time (Days)</th>
<th>Total Time (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolkata-Petropole- Benapole-Dhaka</td>
<td>1.5 – 2</td>
<td>0.5 – 2</td>
<td>1 – 2</td>
<td>4 - 6</td>
</tr>
<tr>
<td>Patna-Hili-Dhaka-Chittagong</td>
<td>10 – 15</td>
<td>1 – 3</td>
<td>0.5 – 2</td>
<td>11.5</td>
</tr>
<tr>
<td>Guwahati-Shillong-Dawki-Tamabil-Chittagong</td>
<td>6 – 10</td>
<td>0.5 – 2</td>
<td>0.5 – 2</td>
<td>7.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Road Routes</th>
<th>Border Crossing Costs (US $ / ton)</th>
<th>Transit Costs (US $ / ton)</th>
<th>Transfer Costs (US $ / ton)</th>
<th>Loss Costs (% of value of goods)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolkata-Petropole- Benapole-Dhaka</td>
<td>2- 3</td>
<td>64</td>
<td>7 – 8</td>
<td>1</td>
</tr>
<tr>
<td>Patna-Hili-Dhaka-Chittagong</td>
<td>5 – 6</td>
<td>77</td>
<td>9 – 11</td>
<td>1.5</td>
</tr>
<tr>
<td>Guwahati-Shillong-Dawki-Tamabil-Chittagong</td>
<td>5 – 10</td>
<td>8 – 10</td>
<td>7 – 8</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>


South Asia needs a common road network which can connect Colombo to Islamabad to Delhi to Dhaka to Kathmandu to Thimpu. At a time when Asian Highway (AH) is becoming a reality, perhaps such a situation is not far to realise. India-Sri Lanka Land Bridge project could be great stepping stone in integrating the economies in this region (see Box 7.4 for India-Sri Lanka land bridge project).

**Cooperation in Railway Sector**

Railways being the lifeline of the South Asian economy it has immense role to play in fostering regional development in South Asia. Except Bhutan, Nepal and Maldives, rest of South Asian countries are endowed with modern railway system. Incidentally, due to high operating costs and cross-subsidization of services, railway facility is loosing out market share, particularly in freight, to the road sector in South Asia. Over and above, except some periodic trial runs, exporters and importers were never encouraged to use railway system for their trade within SAARC. For instance, there is no container train that runs between India and Pakistan and similarly between India and Bangladesh, though passenger trains are running among these countries. As a matter of fact, trading in bulk items between India and Pakistan and India and Bangladesh is not getting the due momentum. Had there been an adequate system placed in the region, cost of intra-SAARC movement of goods such as cement, logs, food grains, salt, etc. could have been cheaper. While there is similarity in railway gauge to some great extent between India and Pakistan, the same is missing between India and Bangladesh. Mutual cooperation between India, Bangladesh and Pakistan will pave the way for having ‘one track one system’ connecting Chittagong and Karachi.

In India, there is stiff competition between road and railway sectors in handling container freight. Indian Railways has started direct container train services between (i) Kolkata and Delhi, (ii) Kolkata and Chennai, and (iii) Kolkata and Amingaon (Assam). The Indian Railway Authority is providing legal guarantee to the users (exporters and importers) for compensation if the cargo train fails to reach Delhi or Chennai within 48 hrs. from the time of departure from Kolkata. Similar services have been started between Mumbai-Delhi, Mumbai-Chennai, and Delhi-Chennai routes. As a matter of fact, due to this, approx. 25 per cent of break bulk cargo, which was earlier used to be transported by the road sector, has now shifted to rail. Now, Indian Railways is planning to spread the similar services between major ports and industrial hubs. Against this backdrop, if Bangladesh Railway Authority connects Mongla port with Bongaon (in India) via Khulna by broad gauge railway track then inter-country goods movement will be faster, safer and easier. If it is done then export cargo from Bangladesh will reach Delhi or Mumbai within 4/5 days, which now takes minimum 15 days by road and 18 days by sea. Certainly, this network will help Mongla/Chittagong port to attract Southeast Asia-bound foreign trade cargo from India (say West Bengal).
Box 7.4: India-Sri Lanka Land Bridge: Proposal

The proposal envisages the construction of a land bridge linking the Sri Lankan and Indian cities of Talaimannar and Dhanushkodi (in Tamil Nadu) respectively. This permanent link will facilitate the effective and efficient movement of both passengers and cargo, resulting in increased economic opportunities for both countries.

Adam’s Bridge is a narrow ridge of sands and rocks; mostly dry, which connects Mannar Island (Sri Lanka) with Pamban Island (India), about 18 ½ miles West-North-Westward. It is mostly composed of shifting sandbanks with intricate channels between them. The land bridge proposed, to be built by connecting the offshore islands found across this ridge with landfills, causeways and/or bridges. It is envisaged that this proposed land bridge should consist of a four-lane highway with a parallel single rail track.

The construction of the land bridge will be mutually beneficial to India and Sri Lanka. The land bridge is seen as key economic infrastructure to capture the benefits of globalisation for both Sri Lanka and India. The gigantic Indian market offers Sri Lankan companies immense potential for export of their food and services. At the same time, Indian investors have always favourably considered Sri Lanka as an attractive destination for investment and tourism.

According to Board of Investment of Sri Lankan Government, project costs could be in around US$ 1 billion, which can be considered to be preliminary, as it does not take into account the full cost of investigations and the need to take storm surges into account. One has to make a more realistic estimate and compare the cost of two alternatives. The first option is the original proposal strengthened to allow for a higher bridge deck and double rail track. The second is the option to build only a short high bridge of total span 2 km and an embankment of 28 km length with material from the 78 million cubic meters of material generated by the dredging for the channel. These numbers are to be taken as very preliminary given that no site specific subsurface data are available.

For Sri Lanka, the land bridge project offers linkages to industries and agro-industries in Southern Tamil Nadu that typically are not in direct competition with industrial and agro-industrial activities in Sri Lanka. There is therefore tremendous scope for mutually beneficial interaction between Sri Lanka and Tamil Nadu ensuing from this project. The Indian South, from the city of Madurai all the way down to Kanya Kumari will provide a hinterland, which can access ports in Tuticorin, Colombo, Trincomalee and Chennai once the land bridge is constructed. This will give the southern Tamil Nadu greater port access than is currently available. The Rail and Port sectors too can form valuable partnerships. In land transportation, rail has a competitive advantage for high volume traffic, over long hauls. A connection between India and Sri Lanka will make an effective contribution to bring larger volumes of transshipment containers for the envisaged development of the Port of Colombo. Raw materials from central India, for the proposed industrial activities both in the east and south of Sri Lanka can also be transported through the same route.

In order to proceed with this project, a detailed feasibility study may be commissioned by the governments with the help of independent consultant.

Source: Dissanayake et al. (2003).

Cooperation in Air Network

We have seen in previous section that passenger traffic in civil aviation sector in most of the South Asian countries including small members has gone up remarkably during the last decade. Open skies policy has allowed private players to run domestic airlines in most of the South Asian countries which has attracted more passengers to fly within the national territory. Over and above, more foreign airlines are now operating in South Asian countries which has also helped foreign tourists to visit this region. But, there are still bottlenecks in improvement of airports and related back up facilities. Mutual cooperation among the members of SAARC may help its small members such as Bhutan to upgrade its international airport, and backward region such as airports in India’s northeastern region.

To encourage South Asian tourists to travel within the SAARC countries, private airlines in the South Asian region may be allowed to fly major tourist destinations in South Asia. India’s Sahara Airline’s recent operation in Sri Lanka could be an example of such initiative. Similarly, private airlines of Nepal may also be allowed to fly into India’s Himachal Pradesh or that of Maldives to India’s Kerala. Inter-connection of South Asian popular tourist spots by South Asian airlines, similar to that of Thailand’s Asia Air, will help promote...
Box 7.5: India – Pakistan Transport Cooperation: Some Stylized Options

- Munabao (India) – Khokhrapar (Pakistan) Rail Link: The track was operational till 1960s. Besides Wagah in Punjab (India), Khokhrapar was the other point in Pakistan which the two countries had agreed to open up in a 1974 border agreement but due to some unknown reasons this railway track was never became operational. If this railway link is reopend, bulk trading between the countries will certainly go up.

- Srinagar (India) – Muzaffarabad (Pakistan) Road Link: This track was closed in 1947 after partition. This 250 km highway also known as Uri Road which connect Srinagar with Rawalpindi in Pakistan through Baramullah, Uri, Kotli and Muzaffarabad. Linking Srinagar with Muzaffarabad will help both the countries to foster trade.

- Mumbai (India) – Karachi (Pakistan) Ferry Link: The steam service between the two great cities was stopped after the 1965 Indo-Pak war. High speed ferry service between Mumbai and Karachi would be very useful in re-establishing people-to-people contact between the two countries.

tourism sector of this region and thereby generate employment. To foster tourism in South Asia, South Asian Airlines, taking equal equity of respective South Asian countries, may be a good idea to resume open sky policy of the region. When people in Pakistan are interested to visit beautiful sea beaches of Goa in India or people in West Bengal want to enjoy sea beaches of Cox Bazar in Bangladesh or people in Maldives are interested to visit Darjeeling in India, such a network will help them fulfil their travel interests. Let there be an open sky policy in South Asia which will foster ‘people to people’ contact in the region. In view of the above, mutual cooperation shall also be initiated for improvement of airport networks in South Asia without which open sky policy may not generate desired results.

7.4. Policy Perspective for Cooperation in Transport Infrastructure

The need to improve the transport infrastructure and transit facilities in South Asia was first recognized during the 11th Session of the SAARC Council of Ministers held in Colombo in July 8-9, 1992. Accordingly, a study was commissioned by the SAARC Secretariat to assess the existing transport infrastructure and transit facilities, including procedural and documental issues in the region in relation to volume and composition of the existing trade in the region. The study was expected to make recommendations for their improvement, with a view to enhancing trade within and outside the SAARC region. Although the study was completed in 1994 and made some recommendations, no important action in this direction has been taken by the member states of SAARC.

It is relevant to mention at this stage that the Technical Committee on Transport of the SAARC, was established in 1983, to deal with three major segments of transport, i.e. land transport, divided into railways and roadways; sea transport sub-divided into inland waterways and shipping; and air transport. Though seventeen meetings of this Committee have been held so far, a concerted plan for facilitation of trade and movement of people within South Asia is yet to take-off.

Passive vs. Active Approaches

South Asian countries have different options with respect to transport infrastructure. First, they may invest in infrastructure as a response to existing bottlenecks. This leads to a passive strategy of transport infrastructure following private investment. Another option is that governments use transport infrastructure as an engine for regional development. This implies an active strategy where transport infrastructure is leading and inducing private investment. Although both the approaches have some pros and cons, many countries have used the latter approach to attract private investments vis-à-vis regional development.

We have good examples of success stories of North American Free Trade Association (NAFTA), Southern African Development Corridors (SADC), Mercosur – the South American Customs Union, through which improved transportation and transit have created great value to the regional economies. As many of the regional blocs have adopted a Common Transport Policy for enhancement of their inter-regional networking, countries in South Asia may also formulate a common transport policy (CTP) which will foster trade and transport in the region. The following lessons outlined will help to prepare a road map towards such cooperation in the infrastructure sector among the South Asian countries.

- There should be harmonization of technical standards such as truck size and weight regulations, railway gauge and rolling stocks across South Asia without which costs for cross-border movement of goods will go up.

- There should not be any restrictions in movement of goods vehicles registered in South Asian countries to move within the South Asia on fulfillment of individual countries road transportation rule and regulations. Sometimes residual economic regulation, especially in the form of cabotage rules and restrictions on the movement of certain goods and on specific modes of transportation increase the cost of cross-border movement. While planning a common transport policy for South Asia, following issues are to be addressed;
According to the International Telecommunication Union (ITU) the number of Internet users worldwide stood at 500 million people at the end of 2001, which was an increase of 30 per cent from the end of 2000 or an increase of 115 million. The following table shows the number of Internet users for the South Asian countries.

### Box Table: Population and Internet Population in South Asian Countries in 2002.

<table>
<thead>
<tr>
<th>Country</th>
<th>Population</th>
<th>Internet users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>133.3 million</td>
<td>150,000</td>
</tr>
<tr>
<td>Bhutan</td>
<td>2.1 million</td>
<td>2500</td>
</tr>
<tr>
<td>India</td>
<td>1 billion</td>
<td>7 million</td>
</tr>
<tr>
<td>Maldives</td>
<td>320,165</td>
<td>6000</td>
</tr>
<tr>
<td>Nepal</td>
<td>25.87 million</td>
<td>60,000</td>
</tr>
<tr>
<td>Pakistan</td>
<td>147.6 million</td>
<td>1.2 million</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>19.57 million</td>
<td>121,500</td>
</tr>
</tbody>
</table>

Source: cyberatlas.internet.com

While more and more people are using the Internet which is a prerequisite for e-commerce, the increase is not indicative of increase in e-commerce. The importance of e-commerce is that it allows enterprises to become efficient in all the stages of their production and distribution processes.

The adoption of such practices like B2B or e business leads to improved competitiveness and productivity and improvement for the economy as a whole. At the country level, the digital and physical sides of the economy will have to be better connected because except in the service sector B2B e-commerce can work if the physical infrastructure such as ports, railways and roads work. e-commerce takes place essentially between enterprises so that B2B accounts for 95 per cent of all e-commerce in all estimates. According to UNCTAD (2002b), the proportion of Internet users who also are e-commerce practitioners is lower than average in developing countries, owing to the lower per capita incomes and other factors such as low credit card usage, and poor logistics. The share of developing countries in e-commerce was expected to be 4.6 per cent at $104.9 billion in 2002. The share of Asia and Pacific was expected to be 3.8 per cent at $87.6 billion in 2002. This share is expected to be about 5.1 per cent in 2006. According to UNCTAD (2002b) e-commerce is spreading fastest in the region of Asia and Pacific than any other region of the world. India’s e-commerce market is estimated at $300 million in 2002. e-mail is the favourite application of India’s 7 million Internet users and very little online shopping is done. As in the other countries PC and telephone penetration is very low and competition among ISPs is limited. B2B volumes are concentrated in the automotive sector and in banking and other financial services. However, India has developed a successful IT industry and IT enabled services which we discuss in greater detail below. The teledensity of India has increased from 3.6 in March 2001 to 4.9 in December 2002.

The total number of telephone connections stood at 50.2 million as of March 31, 2002 of which 45 million was provided by the public sector while the rest was provided by the private sector. The number of cellular subscribers increased from 0.3 million as of March 31, 1997 to 10.4 million in December 31, 2002.

In Pakistan, the Pakistan Telecommunication Company Limited (PTCL) is the provider of infrastructure for connectivity for internet system providers, data network operators, software exporters, educational institutions, universities, corporate customers and other users. It has lowered its tariff by substantially in 2001-02. Till March 2003, 1350 cities and towns have been provided with Internet facility compared to 850 in June 2002, which is an increase of 58.8 per cent. The promotional Pre Paid Calling Card Service commissioned during 2000-01 has been very successful with 9.73 million cards being floated so far. Total telephone lines installed by March 2003 were 4.6 million as against 3.6 million in June 2002 showing an increase of 27.8 per cent. The Mobile Phone service was launched with U-Fone and mobile phones have reached 2 million by the end of March 2003, up from 1.2 million in June 2002, showing a growth of 66.7 per cent.

In Nepal, during the first eight months of the fiscal year 2002-03, 83 licences were distributed by the Nepal Telecommunication Authority against the 2001-02 total of 67 licenses which included 17 Internet licenses, 10 VSAT service providers, 25 service providers, 8 radio paging networks, 1 video conferencing and 6 fax mail services. The corresponding figures for the previous year 2000-01 were 15 Internet, 7 VSAT, 23 service providers, 8 radio paging network, 1 video conferencing, 6 fax mail and 1 cellular mobile. The telephone service is provided through 159 exchanges with a capacity of 409,833 lines of which 356,323 were in operation in 2002-03 against the 142 exchanges with a capacity of 375,312 of which 312,032 were in operation in 2001-02. This compares with 275,558 in operation in the previous year 2000-01. The number of mobile phones in use were 18102 in 2001-02, up from 11117 mobile lines in 2000-01.

In Sri Lanka the total telephone subscriber base which consisted only of wire line in 1990 stood at 121, 388 with a teledensity of 0.7 in that year. Cellular services were launched in 1991 with 1800 subscribers in the year. In 2001 the total telephone subscriber base was at 1494,857 of 708,200 were wire line and 118,995 were of WLL category. The number of cellular phones in the year was 667,662 taking the fixed line teledensity to 4.4 and the cellular teledensity to 3.6 (total teledensity was 8.0). The number of Internet users in 2001 was 62159 and there were 6801 public pay phone booths, 6178 radio paging and 504 trunk mobile radio operators. The corresponding figures for the year 2002 were 768,620 for wire line, 114,488 for WLL, and 931,580 for cellular. The teledensity for the year 2002 was 4.7 for fixed and 4.9 for cellular taking the total to 9.6. There were 75000 Internet users in 2002 with 6681 public payphone booths, 3541 radio paging, 579 trunk mobile radio. In Bhutan, teledensity was 2.2 in the year 1999. The installed capacity of telephones increased from 9126 lines in 1997 to 11831 lines in 1999. The total number of telephone lines was 29316 as of June 2003 in the Maldives while the number of mobile subscribers was 51,722 in 2003.
- Avoiding Border inspection except in strategic areas leading to ‘one stop service’;
- Simplification of documentation and clearance procedures;
- Open sky policy in South Asia for airlines originating from within the region;
- Permission to fly South Asian Airlines in the popular tourist places in South Asia;
- Movement of container train from one port of one country to another port of another country in South Asia; and
- Finally, but not of least importance, South Asian countries also need to pay attention to their telecommunications infrastructure and readiness for electronic commerce (e-commerce) which is becoming a critical factor in international competitiveness (see Box 7.6).

Endnotes

1 Vickerman, 2002.
2 De, 2003a.
4 Subramanian, 1999.
7 Telecommunications Regulatory Commission of Sri Lanka.
8 Eighth Five year Plan midterm review report obtained from www.pcs.gov.bt

References


Transport Infrastructure: Potential and Challenges
8

Biotechnology in South Asia: Issues, Concerns and Opportunities for Cooperation

8.1 Introduction

Given the manifold ways in which biotechnology could influence food production, it has been considered as an effective means of addressing food security concerns and poverty reduction in the developing world. It is also being seen as a major force for economic development in South Asia, despite the limits set by funding, facilities and experienced manpower. In the last decade or so almost all the countries in the region have initiated some activities in biotechnology. These programmes are largely designed at keeping agriculture sector at the centre stage. For instance, in Nepal food security is the stated objective of biotechnology policy while Bhutan is attaching more importance to the efficacious ex-situ conservation of biodiversity through Renewable Natural Resource Centres (RNRCs).

However, it seems that South Asian region faces a major challenge in terms of governance of biotechnology. The regulatory aspects of biotechnology need an urgent attention in the region. The biosafety regulations in some countries are not in place while others have to work further on the gaps between Cartagena Biosafety Protocol and their national legislations for effective management of biosafety. SAARC has provided a forum to exchange experiences, knowledge and expertise for combined technological advancement of the region. It has also helped in working towards harmonization of biosafety and other regulatory issues.

There are certain challenges which the region need to address. The trade in Genetically Modified Organisms (GMOs) is a major area which needs urgent attention. Though this is being addressed in the various committees of WTO, but it would be in the interest of the region to work out a common position as it concerns conservation of biodiversity in the sub-continent. The South Asian region also needs to consider issues like whether Convention of Biological Diversity (CBD) should prevail over WTO as has been proposed by several other developing countries. The trends in IPR regime within biotechnology also needs to be analyzed from the perspective of access to technology in the region. This Chapter presents the status of biotechnology in the South Asian countries and deals with their national strategies towards further development. The Chapter also highlights the contribution of international agencies in the advancement of biotechnology in the region. Drawing from the discussion, the Chapter concludes with an agenda for regional cooperation towards addressing issues specific to each country and for the region as a whole.

8.2 Trends and Status of Biotechnology

Bangladesh

In case of Bangladesh there is a clear policy emphasis on applying biotechnology in agriculture sector primarily to ensure food and nutritional security and also for enhancing the export earnings by supporting industries like tissue culture and other activities. In this context a national guideline is being evolved to develop high yielding varieties of seeds with genetic modification at the indigenous research institutes. Bangladesh appointed a National Committee on Biotechnology Product Development in 1993. The committee had the responsibility to identify key areas in which Bangladesh could commercialize agriculture related products. Recently, Bangladesh has also passed the Biosafety Act 2001.

Bangladesh, being a party to the Convention on Biological Diversity (CBD), has undertaken an international commitment to prepare a National Biodiversity Action Plan. Bangladesh is...
also targeting at achieving self-sufficiency of food grain through introduction the biotechnology. Government has established National Institute of Biotechnology under the Ministry of Science, Information Technology and Communication to take care of the research activities while the Ministry of Environment and Forest is entrusted with the management aspects of biotechnology activities. In Bangladesh, Biodiversity and Community Knowledge Protection Act and Plant Diversity Act are also under review for possible enactment. Ministry of Environment and Forest is the notified national focal point for biosafety protocol also.

**Institutional Infrastructure**

The National Council for Science and Technology (NCST) is the key agency to work on development of technology in Bangladesh. On the recommendation of NCST Bangladesh government decided to establish a National Institute of Biotechnology to work as the central coordinating research centre under the Ministry of Science and Technology, Government of Bangladesh. The institute would have six major research laboratory on DNA technology; plant biotechnology; animal biotechnology; fish biotechnology; formation and bioprocessing and bioenergy and fertilizers. It is also expected to support and guide biotechnology research across various research laboratories, universities and other institutions engaged in biotechnology. There are several government supported research organizations engaged in biotechnology; for example, Bangladesh Atomic Energy Commission (BAEC), Bangladesh Rice Research Institute (BRRI) and few crop specific research institutes. Apart from these institutes, there are 12 science universities and 30 private universities, having programmes of biotechnology. Some of the leading NGOs in agriculture plant biotechnology include Debtech and Proshika which are working in the tissue culture sector.

In case of Bangladesh it is often observed that there is a duplication of research work due to lack of communication among the scientists of different research institutions and universities. Mechanisms are being evolved to avoid such a situation. In this regard the Bangladesh Association for Plant Tissue Culture (BAPTC) is initiating a plant/crop specific national programme involving different agencies so that a comprehensive view may be taken on various initiatives.

**Impact of biotechnology**

In Bangladesh there is a strong movement for linking up tissue culture with wider activities of income generation. Some leading scientists have established a society called Bangladesh Association for Plant Tissue Culture (BAPTC). The Society is regularly publishing a journal called *Plant Tissue Culture*. The Society also organizes biannual international meets to catch on with technology and international business. The first two conferences created enough momentum for a few interested parties to consider seriously setting up of tissue culture based industry. Within two years as many as six companies were set up, BRAC (formerly, Bangladesh Rural Advancement Committee) laboratory being the largest. One lab which was set up in Rajshahi focuses mainly on commercial production of potato micro tubers. Now the Society is organizing the 5th International Conference in November, 2004.

Among the possible areas of application of biotechnology from the economic perspective is in the areas like rice and jute. In Bangladesh rice production faces several problems. Major rice pests in Bangladesh include the stem borer, the rice and Brown Plant Hopper (BPH). Transformation of rice with the Bacillus toxin gene, Bt could be effective against the stem borer. Similarly, the major problem with lentil production is fungal infection causing great crop losses. Jute is one of the major cash crops which is the principal source of livelihood for millions of people, including three million farmers. The major problem of jute is the pest and the fungus which adversely affect the crop. It is worth exploring if biotechnological approach like a systematic investigation by the bacteria bacillus thuringiensis in both the vegetative and the sporulation may help to identify suitable toxin effectiveness against the jute mite. Bangladesh Jute Research Institutes (BJRI) has over 2000 accessions of jute collected from South East Asia and Africa. Many have desirable properties like fungus resistance or flood tolerance.

The Food and Agriculture Organization (FAO) of UN has recently launched a technical cooperation programme on biofertilizers in Bangladesh. Under the Technical Cooperation Model Project, FAO is establishing a demonstration plant for the large scale production of Rhizobium biofertilizers in Bangladesh. It will also support extensive field trials to demonstrate to farmers the effectiveness of biofertilizers in increasing the grain yields. Early field trials have already shown that the technology increases grain production by about 25 per cent. Large scale adoption can thus save the country an estimated US$ 23 million per year in imported grains and some $6 million annually in imported chemical fertilizers.

**Bhutan**

Bhutan has shown a keen interest in biodiversity conservation related international activities. It was in 1992 itself that Bhutan became signatory to CBD. However, the gains to LDCs from this needs to be analyzed afresh (See Box 8.1).

The recently concluded 9th Five Year Plan of Bhutan strengthened the various measures taken up in light of the commitment towards CBD. In this regard the National Environment
Box 8.1: Bio-prospecting and Access to Biotechnology: Case of Bhutan

Bio-prospecting the search for new genes or chemicals of value in pharmaceutical, biotechnology, or agriculture industries is a rapidly growing endeavor, and one which can have immense economic benefits. Several transnational corporations and other firms have used the rich biodiversity of developing countries in various products without any payment for the same. The argument has been that bioprospecting is justified as in most developing countries there is no technological capacity for complete product development. In order to avoid this, the Convention on Biological Diversity (CBD) and in particular its Articles 15 and 16 proposed to allow access to genetic resources with the condition that the developing countries should be benefited by the transfer of technology.

Despite of the fact that Bhutan signed CBD in 1992 and ratified it in 1995 things have not changed much. Bhutan, as is a well know fact, is rich in biodiversity. It has an estimated 300 species of plants and animals which are of immense value for medicinal purposes in forming nearly 200 different traditional medicines but is still struggling for strengthening technologically advanced facility for ex-situ conservation. This is when Bhutan has been contributing to the global gene pool quite liberally. An International Plant Genetic Resources Institute (IPGRI) mission to Bhutan in 1981 collected 483 samples of food plants, legumes and vegetables. The mission noted serious threat to indigenous wheat and rice varieties. In 1983, an IRRI mission collected 184 traditional rice varieties from high and medium altitude rice growing areas, but most remote areas were not visited. Recently, 154 samples of cultivated rice from 68 villages have been collected. This germplasm has special value as it has been collected from a very high altitude areas and traversing about three quarters of the country’s rice growing regions.

Moreover now studies are raising apprehensions about the sustainability of agriculture in Bhutan. Here specialized forms of crop production have evolved as a result of its geography and climate. The narrowness of the genetic base could pose greater risk of crop failure as occurred in other parts of the world. Many local crop and landraces are being replaced by these HYV’s, and in extreme cases, traditional germplasms are so rare that they are in danger of extinction. So far, limited formal germplasm collection has been undertaken in Bhutan.

The country has no medium to long-term storage facility for ex situ collections yet. There is concern that loss due to inaction could become expensive; and no time should be wasted in collecting germplasm of major food crops before farming communities succumb to the pressure of population growth, migration to urban areas and a shift toward consumerism. The National Biodiversity Centre has been established in 2000 but it has very moderate facilities. The Herbarium Project funded by Danida, and Agro-biodiversity Project by the Dutch have started some form of ex-situ conservation of floral diversity in the country.


Strategy was announced in 1999. The Ministry of Agriculture has also established a National Biodiversity Centre (NBC) in the year 2000. This Centre has initiated some work on inventorisation of biodiversity in different parts of Bhutan. The National Environment Commission (NEC) established with support from UNEP and Global Environment Facility (GEF) is one of the important initiative to evolve a national focal point for environment and biosafety management.

In Bhutan some initiatives have been taken to strengthen the institutional infrastructure for first generation biotechnology. The Royal Government of Bhutan has established two tissue culture laboratories for commercial propagation of agronomically important plants. Recently four Renewable Natural Resources Centres (RNRCs) have been established to work on the rich biodiversity available in Bhutan. The private sector participation is yet to come forward in this area.

International cooperation has helped Bhutan in launching several important initiatives. It is with the assistance of the Dutch government that a National Gene Bank has been established. Under this project the Dutch government is also providing assistance for training technical staff. It was in 1985 that Bhutan had taken the membership of the Centre for Science and Technology of the NAM countries and signed the agreement for becoming a member of the International Centre for Genetic Engineering and Biotechnology.

India

India is one of the first few countries to have recognized the importance of biotechnology as a tool to advance growth of agricultural and health sectors as early as in 1980s. India’s Sixth Five Year Plan (1980-85) was the first policy document to cover biotechnology development in the country.

The plan document proposed to strengthen and develop capabilities in the areas such as immunology, genetics, communicable diseases, etc. The programmes in the area of biotechnology included, as mentioned in the document, application of tissue culture for medicinal and economic plants, fermentation technology and enzyme engineering for chemicals, antibiotics and other medical product development, agricultural and forest residues and slaughterhouse waste utilization and emerging areas like genetic engineering and molecular biology. Since then the biotechnology sector, in India has come a long way.

Institutional Infrastructure

An apex official agency viz. National Biotechnology Board (NBTB) was set up in 1982, to spearhead development of biotechnology. The NBTB was chaired by Member (Science) of the Indian Planning Commission and had representation of almost all the S&T agencies in the country, viz. Department of Science and Technology (DST), Council for Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR), Indian Council for Medical Research (ICMR), Department of Atomic Energy (DAE), and the University Grants Commission (UGC). In 1986, NBTB graduated to a full-fledged government department called Department of Biotechnology.
At present in India, there are six major agencies responsible for financing and supporting research in the realm of biotechnology apart from other sciences. They are Department of Science and Technology (DST), Department of Biotechnology (DBT), Council of Scientific and Industrial Research (CSIR), Indian Council of Medical Research (ICMR), Indian Council of Agriculture Research (ICAR) and University Grants Commission (UGC), Department of Scientific and Industrial Research (DSIR). DST, DBT and DSIR are part of the Ministry of Science and Technology while ICMR is with Ministry of Health, ICAR with Ministry of Agriculture, and UGC with the Ministry of Human Resource Development. DSIR is the funding agency for CSIR and both of them fund independently biotechnology related research programmes.

**Human Resource Development and Training**

The National Biotechnology Board had launched an integrated short-term training programme way back in 1984, to cope up with growing demand for highly trained manpower. In the first phase (1984-85), 5 universities were selected for initiating M.Sc./M.Tech programme in this multi-disciplinary area. Subsequently, in 1985-86 and 1986-87, the DBT added 8 universities/institutions for M.Sc/M.Tech/Post-doctoral teaching programmes. In 1986-87 a model system of post-graduate/post-doctoral teaching in biotechnology in 7 universities/institutions was launched.8 Some of the specialised M.Sc. courses in marine and agricultural biotechnology were launched in 1988-89 at 3 universities. In 1992-93, DBT supported a five year Integrated Programme in biochemical engineering and biotechnology in Indian Institute of Technology, Delhi and a post-doctoral programme at Indian Agricultural Research Institute, New Delhi.9

The DBT is supporting 20 M.Sc. courses in general biotechnology, 4 in agricultural biotechnology, one each in medical and marine biotechnology, and a couple of diploma courses in molecular and biochemical technology.10 The total intake of students in the various post-graduate courses supported by the DBT in the country is around 550 per year. As part of restructuring of the post-doctoral research and training programme, DBT has scrapped the ongoing programme with different institutions and has given this responsibility to the Indian Institute of Science (IISc), Bangalore. This has been done to ensure competitive attitude and quality output in the life sciences. It is being proposed that IISc would award up to 75 fellowships of two-year duration in different streams of biotechnology.

DBT is also supporting overseas associateship and short-term training courses for at least 22-25 scientists in a particular year for exposing Indian scientists to newer trends in R&D. In this context, services of Biotech Consortium India Limited (BCIL), New Delhi, a DBT floated organisation, are also being used to bridge the scientific knowledge of DBT supported associates and industry requirement. The State Governments are also exploring various options to finance higher education in such advanced technologies. Recently Karnataka government has established an Institute of Bioinformatics and Applied Biotechnology (IBAB), in collaboration with ICICI Ventures to offer a postgraduate course in bioinformatics on its International Technology Park campus.11

As part of a wider effort for capacity building in institutes of higher learning, full-fledged departments of biotechnology are being set up. The IISc, Bangalore, Indian Institute of Information Technology and Management, Gwalior; and select Regional Engineering Colleges are setting up departments of biotechnology. The All India Council for Technical Education (AICTE) has already approved B.Tech. programmes in biotechnology in eight engineering colleges and has been advised to develop a model curriculum for undergraduate programmes. Apart from expanding teaching of biotechnology at higher educational institutions, a separate module on biotechnology would also be integrated with the school curriculum. The Department of Biotechnology of Government of India will provide the necessary outline of this module so that the National Council of Education Research and Training (NCERT) and the Boards of School Education would be accordingly advised.12

Indian University Grants Commission has come out with a scheme to promote higher centres of learning at one place and assist them as much as possible. In this regard, Delhi-based Jawaharlal Nehru University (JNU) has been identified by the UGC as centre for excellence in the areas of genomics, genetics and biotechnology.13 The University has received funds to the tune of Rs 300 million and is planning to start a new integrated M.Sc./Ph.D programme in life sciences and biotechnology and is setting up a modern animal house for experiments.

**Private Sector Participation**

In India, biotechnology industry has grown over the past few years at a very rapid pace to reach a sizeable scale in terms of turnover. According to the available estimates, the size of India’s market for biotechnology products could be between US $ 1.5 to US $ 2.5 billion.14 Of this the agriculture sector market is valued between US $ 450 to US $ 500 million and diagnostic/vaccines market at US $ 150 to US $ 420 million.

The companies in medical biotechnology in India can be divided into three broad categories. One is that of small start-up companies that have indigenously developed biotech products, e.g. Shantha Biotech and
Bharat Biotech. Then there are large companies, which have started responding to biotechnology and have in fact incorporated biotechnology in their work plan for instance, Dr. Reddy’s Laboratory (DRL), Ranbaxy Laboratories and Wockhardt Ltd. The third group has start-ups, which are all set to emerge as contract research organisations (CROs). Largely their work comes from TNCs.

Then there are companies like Biocon India which may not fit well in this kind of classification as they have an established presence in the industrial biotechnology (the fermentation sector) and a growing presence in the pharmaceutical sector. Biocon set its sights on biopharmaceuticals and using its capabilities in a wide range of fermentation technologies.15

Some of the private foundations such as M. S. Swaminathan Research Foundation (MSSRF), Chennai have taken important initiatives in terms of bridging gap between technology development, its commercialisation and diffusion.16 One of the important projects MSSRF launched in early 1990s was establishment of Biovillages in India and China. The Biovillage approach aims at covering principles of ecological sustainability and economic profitability with equity. Some of the firms such as Indo-American Hybrid Seeds Company, Bangalore and R&D institutions such as Tamil Nadu Agricultural University were the prominent partners. This project boosted the demand for biofertilisers in the Southern Indian villages.

In the agriculture sector a large number of companies have taken up activities related to biotechnology. Leaving aside subsidiaries of TNCs in India, the agribiotech companies can be classified into three broad groups. In the first group there are larger integrated seed companies which are expanding their R&D to cover biotechnology like Mahyco, Indo-American Hybrid Seed, etc. to develop their own transgenics. Second group is that of smaller companies which have not been active in research or product development but have started employing techniques such as tissue culture for their breeding programmes, e.g. companies like Kastur Rangan and Adikeshevalu. The third group may cover highly specialized technology companies that undertake services for specified research, like contract research organisations. This is a relatively new concept in the agriculture R&D in India. Some of the companies like Avesthagen qualify in this group.

Role of Financial Institutions
In recent times, liberalization has unleashed competition for garnering capital in the Indian market. This is more so for technology companies. Some of the major firms in IT and pharmaceutical sector have already achieved a listing at Nasdaq. The venture capital (VC) industry in India is also emerging as a vibrant sector to support information technology, biotechnology, telecommunication and food processing related industries.

The biotechnology commitments by different VCFs amount to almost Rs. 3000 million (Figure 8.1). Out of this, Indian Credit and Investment Corporation of India (ICICI) and Small Industries Development Bank of India (SIDBI) have almost similar commitments for biotechnology while new entrants like Kerela Venture Capital Fund (KVCF) has committed Rs. 200 million, which is just 4 per cent of the total venture capital. SIDBI and ICICI have devoted Rs. 1000 million and Rs. 1700 million, respectively. The two other southern states pro-actively supporting biotechnology through venture capital are Andhra Pradesh and Karnataka. Andhra Pradesh Industrial Development Corporation (APIIDC) has devoted Rs. 500 million, which is 18 per cent of the total amount available at the national level while Karnataka State Industrial Infrastructure Development Corporation (KSIIDC) share 7 per cent with an allocation of Rs 100 million.

Nepal
Recently, Nepal has started giving high priority to biotechnology. The Ministry of Science and Technology of Nepal has placed its vision for biotechnology in Nepal to enhance the quality of life of the Nepalese people in terms of agriculture, forestry, health, safety, environment, social and economic development. The newly drafted biotechnology policy for Nepal with its main focus on poverty alleviation was recently released.17

In Nepal a strategy for development of biotechnology is being worked out largely in the agriculture sector. The stated objective is to provide easy and affordable excess to biotechnology products and appropriate inputs such as biofertilisers, etc. to agriculturists especially small and marginal farmers. The areas of priority for research and development include mass production of virus-free pre-basic seeds of potato by tissue culture; mass production of disease-free banana and citrus saplings by tissue culture and grafting; production of virus-free cardamom plantlets; biotechnological development of poor man’s food crop – millet, barley, buckwheat, etc; development of yield – increasing rice varieties by combination of conventional breeding, marker assisted breeding, anther culture and genetic transformation; mass production of biofertilizers and biopesticides.18 Nepal has also actively started organizing major conferences and

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Figure 8.1: Biotechnology Commitments of VCFs in India

Source: RIS data based on several sources.
seminars on biotechnology and biodiversity. One such major conference with almost 265 scientists from twenty five different countries was organized in Katmandu in 2000. This gave an opportunity to local industry and academicians an opportunity to interact with others in the field.

**Institutional Infrastructure**

Nepal is one of the few LDCs which has strong institutional infrastructure for biotechnology in government as well as in non-government sector. The non-government sector is largely in the domain of private sector with limited financial support from community based development programmes. Some of the major initiatives in non-government sector include Botanical Enterprise Private Limited, Godavari; Nepal Biotech Nursery, Bhainsepati; Research Laboratory for Agriculture Biotechnology and Biodiversity (RLABB) Balkhu and Microplants, Tawkhel.

Under government, there are three major institutes which support biotechnology. They are Department of Plant Resources (DPR), Nepal Agriculture Research Council (NARC) and Royal Nepal Academy of Science and Technology (RONAST). The DPR is largely working on mass propagation of tissue culture disease-free plants of banana and citrus. The DPR has already come out with their biotechnology action plan. The NARC has an active programme on developing virus free seeds of potato. The agriculture botany division of NARC is working on anther culture of rice and wheat and is also all set to establish germplasm conservation and diagnostics facilities using PCR technology. The NARC is also planning to initiate some work on biofertilisers. It has established regional linkages with Nepal by establishing laboratory in different parts of the countries.

The RONAST has initiated work on molecular studies on genetic variation of rhizobium and in vitro grafting of citrus for disease elimination. RONAST has screened more than 80 isolates of rhizobium for enhancing productivity of grain legumes.

**Central Coordination and other Developments in Biotechnology**

Since the Eight Five Year Plan planning in biotechnology has come a long way in Nepal. This was the first plan in which importance of biotechnology and biodiversity was acknowledged. The National Council for Science and Technology, however, has been active in terms of developing and supporting various facets of biotechnology. At this point, Nepal has to work towards further strengthening the institutional coordination and also establish the inter linkages in the biotechnology research in the country. There are several studies which indicate that there is an urgent need of a central coordinating agency in Nepal like Department of Biotechnology (DBT) in India or Biotechnology Commission in Pakistan. This may help in coordinating allocations for various programmes in biotechnology: for instance Panta and Aryal (2000) mention that such funding is needed for a strong programme at the advanced research institutes like Tribhuvan University. The Central Department of Botany (CDB) in Tribhuvan University has been planning for initiation of biotechnology programme but due to lack of proper funds the programme could not be started. In this regard the proposal for Biotechnology Development Council (BDC) or Biotechnology Coordination Committee (BCC) is an important idea for advancement of biotechnology in Nepal.

There is an acute shortage of trained manpower in this advanced technology. The recently concluded National Biotechnology Policy Conference (NBPC) also discussed this issue. It was suggested that one of the two committees BDC or BCC would have to take some steps in this direction. Some of the earlier studies by Yami (1997) and Tuladhar (1994) indicate that there were only 72 graduates out of which 57 per cent had masters degrees and 32 per cent had doctoral degrees. Most of them have specialized in either agriculture or in botany but not in biotechnology. The proposed biotechnology coordination committee is being identified as the agency for developing manpower required for this sector and raise public awareness about biotechnology.

**Pakistan**

In Pakistan the government has taken an active interest in promotion of biotechnology. A National Commission on Biotechnology was announced and nearly a sum of US$ 0.5 million allotted to coordinate the national efforts in 2001. The NCB would have 10-11 members. This commission would sponsor research in the areas of agriculture, food, flowers and fruits and would also initiate programmes and publications to create mass awareness about biotechnology.

Pakistan’s Ministry of Science and Technology (MOST) has approved a project for the promotion of biotechnology research and preparation of a biotechnology action plan. The project will be implemented by the Pakistan Council for Science and Technology in a period of three years with a Rs. 38 million (around 634,000 USD) budget beginning from April 2003. Biotechnology is declared among the top priority areas in the third meeting of the National Commission for Science and Technology. The project was launched to improve the existing research facilities in the areas like agriculture, livestock and medical sectors at universities and R&D organisations.

**Institutional Infrastructure**

The biotechnology programme actually started with the establishment of the National Institute for Biotechnology and Genetic Engineering (NIBGE) at Faisalabad in 1987 by the Pakistan Atomic Energy Commission (PAEC).
This institute has emerged as an important linkage in the advancement of biotechnology in Pakistan. However, the whole idea about the institute emerged in 1981 when a course on recombinant DNA technology was organized by the Nuclear Institute for Agriculture and Biology (NIAB) at Faisalabad. At that time NIAB was one of the three agricultural centres of the PAEC. The training workshop asked the government of Pakistan to develop a national centre of biotechnology and genetic engineering. The Ministry of Education later approved the creation of a Centre of Excellence in Molecular Biology (CEMB), to be built on the campus of Punjab University. The National Institute for Biotechnology and Genetic Engineering (NIBGE) was approved in 1986. NIBGE was developed by Government of Pakistan with the investment of US$ 10.00 million.

Now the government is also supporting some other initiatives such as the Centre for Advanced Molecular Biology (CAMB) and the Institute of Biochemistry and Biotechnology (IBB). Recently an Institute for Biotechnology has also been established at Karachi.

**Impact of Biotechnology**

The biotechnological interventions have contributed significantly towards sustaining the cotton production in the wake of an acute epidemic of cotton leaf curl virus. In addition, development of virus-free potato seed, banana and micro-propagation of sugarcane through tissue culture are only some examples of biotechnology. Commercialization of biofertilizers for rice, wheat and legumes has also come about because of the biotechnology research carried out at NIBGE and NARC. According to a study introduction of the Bt cotton in Pakistan could result in a 45-55 per cent reduction in insecticide use on cotton. This would mean a benefit of about Rs. 4 to 5 million, apart from the favourable impact on the environment and increase in cotton yield. So far, transgenic plants have been produced in about 60 plant species. Cotton has received special attention of the biotechnological companies in the developed countries who were attracted by the profit motives associated with the high value added to the transgenic seeds.

NIBGE has become internationally a lead centre for research on cotton leaf curl virus by deciphering the virus genetic code and documenting the genetic diversity existing in the field. A useful input from University of Arizona, Tuscon; John Imn Centre, Norwich, UK; Imperial College and Queen Mary College London resulted in accumulation of useful data, which is now being utilized for developing transgenic cotton resistant to CLCuV. Similarly, establishment of a Plant Genomic Laboratory in collaboration with PARC (Pakistan Agricultural Research Council) is a step in right direction. The Institute has also excelled in the area of biofertilizers with support from IAEA and more recently from Islamic Development Bank through which Biofertilizer Resource Centre (BIRcen) has been established at NIBGE. Commercialization of biofertilizers under the trade name of BioPower is greatly helping in development of sustainable agriculture. Pakistan has an active programme supporting biopesticides (Table 8.1).

**Private Sector Participation**

In Pakistan, the first generation biotechnology is still to be commercialized at a large level. Almost all the plant tissue culture (PTC) laboratories are in public sector and universities. Despite noticeable contribution in basic research in PTC technology, commercial exploitation remains insignificant. Generally, research in Pakistan is based on public funds and the interest of research laboratories does not match with those of industry or the results are technically immature. Thus, no commercially viable plant tissue culture laboratory has been established in private sector, in any part of the country. However, Agriculture Biotechnologies Pakistan (Pvt) Ltd. is operating in the field of micro-propagation and seed production since 1995 to achieve the excellence in high tech agriculture.

Among the TNCs in the private sector Monsanto Pakistan is one of the active players. It acquired Cargill hybrid seed business in Pakistan in 1998. Monsanto also acquired Dekalb Genetics and Asgrow business worldwide, giving Pakistan an access to wide range of superior genetics. Monsanto deals with proprietary Corn, Sunflower and Forage Sorghum hybrid seeds. As part of a commitment, Monsanto is the only multinational producing and marketing genetically modified seeds. Monsanto has initiated some work on producing drought tolerant plants. Although the research is in the initial stages, the results are encouraging. Scientists are working on the project by sequencing the genes in corn, soy, and rice genomes.

NIBGE has also established a private commercial arm. This is called

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*Source: RIS, Based on Zafer (2001)*

*South Asia Development and Cooperation Report 2004*
Pakistan Innovative Biotechnology service (PIBS). The mandate of PIBS is to expedite the commercialization of technologies applied in various sectors of the industry and agricultural fields, which might have a direct and indirect impact on economy.

**International Collaborations**

Pakistan has also initiated joint collaboration programme with neighbouring and other countries. Recently Pakistan has entered in an agreement with China. The areas of cooperation include agriculture, health and industrial biotechnology. They have decided to facilitate the exchange of microbial culture to enhance fermentation technology capability along with the exchange of visits of scientists. The action plan also included submission of joint research projects to be reviewed by scientific committees on both sides and their subsequent implementation. It has also been decided that students will be exchanged at graduate level and post-doctoral level. Exchange of eminent scientists as teaching faculty to participate in the academic activities of national universities and institutes will also take place. As of now 72 projects have been submitted to the Ministry of Science and Technology by various R&D organizations. They would be screened for undertaking joint research projects under Pak-China joint Research Fund.

Pakistan and the United States have also signed a joint operating arrangement (JOA) worth $10 million for scientists’ cooperation in the field of natural sciences. The arrangement has been designed for further cooperation among scientists of the two countries in the areas of mutual interest with a focus on collection, evaluation and exchange of germplasm, plant genomics, plant biotechnology, stress biology, bioinformatics, application of information technology in agriculture, identification and control of animal and plant diseases, dry land/sustainable agriculture production systems, biotechnology/microbiology and agribusiness development. Recently, Pakistan has also been benefited by the Asian Development Bank loan of $905,000 for the research and cultivation of iron-rich rice. The project would be from 2002 to 2005.

Pakistan is member of Islamic Academy of Sciences (IAS). This institution organised a special session on biotechnology and genetic engineering. In 2001, IAS adopted a Rabat Declaration, urging leaders and decision-makers of the OIC member countries to divert available resources to science education with a view to building a scientific and technological manpower-base capable of adapting and developing new technologies. The Rabat Declaration equally stressed the need for OIC countries to introduce biotechnology programmes at various stages of the educational process. Among the countries from South Asia, apart from Pakistan, Bangladesh also signed this declaration.

**Sri Lanka**

Since 1990 Sri Lanka has been having strong research programme in biotechnology. In the initial year the focus was on plant biotechnology but of late the various research institutions, universities and government departments have entered in the areas of new biotechnology including health and medical biotechnology. In Sri Lanka there is a growing sensitivity about the ethical aspects of biotechnology research. Earlier this year, the National Science and Technology Commission (NASTEC) had handed over a report to the Government on the medical ethics. At this stage, a ‘Draft National Policy on Biomedical Ethics’ related to ‘New Genetic and Assisted Reproductive Technologies’ was also considered.

In Sri Lanka there is already a National Genetics Commission and the National Assisted Reproductive Technologies Commission is to be set up soon. The National Assisted Reproductive Technologies Commission set up by an Act of Parliament would be the apex body overseeing the introduction and practice of assisted reproductive technologies both in research and in clinical settings in Sri Lanka.

**Institutional Infrastructure**

The Ministry for Economic Reform, Science and Technology (MOST) provides a framework for the strategic economic development and growth of the country. In Sri Lanka the National Science and Technology Commission (NASTEC) plays the key role in terms of working as a key apex policy formulating and advisory body to the Government of Sri Lanka on Science and Technology matters. This was established in 1998. It works in consultation with National Science Foundation (NSF).

NASTEC fulfills a need that has been highlighted for a long time by the scientific community. This works as the policy making apex body in the area of science and technology. Its responsibility includes prioritization of areas of national importance of Science and Technology, and in advising the Government as regards the rational allocation of funds for research and development among the national Science and Technology institutions. NASTEC also works closely with the Council for Agricultural Research Policy (CARP) and the National Health Research Council (NHRC) and professional bodies such as Sri Lanka Association for the Advancement of Science (SLAAS), Institute of Chemistry, Institute of Physics, Institute of Engineers and Institute of Biology.

The Plant Genetic Resource Centre (PGRC) is the key institute in Sri Lanka to collect, characterize, conserve and multiply germplasms of crops and other plants. This institute was established with the liberal grant from Japan in 1987. The PGRC is under the Ministry of Agriculture. Under the same ministry is the Horticultural Crop Research and
Development Institute (HORDI). This has also started exploring the first generation biotechnology options in their various research pursuits.

The Council for Agricultural Research Policy (CARP) also of Ministry of Agriculture has identified biotechnology as a thrust area for agricultural research and a key area for development on a national scale.\textsuperscript{34} In view of this, the CARP committee of specialists in biotechnology and plant breeding in the national agricultural research system (NARS) was required to identify constrains confronted with research relating to biotechnology and to suggest possible ways as to how CARP can play a role in developing biotechnology to benefit agricultural development of Sri Lanka.

**Strong Emphasis on Ethical Aspects**

The guidelines for the Proposed National Genetics Commission and the National Assisted Reproductive Technologies Commission have been worked out by an expert group appointed by the NASTEC. The group has also drawn guidelines on how researchers should liaise with the media. It suggests that the preliminary findings of seemingly promising research should be reported because such research may require substantial validation through future studies or as such projects may require further research and a considerable passage of time before it could be translated into human use although it may seem that human application is round the corner. It is also important to safeguard against inaccurate reporting and to ensure that privacy and confidentiality of subjects is not compromised especially in publishing family histories and in publishing or presenting photographs, slides, videos of subject(s); prior consent to do so should be obtained.

The guidelines also suggest that the international collaborative research projects should, in addition to ethical clearance in Sri Lanka, receive clearance from the ethical review committee(s) of the collaborating institution(s) abroad and be subject to other guidelines for international collaboration as may be recommended by the proposed Genetics Technologies Commission and/or the proposed National Assisted Reproductive Technologies Commission.

The guidelines to be drawn up by the proposed commissions shall, in addition to other factors, take into account the need to ensure transfer of technology to Sri Lanka so that such research projects result in the development of research capacity within the country and not merely the transfer of biological material to other countries. The export/import of biological material from/to Sri Lanka should be banned at all times except where it is justified by established medico-legal practices.

**The Economic Challenges**

The strong institutional linkages in Sri Lanka have created a system where by science and technology is being used to overcome the economic challenges. In this regard CARP has identified some of the important areas for the potential application of biotechnology. In Sri Lanka rice is the staple food and is also one of the important food crops of the country. It is estimated that Sri Lanka should produce at least 3.4 million tonnes of rice to cope up with the demand by 2005. The major constraint comes from the pests of rice that cause reduction in yield. High cost was incurred for use of pesticides and chemicals for disease control. Moreover, yield losses due to weed competition alone exceed losses caused by other biotic constraints. The use of herbicides is the most common technique used by farmers to control weeds in rice fields.

The major plantation crops of Sri Lanka are tea, rubber and coconut. The trend in production and export of these crops as given below show a gradual increase in tea and coconut and a decline in rubber. The cost of production has increased dramatically in all the three crops.\textsuperscript{35} Tea improvements require expansion of the existing narrow genetic base, improvement of assessment of germplasm, and production and use of new genotypes such as polyploids. Rubber requires improvement of technical properties of the natural rubber, shortening of the immature period, improvement of timber and assessment of merit of the accessions. Coconut improvement requires development of vegetative propagation methods, broadening the germplasm and reducing the time and cost of breeding new varieties.

Sri Lanka has right from the beginning focused on the need of trained manpower in this skill intensive sector. The National Science Foundation found the availability of trained manpower even in some advanced biotechnology in Sri Lanka. The major challenge is to encourage private sector participation in development of biotechnology. The private sector as of now is largely engaged in tissue culture and biocides related activities. Genetech is one of the leading firms in Sri Lanka engaged in DNA typing and finger printing.

The initiative by various universities and research institutes of making available high skilled manpower in areas other than plant biotechnology is likely to encourage private sector participation. The universities have developed curricula to include modern trends in biotechnology research and development. In this regard the Asian Development Bank has also provided $20,000 as part of the loan for expanding science and technology personnel development in 1987. As a result University of Peradeniya has established under graduate and post graduate course in biotechnology. With this money infrastructure has been upgraded at the University of Colombo.

**International Cooperation**

The research cooperation between Sri Lanka and the Swedish International Development Cooperation Agency...
National Science Foundation (NSF) of Sri Lanka has been functioning as the coordinating agency for many projects under the agreement signed by the governments of Sri Lanka and Sweden. SIDA and NSF have launched a two-year project to establish bioassay techniques to identify insecticidal and other bioactive extracts, fractions and compounds. This project would help in protecting major export crops such as tea and other crops from pest attack. This project also aims at developing strategies for environmentally acceptable methods of control of seven Sri Lankan pests: the shot-hole borer beetle, the live-wood termite, the root-lesion and burrowing nematodes of tea, the groundnut aphid, the diamond-back moth and the cowpea beetle.

Another major area of cooperation with Sweden includes the establishment of a molecular biology and gene technology department in the Faculty of Medicine at the University of Colombo. Two areas were identified as of primary importance: training of manpower resources at the M.Sc. and PhD level and research and development in this field as applied to the study of filariasis. Research collaboration and training has been undertaken with the Department of Medical Genetics, Biomedical Centre, Uppsala University, Sweden.

Recently during the US visit of the Sri Lankan Prime Minister a number of agreements to further business opportunities in the knowledge economy sectors such as biotechnology, Information and Communication Technology were signed. A Memorandum of Understanding between the Government of Sri Lanka and the US Trade and Development Agency (USTDA), which enables funding for technical assistance, feasibility studies, training, orientation visits and business workshops with particular attention to biotechnology, was signed. This initiative may help in strengthening the bioinformatics programme in Sri Lanka.

Sri Lanka also has four on-going research projects with India. Both countries have serious economic interests in aquaculture. In a joint project at College of Fisheries, Mangalore, efforts have been made to develop cell lines for marine fish Sillago which is commonly available in the region. At National Environment Engineering Research Institute (NEERI), Nagpur projects have been launched to study and evaluate biotechnological processes for treatment of waste water.

Sri Lankan biotechnology programme is also being benefited by the programmes supported by the sub-regional grouping such as by the BIMST-EC. This regional grouping was established in 1997 and comprises of Bangladesh, India, Myanmar, Sri Lanka and Thailand. The purpose of this regional grouping is to provide trade and technological cooperation among the BIMST-EC countries in the areas of trade, investment, tourism, transport, commerce, technology, energy and fisheries. National Science and Technology Commission is the focal point from Sri Lanka for science and technology cooperation. The second Expert Group Meeting was held in Sri Lanka in October 2002. The focus of this Expert Group Meeting was Agricultural Technology, Biotechnology, Food Technology, Herbal Drugs and Aromatic Plants, Post-Harvest Technology and Information and Communication Technology. These areas were chosen because of the common agricultural background of the BIMST-EC countries and the ever-growing importance of ICT. The identified areas for R&D collaboration between Sri Lanka, India and Thailand include the following:

1. Establishment of a Database on Medicinal Plants, Bioactive Natural Products and Mushrooms
2. Establishment of a Database on Traditional Knowledge
3. Bio-Fertilizer and Bio-Pesticides
4. Methods of Identification of Functional Foods
5. Policy Formulation and Development of Identification Protocols and Validation on GM Foods

Basing on the identification of these areas seven joint projects have been launched as part of BIMST-EC initiative for technology cooperation.

### 8.3 International Institutions in the Region

Advancement of biotechnology in the region is also facilitated by the presence of advanced research institutes. In South Asia there are two major international institutes having strong regional linkages: International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi and International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Hyderabad. They have established close ties with the farmers and industrial sector for the transfer of innovative technologies and/or products of potential interests. These institutions have also played a key role in human resource development in the region.

ICRISAT has launched several initiatives in South Asia and some of them are financially supported by multilateral financial agencies. For instance, ICRISAT and ADB were partners in two bilateral projects, one with Pakistan and the other with Sri Lanka. The project on strengthening chickpea research in Pakistan worked towards stabilizing yield of the crop, and successfully developing a variety of chickpea which is resistant to the damaging fungus *aschochyta blight*. In case of Sri Lanka the initiative covered the production of pigeonpea and diversification to other crops. The project developed a *maruca* resistant variety which is a short duration pigeonpea, and also designed and developed a processing machine for small farmers. The establishment of a plant biotechnology research and
training unit at ICRISAT and its state-of-the-art Applied Genomics Facility has further strengthened the biotechnology infrastructure in South Asia. The facility helps train NARS scientists in tissue culture, transformation, molecular marker technology and in virus diagnostics. Recently the ICRISAT genebank was augmented, training in genetic resources was provided, and 22 germplasm collection missions in 13 countries resulted in the addition of 10,955 accessions to the ICRISAT genebank.

The Regional Technical Assistance (RETA) grants from ADB under cooperation programme with ICRISAT has also strengthened the grain legume research in South Asia and also strengthened the regional collaboration in cereals and legumes in Asia (1995-99). This worked towards assisting NARS in Asia to improve productivity of grain legumes and coarse cereals. Legume-based technologies for rice and wheat production systems in South and Southeast Asia (1997-April 2001) is an ongoing project designed to quantify the scope for greater inclusion of legumes in rice and wheat cropping systems, evaluate improved technologies, assess adoption, and quantify the impact of improved legume-based technologies.

International Centre for Genetic Engineering and Biotechnology (ICGEB) is an international organisation dedicated to research and training in the field of biotechnology and genetic engineering. There are two components Trieste (Italy) and New Delhi (India). The main mandate of the centre is to impart research and training in the field of biotechnology. ICGEB also helps in developing cost effective technologies in the field of human health and plant biotechnology. As Table 8.2 shows, in the region Sri Lanka and India have benefited at the firm level by getting access to the technologies developed by ICGEB. The centre has conducted more than 100 training programmes and transferred number of technologies to the member countries.

### 8.4 Biodiversity Conservation and CBD

There is a growing concern about rapid degradation of ecosystems and their biological components in the South Asian region. Developing and establishing adequate conservation measures and mechanisms for sustainable utilization of bioresources pose multidimensional challenges. These issues have been negotiated extensively under the aegis of the United Nations. Consequently, the international treaties such as the Convention on Biological Diversity (CBD), 1992; Trade Related Intellectual Property Rights (TRIPS) Agreement under World Trade Organization (WTO), 1995; and the Cartagena Biosafety Protocol, 2000 have been finalized (see Table 8.3). The Contracting Parties of these instruments are actively engaged in evolving mechanisms to effectively implement the provisions contained therein.

Significantly, these developments have also surfaced some contradictory trends, which need to be closely examined in order that we succeed in safeguarding livelihoods of local communities dependent on biological resources and in ensuring full realization of potential of new emerging technologies for the benefit of coming generations. It is being increasingly

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**Table 8.2: Agreements entered into by ICGEB for Transfers of Technology to the Industrial Sector**

<table>
<thead>
<tr>
<th>Product</th>
<th>Country</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV 1-2 Diagnostic Kit</td>
<td>India</td>
<td>1997</td>
</tr>
<tr>
<td></td>
<td>Nigeria</td>
<td>1992</td>
</tr>
<tr>
<td>Hepatitis C Diagnostic Kit</td>
<td>India</td>
<td>1997</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>2001</td>
</tr>
<tr>
<td>Hepatitis B Vaccine(option)(under negotiation)</td>
<td>India</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Egypt</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>2002</td>
</tr>
<tr>
<td></td>
<td>Italy/Iran</td>
<td>2002</td>
</tr>
<tr>
<td>Recombinant Insulin</td>
<td>Argentina</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td>EPO - Erythropoietin(option)(option)</td>
<td>Italy</td>
<td>1996</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Egypt</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>Venezuela</td>
<td>2001</td>
</tr>
<tr>
<td></td>
<td>Italy/Iran</td>
<td>2001</td>
</tr>
<tr>
<td></td>
<td>Brazil</td>
<td>2002</td>
</tr>
<tr>
<td>Alpha Interferon 2b</td>
<td>India</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td>Alpha Interferon 2a</td>
<td>India</td>
<td>2002</td>
</tr>
<tr>
<td>Gamma Interferon</td>
<td>India</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td>HGH - Human Growth Hormone</td>
<td>Italy</td>
<td>1996</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>1999</td>
</tr>
<tr>
<td>G-CSF - Granulocyte Colony Stimulating Factor</td>
<td>India</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Sri Lanka</td>
<td>1999</td>
</tr>
<tr>
<td>Vegetable Brassica expressing BT Toxin</td>
<td>India</td>
<td>1999</td>
</tr>
<tr>
<td>Development of a Malaria Vaccine</td>
<td>India</td>
<td>2001</td>
</tr>
<tr>
<td>Development of Recombinant RHBV-BAC</td>
<td>India</td>
<td>2001</td>
</tr>
<tr>
<td>Patent “Plastid transformation”</td>
<td>India</td>
<td>2002</td>
</tr>
</tbody>
</table>

*Source: RIS.*
accepted that the task of reconciliation cannot be discharged by any single country and that regional cooperation and global responsibilities need to be formalized and gives an institutional mechanism (See Box 8.2).

In Pakistan the Plant Variety Protection (PVP) Act has been finalized after detailed deliberations. Pakistan has strengthened the mechanism for approval of any plant variety for commercial cultivation. All the varieties of major crops are now screened and tested for any possible disease, for their tolerance and their possible implications for environment. The environment ministry has issued the guidelines for complying with before PVP protection is granted. The various ministries are also working towards the necessary legislation concerning access to genetic resources required under the Convention on Biological Diversity (CBD).

Biodiversity in Sri Lanka has been a major policy concern. This country is one of the 25 biodiversity hotspots of the world. The South Western region of Sri Lanka is extremely rich with biodiversity. The Convention on Biological Diversity was signed and ratified by Sri Lanka in July 1992 and March 1994, respectively. The Ministry responsible for the subject, the Ministry of Environment and Forest, has the duty to ensure that the provisions of the Convention are adhered to.

As part of India’s commitment to TRIPs Agreement under WTO India enacted a legislation protecting plant varieties. In the year 1999 Government introduced a Bill to this effect in Parliament which was later referred to a Joint Parliamentary Committee (JPC) so as to ensure protection of farmers’ interests. After getting recommendations from this committee Government enacted the Plant Variety Protection Act (PVPA), 2001.

The PVPA attempts to ensure the delicate balance between the interests of plant breeders and farmers. The farmers now can raise crops of a protected variety every year from their saved seeds. Under this legislation the plant breeders can make profit from the first time sale of self-perpetuating plant species. The Act has taken care of farmers’ interests by putting a clause

<table>
<thead>
<tr>
<th>Countries</th>
<th>CBD Signatories</th>
<th>CBD Ratification</th>
<th>CBD Contribution to Trust Fund for CBD (in USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bhutan</td>
<td>11-06-1992</td>
<td>25-08-1995</td>
<td>92</td>
</tr>
<tr>
<td>India</td>
<td>05-06-1992</td>
<td>18-02-1994</td>
<td>31,534</td>
</tr>
<tr>
<td>Pakistan</td>
<td>05-06-1992</td>
<td>26-07-1994</td>
<td>5,641</td>
</tr>
</tbody>
</table>

**Source:** RIS.

The Convention of Biological Diversity (CBD) and emergence of TRIPs regime under the WTO has set in a canvass where policy options for developing countries have got squeezed to very few while challenges have multiplied many times. In this context regional cooperation has to be seen in a new perspective. Living organisms do not recognize territorial boundaries. As a result, wild biological diversity, diverse cultivars of crops, land races of domesticated animals, and marine and coastal biological diversity are shared by neighboring countries. They also shared the socio-economic contests in which biological diversity is maintained and could be threatened. In this regard, South Asian countries can evolve a work agenda:

(a) Actions to be taken at regional levels:
Appropriate institutional set up at the regional level can only help in streamlining the various efforts made for biodiversity conservation and would also help in meeting individual commitments at international forums. The Technical Committee on Environment and Metrology, which has been considering to give a shape to the SAARC cooperative programme for biodiversity management, and the Technical Committee on Science and Technology, working to get SAARC Biodiversity Council established, should work in close cooperation. The SAARC Biotechnology Council may act as a forum for scientists and policy makers in the region and from other developing countries to discuss issues related to the biotechnology policy in particular and bioresource policy in general.

(b) At regional level efforts should be made to establish a Biodiversity Conservation Fund (BCF). The BCF would be meeting a long felt need of a financial mechanism required for the conservation and management of biodiversity. The SAARC member countries may consider various instruments to tap resources for this fund.

(c) At the regional level, effort should also be made to hold a special meeting of Environment Ministers to draw attention at the apex level on the vital issue of biodiversity conservation. Similar meeting is also required to be organised at the level of senior officials, NGOs, economists and experts from legal profession to continue a meaningful dialogue at the regional level.

**Action to be taken at the National level**
(a) At the level of National Government in each member country, it is important to realize that biodiversity conservation has to be a multi-disciplinary exercise to enhance involvement of experts from different streams. National Governments should set up inter-disciplinary committees at the highest level of advise and guide the conservation programmes.

(b) The law schools and universities may consider to launch diploma courses in the legal aspects of biodiversity conservation. Similar courses should also be made available in technical aspects of conservation for legal experts. At National Government level efforts should also be made to recognize and encourage the role being played by women and NGOs in conserving biodiversity.

proposed a voluntary code of conduct for the release of GMOs way back in 1994. This has now been updated by the ministry of environment as biosafety guidelines in consultation with all the stakeholders, which hopefully will soon be approved at the appropriate forum. This will provide an impetus to indigenous R&D biotechnology activities. A National Biosafety Committee was formulated in January 2000. Draft proposal on Biosafety Regulation was prepared and is at approval stage by the Federal Government.

The biosafety debate in South Asia came under a sharp focus when Sri Lanka took an extreme step of banning the imports of GM food completely in May 2001. The Sri Lankan gazette notification on the ban said it affects any food or food additives that have been subjected to genetic modification. It mentioned “genetically engineered food” means food that contains or was produced with a genetically modified material. One of the reasons given for the ban was that Sri Lanka did not have the expertise to judge whether imported GM foods were good or bad. This got Sri Lankan authorities at the centre of storm. The ban was subsequently suspended.

In the first option, the Sri Lankan food control Authority has the responsibility of looking into the food safety aspect of GM foods on behalf of consumers. The second option is the ban. Although the word “ban” is not used anywhere in the regulations restricting the imports of GM foods, by implication it is a ban. At this point Sri Lanka is working with the UNEP-Biosafety project to evolve national guidelines and strengthening the risk assessment and management system for effective biosafety mechanisms. As part of the project the database is also been established to put together information about GMOs and LMOs. Sri Lanka has also signed the Biosafety Protocol on 24 May 2000 and is all set to establish domestic legal measures and build capacity in the area of biosafety before final ratification comes. The Ministry of Environment is the National Focal Point and is obliged to implement the articles of the protocol.

In Bangladesh the priority at this point is in setting up of a National Committee on Biosafety of Bangladesh (NCBB), as has also been proposed in the Biosafety guidelines. The committee is to oversee research on transgenic and hazardous organisms in the research institutes handling such material, monitor release of such organisms into the environment and also to ensure food safety, if such organisms are detected in food. The committee will also oversee the import of such organisms into the country. The NCBB has to be headed by a full Secretary and a member-secretary on a full time basis as explained in the guidelines.

In India, the debate on biosafety guidelines has come a full circle as Indian Ministry of Environment and Forest (MOEF) reported sowing of unapproved genetically modified (GM) cotton seeds in several hundred hectares
of land. The report has stirred the ongoing debate on GM crops in India, as had happened way back in 1997 when unapproved GM eggplant was located in an agricultural research institute without sufficient safeguards. This has once again brought the implementation-related aspects of biosafety protocol at the centre-stage and has raised several issues concerning the very ability in many developing countries to handle sensitive technologies in such vital sector as agriculture. Though India established the bio safety guidelines way back in 1989, till now no commercial trials of GM crops have been allowed except the one for which permission was granted in (March 2002). India’s Biosafety and Recombinant DNA Guidelines (1990) fall under the Environment (Protection) Act of 1986. In 1994, after India signed the Convention on Biodiversity, the DBT revised its earlier guidelines to accommodate the safe handling of GMOs in research, application and technology transfer. This includes the large-scale production and deliberate release of GM plants, animals and products into the environment. The guidelines are also provided for the shipment and importation of GMOs for laboratory research.

### 8.6 An Agenda for Regional Cooperation

Biotechnology has emerged as one of the important links in the regional cooperation programme in the Asian context. BIMST-EC, Asian Cooperation Dialogue (ACD) and Indian Ocean Rim Cooperation are some of the groupings in which different South Asian countries are participating and biotechnology has been identified as a priority area for cooperation. In the framework of SAARC also several activities are being conducted.

The first meeting of the Technical Committee on Science and Technology under the reconstituted SAARC Integrated Programme of action identified biotechnology an important area of joint activity in Delhi 2001. The committee emphasized on the need of building a talent pool available in the SAARC countries. The meeting also called for acknowledging the availability of a vast reservoir of natural resources in the region. The Special Session on Biotechnology also reviewed progress on activities undertaken already such as plant tissue culture, medicinal and aromatic Plants, vaccines and diagnostics for human health, aquaculture and human resource development.

However, there are certain areas enlisted below which may be addressed on priority for regional cooperation:

#### Research Priority for Food and Nutritional Security

In terms of ensuring nutritional security in the region it is important that research plans address issues like increasing Vitamin A, iron and other nutrient in the edible portion of various plants and crops. It is desirable that South Asian countries come together to address these constraints and economize on selection and application of various techniques in biotechnology. Regional cooperation may even strengthen national approaches in integrated nutrient management and development of biofertilizers and biopesticides. The post-Green Revolution progress with soil fertility, environment, biological stresses should be shared to evolve an effective strategy towards sustainable agriculture.

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**Table 8.4: Leading Biotechnology Institutions and Status of Biosafety in South Asian Countries**

<table>
<thead>
<tr>
<th>Country</th>
<th>Responsible Agency</th>
<th>Status of Regulatory System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Protocol Signed</td>
<td>Protocol Ratified</td>
</tr>
<tr>
<td>India</td>
<td>Ministry of Science and Technology (Department of Biotechnology)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Ministry of Environment and Forests (Genetic Engineering Approval Committee)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Centre for Cellular and Molecular Biology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Center for DNA Fingerprinting &amp; Diagnostics</td>
<td></td>
</tr>
<tr>
<td>Pakistan</td>
<td>Establishment of Centre of Excellence on Molecular Biology (CEMB)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>National Institute for Biotechnology and Genetic Engineering (NIBGE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Centre of Chemistry and Biotechnology, Agricultural Biotechnology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Institute of Biochemistry and Biotechnology</td>
<td></td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>National Science and Technology Commission (NASTEC)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>National Genetic Commission</td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Assisted Reproductive Technologies Commission</td>
<td></td>
</tr>
<tr>
<td></td>
<td>National Science and Technology Testing Commission</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plant Genetic Resource Centre</td>
<td></td>
</tr>
<tr>
<td>Nepal</td>
<td>National Agriculture Research Council (NARC)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Royal Nepal Academy of Science and Technology (RONAST)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biotechnology Development Council</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Biotechnology Coordination Committee</td>
<td></td>
</tr>
<tr>
<td>Bhutan</td>
<td>National Biodiversity Center</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>National Environment Commission</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Renewable Natural Resources Centres</td>
<td></td>
</tr>
</tbody>
</table>

Source: RIS.
Harmonization of Biosafety Regulations
In the region Biosafety Protocol has yet to be ratified by some of the member countries. This puts South Asia on an uneven ground in terms of implementation of a regulatory regime for governance of biotechnology in the region. The biosafety and protocols from all member states except two were exchanged. Follow up action is being taken by respective member states. It may be agreed that all countries would exchange their existing biosafety procedures and protocols. Depending on the outcome of the ongoing WTO discussion on labelling and segregation of GMOs, it is important that regional approach is developed in this important area. In this regard, international support by various agencies should be explored so as to overcome the scientific uncertainty and methods for traceability.

Lesson should be learnt from OECD countries where debate on monitoring of GMOs after release into the natural environment has further intensified. Some scientist argued that monitoring should be continued so that more insights are available for risk management while others feel that the high cost of monitoring are not justified when transgenics have successfully passed the hurdles of safety assessment and risk management.

Cooperation in Human Resource Development
It is important to realize that some of the South Asian countries are facing constraints on the front of trained manpower in the first generation biotechnology. At present, there are not enough capable scientists with adequate exposure to advances in biotechnology. Agriculture and forestry are key sectors where even preliminary biotechnology can help in a major way. Some other members like India and Sri Lank are moving towards the new biotechnologies from the first generation biotechnology. Thus, these complementarities should be tapped for expanding the regional technological frontier. In this regard the financial support from SAARC-Japan Special Fund may be tapped to strengthen the manpower skill upgradation programme. Human resource development is also important for facilitating technology transfer and adaptation when it comes to international collaboration.

Data Bases and Networking
The South Asian countries may also consider the pooling of resources for ensuring online search for scientific literature through internet and help scientific institutions overcome the high costs of purchase of scientific journals.

Some countries are gaining experience in field testing, while others have not yet completed biosafety guidelines. Information on socio-economic and scientific development in biotechnology and biosafety can be accessed from a number of information sources, including the Biosafety Clearing House mechanism to be provided under the terms of the Cartegena Biosafety Protocol.

Joint Research in Other Key Areas
It is important to link up various research project funded at the bilateral and multilateral level to converge so as to yield regional gains. There are some major challenges which modern biotechnology may help in overcoming together with traditional plant improvement methods in making available better agro economic practices. In many parts of South Asia salinity and drought resistance are some of the issues which have to be addressed on priority.

Activate Joint Forum for Private Sector
Developments in biotechnology are largely driven by multilateral cooperation the world over. It is important that small national companies get regional support in terms of access to technology and resources. In this regard, firms working in the area of biotechnology in South Asian region should become more active at a joint forum to provide their inputs for policy formulation and for working toward joint stands in international negotiations.

Regional Biodiversity Conservation Fund (RBCF)
At the regional level efforts should be made to establish a Regional Biodiversity Conservation Fund (RBCF). The RBCF would be meeting a long felt need of a financial mechanism required for the conservation and management of biodiversity. The SAARC member countries may consider various instruments to tap resources for this fund. The fund may be used for supporting collective initiative such as inventorising the germplasm collected for SAARC gene bank for setting up of crisis management group for any kind of biohazard; and collective monitoring of biosafety protocol for checking transboundary movement of genetically modified organism.

Endnotes
2 Declaration at the Third International Plant Tissue Culture and Biotechnology Conference.
4 www.iaea.or.at/worldatom/Press/
5 Dukpa and Yaganagi, 2002.
6 Kumar, 1988.
7 India, Sixth Five Year Plan, 1980-85, New Delhi, Planning Commission, p. 326.
8 DBT, Annual Report 1987-88.
9 DBT, Annual Report, various years.
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11 www.ibab.ac.in
12 The Hindustan Times, December 8, 2001
13 Indian Express, January 9,2002
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9.1 Introduction

This Chapter seeks to address the following broad issue: Has the policy reforms at the national level and global economic changes been leading to improvement in the quality of life of the people? In seeking an answer to this question the present Chapter tries to make a brief assessment of the human development profile of the South Asian countries and highlights some of the challenges being faced by the region. In this context, the issue of the relationship between growth strategy and poverty eradication has been touched upon. There is considerable awareness about the national level efforts in the South Asian countries to combat poverty and achieve overall human development. Relatively less known area of regional efforts under the aegis of SAARC for poverty alleviation in the region has also been highlighted briefly in this Chapter. Finally, the Chapter emphasizes need for sharing of successful developmental experiences amongst the countries of the region.

9.2. Human Development Profile

Countries of the SAARC have made progress in various aspects of human development precisely because in this region ‘growth with equity’ always remained the focus of development strategies. However, the progress made so far has varied from country-to-country. Even now around 41 per cent of population is below the income poverty line defined as US $ 1 per day (1993 PPP US $) in the region. It ranges from 44 per cent in India to 6.6 per cent in Sri Lanka (Table 9.1). However, going by the national poverty line estimates, there is evidence to suggest that the incidence of poverty has been declining. For example in India the proportion of population below poverty line has declined from nearby 36 per cent in 1993-94 to 26 per cent in 1999-00.

In terms of health services around 22 per cent of total population is without access to health services. While the best picture is one of Sri Lanka with only 7 per cent population is excluded from health services the other extreme is 55 per cent in the case of Bangladesh.

One of the most basic needs of human existence remains unfulfilled in the region as 11 per cent (151 million) of the total population remains without access to safe drinking water. While Bangladesh has made significant achievements on this dimension with only 3 per cent population not having access to safe water, in the case of Bhutan it is around 38 per cent. Little progress in access to sanitation has been made with 63 per cent of total population in South Asia remaining without access to sanitation. If Sri Lanka has been successful in tackling this problem wherein only 17 per cent of its population is without access to sanitation, in the case of Nepal the figure is 73 per cent.

One of the important indicators of human development is improvement in education. As is evident from Table 9.1 around half of the total adult population in South Asia remains illiterate. Except Maldives where only 3.3 per cent of total adult population is illiterate and in the case of Sri Lanka where this figure is 8.4 per cent, all other SAARC countries confront a daunting task on this dimension. In
terms of female illiteracy too, most of the countries have a challenging task ahead. Challenges of human development are also manifested in the dimensions of child malnutrition, under-5 mortality rate, as well as spread of life-threatening diseases like AIDS.

Summing up, it may be stated that while progress has been made on various dimensions of human development in the South Asian region, the present status of human deprivation in the South Asian countries poses considerable challenges for the development strategies that these countries adopt in the times to come as brought out above. In this context, it may be highlighted that the efficacy of a growth strategy has to be assessed in terms of its developmental implications. An important way of doing so, among others, is by analyzing the poverty elasticity of growth in a dynamic setting, which is taken up below.

### 9.3. Poverty Elasticity of Growth

Ideally, faster economic growth must reduce poverty. The relationship between growth and poverty has remained a debatable issue due to various complexities. In addition, another problem is that the extent to which growth translates itself into poverty reduction varies considerably from one country to another. Some broad implications of a growth strategy manifesting itself into poverty alleviation could be captured by the poverty elasticity of growth. This is defined as the number of percentage points of change in poverty observed for every one per cent rise in real per capita income. A negative figure of such an elasticity implies poverty reduction. As evident from Table 9.2 during the 1990s the greatest elasticities were for the Philippines and Malaysia (-1.7 to –2.0), followed by Bangladesh, the Lao People’s Democratic Republic, India and Vietnam (-0.8 to –1.0), with much lower figures registered in China and Thailand (-0.6). While Bangladesh and India have been able to convert their growth process into a development process at least on the dimension of poverty alleviation, an opposite effect has been observed in the case of Pakistan.

Extending the analysis further it is also possible to capture the growth-poverty relationship by normalizing for the inequality or the distributive aspects. It is yet another way of analyzing the effectiveness of policies in translating growth into poverty reduction by asking the question as to what the elasticity would have been had income inequality been held constant. This is known as the distribution-neutral growth elasticity and by definition it is always negative since under these circumstances positive growth will raise the income of everyone, including the poor, and thus reduce poverty.
During early 1990s, the distribution-neutral growth elasticities were often very different for the South Asian countries as well as across other countries. In the case of Sri Lanka (-3.8) it has been the highest while in the case of Pakistan (-1.6) it has been the lowest with Bangladesh (-2.3) and India (-1.8) falling in between. This needs to be interpreted as the result of ‘varying social and economic conditions, as reflected in the initial income level and initial income inequality prevailing in these countries: the lower the initial level of income and the higher the initial degree of inequality, the harder it will be for growth to lift people out of poverty’.3

9.4. UN Millennium Development Goals

One of the major initiatives for bringing about development among the developing countries is setting up of the UN Millennium Development Goals. As it is evident from Chart 9.1 the track record of the South Asian region in terms of poverty alleviation has not been very encouraging. This uneven progress would have a bearing on the achievement of the UN Millennium Development Goals as well. For instance, South Asia appears to be missing out on the millennium goal with respect to ‘eradicating extreme poverty and hunger’ by 2015.

This poses considerable challenges to the policy makers in the region and it is also consistent with the analysis presented in the preceding sections. However, there has been a number of initiatives undertaken by the policy makers in the South Asian region to address this issue both at the national and regional level.

In the following section, we highlight some of the efforts that have been made in recent times to address various poverty and development related issues, especially human development under the aegis of the SAARC.

9.5. Regional Efforts under SAARC for Poverty Alleviation

There are two important regional-level SAARC initiatives for poverty alleviation that need to be mentioned. The Report of the Independent South Asian Commission on Poverty Alleviation (ISACPA) will be presented at the 12th SAARC Summit in early January 2004 in Islamabad, Pakistan. The 11th Kathmandu summit had also directed the Council of Ministers to review, on a continuous basis, the Regional Poverty Profile to be prepared under the SAARC Secretary-General with the support of related UN agencies and other institutions. The SAARC Regional Poverty Profile 2003 has already been published and it brings out important lessons from the regional poverty situation (Box 9.1). Work on the second issue of the SAARC Regional Poverty Profile 2004 has already been launched. However, in order to meet the challenges of development more concerted effort is required in the South Asian region. This calls for devising pro-poor growth and development policies that

### Table 9.2: Poverty elasticity of growth in the 1990s, selected countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Poverty</th>
<th>Distribution-neutral growth</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Sri Lanka</td>
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Source: RIS based on UN (2003), Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenges of Poverty Reduction, ESCAP.

### Chart 9.1: Global poverty rates down 20% since 1990, but progress is uneven

Source: http://www.developmentgoals.org/Poverty.htm
Box 9.1: Poverty Issues in the SAARC: Some Lessons

The synthesis reports from different country teams indicated several similarities (both positive and negative) among SAARC countries. Speaking of positive changes, during the last 2-3 decades, almost all countries have made visible progress in reducing population growth rates, raising GNP and per capita incomes, social sector facilities etc. However, despite positive trends at aggregate level, the economic and non-economic inequalities between different groups are also visible. In all the countries share of secondary and tertiary sectors in GNP is slowly rising, while the contribution of agriculture (as a primary sector) is declining. Some of the major problems include: widespread poverty (seen through different economic and social angles), low human development index, persistence of “poverty fundamentals” (institutional inequities, rigidities, distorted incentive structures, etc. promoting poverty) and the exclusion of the poor particularly women, low caste people, unorganized sector, landless and casual labour, slum dwellers, etc. persists. This constitutes one of the major challenges before SAARC countries.

By looking at “diversities” of poverty situation in terms of who the poor are, where they live, and why they continue to be poor, the report calls for a disaggregated view of the poor and differentiated poverty reduction interventions. The disaggregated picture of poverty and a framework to understand the same has been dealt with.

The report also sketches a framework to revisit the past development strategies and tries to indicate how poverty reduction failed to get sharp and exclusive focus in the past. The dominant features of past efforts in terms of (i) centralized, top-down and supply-driven (charity dominated) approach, (ii) persistent macro- micro disconnects, (iii) disregard of “poverty fundamental” as key obstacles; (iv) low priority to institutional dimensions; (v) disregard of perspectives and potential of the poor due to top-down approach, etc. were largely responsible for their mixed success.

The report looks at the gradual shifts in development policies and approaches, which have led to the current situation where both poverty issues and anti-poverty measures are being looked at differently. At present poor are slowly recognized as partners in fighting poverty by way of enhancing their capacities, promoting social mobilization, participation and decentralization as well as bottom up approaches. The donor-NGO-government partnership is a key driver of this change.

While narrating positive achievements of past strategies the report puts together selected success stories to validate the new changes in strategies to address poverty. These success stories deal with different aspects of poverty reduction strategies. The report pleads for recording more success stories or best practices and understand their driving circumstance in order to help replicate such successes. One feature of such successes is increased role of NGOs and communities in fighting poverty and deprivations faced by the poor.


are more effective. This perhaps is possible with the help of understanding some of the implications of the globalization and the economic reforms process in the region and devising social safety nets to achieve the objective of human security and human governance.

9.6. Challenges for Human Development Education

Education, which is an investment in human resource development, increases employment opportunities, improves productivity and thereby increases national income. Another advantage of education is that educated women tend to have lower fertility. Further educational indicators especially that of females, are found to be positively related to life expectancy at birth. Given such important linkages between education and other basic needs and economic indicators, the provision of educational services to the masses would have to be viewed within the framework of human resource development for the overall development.

The challenges in the sphere of education in South Asia have become formidable because of earlier neglect. Approximately 2.2 million children are added each year to the existing number of 50 million. This results in a high pupil-teacher ratio in the region. Moreover, the poor quality of schooling, unqualified teachers, irrelevant curriculum, lack of textbooks and other learning materials are chronic in South Asia. Above all, the problem of school dropouts reflects the quality of education. However, all the South Asian countries have adopted measures to strive for universal education, but progress within the region remains varied.

Another concern relating to human development is the persisting gap between enrolment rates of males and females at all levels, which is particularly wide at the tertiary level. Among the South Asian countries, The Maldives and Sri Lanka have the narrowest gap between educational attainment of males and females at the primary as well as secondary level. On the other hand Bangladesh, India and Nepal have a very wide gap at the secondary level. It seems that despite the widespread universal primary education programmes initiated by the entire South Asian member countries there are wide gaps in enrolment rates between males and females. During 1995-99, at the primary level, gross enrolment of girls is only 81 per cent compared to 99 per cent for boys. During the same period, South Asia’s female adult literacy rates reached 43 per cent from 24 per cent in 1980. Despite remaining the most illiterate region in the world, South Asia has achieved universal primary education for all.

It has been further estimated that out of the total illiterate population in the South Asian region, 63 per cent are women – nearly two fifths of girls, enrolled in primary school drop out before grade V. As a result, the net primary school attendance is much lower for girls than boys in South Asia during 1990s. Further, this is much lower in South Asia as compared to the
world average. As regards the mean years of schooling, India, Nepal, Bangladesh, Pakistan and Bhutan have only 1.2 years of schooling as compared to 6.3 and 3.9 years in Sri Lanka and Maldives. However, only Sri Lanka has met the minimum target of universal primary education, although India and Bangladesh have made considerable progress in bringing school enrolments for girls nearly in line with boys. One encouraging development, is the adoption by the Indian Parliament in Autumn 2001, of a legislation which provides the right to education for children aged 6-15. Sri Lanka has undertaken a major reform of the educational system to respond to the emerging needs (Box 9.2).

Reforms and Social Sectors

With the exception of Maldives, social sector expenditures in South Asia remain low at less than 5 per cent of GDP. This contrasts the patterns of public expenditure in these sectors in the world, which are substantially high at around 5 per cent of GDP/GNP. Apart from The Maldives, Bhutan also accords high priority to public expenditure in these sectors. Even though Sri Lanka has made considerable advances in these sectors, public expenditure in health and education continue to remain low as a proportion of national income during the 1990s. For India, public expenditure on education as a proportion of GNP is equal to the South Asian average of 3.2 per cent (Table 9.3).

Though public expenditure in the health and education sector in India has increased, the increase has not been proportionate during the 1990s. In fact, as a proportion of GNP, public expenditure on education declined from 3.9 to 3.2 per cent in the post-structural reforms period in India. The challenge for the reforms programme is to strike a balance between a critical fiscal situation and social sector development, which impinge critically on the long-term sustainability of growth.

**Box 9.2: Educational Reforms in Sri Lanka**

Sri Lanka has undertaken a major reform of educational system since 1998-99, encompassing all areas of primary, secondary and tertiary education with the broad objective of enhancing learning achievements at all levels, in line with the needs of a market driven economy. This would ensure versatility and adaptability, confidence to face challenges, a positive work ethic, leadership and team work and most importantly, communication skills in the present day labour market. The educational reforms that are being implemented are expected to address these issues. The total government expenditure on education in 2000 increased by 6 per cent over the previous year. The total expenditure in relation to GDP was 2.5 per cent in comparison to 2.6 per cent in 1999.

There are pirivena, private and international schools in addition to government schools in Sri Lanka. But, in government schools, the average student/teacher ratio has remained unchanged. The general education reforms, introduced at grade 1 in 1999, were extended to grade 2 in 2000 and will be gradually extended to grade 5 by 2003, when it is likely to be completed. The reforms were simultaneously introduced to grade 6, 9 and 12 during 1999. These general educational reforms envisage not only changes in classroom teaching, but also reforms in a variety of such related activities as strengthening the teaching of English, developing of technical and practical skills of students, co-curricular activities, special education for handicapped students, counselling and career guidance, school based management and teacher education. Along with the educational reforms, several programmes were introduced to improve infrastructure and support services such as rehabilitation of classrooms, introduction of computers in schools, construction of new school buildings among others. Improvements were also envisaged for non-school going children between the ages of 5-14 years. Along with this, the teacher education service was also strengthened.

With regard to university education, the reform process was relatively slow. In 2000, there were 13 national universities, including the Open University of Sri Lanka. Total admission to universities other than open university is low when compared to the total number of students who acquired the minimum eligibility requirements for university entrance. The student/teacher ratio at universities further improved to 12.6 in 2000. A large unmet demand for higher education continues to exist. In an effort to address these issues, a new tertiary education strategy was planned during 2000. The University Grants Commission (UGC) recognized two institutions, viz. the Sri Lankan Institute of Information Technology (SLIIT) and the naval and Maritime Academy (NMA) as degree awarding institutions, under the Universities Act. The Institute of Technology at the University of Moratuwa was also established in 2000.

Several initial steps were taken to implement university education reforms in 2000. The major components of the university education reforms are curriculum reforms, establishment of career guidance services, staff development, preparation of a new Universities Act, accreditation and quality assurance. The UGC conducted several awareness programmes among university authorities regarding curriculum reforms in 2000. Several universities have commenced career guidance units in consultation with the Ceylon Chamber of Commerce. Most universities have established staff development units to provide orientation programmes to new recruits to the academic staff. However, there has been slow progress in university education reforms during the past three years owing to a shortage of financial resources, lack of enforcement efforts and the absence of a time frame for implementation. In view of the large demand for higher education, the possibility of seeking private sector assistance in conducting higher education programmes to lessen the burden on the government has been widely discussed. It has been said that the private sector is in a better position to design and conduct courses that are in greater demand in the labour market. For this purpose, the establishment of an accreditation and quality assurance institution is a prerequisite. The proposed Universities Act is likely to have provisions for the establishment of such an institution.

Meanwhile, the technical education and vocational training sector expanded further, in line with the recommendations made by the Presidential Task Force on Tertiary Education and Vocational Training. With the rising importance of Information Technology (IT) in the educational system, the private sector has taken the leadership in training IT personnel. In the state sector, the University of Moratuwa, Institute of Computer Technology (ICT) of the University of Colombo and the National Institute of Business Management are the main institutions providing IT education.

The Technical Education and Vocational Training (TEVT) sector expanded in line with the recommendations of the Presidential Task Force (PTF). The TEVT sector consists of technical
Box 9.1 continued

countries, other public and private training organizations and training institutions managed by NGOs. The target group for TEVT includes unemployed youth, rural women, school leavers and other disadvantaged and low-income groups. The ongoing TEVT reforms concentrate on major areas such as the role of the government, the involvement of the private sector in TEVT, the linkage between general education, university education and TEVT, and training for self-employment and unorganized sector. The Tertiary and Vocational Education Commission (TVEC), the apex policy setting and regulatory body in the TEVT sector, took a number of measures for the systematic development of the sector. While the Department of Technical Education and Training (DTET) admitted large number of students in technical colleges, the Sri Lanka Institute of Advanced Technical Education (SLIATE) conducted higher national diploma courses in engineering, accountancy, commerce and business studies. The Vocational Training Authority of Sri Lanka (VTA) is entrusted with vocational training in rural areas, and district centres in various parts of the country.


Table 9.3: Public Expenditure on Education and Health

<table>
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<tr>
<th>Countries</th>
<th>Public Expenditure on Education (as % of GNP)</th>
<th>Public Expenditure on Health (as % of GDP)</th>
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<tr>
<td>World</td>
<td>4.9</td>
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</table>

Notes: a Data refer to the most recent year available during the period specified in the column heading
b Data refer to expenditures by Ministry of Education only.

Global Competition and Social Safety Nets

A lot of discussion has taken place in recent times on the issue of pro-poor growth. Analysts have tried to define this concept as comprehensively as possible (Box 9.3). However, such concepts need to be studied in the light of certain implications of increasing global competition for social security and human governance.

One of the consequences of increased competition is unemployment which contributes directly to human deprivation profiles. It has important implications for the poverty and inequality profiles of different countries in the region. One of the reasons of such a phenomenon in the South Asian region is the increased use of capital and technology intensive methods of production to meet competitive standards at the global level as well as within a domestic economy. Rigidities in the labour market coupled with limited skill upgradation and barriers to labour mobility also play their role.

Access to foreign financial resources in the form of FDI inflows is an advantage of global integration. However, the influence of FDI inflows on labour market needs to be assessed in terms of its ultimate effect on the pattern of generated employment. The effect of FDI on the overall employment situation in a country would depend on the kind of production technique foreign enterprises adopt. There is a possibility that FDI inflows move towards less labour intensive sectors affecting employment levels adversely. The unemployment situation gets aggravated especially when FDI crowds out local investment. FDI inflows could affect employment and labour in the host countries in a number of other ways as well. These include their possible tendency to adopt more capital intensive technique of production than their local enterprises, and low vertical inter-firm linkages generated by foreign affiliates. FDI could also have indirect effects on employment and labour through relative scales of operation, trends in their restructuring, their competitive effects on local industry among others. These together bring to the fore the imperatives of creating adequate social safety nets so as to facilitate inter-sectoral mobility of workers and their adequate training.

It has been argued that given the prevalence of widespread poverty and deprivation in South Asian countries there is a need to adopt a wider concept of social security that would include both promotional and protective social security. A characteristic feature of current social security programmes in South Asian economies is that they are designed in a conceptual vacuum and are implemented mainly as welfare measures. The emphasis is on promotional measures and even within that category, on poverty alleviation programmes. A balanced provision of promotional and protective social security measures is not much evident in any country. Some estimates of the resource requirements for providing such balanced social security suggest that the cumulative cost of essential human investment over the period 1995-2010 would be over 4-5 per cent of GDP. Such allocation of resources towards the wider connotation of social security is essential for the South Asian countries to reap the benefits of the linkages between social attainments and economic growth.
Pro-poor growth has been defined variously. Some refer to it as growth that results in significant poverty reduction, thereby benefiting the poor and improving their access to opportunities. But it is not clear how significant a reduction in poverty must be and how progress in achieving pro-poor growth is to be monitored. Others equate pro-poor growth with high elasticity of poverty with respect to growth, this still begs the questions of measuring and monitoring. The concept of “mean growth rate of the poor” has also been introduced, which seems analytically ambiguous.

Pro-poor growth is the type of growth that enables the poor to actively participate in economic activity and benefit proportionally more than the non-poor from overall income increase. This signals a clear departure from the trickle-down development notion of the 1950s and 1960s that meant a gradual top-down flow from the rich to the poor. Similarly, it has been stated, “pro-poor growth to mean that the poor benefit disproportionately from economic growth.”

Key to the definition of pro-poor growth is the joint consideration of growth and its distribution. It should be stressed that, while both ex ante and ex post distribution are pivotal to poverty reduction, as such pro-poor growth is essentially about ex post distribution, i.e., distribution of the increment to the pie, not of the existing pie. Moreover, pro-poor growth is primarily about the distribution of growth between, not within, lower and upper income groups. Pro-poor growth merely requires that the proportional income growth of the poor exceed the overall average income growth.

**Source:** Pernia, Ernesto M. (2003).

### Box 9.3: What is Pro-poor Growth?

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**Source:** Pernia, Ernesto M. (2003).

### Box 9.4: Empowering Technologies in Bangladesh

Rural Bangladesh, where average incomes are less than $200 per year, might not seem like promising territory for a mobile phone company. But Grameen Phone has shown otherwise. In partnership with the renowned microfinance trailblazer Grameen Bank, it has pioneered a new model for rural telephones based on shared access-one phone per village-operated by a local entrepreneur. The bank loans a villager, usually a woman, the money to buy a mobile phone; she sells access to the phone to her neighboring villagers, who pay for calls in cash. As documented in an independent study by the Canadian International Development Agency and a more recent analysis by the World Resources Institute, such village phones have been a commercial success, each phone generating revenues that average $90 per month-twice what the company earns from its urban mobile phones. The pent-up demand for telephone service and the ability and willingness of poor people to pay for it have turned out to be enormous. Not only are the phones profitable; they have also been a social success, providing economic benefits and improving the lives of villagers in ways that put most antipoverty programmes to shame. Incomes of the phone entrepreneurs have risen sharply. And phone calls can now substitute for a trip to the city that would cost villagers ten times as much as a call. The village phones have helped people working abroad send money to their family back home, enabled farmers to get fairer prices for their crops, and allowed people to discuss important occasions with relatives.


### Sharing of Experiences within South Asia

One of the ways in which the South Asian countries could cooperate for human development through poverty reduction, income generation, employment augmentation and inequality reduction is by sharing the successful experiences. Learning lessons from each other for growth and development could be one important dimension of intra-SAARC regional cooperation for achieving the objective of development with a human face.

An example of IT as an enabling technology to help the rural poor in the area of rural telecom is evident in Bangladesh (Box 9.4). It might not be well known that how a company named Grameen Phone in collaboration with the Grameen Bank has pioneered a new model for rural telephones based on shared access-one phone per village-operated by a local entrepreneur. The popularity of mobile phones through this venture has resulted in substitution of travelling to cities and reduced the cost of communicating with people tremendously along with providing the ease at which people can do their daily businesses in the rural areas.

In the case of Bhutan one of the success stories is in the area of horticulture development with the assistance of the UNDP. An effective implementation of an Integrated Horticulture Development Programme has made some significant progress particularly under the aromatics and medicinal plants component and that too most significantly with the development of essential oils industry from lemongrass (Box 9.5). In terms of its impact for some poor Bhutanese farmers in the east, the development of lemongrass oil industry has played a significant role in improving their livelihoods through low level of investment and comparatively high returns resulting in income generation, employment, better housing and affordability of education.

Substitution of traditional fishing methods by mechanized fishing boats in Maldives with the help of UNDP has been yet another successful example of human development at large from which other South Asian countries, where marine sector is prominent, can learn. Such a project has helped the rural fisherfolk double their fish catch resulting in increased incomes, greater trade and reduced poverty (Box 9.6).

It is worth highlighting how a process of social transformation started taking place when the Village Development Programme (VDP) got intensified in Nepal. This has resulted in building a sustainable institutional foundation towards poverty alleviation initiatives at the grassroots. The programme is based on a participatory approach and focuses on sustainable...
Box 9.5: Growing Pristine Mountain Aromatic and Medicinal Plants in Bhutan

About 85 per cent of the Bhutanese population live in rural areas. Thus, in the promotion of sustainable livelihoods, the stress is necessarily on sustainable increases in agricultural productivity and the development of potential in such areas as horticulture, where Bhutan has a comparative advantage. The sustainable development of horticulture is able to increase the incomes and nutritional standards of the rural population, especially the poor.

Horticulture development has greater potentials than the development of food grains for raising incomes, improving the welfare and quality of life of rural households and promoting rural industrialization. In line with this national objective, UNDP is supporting six of the eight components of the National Horticulture Action Plan through a technical assistance programme amounting to US$ 6.5 million. The six components are: coordination, marketing, post harvest storage and quality control, technology development, extension and cultivation, and processing of aromatic and medicinal plants. UNDP intervention is being used to strengthen national capacities in these areas complemented with on the ground activities including, developing/testing appropriate technologies, promoting new crops, etc., so as to develop and support a vibrant horticulture industry.

The Integrated Horticulture Development Programme has made some significant progress particularly under the aromatics and medicinal plants component and that too most significantly with the development of essential oils industry from lemongrass (Cymbopogon flexuosus), which grows in abundance in the chirpine forests of four out of the six eastern districts. The principal economic value of the lemongrass is the lemongrass oil which is steam distilled from the fresh lemongrass, available from June to November every year. The oil is used in manufacturing vitamin A and in the flavour, cosmetics, perfumery and soap industries. With its low level of investment and comparatively high returns, the development of lemongrass essential oil industry in the four eastern districts has come as a boon for the farmers where cultivation and traditional agriculture is a daily struggle against the harsh and steep topography of the region.

For some poor Bhutanese farmers in the east, the development of lemongrass oil industry has played a significant role in improving their livelihoods. “It has enabled me to replace the roof of my house with more durable corrugated iron sheets – a dream come true for me” says Mr. Chador from Mongar, a district in the east. “It also enables me to buy proper school uniforms for my two sons” continues Mr. Chador.

It has been estimated that about 746 households or over 4400 people are engaged in lemongrass production generating an income of US$ 973,000.

Source: http://www.undp.org/rbap/bhutan.htm

Box 9.6: Mechanized Fishing Boats Transform Lives of Maldivian Fishermen

Reversing several centuries of traditional fishing by sailboat, mechanization of the masdhoni (fishing boats) has truly contributed to trade and the alleviation of poverty. The rural fisherfolk doubled their fish catch and their incomes increased considerably.

The UNDP project of $326,370 led to a World Bank loan of $3.2 million. A revolving fund was created to lend money to fishermen for boat engines. The loans had a 9 per cent interest rate and were repayable over 8 years. The new masdhoni was seven times faster and much more maneuverable.

Since then, in little more than a decade, the fish catch has increased more than three-fold, from 30,000 metric tonnes to more than 100,000 metric tonnes annually.

An improved design and mechanized masdhoni, called the “second generation” fishing boat, was developed and introduced, providing versatility and ability to travel further to fishing grounds that traditional masdhoni could not. Since fishing boats were traditionally owned and operated at the community level, the project made a huge impact on people’s incomes. It would be no exaggeration to say that the lives of the rural island population as well as Maldivian fisheries were transformed as a result of the project.

The resulting loan scheme was the first large-scale credit programme in the country. It was the first time fishermen had borrowed money from an institution, yet the repayment rates were almost 100 per cent. Today 90 per cent of the fishing boats or masdhoni in the Maldives are mechanized.

Source: http://www.undp.org/rbap/maldives.htm

local governance and development programmes. It uses social mobilization as a tool for inspiring the local people to form their own community organizations, to promote development through their own and other resources, and to actively participate in decision-making process for improving lives and their surroundings. The impact has been phenomenal in terms of improving the quality of life on the one hand and breaking social taboos on the other. It has provided avenues for income generation, greater social mobility, helping people to get their children admitted to schools, etc. (Box 9.7).

9.7. Summing Up

It has been observed in this chapter that the human development profile of the South Asian countries poses daunting task for the policy makers of the region. This has also been corroborated by the concept of the poverty elasticity of growth. In this background, it may be highlighted that the region might find it difficult to achieve the UN MDGs. The chapter also highlighted some of the regional efforts for poverty alleviation under the SAARC and brought out some of the implications of increased global competition for devising social safety nets. Emphasis has been laid on sharing the experiences and mutual learning from successful experiments that helped reducing poverty, increasing employment, income generation, trade augmentation and development at large.
Box 9.7: Breaking Social Barriers in Nepal

The transformation started taking place five years ago when the Village Development Programme (VDP) started spreading. The Participatory District Development Programme (PDDP) initiated the VDP in 1996 as one of the key components directly associated with building a sustainable institutional foundation toward poverty alleviation initiatives at the grassroots.

The PDDP takes VDP as a primary channel of implementation for participatory and sustainable local governance and development programmes. The PDDP works in 30 districts and the VDP is being implemented in 334 VDCs, affecting the lives of 218,272 villagers. As a people-centered programme, the VDPs main thrust is improving livelihoods at the household level for alleviating poverty. It uses social mobilization as a tool for inspiring the local people to form their own community organizations, to promote their development through their own and other resources, and to actively participate in decision-making process for improving their lives and their surroundings. The VDP’s approach is to encourage participation of men and women in decision-making processes as well as to enhance their voices and choices through their own organization at the grassroots.

Within a short span of time, the VDP has had dramatic results not only in the overall improvement in the life of the villagers but by breaking in the caste barriers as well. Says Thule: “We have become acceptable to society. Our children go to school with the other children. They do not have to listen to taunts. People welcome us in their homes.” The change has boosted the self-confidence of Thule. When the pots and pans he had made did not find a good market, Thule was disheartened - but not for long. He decided to switch to vegetable farming, and started cultivating tomato in the land stretching over three ropanis. He instantly made a Rs. 40,000 profit – something he had never imagined. His lifestyle has undergone a drastic change - socially, economically and personally. The change in Thule Biswokarma’s life is quite visible. He has constructed a new toilet in his house thanks to the initiative by his community organization. He has some money - enough to avoid the embarrassment and insult he used to face running from door to door of the upper cast people. He has gained enough confidence to talk to the same people whose face he hardly had the courage to look at. “I am very happy with the turn of events,” says Thule. He owes his happiness to the VDP. It has given villagers like Thule the freedom to implement local programmes and projects by themselves. The villagers are mobilized from groups irrespective of caste and ethnicity. And the groups initiate programmes for themselves.

As the government embarks on improving the status of so-called low-castes, also known as the Dalits, this could be a model worth emulating. The recently formed National Commission for the Dalits could well take a leaf out of the Saathighar Village Program to change the fortune of the Nepalese Dalits, who account for a fifth of Nepal’s 23 million people.


Endnotes
1 See RIS, 2002 for details.
2 for a more detailed analysis see RIS, 2002 for details.
3 UN, 2003.
4 Panchamukhi and Das, 1999.
5 Panchamukhi, Kumar and Das (forthcoming).

References
South Asia Development and Cooperation Report 2004

South Asia has sustained an average growth rate of 5.5 per cent per annum over the past two decades despite many external and domestic shocks, making it one of the most dynamic regions in the world. With more than a decade of reforms behind them, the region's economies are more intensively integrated with the global economy, growth of income and exports display promising outlook and inflation rates are in check. Despite such achievements in terms of economic performance, however, the region is home to more than two fifths of the world's poor. The region also fares very poorly in terms of different indicators of human development such as education, health, nutrition, among others. Therefore, the region needs to further accelerate its growth process with an emphasis on human development and strengthen competitiveness to deal with the daunting challenges of alleviation of poverty, hunger, illiteracy, and disease.

The *South Asia Development and Cooperation Report 2004 (SADCR 2004)* argues that the region can face these challenges much more effectively as a group rather than individually. The regional economic integration can, by exploiting the synergies, expand the economic opportunities available and strengthen the growth prospects. The recent experiences with economic integration, in the region, suggest that it leads to expansion of trade and development in a balanced and sustainable manner. In the light of these experiences and against the backdrop of mushrooming regional trading blocs in different parts of the world, the Report finds a compelling case for the region expeditiously effecting its transition into an economic and monetary union by implementing SAFTA, forming a SAARC Customs Union and introducing a South Asia parallel currency, as an intermediate step to a single currency.

Among the key sectors presenting opportunities for mutually beneficial cooperation, SADCR 2004 selects transport infrastructure. Transport infrastructure is not only an important determinant of economic development but is also critical in exploiting the gains of economic integration resulting from geographical proximity. The Report also presents a detailed analysis of the capabilities, potential and challenges for mutually beneficial cooperation in the area of biotechnology that has tremendous promise for promoting food security and hence alleviation of poverty and hunger in the region.

These are some of the issues addressed by the Report.

**RIS**

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