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ECONOMIC AND SOCIAL INFRASTRUCTURE

3.1 Overview

The massive infrastructure development drive implemented over the past few years and measures taken to strengthen the human capital base have had a significant positive impact on expanding the productive capacity of the economy and would facilitate a high and sustainable growth momentum in the medium term. Inadequate infrastructure has been a considerable bottleneck in the country's economic progress over the past several decades. The recent focus of the government to accelerate the development of infrastructure projects, while facilitating enhanced economic activities would help to deliver a transformative impact on the lives of the people. The development initiatives taken in the areas of ports, airports, roads, railroads, irrigation, energy and water supply bears testimony to the government's continuous commitment to improve the economic infrastructure base of the country. The Upper Kotmale hydropower project was completed during 2012 and the operations at Mattala Rajapaksa International Airport (MRIA) were inaugurated in March 2013. The Colombo South Harbour Project, Colombo Outer Circular Highway, Phase II of the Magam Ruhunupura Mahinda Rajapaksa Port, Phase II of the Southern Expressway,

the Colombo - Katunayake Expressway, and the extension of the Northern railway line to Jaffna were other mega infrastructure development projects that progressed in 2012. Meanwhile, many small scale infrastructure development projects such as the 'Maga Neguma' rural road development programme, rural electrification projects, minor irrigation projects and community based water supply projects were continued to facilitate regional development. Improvement of the human capital base through upliftment of social infrastructure, is also expected to aid in improving productivity and innovation that are absolutely essential for the economy to move to a higher growth path. Public investment on economic and social infrastructure development amounted to Rs. 388 billion (5.1 per cent of GDP) in 2012.

The private sector also continues to play a significant role in strengthening the economic infrastructure of the country, particularly in relation to the telecommunication and transportation sectors while contributing to enhance social infrastructure such as education, health and housing. The current pace of infrastructure development in sectors such as urban development and transportation provide

Table 3.1 Government Investment in Infrastructure

Year	Economic Services		Social Services		Total	
	Rs. billion	% of GDP (a)	Rs. billion	% of GDP (a)	Rs. billion	% of GDP (a)
2003	58.7	3.2	19.2	1.1	77.9	4.3
2004	61.3	2.9	29.0	1.4	90.3	4.3
2005	77.5	3.2	60.4(b)	2.5	137.9	5.7
2006	106.8	3.6	48.4	1.6	155.2	5.3
2007	141.2	3.9	55.0	1.5	196.2	5.5
2008	168.9	3.8	60.2	1.4	229.1	5.2
2009	256.4	5.3	53.9	1.1	310.3	6.4
2010	278.8	5.0	56.2	1.0	335.0	6.0
2011	312.2	4.8	63.0	1.0	375.2	5.8
2012 (c)	317.6	4.2	70.6	0.9	388.2	5.1

(a) Data based on GDP estimates compiled by the Department of Census and Statistics
Sources: Ministry of Finance and Planning
Central Bank of Sri Lanka
Department of Census and Statistics

(b) Inclusive of Tsunami related capital expenditure

(c) Provisional

numerous opportunities for the private sector to participate and share their expertise. The economic efficiency and long term sustainability of those projects may also be improved through private sector participation in the subsequent maintenance and operation of such projects following the initial capital outlay made by the government. Such forms of Public-Private Partnerships (PPPs) are essential to catalyze economic development and to create an investor friendly environment in the country.

Continued public investment in key social infrastructure facilities has enabled Sri Lanka to create a productive and healthy human capital base, which is vital to sustain a high growth momentum. Sri Lanka continues to remain ahead of her regional peers in terms of social indicators, which have helped ensure significant growth in productivity and competitiveness. However, such achievements are now being challenged by the changing needs of global labour markets and the ongoing domestic demographic transition. A dynamic education system to address the changing needs of the economy is a prerequisite for sustained growth and development. Recognising this prerequisite, the government has initiated a series of measures to reduce regional disparities in education, strengthen service delivery and improve the economic and social relevance of educational

programmes at all levels. However, it is important to ensure that those measures would help improve the quality of human capital produced by the education system to be on par with domestic and international labour market requirements. Private sector participation in the education sector also needs to be encouraged as it can help save foreign exchange by addressing the issue of inadequacy in tertiary education opportunities while improving the quality of education through enhanced competition. In the meantime, continued investment in healthcare will yield enormous economic benefits as there is a strong link between health and human capital development. While the government continues to emphasise the improvement of primary level health care, measures are being taken to control communicable and non-communicable diseases, and to improve housing and sanitation facilities. Low fertility rates coupled with higher life expectancy will increase the aging population in Sri Lanka leading to a strong demand that would be created for health care and elderly care in the future. Changing lifestyles and urbanisation patterns are also expected to have an impact on the health sector significantly in the future.

The commendable progress in infrastructure development needs to be supplemented with an effective institutional reform agenda to harness the maximum economic and social benefits. It is a well-known fact that the financial viability of several key state owned enterprises (SOEs) which provide essential public utility services, has weakened over the past few years. While Ceylon Electricity Board (CEB) and Ceylon Petroleum Corporation (CPC) have been making substantially large losses, Sri Lanka Railways (SLR), Sri Lanka Transport Board (SLTB), SriLankan Airlines and the Department of Posts are among the other entities which have also recorded weak financial performance. The lack of strategic institutional improvements to ensure the financial viability of those institutions can pose a threat to the

macroeconomic stability of the country, considering their importance in the national economy. Hence SOEs must be encouraged to adopt sustainable financial and corporate planning including a rational pricing policy in line with market developments. A rational, flexible and transparent pricing policy can be beneficial to both suppliers and consumers and to the economy through reduced uncertainty, less burden on the government budget, and reduced financing from the banking sector.

3.2 Economic Infrastructure Policies, Institutional Framework and Performance

Communication Services

The telecommunications sector continued to expand in 2012. Accordingly, the total number of telephone connections increased by 8.4 per cent to 23.8 million. This is largely due to higher mobile penetration, which grew by 10.9 per cent. There was a 6.1 per cent growth of fixed wireline telephone connections compared to the 5 per cent growth in 2011. However, the total fixed wireless telephone connections declined by 8.1 per cent due to the removal of non-revenue generating connections with the amalgamation of service providers in the industry. Accordingly, total fixed telephone connections declined by 4.4 per cent. Increased competition between mobile telecommunication

Chart 3.1 Telephone Density

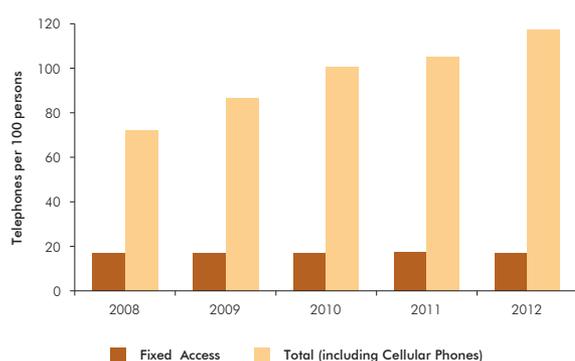


Table 3.2 Growth of Telecommunications and Postal Services

Item	2011	2012(a)	Growth Rate (%)	
			2011	2012(a)
1 Telecommunications Services				
1.1 Fixed Access Services (No.) ('000)				
Wireline Telephones in Service	942	999	5.0	6.1
Wireless Local Loop Telephones	2,667	2,450(b)	1.1	-8.1
1.2 Cellular Phones (No.) ('000)	18,319	20,324	6.1	10.9
Telephone Density (Telephones per 100 persons including Cellular Phones)	105.1	116.9	4.4	11.2
1.3 Other Services				
Public Pay Phones (No.)	6,458	6,983	-7.2	8.1
Internet & Email (No.) ('000) (c)	845	1,366	68.3	61.7
2 Postal Service				
Delivery Areas (No.)	6,729	6,729	0.0	0.0
Post Offices (No.)	4,742	4,738	0.0	-0.1
Public	4,058	4,062	0.0	0.1
Private	684	676	0.0	-1.2
Area Served by a Post Office (sq.km)	14	13	0.0	-7.1
Population Served by a Post Office (No.)	4,401	4,290	1.1	-2.5
Letters per Inhabitant (No.)	12	15	-33.3	25.0
(a) Provisional	Sources: Telecommunications Regulatory Commission of Sri Lanka			
(b) Discrepancies in statistical reporting were rectified subsequent to the merger of two players.	Department of Posts			
(c) Including mobile broadband services	Department of Census and Statistics			

providers through promotional schemes, value added services with local and international services and competitive pricing, coupled with the ease of obtaining services, internal labour mobility and increased incomes raised cellular penetration to reach 100 per cent in 2012 from 87.8 per cent in 2011. Internet penetration reached 6.7 per cent in 2012 from 4 per cent in 2011. Though internet penetration remained at single digit, there was a high growth of 66 per cent in penetration level compared to previous year. Internet penetration through mobile broadband connections alone has grown by 99.3 per cent in 2012. However, actual internet penetration may be higher as the computation does not include those who are connected through common access points. High growth in internet penetration can be expected for 2013 as mobile operators are expanding Third Generation (3G) service coverage and as there is high competition among internet service providers through advertising and value added services. The introduction of low cost smart phones to the market will also enhance internet usage. The Government has been actively supporting

BOX 5

Mobile Communication Technology towards Economic Growth

Introduction

Mobile communication which was commercially established in Sri Lanka in 1989 has now become widely available to people in all parts of the country. Despite the widespread reach of mobile communication services in the country, the productivity of mobile services from an economic perspective can be further improved. The increasing popularity of mobile services in the country and the immense potential it has in facilitating economic activities has to be aptly recognised to exploit it to benefit the sustained economic growth process of the country.

Evolution of Mobile Communication Technology

Globally, mobile communication has fast evolved reaching the "Fourth Generation" (4G), since the first automated "First Generation" (1G) cellular system was commercially launched in 1979. Sri Lanka's mobile communication too, has kept pace with global technology evolution. The domestic mobile communications market has been able to avail the 4G technology within a short span of 3 years after its global commercial establishment. In recent years, Sri Lanka's adoption of new technology has been faster and ahead of many of its regional peers, when compared to the 10 years lag seen with the implementation of the 1G mobile network. While earlier generations had been focused on traditional call and messaging features, the more recent generations focus on the evolution of high speed data communication systems. Long Term Evolution (LTE), which is the 4G of mobile technology, will provide much faster data speeds exceeding 100 Megabits per second. Although there are currently no applications which require such high data speeds, 4G will enable the simultaneous serving of a larger number of subscribers with high data speeds.

Current Status of Mobile Communication in Sri Lanka

Mobile connections penetration of the country reached 100 percent in 2012, within a short span of 23 years due to consistently high growth seen in the industry. This has resulted due to industry liberalisation, private sector participation, aggressive competition, affordable initial cost, quick supply, coverage expansion and improvements in technology parallel to global technology evolution. Particularly the fabulous financial positions with high profit margins in late 90s and in the early years of the new millennium drove mobile operators to hugely invest on the industry to attain a high growth rate. This penetration indicates that on average, each person possesses a mobile connection

and the market for basic voice services may be in a saturate stage. However, currently the level of internet penetration is at a low level of 6.7 per cent. This shows that there is immense potential to improve Information and Communication Technology (ICT) in the country, in accordance with the government's policy agenda as enumerated in Mahinda Chintana Vision for the Future objective of improving the ICT literacy rate to 75 per cent. In turn, ICT progress can help to create vast improvements in the efficiency of economic activities across a wide variety of sectors. This can benefit both the urban and the rural population.

Challenges and Issues in the Industry

While rapid growth is seen in the mobile communications sector, technological evolution gives rise to many challenges in this market. Rapid evolution causes the equipment used by mobile operators to become obsolete within a short span of time. This translates into a high rate of depreciation of assets. Evolving technology also poses challenges to the intensity of coverage due to capacity constraints arising from higher data requirements and the increase of field losses resulting from inefficiencies in frequency spectrum management¹ and from high frequency bandwidth² requirements for the new technologies. This necessitates the continuous deployment of new base stations. As building and operating such infrastructure is a significant cost to operators, they have adopted Passive Sharing³ which includes infrastructure such as steel towers, ground space and power supply. However, in order to overcome capital constraints, initiating Active Sharing⁴ may be more efficient and productive as it will enable sharing of equipment such as radio access network, transmission and even core switches. Active sharing is essential for the future survival of operators and to break barriers associated with capital constraints. Access network and coverage superiority will no longer serve as differentiation determinants as operators can never recover the investment associated with a fully owned network, solely through their operations.

Another innate problem in the industry is price competition (on products such as local and foreign calls, SMS, Internet, etc.), rather than opting for competition based on service differentiations which can lead to a fall in margins. This disallows industry players to re-invest profits into technology upgrades.

1 Frequency Spectrum Management is the analytical, procedural, and policy approach to planning and managing the use of the electromagnetic spectrum.

2 Frequency bandwidth is the width of the range of frequencies that an electronic signal uses on a given transmission medium to deliver data.

3 Passive sharing is the sharing of civil engineering elements such as space or physical supporting infrastructure.

4 Active sharing is the sharing of electronic elements which is the intelligence of telecommunication network.

The Telecommunications Regulatory Commission (TRC) of Sri Lanka's proactive intervention through the introduction of minimum floor prices for voice calls prices is commendable and has helped revive the industry and facilitate its sustainability. However, due to the popularity of data call services, traditional voice services, especially International Direct Dialing (IDD) and International Roaming are expected to become obsolete soon. Thus there is a need for price regulation on data services too as the revenue from this market is not aligned with the associated operational costs.

As Sri Lanka adopts new technologies, it is vital for the TRC to conduct a review of frequency spectrum management. Currently, emerging technologies are being hosted on higher frequencies which lead to higher field losses and thereby compromising the efficiency of the service. Active engagement in frequency spectrum management can help explore the possibilities of hosting such technologies on lower frequencies. This will lead to significant quality and coverage improvements.

Mobile Communication towards Economic Activities

Though mobile operators are promoting and delivering new value added services and internet services to their customers, these are mainly focused on consumer entertainment, especially in social networks and video sharing websites. To improve the efficiency of economic activities, a tremendous change in the role of mobile operators towards total ICT service providers through Digital Services such as Cloud Technologies⁵ and Machine to Machine (M2M) Technologies⁶ is essential.

As a result of the high level of mobile penetration prevalent in Sri Lanka, there is immense potential to exploit this opportunity in favour of the country's growth trend. As the government is committed to increase financial inclusion, automation of banking through mobile communication will not only ensure that many rural consumers come within the ambit of the financial system, it can also create a large amount of savings in terms of man-hours and the usage of other productive resources. Financial institutions may also benefit from growing mobile penetration as mobile phones provide opportunities to offer simple and secure services. Financial institutions are currently moving towards the provision of many mobile banking services. In the future, it may be possible for such institutions to make consumers aware about essential financial products thereby delivering these in a more convenient and cost-effective manner to vast numbers of unbanked and under-banked consumers.

⁵ Cloud technology is internet based technology, whereby shared resources, software and information are provided to computers and other devices on-demand, like electricity.

⁶ Machine to Machine technologies are enabling the flow of data between machines and machines and ultimately machines and people.

International studies have also shown that mobile penetration has had a significant impact on uplifting the living standards of the rural poor. One potential area is agriculture. Linking farmers to economic trade centres through mobile applications can improve the awareness of farmers with regard to market price trends. This will enhance the profits margins and incomes which are often cited to be threatened by other individual intermediaries. All above automations will also support the government's strategy of transforming the country as a commercial hub and complement the government's "Divi Neguma" project which uplifts the living standards of persons in urban and rural areas while reducing poverty.

Mobile applications can also be used to break down barriers posed by the usage of debit or credit cards for commercial transactions as unlike mobile phones, electronic systems are not available in all retail and wholesale locations. This may also help facilitate the adoption of international trends that favour online shopping as mobile applications can provide increased security and efficiency. Aside from shopping, mobile applications can be integrated with security and safety service providers (Police, fire brigade, etc.) and security and safety tracking systems (theft, fire, flood, etc.) of organisations and households to enable remote and efficient tracking and resolving in emergency situations. Mobile operators can also build partnerships with Business Process Outsourcing (BPO) organisations as a communication facilitator to provide advances in information security, front and back office services, improved remote project management capabilities and globalised services with reduced operational cost while reducing the reluctance to outsource offshore.

The use of mobile communication devices in education has led to the evolution of a new paradigm in electronic learning (e-learning) called mobile learning (m-learning). M-learning comprises the use of wireless portable communications devices to deliver content and learning support. M-learning is fast gaining prominence because of the desire for lifelong learning which is usually undertaken by learners with other commitments related to work, family and society. Mobile operators can also facilitate Knowledge Process Outsourcing (KPO) organisations to deliver the data contents and knowledge and expertise of skilled professionals in knowledge intensive industries, wherever in the world, to many educational institutions and industries in the country, in a far more convenient and potentially inexpensive manner. Such initiatives in collaboration with those made by the government and telecommunication operators to promote internet among the students for their education and knowledge acquisition can help enhance the knowledge base and ensure that professionals are up-to-date with the most recent advancements in their respective fields.

the effort to enhance the nation's accessibility to information and communication services through the "Nenasala Centers" established by the Information and Communication Technology Agency (ICTA). In 2012, 60 new Nenasala Centers were established island wide taking the total number of Nenasala Centers to 694, which would enable rural communities to have better access to Information and Communication Technology (ICT) based services.

The Telecommunications Regulatory Commission (TRC) had been proactively involved in facilitating dynamism and innovation in the telecommunications sector.

A new FM broadcast frequency plan was prepared under the National Telecommunications Policy, in an effort to minimise technical problems that hindered listeners receiving a clear reception. A new plan was prepared to re-allocate the frequencies among the FM channels taking into account the frequencies that were used by radio broadcasters. As per the new plan, which was implemented on 01 November 2012, all FM radio channels are easily accessible with improved reception throughout the island, including remote areas. The existing frequency separation of 100 kHz was increased to 300 kHz. Further, action had been taken to transform the optical backbone network of Sri Lanka Telecom PLC (SLT) into a National Backbone Network (NBN) through issuing of licences to SLT, incorporating conditions related to providing a service to all operators at national level. As proposed in the government budget in 2013, the TRC reduced the Telecommunication Levy on internet broadband connections from 20 per cent to 10 per cent from January 2013, with a view to improve the broadband penetration in the country to three million users by 2015. Further, the TRC has taken measures to ban the usage of imported mobile phones that are not registered with the TRC.

The e-Sri Lanka initiative which is used to strengthen the institutional framework to enhance delivery of government services and ICT based systems was advanced with the introduction of new platforms. The ICTA e-Services platform established the Lanka Government Information Infrastructure (LGII) to manage the operations of the Lanka Government Network, which currently consists of 475 government organisations. During the year, 22 government institutions initiated the provision of their services as e-Services. It was expected to enable citizens to obtain a variety of government services through a common portal in a more convenient manner, without having to visit the relevant institutions. Widening Sri Lanka's adoption of e-governance, the first ever cloud computing platform, 'Lanka Cloud' was launched in August 2012 through LGII. This platform will allow government organisations to create online databases, enabling easier access for other organisations and the general public. The strengthening of Sri Lanka's ICT framework has been reflected in the improvement of the country's Networked Readiness Index (NRI). Sri Lanka which was placed at number 83 out of 115 countries in 2006 had moved to the 71st place out of 142 countries in 2012. That improvement indicates the potential of Sri Lanka to benefit from ICT and other new technologies to increase its growth and welfare. ICTA has also focused on the skills development of government officers, students and the general public through various training programs and Nenasala Centers, in order to increase IT literacy and enable citizens to effectively utilise technological advancements.

Amidst increasing competition from alternative modes of communication services, the Department of Posts (DOP) continued to serve through 4,738 post offices island wide. They comprised 651 main post offices, 3,411 sub-post offices, 516 agency post offices, 156 rural

agency post offices and 4 estate post offices. 61 estate post offices were closed down in 2012 as these post offices did not generate sufficient revenue to sustain operations while 53 Agency post offices were newly established. In addition, diversifying and expanding its services in line with advanced technology, the DOP provided several new and value added services in 2012 including a 4 hour courier service in Colombo and the suburbs. The operating loss of DOP increased by 8 per cent to a substantial Rs. 5 billion in 2012, following a 52 per cent increment in 2011. This was the outcome of a modest increase of total revenue by 4.6 per cent to Rs. 3.3 billion and a higher 6.6 per cent increase in operating expenditure to Rs. 8.3 billion. In this context, it is essential that DOP consolidates its revenue by diversifying services while containing its expenses to reduce its burden on the national budget.

Energy

Sri Lanka's energy sector faced many challenges during 2012 owing to highly volatile crude oil prices in international markets, drought conditions which led to expensive thermal power generation, the depreciation of the rupee, and the economic sanctions imposed on Iran, the country's main crude oil supplier. Unfavourable conditions in both the domestic and international front adversely affected the financial positions of CEB and CPC. The geopolitical tensions mainly in the oil-producing Middle East region, caused Brent crude oil prices to fluctuate in the range of US dollars 90 to US dollars 130 per barrel during the year. The depreciation of the rupee also had an adverse impact on the financial position of the CPC. In addition, the imposition of sanctions by the US and the EU on Iran adversely affected the financials of the CPC. Sanctions imposed on Iran necessitated the reduction of imports of Iranian Light crude, which is best suited

for use in the CPC refinery in terms of the yield or refinery margin obtained from the refining process. Consequently, the shift to other sources of crude oil resulted in a substantial reduction in the refinery margin, impacting adversely the CPC profitability arising from the refining of crude oil locally. The Iranian sanctions also led to the closure of the refinery on several occasions as suitable supplies of crude oil could not be procured. The shortfall in the local refinery production was replaced by importation of higher priced refined petroleum products. Insufficient rainfall which depleted reservoir water levels to the lowest since 2001 and frequent interruptions to power generation in the Norochcholai coal power plant necessitated increased thermal power generation during the first ten months of the year. These developments negated the financial benefits that were expected to accrue from the revisions in fuel prices and the re-imposition of the Fuel Adjustment Charge (FAC) to the electricity tariffs.

The average price of crude oil (C&F) imported by CPC increased by 5 per cent to US dollars 114 per barrel in 2012 compared to US dollars 109 per barrel in 2011. As a result, the total oil import bill increased by 4.9 per cent to US dollars 4.9 billion which accounted for 26 per cent of the total import expenditure of the country in 2012. Further, the borrowings of CPC and CEB from the banking sector have become a burden, particularly to state banks, as outstanding liabilities have increased by 52.6 per cent to Rs. 245 billion at end 2012 from Rs. 160.6 billion at end 2011. Measures are being taken to reduce Sri Lanka's over reliance on fossil fuels in the medium term by increasing power generation through coal, hydro and other renewable sources of energy and initiating an energy conservation culture. However, in the short run, Sri Lanka still continues to be vulnerable to oil price shocks.

Electricity

Electricity generation in 2012 increased moderately by 2.4 per cent to 11,800 GWh compared to 11,528 GWh in 2011. Severe drought conditions that prevailed during the period June to October 2012 caused a decline in the share of hydro power in total power generation. As a result, total electricity generation through hydro sources declined by 28.6 per cent to 3,298 GWh while thermal power generation increased by 22.9 per cent to 8,339 GWh. The system loss as a percentage of total generation, declined from 12 per cent to 11 per cent in 2012 due to proactive efforts made by CEB to curb both technical and non-technical losses. The share of power generated by CEB, in relation to total power generation decreased to 52 per cent in 2012 from 57 per cent in 2011, reflecting the increase in the share of power produced by the private sector from 43 per cent to 48 per cent.

Electricity sales increased by 4.5 per cent to 10,475 GWh in 2012 compared to 10,024 GWh in 2011. Electricity consumption of the household sector increased by 4.2 per cent, mainly due to a rise in income levels of the people, which led to higher utilisation of electric appliances and also due to the implementation of rural electrification projects. Sales to General Purposes and Hotel categories increased by 5.5 per cent, reflecting the growth in the tourism industry and other business activities. Meanwhile, electricity consumption in the Industrial sector increased by 4.9 per cent, reflecting the growth in the industrial sector.

The financial position of CEB was weakened during the year mainly due to the rise in average generation cost caused by higher thermal power generation. According to unaudited provisional financial data, CEB recorded an operating loss of Rs. 61.2 billion in 2012 compared to a loss of Rs. 19.3 billion in 2011. Increased thermal power generation coupled with the upward

Table 3.3 Power Sector Performance

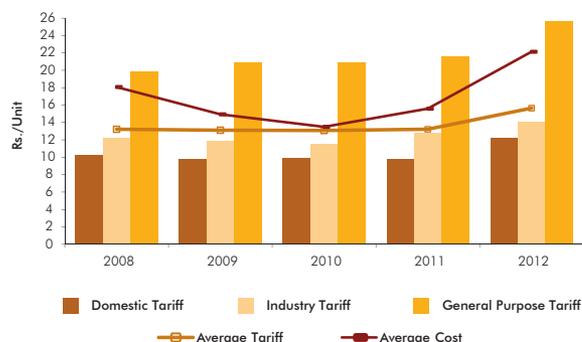
Item	2011	2012(a)	Growth Rate (%)	
			2011	2012(a)
Installed Capacity (MW)	3,148	3,312	11.8	5.2
Hydro	1,401	1,584	1.4	13.1
Thermal (b)	1,696	1,638	22.0	-3.4
Other	51	90	13.3	76.5
Units Generated (GWh)	11,528	11,800	7.6	2.4
Hydro	4,619	3,298	-18.0	-28.6
Thermal (b)	6,785	8,339	35.8	22.9
Other	124	163	44.4	31.2
Total Sales by CEB (GWh)	10,024	10,475	8.2	4.5
Domestic and Religious	3,430	3,577	7.7	4.3
Industrial	3,131	3,285	9.1	4.9
General Purpose and Hotel	2,087	2,202	9.7	5.5
Bulk Sales to LECO	1,267	1,302	5.5	2.8
Street Lighting	109	109	0.9	0.0
LECO Sales (GWh)	1,184	1,216	5.4	2.7
Domestic and Religious	523	539	2.5	3.1
Industrial	232	237	1.3	2.2
General Purpose and Hotel	408	412	12.4	1.0
Street Lighting	21	28	0.0	33.3
Overall System Loss of CEB (%)	11.7	10.7	-13.3	-8.5
Number of Consumers ('000) (c)	5,208	5,481	5.0	5.2
o/w Domestic and Religious	4,610	4,842	5.0	5.0
Industrial	51	54	6.3	5.9
General Purpose and Hotel	542	580	5.7	7.0

(a) Provisional
(b) Inclusive of Independent Power Producers (IPPs)
(c) Inclusive of LECO consumers

Sources: Ceylon Electricity Board
Lanka Electricity Company (Pvt.) Ltd

revision of furnace oil prices by CPC significantly increased the fuel bill of CEB by 68.7 per cent to Rs. 42.5 billion in 2012. The CEB's average unit cost at selling point stood at Rs. 22.13 per unit while the overall average tariff was at Rs. 15.65, resulting in a loss of Rs. 6.48 per unit of electricity at selling point. CEB's short-term borrowings from banks, other outstanding liabilities to CPC and to Independent Power Producers (IPPs) amounted to Rs. 137 billion while long-term outstanding liabilities stood at Rs. 296 billion as at end 2012. In order to improve CEB's financial position, measures such as restructuring of power purchasing agreements upon the expiration of current agreements, adoption of improved technology and equipment which would enable power plants to operate without undue failure, adoption of modernisation measures to improve efficiency and the buildup of adequate storage facilities to reduce the cost of storage are to be actively implemented.

Chart 3.2 Average Tariff and Cost of Electricity



Electricity tariffs were revised upwards with introduction of Fuel Adjustment Charges (FAC) in February 2012 subsequent to the increase in furnace oil price. The price of diesel used for power generation was revised from Rs. 84 to Rs. 115 per litre. The price of High Sulphur Furnace Oil and Low Sulphur Furnace Oil were revised from Rs. 40 to Rs. 65 per litre and Rs. 52 to Rs. 75 per litre respectively. Accordingly, a FAC of 25 per cent was imposed on households who consume less than 30 units of electricity per month, 35 per cent on those who consume 31 – 60 units and 40 per cent on those who consume more than 60 units per month. The FAC on general purpose category and industry and hotel categories was 25 per cent and 15 per cent, respectively. Although furnace oil prices were to be raised again by Rs. 25 per litre effective from January 01, 2013, the price revision has been suspended pending CEB's proposed tariff adjustment. Accordingly, the CEB has forwarded a proposal to Public Utilities Commission in Sri Lanka (PUCSL) in March 2013 requesting for a further revision of electricity tariffs, which is under consideration.

CEB continued its efforts to electrify the Northern and Eastern provinces through the national grid whilst being engaged in various rural electrification projects to provide electricity to areas that do not have access to

electricity. The Jaffna peninsula was connected to the national grid after 25 years in September 2012 through a 33 kV line from Kilinochchi. While the 132 kV transmission line connecting Vavuniya to Kilinochchi was completed in 2012, the construction of another 132 kV transmission line from the Kilinochchi substation to Chunnakam in Jaffna is in progress under the second stage of the project. At the same time CEB continued the implementation of rural electrification projects. Those projects are expected to bring the country closer to achieving its target of 100 per cent electrification by end 2013.

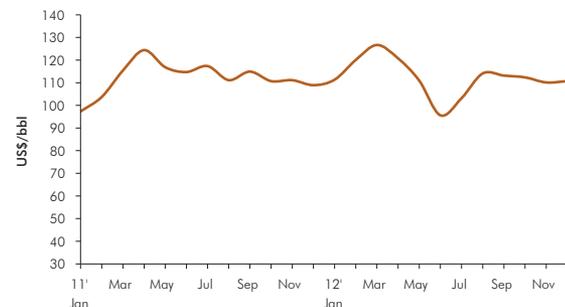
The Upper Kotmale Hydro Power Plant was added to the national grid and the construction work of several major power projects was in progress in 2012. The Upper Kotmale Hydro Power Plant added 150 MW to the national grid on a permanent basis in July 2012. The construction work of the second phase of the Norochcholai Coal Power Plant, which comprises two 300 MW units, was also in progress during the year and is expected to be added to the national grid in 2013 and 2014, respectively. The Uma Oya Hydro Power Project, which is under construction, is expected to add another 120 MW to the national grid by end 2015. The construction of a 500 MW coal power plant in Trincomalee is also in progress and is expected to be added to the national grid by 2017. The addition of these new power plants to the national grid will help increase the total installed capacity of the country by around 37 per cent to 4,532 MW by end 2017. The availability of an additional 1,100 MW of coal power by 2017 is expected to substantially reduce the average generation cost. While the positive progress in developing low-cost power generation projects is commendable, there is a need to implement a robust framework to ensure appropriate technical monitoring and maintenance, to prevent frequent shutdowns of these plants, that result in power cuts.

The Sri Lanka Sustainable Energy Authority (SLSEA) is taking steps to make energy generation and usage in Sri Lanka sustainable through greater utilisation of renewable energy and energy efficiency within the country. The authority aims to increase the share of renewable energy in power generation from the currently existing 7 per cent to 20 per cent by end 2020. As at end 2012, there were 234 MW of mini-hydro power, 74 MW of wind power, 11.5 MW of biomass energy and 1.4 MW of solar power connected to the national grid while another 135 renewable energy projects were under construction to add 350 MW to the national grid. Further, SLSEA was also actively involved in the government programme to electrify 100 per cent of households by 2013 through the “Gama Shakthi programme” which will help provide electricity to rural households, using off-grid systems. Energy audits have been carried out by the SLSEA with the objective of providing technical advice to organisations for conserving energy. A Code of Practice for energy efficient buildings were also introduced to the building approval process while regulations were published regarding the appointment of energy managers and energy auditors in bulk energy consuming institutions. In addition, measures have already been taken to improve the awareness on the importance of energy conservation among the younger generation.

Petroleum

During 2012, crude oil prices were highly volatile, although the average crude oil price remained largely unchanged when compared to 2011. The average international crude oil price (Brent) stood at US dollars 112.41 per barrel in 2012, when compared to US dollars 112.25 per barrel in 2011. However, oil prices fluctuated between US dollars 90 per barrel and US dollars 130 per barrel during the year. While there were significant supply uncertainties caused by political disturbances in the Middle East and North Africa

Chart 3.3 International Crude Oil (Brent) Prices (Monthly Average) 2011/2012



which put an upward pressure on petroleum prices, the slow pace of economic recovery of the United States and the worsened Euro Zone debt crisis moderated prices reflecting demand side concerns. However, the average price of crude oil imported by CPC increased by 5 per cent to US dollars 114 per barrel in 2012, mainly due to diversion of several crude oil import shipments from Iran to more costly other sources.

Domestic retail prices of petroleum products were revised upward in 2012 and 2013 in order to address the financial difficulties of CPC. The substantial increase in international oil prices in early 2012, followed by the depreciation of the rupee and the increase in sale of furnace oil to CEB at prices below cost, and increased thermal power generation caused heavy losses to CPC, necessitating price revisions for petroleum products. Accordingly, domestic retail prices of petrol, diesel and kerosene were increased by Rs. 12, Rs. 31 and Rs. 35 per litre, respectively, with effect from February 12, 2012. Along with the petroleum price revision the price of furnace oil supplied to the CEB was also increased. However, despite the price revision, financial position of CPC further deteriorated with provision of certain petroleum products below cost, depreciation of the rupee, the closure of the refinery on several occasions and falling refinery margins due to shifting to more costly sources of crude oil with the

US sanctions on Iran. Accordingly, the domestic retail price of petrol was further increased by Rs. 10 per litre on December 15, 2012. Domestic petrol and diesel prices were again increased by Rs. 3 per litre and Rs. 6 per litre, respectively, with effect from February 23, 2013, due to increased international crude oil prices at the beginning of the year. These price adjustments have helped to reduce the financial losses of CPC to a certain extent. However, a flexible pricing policy for petroleum products in line with oil price movements in the international market will encourage energy conservation and thereby increase the efficiency in the usage of energy products.

Although consumption of petroleum products increased during 2012 in line with the demand for power generation, price revisions had curbed demand. The total sales of major petroleum products namely petrol, diesel and kerosene by CPC and Lanka Indian Oil Company (LIOC) PLC increased by 4.9 per cent in 2012, compared to an increase of 18.3 per cent in 2011. Petrol sales increased by 8.1 per cent in 2012 compared to 19.6 per cent increase in 2011. This moderation could be due to a decline in demand due to the significant increase in the prices of petroleum products. Diesel sales increased by 5.5 per cent reflecting the higher demand for thermal power generation. The increase in the level of electrification of households has resulted in a fall in kerosene sales by 15.4 per cent.

CPC's financial position eroded further during the year. As per the financial statements, CPC reported an operational loss of Rs. 89.7 billion in 2012 compared to Rs. 94.5 billion in 2011. The main contributory factors for the financial losses of CPC were the provision of furnace oil at a highly subsidised rate to CEB and IPPs, falling refinery margins due to the change in sources of crude oil, and the depreciation of the rupee during the year. Also, disruptions to refinery operations due to

Table 3.4 Petroleum Sector Performance

Item	2011	2012(a)	Growth Rate (%)	
			2011	2012(a)
Quantity Imported (MT '000)				
Crude Oil	2,070	1,486	13.8	-28.2
Refined Products (b)	3,501	3,950	21.5	12.8
Coal	782	930	617.4	18.9
L.P. Gas	180	199	10.4	10.6
Domestic L.P. Gas Production (MT '000)	24	17	4.3	-29.2
Value of Imports (C&F)				
Crude Oil (Rs. million)	183,056	157,758	52.3	-13.8
(US\$ million)	1,653	1,248	55.4	-24.5
Refined Products (Rs. million)	335,225	466,078	50.8	39.0
(US\$ million)	3,033	3,666	54.4	20.9
Coal (Rs. million)	12,109	15,381	793.0	27.0
(US\$ million)	109	123	808.3	12.8
L.P. Gas (Rs. million)	20,107	27,939	25.3	39.0
(US\$ million)	182	219	28.2	20.3
Average Price of Crude Oil (C&F)				
(Rs./barrel)	12,027	14,416	33.9	19.9
(US\$/barrel)	108.59	114.00	36.6	5.0
Quantity of Exports (MT '000)	589	504	35.1	-14.4
Value of Exports (Rs. million)	61,170	58,902	105.5	-3.7
(US\$ million)	553	463	110.3	-16.3
Local Sales (MT '000)	4,608	4,840	19.0	5.0
o/w Petrol (90 Octane)	676	729	18.0	7.8
Petrol (95 Octane)	35	40	59.1	14.3
Auto Diesel	1,985	2,086	19.4	5.1
Super Diesel	15	25	25.0	66.7
Kerosene	169	143	2.4	-15.4
Furnace Oil	1,222	1,332	9.4	9.0
Avtur	315	326	99.4	3.5
Naphtha	85	63	57.4	-25.9
L.P. Gas	228	228	8.6	0.0
Local Price (End Period) (Rs./litre)				
Petrol (90 Octane)	137.00	159.00	19.1	16.1
Petrol (95 Octane)	155.00	167.00	16.5	7.7
Auto Diesel	84.00	115.00	15.1	36.9
Super Diesel	106.30	142.00	20.4	33.6
Kerosene	71.00	106.00	39.2	49.3
Furnace Oil				
500 Seconds	50.30	-	0.0	0.0
800 Seconds	52.20	92.20	23.7	76.6
1,000 Seconds	48.70	-	0.0	0.0
1,500 Seconds	50.00	90.00	25.0	80.0
3,500 Seconds	50.00	90.00	25.0	80.0
L.P. Gas (Rs./kg)				
Litro Gas	163.68	179.68	23.8	9.8
Laugfs Gas	163.68	179.68	34.6	9.8
(a) Provisional	Sources: Ceylon Petroleum Corporation			
(b) Imports by Ceylon Petroleum Corporation, Lanka IOC PLC and Lanka Marine Services (Pvt.) Ltd	Lanka IOC PLC Lanka Marine Services (Pvt.) Ltd Litro Gas Lanka Ltd Laugfs Gas PLC Sri Lanka Customs			

change of crude oil type and importation of refined petroleum products to meet the supply shortage had adversely impacted the financial position of CPC. Although, SriLankan Airlines has settled Rs. 18 billion of its total outstanding dues of Rs. 26 billion to CPC, outstanding trade receivables from government entities stood at Rs. 85 billion exerting significant pressure on CPC's financial position.

The continuous increase in operational losses of CPC has also resulted in a loss in tax revenue to the government. Further, CPC's increased borrowings from the banking sector to finance its oil bills increased the banking sector's exposure to the CPC. CPC's net borrowings from the banking system increased by Rs. 53.7 billion during the year. Treasury bonds amounting to Rs. 60 billion were issued by the Government in January 2012 to settle accumulated outstanding dues to CPC from CEB and other SOEs.

There is an urgent need to expedite the Sapugaskanda Oil Refinery Expansion and Modernisation (SOREM) Project in order to ensure that petroleum products are supplied to the market in a cost effective manner. It has been highlighted that the non-modernisation and expansion of the refinery in the recent past has led to poor yields and frequent stoppages. This has led to lower refinery margins reducing the economic efficiency of refinery operations. Further, as a consequence of the imposition of sanctions against Iran by the U.S. and the resultant constraint on making payments for oil, Sri Lanka had reduced crude oil importation from Iran and diversified to other sources and types of crude oil which gives a lower yield. Therefore, it is important to upgrade the refinery to increase the yield even for different types of crude oil. With respect to the current status of the SOREM project, approximately 98 per cent of the institutional work related to land acquisition had been completed by end 2012. The Environmental Impact Assessment (EIA) report has also been completed, which is to be presented to the Central Environment Authority (CEA) for final approval.

Oil Exploration

Following the two successive discoveries of gas and condensate in two of the three exploration wells in late 2011, Cairn Lanka (Pvt)

Ltd, the operator of the Mannar Basin Block SL 2007-01-001, notified the Government of Sri Lanka (GoSL) of its intention to enter the second phase of exploration. Consequent to the two discoveries made in 2011 in the Mannar basin and the interest shown by several international oil companies, the Petroleum Resources Development Secretariat (PRDC) decided to stage Sri Lanka's second international offshore exploration licensing round in early March 2013 to offer more blocks in the Mannar and Cauvery basins to investors. A global energy information company was awarded the contract as the consultant to assist the Government in the licensing rounds with the scope of updating the current model petroleum resource agreement, reviewing and revising the economic model and fiscal regime and promoting and marketing the license round. On the international relations front, several National Oil Companies (NOCs) and International Oil Companies (IOCs) held discussions with the Government on potential exploration and business investment collaboration. Several events were held by PRDS & Cairn Lanka with a view of creating awareness and opportunities for local suppliers to prepare themselves for greater participation in the upstream petroleum industry. The MOU signed between the PRDS and Malaysia Petroleum Resources Corporation on October 11, 2012 paved the way for Malaysian investors to collaborate with their Sri Lankan counterparts to seek possible business opportunities in the oil and gas sector in Sri Lanka. Some large IOCs also have shown a keen interest in conducting joint studies in ultra-deep water areas which have not been explored so far. Discussions are underway to offer several large, ultra-deep water blocks to suitably experienced and capable operators who qualify, for the purpose of joint study with GoSL towards identifying long-term hydrocarbon potential. The PRDS launched the licensing round in Houston, United States on March 07, 2013, followed by road

shows in London and Singapore in subsequent weeks. The licensing round will close on September 30, 2013, providing sufficient time for international oil companies to make their final decision.

Transportation

The transportation sector achieved significant progress in 2012 with the expansion of the existing road network and transport services, strengthening regional connectivity and contributing to inclusive growth in the country. That would connect under privileged remote areas with the centre, integrating them with the main economic stream and ensure balanced growth. The development in the transportation sector continued to be seen in the road development sector while expansion of bus services particularly covering the rural areas and additions to the rail road network continued. Different projects such as the Conflict Affected Region Emergency Project (CAREP) and the Northern Road Connectivity Project (NRCP) continued to enhance connectivity of communities in the fast re-emerging Northern and Eastern provinces with the main stream economy. The construction of highways, expressways, bridges and rehabilitation of existing roads in the entire country continued during the year. Both road transportation and air transportation recorded significant growth in 2012. However, the growth in Port activities was sluggish amidst a slower growth in the world economy and a decline in domestic and international trade. Proactive planning is therefore necessary for the emerging requirements for road, rail, air and naval networks, with the economy shifting into the upper middle income country status in the near future. Special attention also needs to be paid on reducing traffic congestion in road transportation, which would help to reduce the time spent and cost on energy while supporting efficiency in enhancing economic activities and productivity.

Road Development

The government has given high priority to rehabilitate the existing road network and build new roads in order to support efficient factor mobility. Over the past few years, considerable improvements have been made to the road network facilitating both passenger and goods transportation. The National Road Master Plan highlights the formidable challenges that Sri Lanka's road sector is currently encountering and the appropriate steps to be taken for its transformation. The establishment of a robust road network will also contribute to the stronger integration of the national economy into the global value chain. At the same time, modern modes of transportation such as expressways, high speed electrified railroads, metros, light railways, and maglev (trains driven by magnetic levitation) railways need to be developed in partnership with the private sector, after assessing the viability of such options.

The road network of Sri Lanka comprises Expressways (E class) and National Highways (A and B class roads) that are under the purview of the Road Development Authority (RDA) and provincial roads (C and D class roads), unclassified local authority roads and other roads. The total length of the National Highways maintained by RDA in 2012 was approximately 12,165 km while the length of the roads maintained by Provincial Councils was approximately 16,000 km. Although, Sri Lanka's road density is comparatively high in relation to its peers in the region, much of it needs uplifting, to serve the emerging demand. While building new roads, continuous maintenance, proper rehabilitation and improvements to the existing road network are required. Thus, to improve the existing road network and to build new roads to cater to the emerging demand in the economy, the government had allocated Rs. 122.7 billion in

2012. The expenditure incurred by RDA for road development stood at Rs. 133.7 billion in 2012, including both domestic and foreign funds.

Major road development and bridge rehabilitation projects were in progress during the year. The Southern Expressway Phase I from Kottawa to Pinnaduwa (95.3 km) commenced operations in November 2011 and the average daily earning from tolls in 2012 was Rs. 2.8 million with an average of 9,500 vehicles plying the road on a daily basis. The construction of the south section connecting Pinnaduwa to Godagama (34.6 km) which commenced in April 2011 is expected to be completed by mid-2013. It is proposed to connect the Southern Expressway from Matara to Hambantota with the intention of providing fast connectivity between Colombo and Hambantota where many major development projects are taking place. The construction work of the Colombo – Katunayake Expressway project (26 Km) with 6/4 lane dual carriageway facility, and 4 interchanges was also in progress in 2012 and is expected to be completed in 2013. The physical progress of the overall project was 74 per cent as at end 2012. Work relating to the Outer Circular Highway (29.1 km), the ring road around Colombo, linking all major expressways, with the objective of reducing traffic congestion within the city, was also in progress. Phase I of the Outer Circular Highway from Kottawa to Kaduwela (11 km) proceeded with 72 per cent of the civil works completed by end 2012. Land acquisition relating to Phases II from Kaduwela to Kadawatha (8.9 km) and Phase III from Kadawatha to Kerawalapitiya (9.3 km) was also in progress. Several other road development projects under the Road Sector Assistance Project II, Road Project Preparatory Facility (RPPF), National Highway Sector Project and Priority Roads Projects I and II were in progress during the year. Meanwhile, the “Maga Naguma” programme to rehabilitate rural roads proceeded during 2012 at a cost of Rs. 3.2

billion under the Ministry of Ports and Highways. The extent of roads rehabilitated under “Maga Naguma” in 2012 was 629 Km.

The government continued to focus on development of the road network in the Northern and Eastern provinces under the Northern Road Rehabilitation Project (NRRP), CAREP and NRCP. Significant progress has been recorded in the Kandy- Jaffna road under the NRRP project in 2012. Under CAREP, improvements to the Paranthan-Pooneryn Road (26 km) and Mankulam-Vellankulam Road (38 km) are expected to be completed by September 2013. Under the NRCP, the reconstruction of 165 km of National Highways in the Northern and North Central provinces continued and the rehabilitation of two roads namely, the A020 road from Anuradhapura to Rambawa and the B268 road from Mannipay to Kaithady were completed in 2012, respectively. The Trincomalee Integrated Infrastructure Project (TIIP), which was initiated in 2008 to develop the Batticaloa-Trincomalee road, Allai-Kantale road, and some coastal roads and five bridges was also completed in 2012.

Road Passenger Transportation

The public passenger transportation sector recorded a mixed performance in 2012. The operated kilometreage of the Sri Lanka Transport Board (SLTB) marginally declined while the passenger kilometreage improved by 8.4 per cent during 2012. The total number of buses owned by SLTB declined in 2012 to 7,756 from 7,821 in 2011 while the average number of buses operated also declined to 4,314 in 2012 compared to 4,365 in 2011. This is due to the accelerated programme to dispose of buses that were in a dilapidated state and which could not be refurbished economically. However, the refurbishment of buses continued with subsequent additions to the fleet. The number of buses owned by private operators increased

by 3.8 per cent to 20,444 while the operated average bus fleet increased by 3.2 per cent to 17,129 in 2012. The total passenger kilometrage of private buses also increased by 7.8 per cent to 21,604 million kilometers. The financial position of the SLTB continued to remain weak, although the revenue position improved, compared to the decline recorded last year. The revenue of the SLTB increased by 25.1 per cent to Rs. 26.3 billion mainly due to the increase in bus fares by 20 per cent effective from February 2012. However, the operating expenditure also increased by 23.8 per cent to Rs. 30.1 billion, resulting in the operational loss increasing to Rs. 3.8 billion in 2012 compared to the loss of Rs. 3.3 billion recorded in 2011, as per provisional financial statements.

SLTB continued to provide services for needy groups. The “Nisi Sariya” programme that provides bus services during night time and early morning, when private buses are not available, continued in 2012, with 29 new buses adding to the service in 2012. Provision of bus services on uneconomical routes in rural areas under the “Gami Sariya” programme and to school children under the “Sisu Sariya” programme also continued in 2012 with the addition of new buses to the service. The Treasury has subsidised Rs. 1.4 billion on account of season tickets and Rs. 2.2 billion on buses operating on non-remunerative lines in 2012.

Several steps were taken to improve the efficiency of state owned bus services. Electronic ticketing machines, which are automatically connected to the main system, were introduced and being used in buses operating in the Colombo district in 2012. New bus services have been added to operate in the Southern Expressway and bus services in the intercity service have also increased. The Local Area Network (LAN) project to upgrade the management information system in unconnected areas, computerisation of the Daily Cash Book and Inventory Control System, and improvement of the human resources information system continued in 2012.

Registration of new motor vehicles decreased substantially during 2012 owing to higher import duties imposed on vehicle importation. The number of new vehicles registered during 2012 decreased by 24 per cent to 397,295 compared to an increase of 46 per cent in the previous year. The decline occurred primarily due to the increase of excise taxes on motor vehicles. The number of cars registered decreased by 46 per cent during 2012 while registration of buses and three wheelers declined by 27 per cent and 29 per cent, respectively. However, land vehicles such as tractors registration declined only at a moderate rate of 6 per cent due to the improvement in the agricultural and industrial sectors.

Rail Transportation

The operations of Sri Lanka Railways (SLR) showed an improvement in 2012. Passenger kilometrage increased by 10.2 per cent to 5,039 million kilometers compared to 4,574 million kilometers recorded in 2011 owing to re-opening of the upgraded Southern railway line for passenger transportation and due to the addition of new trains to the service. The goods kilometrage also increased by 3.9 per cent, indicating an improvement in the utilisation of the railways in freight transportation due to the addition of new carriages for this purpose. The total revenue of the SLR increased by 15 per cent to Rs. 4.9 billion while the recurrent expenditure increased by 4.3 per cent to Rs. 8.6 billion, leading to a decrease in operating losses to Rs. 3.8 billion in 2012 compared to the loss of Rs. 4.1 billion in 2011.

SLR took several measures in 2012 to strengthen the rail transportation system. Railway wagon re-construction has been commenced and a new set of railway engines were purchased for the rehabilitation of existing locomotives during the year. With the receipt of 20 power sets from India in addition to 13 power sets imported from China, several new train

Table 3.5 Salient Features of the Transport Sector

Item	2011	2012(a)	Growth Rate (%)	
			2011	2012(a)
1. New Registrations of Motor Vehicles (No.)				
Buses	525,421	397,295	46.3	-24.4
Private Cars	4,248	3,095	70.5	-27.1
Three Wheelers	57,886	31,546	150.9	-45.5
Dual Purpose Vehicles	138,426	98,815	61.6	-28.6
Motor Cycles	33,518	37,397	186.2	11.6
Goods Transport Vehicles	253,331	192,284	23.7	-24.1
Land Vehicles	14,818	12,266	25.1	-17.2
	23,194	21,892	18.0	-5.6
2. Sri Lanka Railways				
Operated Kilometres ('000)	10,030	10,600 (b)	2.5	5.7
Passenger Kilometres (million)	4,574	5,039	5.1	10.2
Freight Ton Kilometres (million)	154	160 (b)	-5.5	3.9
Total Revenue (Rs. million)	4,235	4,852	5.4	14.6
Operating Expenditure (Rs. million)	8,295	8,648	15.4	4.3
Operating Loss (Rs. million)	4,060	3,796	28.0	-6.5
3. Sri Lanka Transport Board				
Operated Kilometres (million)	341	338	0.0	-0.9
Passenger Kilometres (million)	17,996	19,509	10.6	8.4
Total Revenue (Rs. million)	21,019	26,303	-2.5	25.1
Operating Expenditure (Rs. million)	24,326	30,124	8.7	23.8
Operating Loss (Rs. million)	3,307	3,821	299.9	15.5
4. SriLankan Airlines				
Hours Flown	74,886	93,922	19.4	25.4
Passenger Kilometres Flown (million)	10,677	12,790	13.6	19.8
Passenger Load Factor (%)	78	81	0.0	3.8
Weight Load Factor (%)	55	53	0.0	-3.6
Freight (MT '000)	90	98	8.4	8.9
Employment (No.)	5,487	6,159	10.4	12.2
(a) Provisional	Sources: Department of Motor Traffic			
(b) Estimates	Sri Lanka Railways			
	National Transport Commission			
	Sri Lanka Transport Board			
	Civil Aviation Authority of Sri Lanka			
	SriLankan Airlines			

services including intercity and express train services were introduced by SLR in 2012. New train services commenced between Colombo and Anuradhapura, Colombo and Homagama and Colombo and Hikkaduwa during 2012. A super luxury compartment was added to the trains on the Upcountry, Northern and Eastern railway lines in collaboration with the private sector, with the objective of providing a comfortable journey for long distance passengers. In order to facilitate passenger services under the "Deyata Kirula" programme, an intercity train service was introduced from Colombo to Vavuniya.

SLR continued with infrastructure development projects with special attention to the reconstruction of railway lines and establishment of stations in the Northern line.

Ground clearance of the Northern railway line from Medawachchiya to Thalaimannar (106 km) was completed while laying of the railway line was in progress. Similarly, the preliminary survey work of the line from Pallai to Kankasanthurai (56 km) has been completed. In tandem with the reconstruction of the Northern Railway line, an electric signal system has also been installed. A project was launched to reconstruct the signal system from Anuradhapura to Kankasanthurai and Medawachchiya to Thalaimannar. Several other projects towards the improvement of the railway signal system, with the objective of maintaining an efficient train service, were also in progress. The railway line from Kalutara South to Matara has been upgraded under the Coastal line improvement project and railway operations commenced in 2012. Further, the railway line from Seeduwa to Negombo was converted to a double track during 2012.

SLR has the potential to improve its services for transportation of passengers and freight thereby helping to reduce city traffic congestion to a great extent. At present, SLR's contribution to passenger transportation is low at 5 per cent while it's contribution to goods transportation is lower at 2 per cent. The limitations in the rail transport system, such as inadequate coverage, lack of carriages and inefficiency have compelled the general public to seek other modes of transportation. This has caused heavy traffic congestion, and thereby losses in terms of productive man-hours and energy utilisation. The modernisation of the existing railway system is required to overcome the above constraints. Although the modernisation of the railway system may warrant a higher tariff, it may be justified with improved coverage and providing a more efficient service suited to serve the rising demand of the growing economy, in relation to both passengers and goods transportation. Therefore, there is an urgent need to seriously consider introducing alternative rail transport modes, such as a metro rail system which would connect peripheral

cities with Colombo. In addition, SLR manage large extent of lands in excess of 17,000 acres which could be utilised more efficiently and effectively to generate an additional income source to the SLR whilst it would help to establish business entities in already viable commercial areas.

Civil Aviation

The civil aviation sector recorded a positive growth in 2012. The Bandaranaike International Airport (BIA) at Katunayake handled 7 million passengers, including transit passengers during 2012, recording an increase of 15 per cent compared to 2011. The total number of passenger aircraft movements handled by the BIA increased to 48,416 aircrafts indicating a growth of 11 per cent. Total air cargo handling increased by 11 per cent during 2012. During the year, SriLankan Airlines (SLA) acquired a brand new Airbus A320 aircraft and an A330 aircraft while successfully completing the business class refurbishment programme on two aircrafts. With the growth in per capita income, it is expected that the demand for leisure will help fuel the demand for domestic air travel. In order to meet such demand, SLA's domestic operation, the SriLankan Air Taxi increased its number of destinations from 13 to 15 during the year.

The financial performance of the aviation sector remained weak in 2012. The total revenue of SLA increased by 36.1 per cent to Rs. 107.4 billion, while the operating expenditure increased by 30.6 per cent to Rs. 128 billion resulting in an operating loss of Rs. 20.5 billion. Emerging competition from other international airlines and the volatility of fuel prices have adversely affected the profitability of SLA. Mihin Lanka recorded an operating loss of Rs. 1 billion in 2012 compared to the operating loss of Rs. 455.3 million incurred in 2011.

The construction work of several aviation development projects was in progress. The construction work of Phase I of the Mattala

Rajapaksa International Airport was completed in early 2013 and commercial operations commenced on March 18, 2013. Under Phase I, an annual passenger volume of 1 million and an annual cargo throughput of 45,000 MT are being targeted. The construction of Phase II is expected to commence shortly and is to be completed in 2017. The project will include a parallel taxiway and stub connecting taxiway, terminal building to facilitate 5 million passengers, apron expansion and enhancements to the cargo operations area and logistic facilities. Under the BIA expansion project, a second terminal with the capacity to handle 9 million passengers per annum is to be constructed. Upon completion, the total capacity of the BIA would be 15 million passengers per annum. In order to ensure increased passenger comfort and satisfaction, a hotel is also to be built in the vicinity of the BIA. The Ratmalana domestic airport was also converted into a city airport through the accommodation of international corporate flights from September 2012.

There is a vast potential to expand the civil aviation industry and increase its value addition to the economy as Sri Lanka emerges as an aviation hub. Sri Lanka's strategic location will enable it to reap the benefits of future growth in international air cargo handling especially considering the proximity of the Mattala Airport to the Hambantota Port and the railway system which will link both these points. Further, the Mattala Airport is expected to become an aviation complex with facilities for aircraft maintenance, repair and overhauling and will also host flying schools. An existing building at the BIA is to be modified and converted to a terminal to serve low cost carriers and to serve as a boarding gate during peak hours. Considering the surge in demand for domestic tourism, steps have been taken to upgrade / develop eight domestic airports at Sigiriya, Koggala, Kandy, Batticaloa, Ampara, Trincomalee, Nuwara Eliya and Palali.

Port Services

Ports activities reflected a slight decline in 2012. The slow pace of global economic recovery and the reduction in domestic import trade due to tight monetary and fiscal policy measures adopted at the beginning of the year, adversely affected the performance of the ports sector. Total container handling fell by 1.8 per cent to 4.2 million twenty foot equivalent container units (TEUs) in 2012 from 4.3 million TEUs in 2011. Transshipment handling fell only marginally. Total cargo handling remained unchanged at 65.1 million metric tons. The total number of vessels arriving at the port of Colombo reflected a decline, but the gross tonnage of container ships that called during the year increased by 3.6 per cent reflecting the arrival of larger ships. The financial performance of the Sri Lanka Ports Authority (SLPA) has improved significantly despite the sluggish pace of global trade as per unaudited financial data. The revenue of the SLPA increased by 24 per cent to Rs. 38.7 billion due to the commencement of operations at Magam Ruhunupura Mahinda Rajapaksa (MRMR) Port and also due to the net depreciation of the rupee against the dollar by around 10 per cent during 2012. The operating expenditure increased by 11.5 per cent to Rs. 25.6 billion in 2012. The operating profit of the SLPA increased by 58 per cent in 2012 to Rs. 13.1 billion compared to Rs. 8.3 billion in 2011.

Chart 3.4 Volume of Container Handling and Transshipments

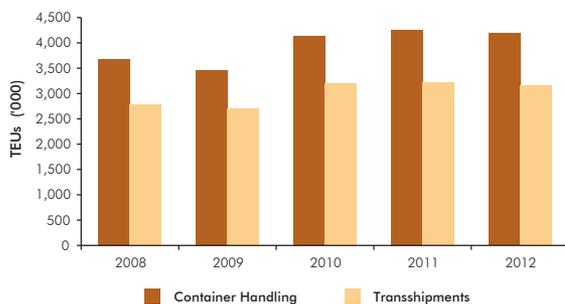


Table 3.6 Performance of Port Services

Item	2011	2012(a)	Growth Rate (%)	
			2011	2012(a)
1. Vessels Arrived (No.)	4,332	4,134	6.5	-4.6
Colombo	4,124	3,870	5.5	-6.2
Galle	73	69	52.1	-5.5
Trincomalee	126	161	15.6	27.8
Hambantota	9	34	0.0	277.8
2. Total Cargo Handled (MT '000)	65,069	65,070	6.3	0.0
Colombo	62,016	61,669	5.5	-0.6
Galle	464	522	45.9	12.5
Trincomalee	2,574	2,859	19.5	11.1
Hambantota	15	20	0.0	33.3
3. Total Container Traffic (TEUs '000) (b)	4,263	4,187	3.0	-1.8
4. Transshipment Container (TEUs '000)(b)	3,216	3,167	0.3	-1.5
5. Employment (No.) (c)	11,008	10,200	-14.2	-7.3
Colombo	10,109	9,373	-13.9	-7.3
Galle	433	391	-9.8	-9.7
Trincomalee	466	436	-22.5	-6.4

(a) Provisional

Source: Sri Lanka Ports Authority

(b) TEUs = Twenty-foot Equivalent Container Units

(c) Only for Sri Lanka Ports Authority

The development of the ports sector remains at the forefront of the country's development strategy. Construction of Phase I of the Hambantota Port was completed in December 2011 and port operations commenced during 2012. As an effective measure to ease the long berthing delays experienced by Roll on-Roll off (Ro-Ro) vessels at the Port of Colombo, it was decided to route all such vessels to the MRMR Port and the first Ro-Ro vessel operation at the port was carried out on 06 June 2012. Accordingly 4,388 transshipment vehicles were handled at MRMR port in addition to 6,515 vehicles cleared for local usage. Seven investors have been selected and approvals of the Cabinet of Ministers have been obtained for setting up of Sugar, Petrochemical, Fertilizer, Cement and Warehousing ventures within the port. One business venture is to commence construction shortly, while the agreements with others were being finalised by end 2012. Owing to the high demand for investment opportunities in the port, the second Request for Proposals (RFP) was floated this year. In this round, ten investment proposals are currently being evaluated. The construction of fourteen oil tanks under the Bunkering Facilities and Tank Farm Project in Hambantota were

nearing completion by end 2012 and are expected to be commissioned shortly. Phase II of the Port Project was commenced in November 2012 and is scheduled to be completed by end 2015. The Colombo South Port project was in progress in 2012. Construction of the main breakwater and the secondary breakwater were completed in April 2012 and harbour infrastructure was nearly completed and the first 450 meters of terminal is expected to be operational in the fourth quarter of 2013. The construction work of the Oluvil Port was completed in 2012 and handed over to the SLPA. This port is expected to serve as a South Eastern link in the developing chain of coastal harbours in the country. It will provide convenient and cost effective access to and from the south eastern region for goods and cargo originating on the west coast. A port city is also expected to be developed around the Port of Colombo, which, while adding to Sri Lanka's tourist attractions, would widen the land mass through the reclamation of lands from the ocean.

SLPA has been proactively involved in maintaining its competitiveness amidst stiff competition from regional ports. The new ports emerging in the region, will pose a challenge to the Sri Lankan ports sector. However, future prospects remain bright as there are currently around 161 mega ships operational within the Asia Europe Trade Route and another 110 ships are on the order book which can be attracted to Colombo resulting in the creation of an increased demand in the future. Considering the capacity constraints that are prevalent in the Colombo Port, old buildings adjacent to the Jaya Container Terminal were demolished and the domestic container stacking area was expanded to accommodate a further 8,000 TEUs. Vessel productivity levels were also greatly improved in 2012 through the procurement of new equipment including ship-to-shore gantry cranes, rubber tyred gantry cranes

and yard tractors. Educational and awareness programmes were conducted throughout the year to help improve the knowledge and skills of staff at operational level, to improve overall productivity.

Water Supply and Irrigation

Development activities in the water and drainage sector are essential to upgrade the socio-economic standards of beneficiaries in line with the target of safe water coverage of 100 percent by year 2020. The Ministry has taken action to formulate a national policy on drinking water, sanitation and industries causing major water pollution. The National Policy on Drinking Water had been formulated and approved by the Cabinet and is currently being proactively implemented. Steps have also been taken to formulate and amend legislations and regulations to ensure the smooth implementation of related national policies. The National Water Supply and Drainage Board (NWS&DB) has been actively coordinating with other ministries in the development of national policies and international agreements related to water and sanitation such as, information sharing on water and sanitation under the National Human Rights Action Plan and National Action Plan on Child Protection 2013-2017. Providing individual connections in underserved settlements was continued and consumer societies were established in such settlements to encourage people to conserve water and pay monthly bills for public water outlets. During the year, the government had allocated Rs. 36.3 billion for the implementation of water supply and sewerage projects.

Several projects were implemented by the NWS&DB during 2012. During the year, some of the major water supply projects covering Greater Kandy, Towns South of Kandy, Dambulla, Towns North of Colombo, Colonna, Balangoda, Negombo, Trincomalee, Jaffna and Kilinochchi had been implemented. In addition to such projects, 4,000

small scale rural water supply schemes had been constructed around the country to provide water to over 3 million people island wide. The schemes are maintained and operated by beneficiaries through their Community Based Organisations (CBOs) which are supported by district Rural Water & Sanitation (RWS) Units. While providing technical, community development and financial management support, the RWS units also help conduct water quality surveillance programmes and motivate CBOs to liaise with other stakeholders in the area.

The demand for pipe borne water has increased significantly in line with rapid expansion in commercial and industrial activities and urbanisation. The NWS&DB provided 137,874 new water connections in 2012. The total number of connections managed by NWS&DB reached 1.6 million, reflecting a 9.5 per cent increase. In 2012, the proportion of non-revenue water decreased from 31.3 per cent to 30.7 per cent in the Greater Colombo area and increased from 25.1 per cent to 25.8 per cent in other regions. In order to reduce the levels of non-revenue water usage, the NWS&DB has taken a variety of short term measures. Arrangements have been made for water leaks to be repaired by staff at any time of the day and for the service to be available throughout the year. The NWS&DB has commenced replacement of heavily corroded pipes and the provision of individual connections in underserved settlements. In recent years, over 10,000 such connections were provided and 800

stand posts had been removed. The procedure related to raiding and prosecution of water thefts has also been strengthened. The NWS&DB aims to bring down the percentage of non-revenue water usage, island wide to 20 per cent by the year 2020.

The financial position of the NWS&DB improved in 2012. As per unaudited provisional financial statements, the total revenue increased by 11 per cent to Rs. 15.4 billion mainly due to the increased number of connections provided, proactive strategies to reduce non-revenue water usage and the revision of water tariffs during the year. As per the new tariff structure which was implemented with effect from 01 October 2012, the average water tariff for domestic users increased by 60 per cent while that for commercial and industrial users increased by 15.4 per cent and 9.4 per cent, respectively. The operational and maintenance cost also increased by 3 per cent to Rs. 12.4 billion. Therefore, the operating profit (provisional) of NWS&DB improved significantly to Rs. 3 billion.

Construction work of several major irrigation projects was in progress in 2012. During the year, thirteen major irrigation projects, such as the Menik Ganga Reservoir, Yan Oya Reservoir, Lower Uva Project, Mahagona wewa, Galoya Nawodaya, Gurugaloya Project, were in progress. Nine new irrigation projects commenced in 2012 and those were expected to irrigate 11,748 hectares and will benefit over 15,000 families. The expenditure incurred on major irrigation schemes during the year stood at Rs. 3.8 billion. The Department of Irrigation has also initiated the Pro-Poor Economic Advancement and Community Enhancement (PEACE) Project which covers 8 major irrigation schemes and 12 medium irrigation schemes scattered in the Anuradhapura and Kurunegala districts. Under this project, irrigation infrastructure facilities and water management of all major and medium sized inter-provincial schemes are to be upgraded and rehabilitated.

Table 3.7 Water Supply by National Water Supply & Drainage Board

Item	Growth Rate (%)			
	2011	2012 (a)	2011	2012 (a)
Total Number of Water Supply Schemes (b)	323	323	2.5	0.0
Total Number of New Connections				
Given during the Period	95,728	137,874	9.7	44.0
Total Number of Connections (b)	1,449,301	1,587,175	7.1	9.5
Total Water Production (Mn. Cu. Mtr.)	490	526	4.5	7.3
Unaccounted Water (%)				
Greater Colombo	31.3	30.7	-0.6	-1.9
Regions	25.1	25.8	-5.6	2.8

(a) Provisional
(b) As at year end

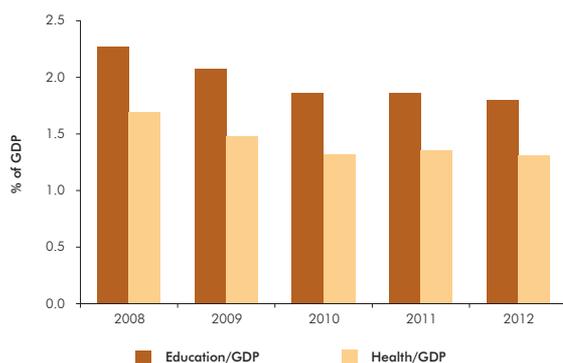
Source: National Water Supply and Drainage Board

3.3 Social Infrastructure Policies, Institutional Framework and Performance

Sri Lanka's achievement of many of the Millennium Development Goals ahead of the target year of 2015 is highly commendable. The goals that have already been achieved are the halving of poverty, achievement of universal primary education, promotion of gender equality and empowerment of women, targets on skilled birth attendance and antenatal care, reduction of tuberculosis prevalence and consumption of ozone-depleting substances, and the provision of safe drinking water and basic sanitation. Those benefits have been reaped as a result of the government's continued commitment and heavy investment in sectors of socio-economic importance, such as health and education, since independence. Therefore, Sri Lanka is well above and over the achievements of many of its peers in the Asia-Pacific region in respect of these targets. However, as the country strives to achieve its per capita income target of US dollars 4,000 in 2016, it is vital for the social infrastructure system to evolve into an internationally competitive service framework which will be able to cope with the growing demands of the population. Unless the quality and outreach of these services are enhanced, maintaining the existing achievements will pose a challenge in the future.

Chart 3.5

Government Expenditure on Health and Education



Health

The government is committed to adopt a health policy which is directed at consolidating gains achieved so far while adopting new measures to reduce regional disparities and enhancing equitable access to health care services. The broad aims of the health policy are to further increase life expectancy by reducing the prevalence of communicable and non-communicable diseases and improving the quality of life by reducing preventable diseases. In line with the "Mahinda Chintana" emphasis has been placed on equity in access to healthcare services so as to improve access for lower income groups, such as those in estates, remote rural areas and former conflict and disaster affected areas. In order to achieve those goals, a strategic health development framework has been developed comprising of five main areas; strengthening individual household and community actions for health, improving health services delivery, improving stewardship and management functions, improving human resource management and improving health financing including resource allocation and utilisation.

During the year, numerous measures have also been taken to improve the human resource and physical infrastructure base of the health sector. There were 593 government hospitals with 73,437 beds in the country, which amounts to 3.6 beds per 1,000 persons by end 2012, excluding beds in private hospitals. There were 17,129 qualified doctors in the state health sector: a doctor for every 1,187 persons, and 29,781 qualified nurses: a nurse for every 683 persons, by end 2012. The cadre of the health ministry and provincial health departments were improved with new staff recruitments. During the year, 3,266 new supportive health staff and 3,049 health staff were recruited in order to strengthen health sector service providers. Several physical infrastructure development projects were also under way

throughout the country in order to improve the service delivery of the public health system in 2012.

There is a strong need to strengthen the existing primary level health care system in order to reduce the burden on secondary and tertiary care providers. Surpassing primary health care providers and obtaining services from higher level hospitals or private specialists not only increases the cost of health care to the government but also creates a significant cost to individuals. In order to address those issues, the Ministry of Health intends to propose a “universal access plan,” in which, a key strategy will be the strengthening of primary level health care. As per such plan, policy directions that are to be considered include a cluster system whereby specialist hospitals (base hospitals and above) will be linked with the primary level institutions in the area for referral and back referrals, ensuring that continuity of care is in place. There will be a rational distribution mechanism for essential drugs and consumables to manage Non-Communicable Diseases (NCDs) so that patients can access primary care within the vicinity of their residence and ensure continuity of treatment. In addition to infrastructure and human resource development, Out-Patient Departments of primary level curative institutions are also to be improved in order to provide patients with a new outlook on

out-patient consultation, lifestyle guidance, basic laboratory investigations and emergency care, and pharmaceutical services. Community health services are also to be strengthened to support rational screening for selected NCDs to prevent overburdening of primary level curative services in the future.

The present demographic dividend with a larger working age population is challenged by emerging health related issues. The high proportion of working age population with a lower dependency ratio due to the fall in fertility rate below replacement level provides a demographic dividend at present. However, this period will be followed by a gradual decline in the share of working age population and an increasing dependency ratio, due to the aging of the population. Considering this rise in the dependent population, keeping vulnerability levels in check will be increasingly challenging with limited resources. Public spending priorities in the health sector will have to be readjusted considering the increasing demand for elderly care.

The ongoing epidemiological and demographic transition will bring new challenges to the health sector. In recent times, there has been a surge in NCDs, such as cardiovascular disorders, diabetes, kidney disease, cancer and mental illness. While NCDs have beaten communicable diseases as the leading cause of death in the country, the trend is expected to continue in the context of the growing aging population. It is expected that the growing per capita income will entail significant changes to lifestyles, adding major risk factors for developing chronic NCDs. Such factors include unhealthy dietary habits, job stress and tension, physical inactivity, smoking and harmful alcohol use. During 2012, the Ministry of Health continued to actively implement the NCD Prevention and Control programme. Measures that were taken included the revision and distribution of Guideline for Management of NCDs

Table 3.8 Salient Features of Health Services

Item	2011	2012(a)
Government		
Hospitals (Practicing Western Medicine) (No.)	592	593
Beds (No.)	69,731	73,437
Primary Health Care Units (No.)	475	480
Doctors (No.)	16,384 (b)	17,129
Assistant Medical Practitioners (No.)	1,097	1,061
Nurses (No.)	29,101	29,781
Attendants (No.)	7,477	8,403
Ayurvedic		
Ayurvedic Physicians (No.) (c)	20,353	20,712
Total Government Expenditure on Health (Rs. billion)		
Current Expenditure	89.2	99.0
Capital Expenditure	74.4	81.9
	14.8	17.1

(a) Provisional
 (b) Including Intern Medical Officers
 (c) Registered with the Department of Ayurvedic Commissioner

Sources: Ministry of Health
 Department of Ayurveda
 Ministry of Finance and Planning
 Central Bank of Sri Lanka

in Primary Health Care institutions, development of the NCD Check-up Manual and NCD Screening Guideline, promotion and awareness campaigns among school children, youth and the general public. Communicable diseases also remain a health burden as the infectious nature of diseases such as malaria, dengue and filariasis are a public concern.

The private sector continues to play a significant role in health care service delivery in Sri Lanka. The number of registered private hospitals stood at 197 by end 2012 with a bed capacity of 4,908. The increase in income levels and changing lifestyles has created a significant demand for private health services. As this trend continues into the future, there is an urgent need for effective private health service regulations and appropriate accreditation policies to ensure that service quality is not compromised in an attempt to profit from the growing pace of demand and the lag in supply. The process of amending the existing Private Medical Institutions (Registration) Act was continued in 2012 and steps are being taken to streamline the procedure related to temporary registration of foreign qualified specialists to be employed in private hospitals and to provide services for workshops, curative care and special camps on a voluntary basis. Implementation of appropriate accreditation policies to accredit private healthcare service providers will also be relevant to developing niche markets, such as health tourism, which can complement Sri Lanka's efforts in attracting tourists.

Education

The education sector is currently undergoing several reforms to upgrade its standard to a globally competitive level. The dynamic process of knowledge creation raises the possibilities of enhanced growth and competitiveness. In ensuring knowledge creation, equitable access to

quality education is a fundamental consideration. Therefore, adequate action to improve accessibility to education needs to be expedited while appropriate changes in the higher education sector and technical and vocational education sectors are needed to be brought in, in order to align with changing labour market trends.

In 2012 several steps were taken to increase equitable access to primary and secondary education and to improve quality, governance and service delivery of education services. The flagship programme under the education strategic plan on transforming 1,000 secondary schools and around 5,000 primary schools to ensure the achievement of objectives of providing equitable opportunities to all was in progress in 2012. As the medium term outcome of the project, primary and secondary schools at each Divisional Secretariat were to be established to promote accessibility and full participation in primary and secondary education and thereby to minimise regional imbalances. However, the number of schools with less than 50 students had increased to 1,598 in 2012 compared to 1,552 in 2011. There is a disparity in resource endowments to such schools compared to the national level, reflecting the need to rationalise the usage of existing resources. Further, steps are expected to be taken to strengthen the system of assessments of students to facilitate evidence based policy decision making and the planning process, thereby avoiding the concerns that had arisen recently on the efficacy of the evaluation system. Special attention has been paid to improving general education facilities in Northern and Eastern Provinces focusing on ensuring proper education facilities in the former conflict affected areas. Under the programme, 139 destroyed and damaged schools were reconstructed and rehabilitated while 348 schools had been re-opened in Northern Province during 2012.

Table 3.9 Salient Features of General and University Education

Item	2011	2012 (a)
1. General Education		
a. Schools (No.)	10,549	10,763
Government Schools	9,731	9,931
o/w National Schools	342	342
Other Schools	818	832
Private (b)	98	98
Pirivena	720	734
b. Students (No.) ('000)	4,158	4,187
c. New Admissions (No.) ('000) (c)	331	338
d. Teachers (No.) ('000)	228	244
e. Student/Teacher Ratio (Government Schools)	18	18
f. Total Govt. Expenditure on Education (Rs. billion) (d)	121.4	136.2
Current Expenditure	99.0	107.3
Capital Expenditure	22.3	28.9
2. University Education		
a. Universities (No.)	15	15
b. Students (No.) (e)	74,440	69,879
c. Lecturers (No.)	5,064	5,200
d. Number Graduating (e)	16,686	n.a.
Arts and Oriental Studies	6,940	n.a.
Commerce & Management Studies	2,791	n.a.
Law	348	n.a.
Engineering	1,346	n.a.
Medicine	1,061	n.a.
Science	2,651	n.a.
Other	1,549	n.a.
e. New Admissions for Basic Degrees (No.) (e)	22,016	- (f)

(a) Provisional
 (b) Private schools approved by the government and schools for children with special needs (This figure excludes international schools which are registered under the Companies Act)
 (c) Government schools only
 (d) Includes government expenditure on higher education
 (e) In all Universities, excluding the Open University of Sri Lanka
 (f) New intake from GCE (A/L) 2011 was not admitted to universities in 2012 due to pending court case on issues in methodology used to calculate the Z-score

Sources: Ministry of Education
 University Grants Commission
 Ministry of Finance and Planning
 Central Bank of Sri Lanka

Several measures were taken to expand the computer facilities and Information Technology (IT) education in government schools. In order to introduce ICT for primary grades, the One Laptop Per Child (OLPC) project was continued. Under the 1,000 secondary schools development project, it is planned to provide a 'Mahindodaya Technical Laboratory' with 40 computers, printer, scanner and other equipment for each school. Further, a Memorandum of Understanding has been signed between the Ministry of Education and Ministry of Youth Affairs and Skills Development in relation to awarding of National Vocational Qualification (NVQ) level 2 and 3 for school children who study ICT in the school curricular, based on their results.

The Learning Content Management System (e-Thaksalawa) project has also continued in 2012. The Ministry of Education continues to be involved in programmes to encourage the development of English competency among students and teachers. The third phase of the Presidential initiative 'English as a Life Skill' through which, English language skills were taken across the country with special focus on spoken English, was launched in February 2013.

The university education system continues to face challenges of keeping abreast with domestic and global requirements to cater to the needs of the labour market. Since Sri Lanka has currently embarked on a development strategy that seeks to bring about rapid and sustained growth in the medium term, it is vital to transform the higher education sector with modern strategies and tools. For this transformation to occur in 2012, the government allocated Rs. 75 million to each university to convert 6 public universities into world class institutions. However, it is understood that the increasing demand for higher education in the country is difficult to be fulfilled through public sector higher education institutes alone. Hence, it is important to encourage private sector participation in the higher education sector along with suitable accreditation and reviewing processes in place. At the same time, collaboration between public and private universities is to be encouraged through developing linkages between the two institutions and with industrialists to embark on research and development. An initiative with such a mandate, with suitable fiscal incentives may help both public and private universities mutually and to better utilise research output.

The University Grants Commission (UGC) continued its programmes to improve the existing university system amidst the challenge of satisfying the requirements of the labour market. The UGC approved the establishment of

the Faculty of Engineering with four departments attached to the University of Jaffna and the Faculty of Engineering with five departments attached to the South Eastern University. Further, the UGC has granted approval for one undergraduate course and 7 new postgraduate courses enhancing the number of spheres available for students to pursue higher studies. In addition, the UGC approved the establishment of the Department of Commerce in the University of Jaffna. Further, it should be noted that the Secretary to the Ministry of Higher Education has granted approval, based on the UGC recommendation, to issue four Bachelor of Science degrees in Engineering to the Sri Lanka Institute of Information Technology (SLIIT) and Bachelor of Arts degree in Buddhist Leadership by Sri Lanka International Buddhist Academy after institutional and programme reviews. Action has been taken to gazette the Institute of Chartered Accountants of Sri Lanka (ICASL) and National School of Business Management (NSBM) as degree awarding institutions.

Many initiatives had been taken in 2012 to enhance the outreach of the Technical and Vocational Education and Training (TVET) sector. The development of competencies of the potential and existing workforce is considered as the key objective of the TVET sector and there were 463 public institutions and 359 private and NGO institutions providing 1,225 accredited courses in technical and vocational education in the country by end 2012. Under the NVQ system, 18,111 NVQ certificates were issued to students by the Tertiary and Vocational Education Commission (TVEC) during the year. The TVEC continued to provide information on the labour market through its Labour Market Information Bulletin and Labour Market Information Website, enabling students to keep pace with labour market requirements. Further, the TVEC was involved in awarding financial grants for Public, Private and NGO sector training institutions

for the purpose of improving quality and relevance of training. There is a need to create a clear entry route, to direct students with different levels of educational attainment, to the TVET sector. Career counseling and guidance at the school level will enable effective assessment of individual students' abilities and thereby help to guide them towards the right vocational or technical training opportunities. As the economy progresses on a sustained growth path, there will be an emerging demand for semi-skilled and skilled labour to meet the growing demands of the economy, across a range of sectors. Upliftment of the TVET sector can help address that rising demand, both in the domestic and international labour market.

Housing and Urban Development

In 2012, both government and non-government institutions endeavoured to realise the national housing policy of house ownership for all, through the target of 600,000 houses by 2016, according to the Mahinda Chintana. The strategy involved both public and privately funded projects with full or part sponsored construction or financial assistance provided to individuals. The national housing policy mainly targeted low and middle income families and focused on a multi-dimensional approach of construction of new houses, rehabilitation of existing housing facilities, relocation from low quality housing, providing assistance for low and middle income families to construct their houses, resettlement and orientation and confirmation of property rights. At the same time, investments have been promoted to construct houses for high income earners as well, since the country envisages a growing high income stratum with increasing per capita incomes, as well.

The Jana Sevana Housing Development Programme, the main programme implemented by the National Housing Development Authority (NHDA) and Urban Settlement Development

Authority (USDA), continued projects to increase housing facilities in the country. The government allocated funds of over Rs 10 billion to 12 programmes that were initiated by the NHDA, USDA and the Condominium Management Authority in 2012. These projects included rural housing, housing under Deyata Kirula, upgrading of non-permanent residences, re-housing, renovation and condominium constructions. The Nagamu Purawara housing infrastructure rehabilitation programme, also under the Jana Sevana programme, renovated condominium property schemes which were more than 30 years old and that benefited more than 18,000 condominium dwellers. The Jana Sevana Swashakthi Human Development programme took a participatory approach along with the physical development of low facility urban settlements in order to empower them. Further legal deeds for housing units of government housing schemes were issued to 3,119 dwellers in 2012. Several housing schemes were launched to provide permanent housing for displaced families in former conflict affected areas in the North and East. Of those programmes, the main resettlement programme provided a special loan to displaced families in the Northern Province and the construction of houses were done through a participatory approach. Those schemes included loans and grants with supplies, labour and technical assistance and overall supervision was mainly coordinated by the NHDA.

Urban development gained high momentum and emphasis in 2012, as many large scale projects that improved the quality of the urban environment were initiated and completed. The urban development strategy of Sri Lanka focused on developing both economic and social infrastructure in order to provide a holistic living and working environment for the entire country. Therefore, facilities for business activities, public utilities, township development, improved

housing facilities, recreational facilities and urban beautification programmes were given high importance. The future sustenance and efficient operation of those projects creates avenues for private sector participation.

The Urban Development Authority (UDA) continued its city development and beautification programmes through various funding arrangements in collaboration with both local authorities as well as international organisations. Urban regeneration in the capital city Colombo and its suburbs, enhancing functionality and uniqueness, led to a transformation of the city. Under that programme, Colombo, the main commercial centre of the country was being developed with the improvements of facilities catering to a healthy urban society, through the construction of walkways, rehabilitations of roads, parks, restaurants, commercial centres, recreational facilities and a proper waste management system. The West Beira developments, Nugegoda Wetland Park, Japan-Sri Lanka Friendship Road, are some of the purpose built recreational and infrastructure projects completed in 2012. Taking urbanisation to the periphery, projects such as the Mahiyangana Pola and Shopping Complex, office space development at Polonnaruwa, Imaduwa Town centre development also continued. Many of the key infrastructure development projects related to urban regeneration have been implemented as PPPs as well with assistance of international agencies.

Safety Nets and Poverty Alleviation

Sri Lanka is in the process of alleviating national poverty, gradually moving away from safety nets to livelihood development and economic empowerment of the poor. That transformation had taken place with the gradual decline in the incidence of poverty as shown by

Table 3.10

**Samurdhi Welfare Programme
Number of Beneficiary Families and Value of Grants**

Year	Income Supplementary Programme		Dry Ration Programme		Nutrition Programme	
	Number of Families (a)	Value (Rs. million)	Number of Families (a)	Value (Rs. million)	Number of Families (a)	Value (Rs. million)
2007	1,844,660	9,423	105,105	1,234	102,020	594
2008	1,631,133	9,967(b)	102,662	1,457	86,480	386
2009	1,600,786	9,274(b)	173,450	2,860	71,762	505
2010	1,572,129	9,241(b)	30,320	1,016	61,495	388
2011	1,541,575	9,043(b)	n.a.	100	44,739	600
2012	1,549,107	10,553(b)	n.a.	54	55,299	250

(a) As at year end
(b) Including the kerosene subsidy

Sources: Department of the Commissioner General of Samurdhi
Ministry of Finance and Planning

the decline in the Poverty Head Count Index (percentage of population below the national poverty line) from 15.2 per cent in 2006/2007 to 8.9 per cent in 2009/2010.

Several programmes were implemented under the Samurdhi initiative in order to improve the socioeconomic conditions of people who were previously living under impoverished conditions. Various projects, such as water supply projects, and the 'Gemidiriya' Community Development & Livelihood Improvement Project were implemented as poverty alleviation initiatives and as safety ropes. Samurdhi Authority was also involved in implementing a range of other programmes such as loan facilities under Samurdhi Banking societies and focused livelihood programmes covering agriculture, animal husbandry, industries, and marketing. The total allocation for Samurdhi subsidy programme

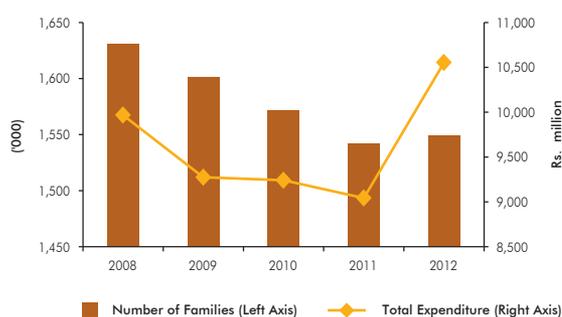
in 2012 stood at Rs. 10.6 billion and was utilised by 1,549,107 beneficiary families. The Samurdhi Social Security Fund has consistently helped reduce the vulnerability of the poor to exigencies such as death, hospitalisation and child births. During the year, payments were made from this fund to 52,686 beneficiaries.

Signaling institutional strength to facilitate greater economic empowerment, steps were taken in 2012 to enhance the scope and reach of the Divi Neguma (Livelihood Development) programme. The aim of the Divi Neguma programme was to establish 2.5 million household economic units involving all villages in areas such as home gardening, animal husbandry and cottage industries.

Environment

As Sri Lanka strives to grow faster and targeted to reach US dollars 4,000 level of per capita income by 2016, it is vital to ensure that the country reaches the target along an environmentally sustainable path, without over exploitation of natural resources. Environment policies have to deal with the three core issues viz threats to public and occupational health where the environment is the medium of transporting the agent of disease or health risks, biodiversity issues such as the existence of valuable rare species and, the appropriate use of natural resources

Chart 3.6 Number of Samurdhi Beneficiary Families and Expenditure



BOX 6

Solid Waste Management

Solid Waste Management (SWM) is a serious problem faced by many local authorities and cities around the world and since the late 1990s, solid waste has become a worldwide issue. Cities and their suburbs are places with large concentrations of population and they produce an enormous quantity of solid waste daily. It is not uncommon to see large solid waste dumping yards that are stinking, unattended and mismanaged, in the vicinity of cities of many developing countries. An efficient and scientific SWM system is a necessary condition for maintaining a clean environment in cities and their surroundings. However, even after following good SWM practices, more often than not, there will finally be a "disposal" where the residue of the solid waste or its constituents enters the environment; the atmosphere, the soil or water bodies. Therefore, the goal of a good SWM system should be to minimise the quantity of final disposal and its adverse impact on the environment.

In general, the subject of waste management falls under the purview of municipalities and local or provincial governments i.e. sub national levels of government. Many municipalities, local authorities and state governments in the developed world have adopted scientific and efficient measures for SWM. Those measures include conservation tenets of 3R's i.e. "Reduce, Reuse, Recycle", education of consumers and producers on waste reduction methods, developing markets for discarded materials and diverting such materials to those market centres, sustainable landfilling and incineration or thermal treatment which converts solid waste into ash, flue gas and heat, all of which have resource recovery elements by way of material or energy. Employing techniques for reducing waste in the end needs to be a responsibility of producers. Establishment of uniformity in SWM within a country leads to increased efficiency. For example, economies of scale could be derived by adopting similar methodologies such as 3R's.

Collection of door to door solid waste from the households, employing an adequate number of conservancy workers for conservancy operations, introducing specially designed solid waste bags and introducing a uniform mode of carrying such solid waste to designated enclosures and finally transporting those to dumping yards, have to be followed with agreed minimum standards imposed by the central government on local jurisdictions as the toxic leachate could migrate to other local authority jurisdictions or environmentally sensitive areas such as water bodies. As the responsibility for the environment rests with the central government the required laws and regulations that lead to collective action by the sub national levels of government, have to come from the centre.

Public awareness is one essential precondition for a successful SWM programme. Solid waste in urban areas now takes a totally different form compared to the past. Today it ranges from e-waste and industrial waste to green waste and bio waste resulting from municipal or local authority, commercial, industrial, institutional, mining, agricultural, community or household activities. In implementing community wide programmes such as 3Rs, public awareness play a major role.

Any residual waste after a process of recycling, medical or clinical waste or industrial waste could be hazardous. Therefore, special permits may be required for handling, storing, transporting, treating and disposing of such hazardous waste to protect public health, safety and welfare from the short and long term dangers that could emanate from such waste. Local authorities that have best practices in managing solid waste, maintain inventories of the nature and quantity of hazardous waste for future planning purposes. Europe uses Waste Catalogue Codes for classifying the waste into its overarching category of waste, its sub category and the precise waste stream. Those classifications provide guidelines to identify proper ways of managing solid waste. Further, hazardous waste disposal sites need to be identified and designated. The impact of such hazardous waste to humans, other living beings and to the environment needs to be monitored continuously.

Central monitoring is required in SWM as its impact goes beyond local jurisdictions. An efficient central monitoring system would require all local authorities to submit plans for waste management systems to their respective jurisdictions in a cohesive manner. Centrally enforced environmental laws are required for the lawful management of solid waste. Those laws may provide for the planning and regulation of solid waste storage, collection, transportation, processing, treatment and disposal. It has to be determined and declared that improper handling of solid waste creates public health hazards, pollutes the environment, causes harm to public health, safety and welfare and gives rise to economic losses. Local authorities may be guided to establish comprehensive SWM programmes with the technical and financial assistance from the central government. Utilising private sector capabilities for effective, consolidated and comprehensive SWM programmes will address the efficiency issues in such programmes.

The process of SWM is a costly and difficult operation when solid waste is accumulated in large quantities on a daily basis. Further, SWM has to be undertaken in a safe and responsible manner as there could be very long term implications to the environment as well as to the entire bio-sphere. Therefore, any SWM programme needs to

be sustainable, economically viable, socially acceptable and capable of generating cooperative stakeholder interactions. Further, any SWM programme needs to be evaluated in the context of its social acceptance. An economically viable and sustainable model would be undertaking SWM as a business activity of the private sector in which solid waste becomes the sellable main input in that process. Some options available, namely recycling, incineration and landfilling can be thought of in this regard.

Recycling can be a very effective, economically viable and sustainable SWM tool. In the SWM recycling programmes the collection of recyclables has to be made efficient and economical to have stakeholder cooperation by introducing easy to dispose methods such as curbside collection, drop off centers, deposit or refund programmes and community collection centres or home visits. Those methods allow solid waste owners either to divert, dispose or sell part of their solid waste. If all local jurisdictions are bound by similar rules and regulations, the quantities collected at collection centres will be sufficient to operate profitable recycling centres creating sustainable and economically viable SWM programmes for its stakeholders. SWM programmes of incineration can be used to create energy in the form of electricity. Waste incineration or "Waste-to-Energy" plants are resource recovery facilities which can be used for SWM, provided that adequate safety measures are taken to meet the safe emission standards to control the release of toxic gases and ashes to the environment in the process of combustion. Solid waste generators can

divert their solid waste to the energy producing company who operates Waste-to-Energy plants. Landfilling is also a method that can be used for solid waste disposal provided the availability of landfill capacities. As a way of resource recovery there are methods to tap landfill gases. About 50 per cent of it is methane, which can be used for power generation with the right technology.

Social acceptance of SWM programmes, to a large extent, depends on the enforcement of the proper set of rules and regulations applicable to the operators of solid waste treatment plants or the owners of landfills, by making them liable for damages caused due to mishandling of solid waste.

It is important to note that there are merits and demerits of any SWM programme. However, the merits of any SWM programme have to be judged in relation to the available alternatives.

References:

1. Consolidated European Waste Catalogue, Appendix A. Environment Agency Hazardous Waste: Interpretation of the definition and classification of hazardous waste (2nd edition v2.2)
2. Karmperis, A.C, et al. Decision support models for SWM: Review and game theoretic approaches, Waste Management (2013), <http://dx.doi.org/10.1016/j.wasman.2013.01.017>
3. Laws of Pennsylvania, Act No. 1980-97
4. Recycling Basics, Reduce, Reuse, Recycle, US EPA, <http://www.epa.gov/recycle/recycle.html>
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such as minerals, fish stocks and global commons (the atmosphere or the ozone layer). Sri Lanka has been safeguarded to a certain extent from above outlined issues due to inherent Sri Lankan cultural and national values and the adherence to several international conventions, agreements and protocols. However, certain emerging issues such as land degradation, haphazard waste disposal, forest cover depletion, air pollution, and pollution of inland waters need to be properly addressed, as the protection of the environment and economic growth are often seen as competing aims.

The government continued to strengthen environment policies in order to ensure that the ecological impact of economic activities is sustainable. A National Cleaner Production

Policy and Strategy was developed by the Ministry of Environment and the approval of the Cabinet of Ministers was obtained in order to promote ecologically sustainable production and consumption throughout the country. The Ministry of Environment and Renewable Energy was also involved in the formulation of green procurement guidelines to promote sustainable consumption and production in public and private sectors in the country. A Green Accounting Mechanism has also been developed to evaluate the ecosystem services and their linkages with economic development and the real contribution of natural resources to the national economy. During the year, the Air Resources Management Centre (AirMAC) was established as a multi stakeholder organisation

to work out all policies related to air quality in Sri Lanka. The Pavithra Ganga Programme aimed at maintaining the water quality of the main water bodies of the country was continued during the year, while provisions under Basel Convention for the control of trans boundary movement of hazardous waste and their disposal were implemented.

The CEA had also implemented several measures to safeguard the environment. Population density and inequitable resource management have been identified as the root causes of water scarcity, especially in rapidly developing countries. In order to address such issues, the CEA continued to evaluate water quality in the Kelani River, Ma Oya and Dadugama Oya, using the water quality index. This index reflects the quality for health and acceptability of

the proposed ambient water quality standards. During the year, steps were taken to revise the present waste water discharge standards and their tolerance limits based on the country's development needs, to ensure effective control. A panel of relevant stakeholders and university experts has been appointed to review, monitor and draft new waste water discharge standards and their tolerance limits. The CEA has also decided to review and update the National Environmental Protection & Quality Regulation No. 01 of 2008 in order to draft more effective and broad based standards to discharge industrial waste water. A variety of awareness and training programmes were conducted for teachers, school children and officers in order to increase awareness about environment protection and to improve monitoring activities.