

# 3

## ECONOMIC AND SOCIAL INFRASTRUCTURE

### 3.1 Overview

**T**he government continued with its massive infrastructure development drive in 2011, which is fundamental to economic development and plays a crucial role in determining the quality of life. Improving economic infrastructure across the country would lead to the expansion of the production capacity of the economy while increasing economic efficiency and reducing regional disparities, thereby helping to achieve a regionally balanced growth. Development of social infrastructure is also vital for strengthening the human capital base resulting in productivity improvements and innovations which would drive the growth. The government's consistent commitment to improving the economic infrastructure base of the country was evident from various projects being implemented in the areas such as ports, airports, roads, railroads, irrigation, energy and water supply. The first phases of Southern Expressway, Norochcholai Coal Power Plant and the Hambantota Port Project were completed in 2011. The Upper Kotmale Hydro Power Project reached the final stage of completion. In addition, phase II of the Norochcholai Coal Power Plant, Colombo South Harbour Project, Phase II of Hambantota Port Project, Matthala International Airport, Phase II of Southern Expressway, Colombo - Katunayake Expressway and Colombo Outer Circular Highway were other key infrastructure development projects

implemented in 2011. The public investment on the infrastructure development programme amounted to Rs. 407.5 billion (6.2 per cent of GDP) in 2011. 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 rural development.

**While the commitment of the government to improve the infrastructure base of the country is commendable, financially viable institutions, effective regulations, proper pricing and precise targeting are essential to maintain the sustainability of services provided.** In this context, the recent fuel price adjustments followed by electricity tariff and transport fare adjustments were steps in the right direction. Such price revisions are essential to correct adverse macro-economic implications caused by the heavy losses incurred by Ceylon Petroleum Corporation (CPC) and Ceylon Electricity Board (CEB) due to the sale of their products at prices below cost. At the same time, it is important for other State Owned Enterprises (SOEs) providing infrastructure such as Sri Lanka Railways (SLR), Sri Lanka Transport Board (SLTB), Postal Service, SriLankan Airlines (SLA), National Water Supply and Drainage Board (NWS&DB) to ensure the financial viability by improving financial

**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)
2002	51.7	3.4	15.7	1.0	67.4	4.4
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 (c)	312.2	4.8	63.0	1.0	375.2	5.8

(a) From 2003, 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

management and pricing. Less dependence of these entities on the government budget and the banking system to finance their operating losses is important to avoid the likely macroeconomic implications. In 2011, policy measures were initiated by the government to improve the performance of SOEs to increase their return on investment through the development of an economically feasible cost reflective pricing structure and thereby reducing the reliance on the Government budget. SOEs are also expected to explore innovative Public-Private Partnership (PPP) strategies and attract private investments to catalyse the development process.

**Key social infrastructure facilities in the country continued to improve in 2011.** Over the years, Sri Lanka has shown steady improvements in social development indicators such as mortality rates, life expectancy, educational attainment, access to safe drinking water, poverty and gender equality, thereby helping the country to stay ahead of its regional peers. However, sustaining such achievements is equally important to create and maintain a dynamic and productive labour force that can facilitate the transition of the economy into a sustained high growth path. Having recognized the role of education as a stimulant of growth and development, the government has taken numerous measures to enhance the quality of education at all levels. To reap the benefits of the education system, the quality of education has to be improved

with the aim of fulfilling the needs of the labour market. Considering the budgetary constraints of the government, private sector participation has to be encouraged to meet the demand, maintain the required level of investment in education and concurrently improve the quality of education by inducing competition and through an effective accreditation process. Quality of health services is also a major determinant of labour productivity and efficiency. Public health services provided by the government include the improvement of provision of curative and preventive care services, control of communicable diseases, better housing, clean water supply and sanitation in rural and urban areas. Despite this, the demographic and epidemiological transition challenges the sustainability and efficient provisioning of public health services.

### 3.2 Economic Infrastructure Policies, Institutional Framework and Performance

#### Communication Services

**The telecommunications sector further expanded during 2011.** The total number of connections increased by 5.4 per cent to 21.9 million by end 2011 reflecting the growth in mobile connections. The number of mobile connections grew by 6.1 per cent to 18.3 million compared to 17.3 million connections in 2010. Fixed telephone connections remained largely unchanged at 3.6 million. The mobile penetration (mobile connections as a per cent of total population) reached 87.8 per cent in 2011 from 83.6 per cent in 2010. The telephone density (telephones per 100 persons including cellular phones) increased to 105.1 in 2011 compared to 100.7 in 2010 indicating that on average each person possesses a telephone. The growth in the telecommunications sector in recent years was largely fuelled by the increased penetration of services in the Northern and Eastern provinces and provision of value added services at competitive rates. The level of internet penetration (as a percentage of total population) improved considerably to 4 per cent compared to 2.4 per cent recorded in 2010. Due to the high level of

mobile penetration that has been already attained, mobile operators may need to exploit the potential of popularising broadband services and other value added services.

In order to facilitate growth and maintain fair competition in the telecommunication industry, the Telecommunications Regulatory Commission (TRC) continued to intervene proactively whilst facilitating much needed innovation and dynamism. The TRC continued to reduce the minimum floor price applicable to mobile services per minute to Rs. 1.50 from Rs. 2.00 during 2011. The floor price was introduced to sustain the industry amidst concerns that greater competition steered operators to resort to price cutting competition which in turn is likely to hinder investments in new technology. In addition, the tariff applicable to Interactive Voice Response (IVR) and Premium Short Message Service (PSMS) was reduced from February 2011 to Rs. 5.00 and Rs. 2.50, respectively. TRC has also expressed its commitment to assist all operators to expand the broadband facility by providing ample frequencies and channels.

Table 3.2

## Growth of Telecommunications and Postal Services

Item			Growth Rate (%)	
	2010	2011(a)	2010	2011(a)
<b>1. Telecommunications Services</b>				
1.1 Fixed Access Services (No.) ('000)				
Wireline Telephones in Service	897	942	2.9	5.0
Wireless Local Loop Telephones	2,638	2,667	2.9	1.1
1.2 Cellular Phones (No.) ('000)	17,267	18,319	21.1	6.1
Telephone Density (Telephones per 100 persons including Cellular Phones)	100.7	105.1	16.3	4.4
1.3 Other Services				
Public Pay Phones (No.)	6,958	6,458	-5.7	-7.2
Internet & E-mail (No.) ('000)(b)	502	844	109.2	68.1
<b>2. Postal Service</b>				
Delivery Areas (No.)	6,729	6,729	0.0	0.0
Post Offices (No.)	4,742	4,742	0.1	0.0
Public	4,058	4,058	0.1	0.0
Private	684	684	0.0	0.0
Area Served by a Post Office (Sq.km)	14	14	0.0	0.0
Population Served by a Post Office (No.)	4,355	4,401	0.9	1.1
Letters per Inhabitant (No.)	18	12	-10.0	-33.3

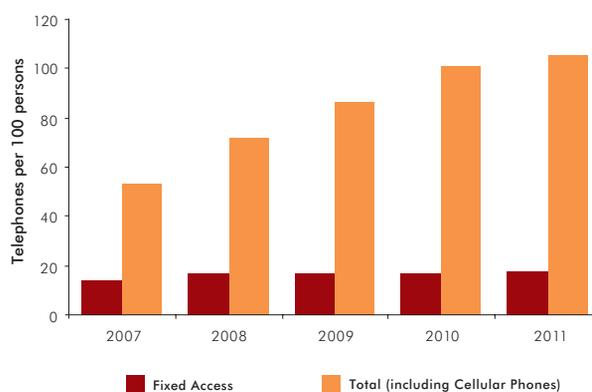
(a) Provisional

(b) Including mobile broadband services

Sources: Telecommunications Regulatory Commission of Sri Lanka  
Department of Posts  
Department of Census and Statistics

Chart 3.1

## Telephone Density



**A modern sophisticated telecommunications infrastructure is vital to facilitate the emerging Business Process Outsourcing (BPO), Knowledge Process Outsourcing (KPO) and IT Enabled Services (ITES) in the country.** As a step forward to facilitate this fast emerging demand for integrated telecommunication infrastructure, construction of the multi-functional telecommunication tower “Colombo Lotus Tower” located in Colombo began in 2011. This tower will facilitate 50 separate broadcasting and telecasting services removing high powered television and Frequency Modulation (FM) antennas innumerable located at different buildings around Colombo. The tower head will provide a base for antennas of service providers for telecommunications, telecasting, broadcasting and defence related transmissions. In addition, the Kokavil tower which provides digital radio and television transmission through Digital Video Broadcasting (DVB – T2) services to the Northern Province commenced its operation in June 2011. In addition to these physical infrastructure developments, several technological developments have taken place in the telecommunication industry. Introduction of 3.75G (HSDPA) technology, testing for 4G Long Term Evolution (LTE) and frequencies have been identified for the deployment of digital broadcasting services and Wi-Max – e services in Sri Lanka.

**The Department of Posts (DOP) continued to report operating losses in 2011.** The operating loss of DOP remained high at Rs. 4.6 billion in 2011 compared to the loss of Rs. 3 billion in 2010. The

total revenue of DOP decreased by 27 per cent to Rs. 3.2 billion while the operating expenditure increased by 5.7 per cent to Rs. 7.7 billion, leading to an increase in operating losses. Hence, it is important for DOP to continue with the efforts taken to generate other sources of income and vigorously follow cost rationalization methods to transform itself to a self-financing venture. Postal services was provided through 4,742 post offices including 648 main post offices, 3,410 sub-post offices, 463 agency post offices, 156 rural agency post offices and 65 estate post offices. The initiatives taken by the DOP to provide additional revenue generating services such as banking facilities and pre-paid phone cards, International Emergency Mail Services and Western Union Money Transfer services continued in 2011.

## Energy

In 2011, Sri Lanka's energy sector experienced a significant pressure due to high international oil prices and lower hydro power generation caused by erratic weather conditions which led to increase in utilization of thermal power. Higher utilization of thermal power amid high international oil prices adversely affected the financial position of CEB and CPC. In 2011, international oil prices were largely influenced by the geopolitical disturbances in crude oil producing countries, Euro zone debt crisis and the slow phase of global economic recovery. The sluggish pace of recovery in the global economy and aggravation of the Euro zone debt crisis curbed possible significant increases in oil prices caused by geopolitical disturbances in the Middle East. In 2011, crude oil prices were largely in the range of US dollars 110-116 per barrel. The annual average price of crude oil (Brent) in 2011 increased to US dollars 112 compared to US dollars 80 per barrel in the previous year. The annual average import price of crude oil (C&F) by CPC stood at US dollars 109 per barrel reflecting an increase of 36 per cent when compared to the previous year. The total oil import bill increased by 57.7 per cent to US dollars 4.8 billion in 2011. While the government has taken some measures to promote energy conservation and

development of renewable energy, the vulnerability to oil price shocks could affect adversely on the import bill and create economic imbalances unless timely corrective actions are taken, including credible measures for energy conservation.

## Electricity

**Electricity generation increased by 7.5 per cent to 11,521 GWh in 2011 reflecting the expansion of economic activities.** The share of hydro power in total power generation decreased to 40 per cent in 2011 from 53 per cent in the previous year reflecting the dry weather conditions which prevailed during the second half of the year. As a result, thermal power generation increased by 36 per cent to 6,785 GWh. The system loss as a percentage of total generation, declined from 13.5 per cent in 2010 to 13 per cent in 2011. The share of CEB in total electricity generation decreased to 57 per cent in 2011 from 60 per cent in 2010, increasing the share of power produced by the private sector to 43 per cent.

**Table 3.3**

**Power Sector Performance**

Item	2010	2011 (a)	Growth Rate (%)	
			2010	2011 (a)
Installed Capacity (MW)	2,817	3,139	5.0	11.4
Hydro	1,382	1,399	0.2	1.2
Thermal (b)	1,390	1,690	7.8	21.6
Other	45	50	200.0	11.1
Units Generated (GWh)	10,714	11,521	8.4	7.5
Hydro	5,634	4,620	45.2	-18.0
Thermal (b)	4,995	6,785	-16.4	35.8
Other	86	116	230.8	34.9
Total Sales by CEB (GWh)	9,268	10,024	9.8	8.2
Domestic and Religious	3,186	3,430	8.8	7.7
Industrial	2,870	3,131	14.0	9.1
General Purpose and Hotel	1,903	2,087	7.6	9.7
Bulk Sales to LECO	1,201	1,267	7.2	5.5
Street Lighting	108	109	0.0	0.9
LECO Sales (GWh)	1,123	1,184	7.0	5.4
Domestic and Religious	510	523	4.9	2.5
Industrial	229	232	10.1	1.3
General Purpose and Hotel	363	408	9.7	12.4
Street Lighting	21	21	-16.0	0.0
Overall System Loss of CEB (%)	13.5	13.0	-7.5	-3.7
Number of Consumers ('000) (c)	4,958	5,208	4.4	5.0
o/w Domestic and Religious	4,392	4,610	4.4	5.0
Industrial	48	51	4.3	6.3
General Purpose and Hotel	513	542	4.5	5.7

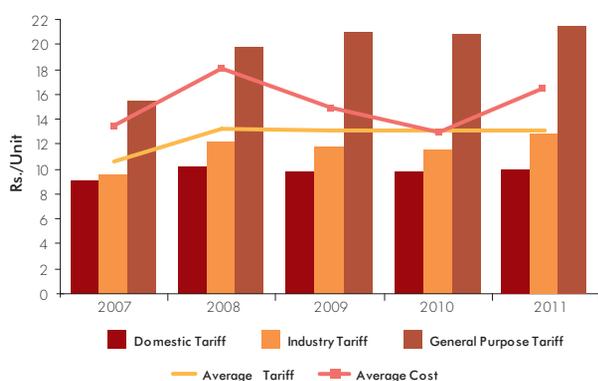
(a) Provisional  
 (b) Inclusive of Independent Power Producers (IPPs)  
 (c) Inclusive of LECO consumers

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

**The electricity sales, increased by 8.2 per cent to 10,024 GWh in 2011.** The electricity consumption of the household sector increased by 7.7 per cent mainly due to rise in income levels which led to higher utilization of domestic appliances and rural electrification. Sales to general purposes and hotel categories increased by 9.7 per cent reflecting the growth in the tourism industry and other business activities. Meanwhile, electricity consumption in the industrial sector increased by 9.1 per cent, reflecting the growth in the industrial sector.

**The financial position of CEB weakened during the year mainly due to heavy reliance on thermal power for electricity generation.** According to unaudited provisional financial data, CEB recorded an operating loss of Rs. 25.5 billion in 2011 compared to a profit of Rs. 4.8 billion reported in 2010. The higher dependence on thermal power due to dry weather conditions that prevailed during the second half of 2011 was the main reason for the deterioration in the financial position of CEB. The fuel bill of CEB increased by 54 per cent to Rs. 25 billion in 2011. On average, CEB incurred Rs. 6.77 to generate a unit of electricity in 2011. The average purchase price of power per unit from the private sector amounted to Rs. 17.24 in 2011. Accordingly, the average cost of electricity generation increased to Rs. 16.21 per unit while the average tariff of a unit was at Rs. 13.22 in 2011. CEB's short-term borrowings from banks and other outstanding liabilities to CPC and to Independent Power Producers (IPPs) amounted to Rs. 121 billion by end 2011.

**Chart 3.2** Average Tariff and Cost of Electricity



**The electricity tariff was revised with effect from 01 January 2011.** The average tariff was increased by 8 per cent, while keeping unchanged the tariff applicable to households which consume less than 120 units per month as a relief measure to low income consumers. The tariff applicable to the industrial and commercial sectors was increased and the tariff based on the time of use was made mandatory for large scale hotels and industries. The Fuel Adjustment Charge (FAC) of 30 per cent applicable to some categories of consumers was removed with effect from January 2011. Removal of FAC has had an adverse impact on the financial position of CEB. At the same time, concessionary tariffs discouraged conservation of energy. However, with the changes in domestic prices of petroleum products, the FAC was re-imposed for all categories with effect from mid-February 2012. Accordingly, the average tariff increased by 20 per cent to Rs. 16.34 per unit.

**CEB intensified implementation of rural electrification projects.** The ongoing rural electrification projects will bring the country closer to achieving its target of 100 per cent electrification by end 2013. There were 225 rural electrification projects implemented by CEB under Rural Electrification Scheme (RES) and 219 projects were completed in several districts. It is estimated that 34,300 households will benefit from these RESs. At the same time, under the Conflict Affected Area Rehabilitation Project, 24 RESs were completed. Several other RESs were in progress under "Uva Udanaya", "Negenahira Navodaya", "Kandurata Udanaya" and "Batahira Ran Aruna" programmes. In addition, several distribution enhancement projects were also in progress to improve the distribution network and thereby reduce the system loss.

**The construction work of several power projects was in progress in 2011.** The first phase (300 MW) of the Norochcholai Coal Power Plant was added to the national grid on a permanent basis in July 2011. 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 by 2014. The construction of the Upper Kotmale Hydro Power Plant (150 MW) was in progress during the year and is expected to be added to the national grid by June 2012. The Uma Oya Hydro Power Project, which is in the initial stages of construction, is also expected to add another 120 MW to the national grid by 2015. The construction of the 500 MW coal power plant in Trincomalee was also in the initial stages and is expected to be added to the national grid by 2016. The addition of these new power plants to the national grid will help increase the total installed capacity of the country by around 44 per cent to 4,509 MW by end 2016.

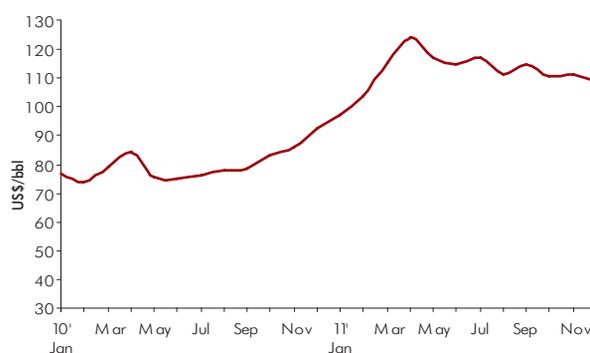
**Emphasis has also been placed on the development of appropriate renewable energy sources while measures were taken to promote energy conservation.** The Sri Lanka Sustainable Energy Authority (SLSEA) seeks to increase the share of renewable energy in power generation to 10 per cent in 2015 and 20 per cent by end 2020. In 2011, 34 MW of wind power and another 11.5 MW of biomass energy were added to the national grid. The SLSEA also commissioned the first grid connected Solar Energy Project in Hambantota in August 2011 which generates 840 MWh of clean energy annually. The mandatory energy labelling programme which was introduced in 2009 was carried out in 2011 to promote energy conservation in the country. Although, certain adhoc measures have been implemented to promote energy conservation, in view of the escalating oil prices and limited low-cost generation capacity, it is essential to introduce integrated energy conservation policy to conserve energy. The energy pricing policy, tax policy and public transportation policy could also be used towards energy conservation.

## Petroleum

**International crude oil prices increased in 2011.** The average international crude oil price (Brent) increased to US dollars 112 per barrel in 2011, reflecting a 40 per cent increase compared to 2010. Supply uncertainties caused by political disturbances in oil producing countries in the Middle East and North Africa exerted an upward pressure on international crude oil prices. The average price

Chart 3.3

International Crude Oil (Brent) Prices (Monthly Average) 2010/2011



of crude oil imported by CPC increased by 36 per cent to US dollars 109 per barrel in 2011.

**The consumption of petroleum products increased during 2011 reflecting increased demand for transportation and power generation.** The total sales of major petroleum products namely petrol, diesel and kerosene by CPC and Lanka Indian Oil Company (LIOC) PLC increased by 15.3 per cent in 2011, compared to that of the previous year. Petrol sales increased by 15.3 per cent due to higher demand for transportation and increase in the stock of private vehicles. Diesel sales increased significantly by 16.6 per cent reflecting the higher demand for thermal power generation. Kerosene sales also increased by 2.4 per cent.

**Domestic retail prices of petroleum products were revised twice in 2011 due to higher prices in the international market.** The domestic retail prices of petrol, diesel and kerosene were increased by Rs. 10.00, Rs. 3.00 and Rs. 10.00 per litre, respectively, with effect from 2 April 2011. Domestic retail price of petrol, diesel and kerosene were again increased by Rs. 12.00, Rs. 8.00 and Rs. 10.00 per litre, respectively, with effect from 30 October 2011. Consistently increased international oil prices, heavy losses incurred by CPC due to sale of fuel to CEB at a highly subsidized rate, and increased thermal power generation led to another price hike in 2012. Accordingly, domestic retail prices of petrol, diesel and kerosene were increased by Rs. 12.00, Rs. 31.00 and Rs. 35.00 per litre respectively, with effect from 12 February

**Table 3.4** Petroleum Sector Performance

Item	2010	2011 (a)	Growth Rate (%)	
			2010	2011(a)
Quantity Imported (MT '000)				
Crude Oil	1,819	2,070	-12.0	13.8
Refined Products (b)	2,991	4,282	32.1	43.2
L.P. Gas	163	181	11.6	11.0
Domestic L.P. Gas Production (MT '000)	23	24	-4.2	4.3
Value of Imports (C&F)				
Crude Oil (Rs. million)	120,180	183,056	7.6	52.3
(US\$ million)	1,064	1,653	9.4	55.4
Refined Products (Rs. million)	223,629	347,333	60.5	55.3
(US\$ million)	1,977	3,142	63.1	58.9
L.P. Gas (Rs. million)	16,049	20,296	42.1	26.5
(US\$ million)	142	184	44.9	29.6
Average Price of Crude Oil (C&F)				
(Rs./barrel)	8,985	12,027	22.4	33.9
(US\$/barrel)	79.52	108.59	24.4	36.6
Quantity of Exports (MT '000)	436	589	62.1	35.1
Value of Exports (Rs. million)	29,761	61,170	92.7	105.5
(US\$ million)	263	553	96.3	110.3
Local Sales (MT '000)	3,872	4,135	-1.2	6.8
o/w Petrol (90 Octane)	573	651	10.6	13.6
Petrol (95 Octane)	22	35	0.0	59.1
Auto Diesel	1,663	1,937	-1.1	16.5
Super Diesel	12	16	33.3	33.3
Kerosene	165	169	9.3	2.4
Furnace Oil	1,117	955	0.6	-14.5
Avtur	158	172	-31.0	8.9
Naphtha	54	46	-51.4	-14.8
L.P. Gas	210	229	8.2	9.0
Local Price (End Period) (Rs./litre)				
Petrol (90 Octane)	115.00	137.00	0.0	19.1
Petrol (95 Octane)	133.00	155.00	0.0	16.5
Auto Diesel	73.00	84.00	0.0	15.1
Super Diesel	88.30	106.30	0.0	20.4
Kerosene	51.00	71.00	0.0	39.2
Furnace Oil				
500 Seconds	50.30	50.30	-7.4	0.0
800 Seconds	42.20	52.20	20.9	23.7
1,000 Seconds	48.70	48.70	-7.6	0.0
1,500 Seconds	40.00	50.00	22.3	25.0
3,500 Seconds	40.00	50.00	53.8	25.0
L.P. Gas (Rs./kg)				
Litro Gas	132.16	163.68	6.6	23.8
Laugfs Gas	121.60	163.68	2.6	34.6
(a) Provisional	Sources: Ceylon Petroleum Corporation			
(b) Imports by Ceylon Petroleum Corporation,	Lanka IOC PLC			
Lanka IOC PLC and Lanka Marine	Lanka Marine Services (Pvt.) Ltd			
Services (Pvt.) Ltd	Litro Gas Lanka Limited			
	Laugfs Gas PLC			
	Sri Lanka Customs			

2012. This price adjustment was in the right direction to prevent possible macro-economic imbalances caused by continued high losses by CPC due to the sale of petroleum products below the cost. This highlights the need for flexible pricing policy for petroleum products to avoid huge price adjustments that could disrupt economic activities.

**CPC's financial position eroded further during the year.** As per unaudited provisional financial statements CPC reported an operational loss of Rs. 94 billion in 2011 compared to Rs. 27

billion in 2010. The main contributory factors for the financial losses of CPC were the provision of heavy fuel at a highly subsidised rate to CEB and IPPs, and non-adjustment of prices in line with international oil prices during the year. The outstanding trade receivables amounting to Rs. 115 billion by end 2011 from various government entities placed a heavy burden on CPC's financial position. At the same time, the continuous operational losses of CPC have resulted in a significant loss in tax revenue to the government and high borrowings from the banking system to finance working capital requirement. CPC's net borrowings from the banking system for their working capital requirements increased by Rs. 53.3 billion during the year. Treasury bonds amounting to Rs. 55 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.** The Sapugaskanda oil refinery was established in 1969 and the lack of modernisation of the plant has resulted in a very poor yield as a sizeable portion of the output comprises low value products thereby reducing the refinery margin significantly and making the operation less economical. Hence, modernization and capacity expansion will enable an increase of high quality output and more profitable products that can meet growing domestic demand and thereby increase the refinery's margin. The feasibility study of the project has been completed and the land acquisition is nearing completion.

## Oil Exploration

**Petroleum exploration activities continued in 2011.** Cairn Lanka Private Limited (CLPL), the local subsidiary of Cairn India Private Limited, owns the exploration licence for the block SL 2007-01-001 of the Mannar Basin. Following the evaluation of the Environmental Impact Assessment, the Marine Environment Protection Authority issued the environmental licence to CLPL in May 2011. Subsequently, CLPL commenced an exploratory drilling programme in August 2011 and successfully

## BOX 8

## Petroleum Exploration in Sri Lanka

Apart from transient fluctuations, crude oil prices show a steady increasing trend. During the last decade the world crude oil price on average has increased five-fold. In keeping with the rising oil prices as well as the local demand for petroleum products, Sri Lanka's oil bill for the last few years shows a substantial increase. In 2011, the country's oil bill was around 45.4 per cent of its export income as against 23.7 per cent of its import expenditure. Therefore, oil exploration is a vital venture for ensuring the country's energy security on a long term basis. Also, if petroleum resources are exploited successfully and prudently it would be a valuable natural resource in Sri Lanka which could generate massive socioeconomic benefits to the country.

Geophysical studies have shown the Cauvery, Mannar and Southern Offshore Basins in Sri Lanka have a higher petroleum potential<sup>1</sup>. The first ever offshore exploration licensing round in Sri Lanka was held in 2007. As a result, the exploration block SL 2007-01-001 of the Mannar Basin was offered to Cairn Lanka Private Limited (CLPL), the local subsidiary of Cairn India Private Limited. A Petroleum Resources Agreement (PRA) was signed between the Government of Sri Lanka (GOSL) and CLPL on 7 July 2008. Subsequently, CLPL acquired 1,750 sq km three dimensional (3D) seismic data at selected locations in the block during the first quarter of 2010. Based on the interpretations of the 3D seismic data, CLPL launched an exploratory drilling programme during August – December 2011. The first exploration well referred to as the CLPL-Dorado-91H/1z was drilled in a water depth of 1,354 metres. According to CLPL, the well penetrated a gross 25 metres hydrocarbon column in a sandstone between the 3,044 – 3,069 metres depth. The discovery was predominantly gas bearing with some additional liquid hydrocarbon potential. This well was the first to be drilled in Sri Lanka in 30 years and the first to discover hydrocarbons in the country. The second exploration well, the CLPL-Barracuda-1G/1 located 38 km west of the Dorado well, also hit on natural gas in a 24 metres of hydrocarbon bearing zone between the depth of 4,067 – 4,206 metres. Further drilling would be required to appraise the commercial viability of new discoveries, which would depend on several factors including the extent of deposit, prevailing gas prices and exploration, appraisal, development and production costs. However, new hydrocarbon discoveries have confirmed the occurrence of necessary geological conditions required to produce oil and natural gas deposits in the Mannar Basin. Accordingly, CLPL has notified the GOSL of their intent to enter into the second exploration phase.

If the new discoveries made by CLPL are found to be economically viable, commercial production arising from a subsequent development programme would generate direct and indirect benefits to the country. The direct benefits will be in the form of a production bonus, royalty, profit petroleum and relevant taxes. The indirect benefits

would include creation of employment opportunities and demand for some local goods and services, promotion of environmental research through the Environmental Fund, the National Oil Company's (NOC) participating interest, and attraction of Foreign Direct Investments (FDI) into the country.

Petroleum exploration is a high risk high return industry. A blowout took place in Macondo well in the Gulf of Mexico (GOM) in April 2010, which gave rise to a release of around 4.9 million barrels of crude oil into the GOM, the latest instance that revealed the risk associated with offshore drilling. Massive oil spills could cause extensive damage to marine and wildlife habitats and to the fishing industry and tourism. The Gulf of Mannar together with the country's coastal belt is a pristine marine ecosystem. Sri Lankan laws on marine environment protection require that companies engaged in offshore petroleum exploration produce a comprehensive Environmental Impact Assessment (EIA) to obtain the Environmental License from Sri Lanka's Marine Environment Protection Authority (MEPA). Nevertheless, offshore drilling operations should be thoroughly monitored to ensure that the driller's comply with the latest Health, Safety and Environment (HSE) policies adopted by the petroleum industry as well as with various international treaties and conventions on marine environment protection to which Sri Lanka is a signatory. A country specific HSE policy and a national environmental policy on oil exploration would further strengthen the marine environment protection during petroleum exploration in Sri Lanka.

Development of the upstream petroleum industry in Sri Lanka would require an industry specific skilled labour force, infrastructure facilities, research and development and collaboration between local and foreign stakeholders including universities and research institutes. Further, the county would require an aggressive offshore exploration licensing programme to offer remaining blocks in the Cauvery, Mannar and Southern Offshore basins. So far, some exploration companies based in Russia, Vietnam, India and China, have shown interests in petroleum exploration in Sri Lanka. As per the PRA, data acquired by exploration companies is the property of the GOSL. The establishment of a data repository with gravity, magnetic and seismic data, petrophysical and stratigraphic logs, core samples, literature etc. would promote the prospective exploration companies to study the petroleum potential of Sri Lanka. In addition, having a computer workstation in the country to visualize and interpret 2D and 3D seismic data is a key requirement. Core samples and well cuttings recovered during exploratory drilling should be stored as per the internationally accepted petroleum industry practices and necessary geochemical analyses should be performed before losing valuable geological information stored in the samples. This information would be vital in decision making in petroleum exploration.

<sup>1</sup> Information on the history of petroleum exploration in Sri Lanka is given in the Box No. 03 of the 2007 Annual Report.

discovered natural gas and condensates in two wells namely, CLPL-Dorado-91H/1z and CLPL-Barracuda-1G/1. The Commercial viability of new discoveries has to be assessed through appraisal drilling. However, new discoveries have confirmed the occurrence of an active petroleum system in the Mannar Basin. Consequently, CLPL has notified the Government of their intent to enter into the second exploration phase.

## Transportation

**The transportation sector achieved a remarkable progress in 2011 showing the government's commitment to improve the connectivity between regions, helping to achieve a regionally balanced growth.** Development in the transportation sector was primarily seen in the road development sector. The construction of highways, expressways, bridges and rehabilitation of existing roads especially in the Northern and Eastern provinces and construction of rural roads under the "Maga Neguma" programme continued in 2011. The Southern Expressway which opened to the public in November 2011 is expected to generate high economic returns as it will serve as a transport corridor which connects large markets, thereby reducing transport cost to a large extent. However, economic planning is necessary for proactive assessment of capacity requirement given the high traffic congestion due to increased passenger and freight transportation in the country. Proper traffic management could lead to fuel efficiency and time saving, supporting overall productivity improvement in the economy and reducing the huge amount of foreign exchange spent on petroleum imports. Passenger transportation, port services and air transportation also recorded a significant growth in 2011 reflecting increased economic activities.

## Road Development

**Improvements in road connectivity reduce regional disparity, open up new markets, generate employment opportunities and thereby reduce poverty in lagging areas.** Recognizing the importance of road development, the government continued to give prominence to road development under its infrastructure development programme in 2011. Accordingly, the National Road Master

Plan was prepared focusing on the continuation of construction of expressways and highways, widening of highways, reduction of traffic congestion, road maintenance and rehabilitation, bridge rehabilitation and reconstruction, land acquisition and the resettlement of people where lands had been acquired for road development. Since inter-regional and intra-regional connectivity is vital for balanced regional development, emphasis has been placed on the construction of roads to connect the provinces with the centre while taking initiatives to improve the conditions of rural level roads under the Maga Neguma Programme.

**The current road density of Sri Lanka at 1.6 km of roads per square kilometre is very high when compared to its regional peers.** The network of National Highways consists of 4,219 km of Trunk (A class) and 7,800 km of Main (B class) roads and 4,213 bridges as at end 2011. The total length of the national highways maintained by the RDA was approximately 12,020 km by end 2011. Though road density is high, to cater to the rapidly expanding vehicle usage most roads in the network need improvement. Thus, to improve existing road network and for building new roads to cater to the emerging demand in the economy, in 2012, the government allocated Rs. 98.7 billion for the development of highways and expressways in the Budget 2012.

**Major road development projects were in progress in 2011.** The first three sections of Phase I of the Southern Expressway were completed and opened for traffic in November 2011. This is the first Class E highway in Sri Lanka constructed in 4 lane standards and the first toll road to operate in the country. The expressway reduces the travel time from Kottawa to Galle from three hours to approximately one hour. The total toll collection during the first three months amounted to Rs. 235 million with the average daily revenue from the Southern Expressway at approximately Rs. 2.5 million. Phase II of the Southern Expressway is expected to be completed by mid-2013. The construction work of the Colombo – Katunayake Expressway project was also in progress in 2011 with physical progress of 53 per cent been achieved by end 2011. The Outer Circular Highway,

connecting the Southern Expressway and the Colombo-Katunayake Expressway, was also under construction. The civil construction work of Phase I of the Colombo Outer Circular Highway from Kottawa to Kaduwela was in progress while the land acquisition relating to Phases II and III were also in progress. The preliminary work of Phase I of the Colombo – Kandy Expressway was completed by end 2011. Under the Weak Bridge Reconstruction Programme (WBRP), the rehabilitation of 46 bridges was continued while the rehabilitation of 33 bridges was completed during the year. Meanwhile, the rehabilitation of rural roads under the Rural Road Reconstruction Programme “Maga Naguma” was continued during 2011 at a cost of Rs.3.3 billion. The extent of roads reconstructed in 2011 under the Maga Neguma programme was 553 kms.

**Emphasis has been placed on the development of the road network in the Northern and Eastern provinces.** Construction work under the Northern Road Reconstruction Project (NRRP) and the Conflict Affected Region Emergency Project (CAREP) was initiated in 2011 to improve the road network in the Northern and Eastern provinces. NRRP project includes the reconstruction of 511 kms of roads in the Northern Province. Under CAREP, improvements to the Paranthan-Pooneryn Road (26 km) and Mankulam-Vellankulam Road (38 km) are to be completed by end 2013. Under the Northern Road Connectivity Project (NRCP), the reconstruction of 170 km of National Highways in the Northern and North Central provinces was carried out. Reconstruction work of the Kandy-Jaffna (A9) road commenced during the first half of the year. The Trincomalee Integrated Infrastructure Project (TIIP) was also initiated to develop the Batticaloa-Trincomalee and Allai-Kantale roads.

### Road Passenger Transportation

**The public passenger transportation sector recorded a moderate growth in 2011.** The operated kilometreage and passenger kilometreage of the SLTB increased marginally during 2011. SLTB owned 7,921 buses and the operated average number of buses were limited to 4,365 per day in 2011. Refurbishment of buses and adding them to

the fleet was continued by the SLTB to enhance the operative bus fleet. The number of buses owned by private operators decreased by 4.3 per cent to 18,955 while the operated average bus fleet increased by 3.9 per cent to 16,507 in 2011. The government continued to support the improvement of fleet and tax concessions were granted for replacement of existing old buses with new buses. The financial position of the SLTB continued to remain weak in 2011. The revenue of the SLTB decreased by 11.3 per cent to Rs. 19.1 billion while the operating expenditure increased by 2.4 per cent to Rs. 22.9 billion. As a result, the operating loss amounted to Rs. 3.8 billion in 2011.

**Several programmes launched by the SLTB to cater to transport needs of the public were continued in 2011.** The provision of bus services during night time and early morning, when private buses are reluctant to operate, continued under the “Nisi Sariya” programme. Provision of bus services to commuters using uneconomical routes in rural areas under the “Gami Sariya” programme and to school children under the “Sisu Sariya” programme also continued in 2011. The government continued to provide subsidy payments for these services. The bus fares were revised upwards in July 2011, by an average rate of 7.6 per cent considering changes in operational costs during the year. Considering the recent fuel price adjustment the bus fares were raised upward by 20 per cent with effect from 14 February 2012.

**Several initiatives have been taken to improve the efficiency of state owned bus services.** Improvement of compilation of statistics, Local Area Network (LAN) project to upgrade the management information system in the SLTB, computerization of the Daily Cash Book and Inventory Control System, and improvement of human resources information system were carried out in 2011. The use of GPRS ticket machines was extended to 1,000 machines and distributed among various regions in 2011. SLTB paid special attention to improve the public transport system in the Northern and Eastern provinces, by extending services and improving related infrastructure.

**Registration of new vehicles increased substantially during 2011.** The number of vehicles registered increased by 46 per cent to 525,421 during 2011 following an increase of 76 per cent recorded in 2010 due to increased registrations of buses, motor cars, motor cycles, three-wheelers and agricultural vehicles. The number of buses registered increased by 71 per cent during 2011 mainly due to replacement of existing fleet. The number of motor cars registered increased by 151 per cent due to lower import duties, increased real income levels, low interest rates and granting permits to import motor vehicles at concessionary tax rates to public servants.

### Rail Transportation

**The operation of SLR reflected mixed performance during 2011.** Passenger kilometreage increased by 4 per cent despite that the coastal railway line between Aluthgama and Galle was closed for rail track upgrading. The goods kilometreage increased by 8 per cent indicating increased utilization of the railway for oil transportation. The total revenue of the SLR increased by 5.4 per cent to Rs. 4.2 billion while the operating expenditure increased by 15.4 per cent to Rs. 8.3 billion, leading to an increase in operating losses to Rs 4.1 billion in 2011 compared to the loss of Rs. 3.2 billion in 2010.

**SLR has taken several measures to strengthen rail transportation.** Five M9 engines were refurbished and added to the fleet. SLR imported 9 power sets from India and orders have already been placed to import another 13 power sets from China. In order to improve passenger services, two new office trains from Rambukkana to Colombo, two new office trains from Chilaw to Colombo, a new intercity train from Colombo to Kandy during weekends, a new intercity express train daily from Colombo to Vavuniya, a new rail-bus service from Galoya to Trincomalee were also introduced in 2011. In addition, a new luxury train service operated by the private sector on a revenue sharing basis was introduced. Furthermore, seat reservations for intercity trains were made possible through mobile phones making the railway service more customer friendly.

### SLR continued with infrastructure development projects which were initiated to improve the rail transportation in the country

The construction of the double tracking of the railway line from Ja-Ela to Seeduwa was completed in 2011. The first stage of the coastal railway line upgrading which covers 42 kilometres from Galle to Matara was completed in February 2011 and the second stage, which covers 72 kilometres from Kalutara to Galle, was in progress. Steps have been taken to extend the Colombo to Matara railway line up to Kataragama. In the first stage of the project, a 27 km line from Matara to Beliatta is to be built. In addition, feasibility studies are being carried out to extend the proposed Panadura-Horana-Avissawella railway line up to Hambantota. Further, feasibility studies in respect of the proposed Horana – Kottawa line were completed and detailed environmental studies in respect of the proposed Kurunegala – Habarana line commenced. The reconstruction of the railway line from Medawachchiya to Thalaimannar commenced in March 2011. In addition, the reconstruction of 145 km line from Omanthai to Kankesanthurai was also commenced and is to be implemented in two stages from Omanthai to Pallai and Pallai to Kankesanthurai.

**SLR has the potential to significantly increase its contribution to passenger and goods transportation in the country.** At present, SLR's contribution to passenger transportation and freight transportation is as low as 5 per cent and 1 per cent, respectively. In order to improve the coverage and to serve the rising demand for transportation of the growing economy, the railway system needs to be modernised while improving efficiency and reliability of the service delivery. As road transportation is the favoured mode of transportation in Sri Lanka, it is often subjected to heavy traffic congestion, which leads to a substantial loss of productive man-hours and high fuel usage. Thus, it is also timely to seriously consider introducing alternative modes of transport, including monorail system, which could connect peripheral cities with Colombo.

Table 3.5

## Salient Features of the Transport Sector

Item			Growth Rate (%)	
	2010	2011 (a)	2010	2011(a)
<b>1. New Registrations of Motor Vehicles (No.)</b>				
Buses	359,243	525,421	76.0	46.3
Private Cars	2,491	4,248	237.1	70.5
Three Wheelers	23,072	57,886	300.4	150.9
Dual Purpose Vehicles	85,648	138,426	129.2	61.6
Motor Cycles	11,712	33,518	815.0	186.2
Goods Transport Vehicles	204,811	253,331	51.2	23.7
Land Vehicles	11,845	14,818	44.0	25.1
	19,664	23,194	28.7	18.0
<b>2. Sri Lanka Railways</b>				
Operated Kilometres ('000)	9,790	10,040 (b)	2.6	2.6
Passenger Kilometres (million)	4,353	4,527 (b)	-4.7	4.0
Freight Ton Kilometres (million)	163	176 (b)	44.2	8.0
Total Revenue (Rs. million)	4,018	4,235	0.0	5.4
Operating Expenditure (Rs. million)	7,191	8,295	-18.2	15.4
Operating Loss (Rs. million)	3,173	4,060	-33.5	28.0
<b>3. Sri Lanka Transport Board</b>				
Operated Kilometres (million)	341	341	2.7	0.0
Passenger Kilometres (million)	16,274	16,346	7.6	0.4
Total Revenue (Rs. million)	21,560	19,122	54.2	-11.3
Operating Expenditure (Rs. million)	22,387	22,920	1.7	2.4
Operating Loss (Rs. million)	827	3,798	-89.7	359.3
<b>4. SriLankan Airlines</b>				
Hours Flown	62,694	74,886	15.6	19.4
Passenger Kilometres Flown (million)	9,400	10,677	19.7	13.6
Passenger Load Factor (%)	78	78	2.6	0.0
Weight Load Factor (%)	55	55	-5.2	0.0
Freight (MT '000)	83	90	20.3	8.4
Employment (No.)	4,969	5,487	6.5	10.4

(a) Provisional  
(b) EstimatesSources: Department of Motor Traffic  
Sri Lanka Railways  
Sri Lanka Transport Board  
National Transport Commission  
Civil Aviation Authority of Sri Lanka  
SriLankan Airlines

## Civil Aviation

The civil aviation sector recorded an impressive growth in 2011. The Bandaranaike International Airport (BIA) at Katunayake handled 6.1 million passengers including transit passengers during 2011, recording an increase of 17 per cent compared to 2010. The total number of passenger aircraft movements handled by the BIA increased to 43,454 indicating a growth of 27 per cent. Total air cargo handling increased only marginally during 2011. BIA's passenger handling reached the designated capacity of 6 million passengers in 2011. The BIA modernisation programme is expected to enhance its passenger handling capacity significantly. SLA continued its fleet modernisation programme during 2011 and acquired 3 brand new A320 aircrafts and commenced its business class refurbishment programme. The demand for domestic air travel is expected to increase with improvement in tourism activities.

The financial performance of the aviation sector remained weak in 2011. The revenue of SLA increased by 16.3 per cent to Rs. 78.9 billion, while the operating expenditure increased by 32.2 per cent to Rs. 98 billion resulting in an operating loss of Rs. 19.1 billion. High fuel prices and lower yields due to increased competition contributed to the increase in operating expenditure of SLA. Meanwhile, Mihin Lanka recorded an operating loss of Rs. 455 million in 2011 compared to the operating loss of Rs. 788 million incurred in 2010.

The construction work of several aviation development projects was in progress. The construction work of Phase I of the Mattala International Airport is expected to be completed by end 2012. Several leading international airlines have expressed their interest to operate at the second international airport of the country. Under Phase II of the BIA expansion project, the passenger handling capacity will be doubled to 12 million passengers per annum. Upon completion, BIA will be equipped with elevated roadways and roads, a new pier with 8 gates, a remote apron and taxiways.

Sri Lanka has the potential to emerge as an aviation hub in the region. The second phase of the BIA modernisation project and the expected completion of the second international airport at Mattala in 2012 would reinvigorate the aviation industry to serve the growing number of tourists visiting the country. The growth in the air transportation is expected to create a demand for aircraft maintenance, repairs, re-building, bunkering and catering services which would provide an opportunity for development of an efficient aviation industry in the country. Sri Lanka has been striving to meet the international standards of the aviation industry and adopt recommended practices with a view to emerge as an aviation hub in the region. Furthermore, Sri Lanka has taken steps to develop domestic airports at Ampara, Koggala, China-Bay, Jaffna and Ratmalana. These will then be developed as "City Airports" aimed at developing the market for charter flights and private jet operations.

## Port Services

A steady growth was seen in the ports sector in 2011. Despite severe set-backs in the pace of global economic recovery, total container handling increased by 3 per cent to 4.3 million twenty foot equivalent container units (TEUs) in 2011 while transshipment handling increased marginally. The total cargo handled increased by 6.2 per cent to 65.1 million metric tons. The total number of vessels arriving at the port of Colombo grew by 5.5 per cent. As per the unaudited provisional financial data, financial performance of the Sri Lanka Ports Authority (SLPA) improved significantly despite the sluggish pace of global trade. The revenue of the SLPA increased by 10.5 per cent to Rs. 31.2 billion, while the operating expenditure decreased by 3.9 per cent to Rs. 30 billion in 2011. The operating profit of the SLPA increased by 89 per cent to Rs. 8.3 billion compared to Rs. 4.4 billion in 2010.

Development of port infrastructure has been at the forefront of the government's infrastructure development drive. Construction of Phase I of the Hambantota Port was completed in December 2011 and full scale commercial operations are expected to commence by mid-2012. SLPA shortlisted 14 of the 27 Expressions of Interest received for the setting up factories at the Hambantota Port. Four proposals to set up petrochemical, cement, sugar and fertilizer processing plants have been approved by the Cabinet of Ministers. Construction of an oil tank farm with fourteen tanks was in progress at

Chart 3.4

Volume of Container Handling and Transshipments

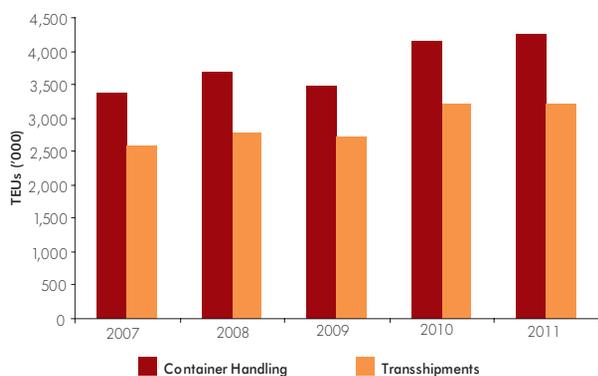


Table 3.6

Performance of Port Services

Item	2010	2011 (a)	Growth Rate (%)	
			2010	2011 (a)
1. Vessels Arrived (No.)	4,067	4,323	-8.7	6.3
Colombo	3,910	4,124	-5.0	5.5
Galle	48	73	50.0	52.1
Trincomalee	109	126	-64.8	15.6
2. Total Cargo Handled (MT '000)	61,240	65,054	25.5	6.2
Colombo	58,768	62,016	26.7	5.5
Galle	318	464	90.4	45.9
Trincomalee	2,154	2,574	-3.8	19.5
3. Total Container Traffic (TEUs '000) (b)	4,137	4,263	19.4	3.0
4. Transshipment Container (TEUs '000) (b)	3,205	3,216	18.2	0.3
5. Employment (No.) (c)	12,828	10,982	-4.0	-14.4
Colombo	11,747	10,083	-4.2	-14.2
Galle	480	433	-6.4	-9.8
Trincomalee	601	466	1.7	-22.5

(a) Provisional Source: Sri Lanka Ports Authority

(b) TEUs = Twenty-foot Equivalent Container Units

(c) Only for Sri Lanka Ports Authority

the Hambantota Port to facilitate the supply of bunkering fuel. The Colombo South Port project was in progress in 2011 and construction of the South Container Terminal is expected to commence in early 2012. The estimated project cost is US dollars 500 million and the terminal is expected to commence operations in May 2014 with the capacity to handle another 2.4 million TEUs per annum. All land, building and road construction work of the Olivil Port was completed in 2011 while the entire project is expected to be completed by July 2012. The project comprises a commercial harbour and a basin for fishing rafts. Upon completion of reconstruction work of the Galle Port, it will cater to the tourism sector in the region by developing a Yacht Marina, which will attract more yachts. The Trincomalee harbour has been identified as a centre to cater for bulk cargo and port related industrial activities including heavy industries, tourism and agriculture. SLPA has also proposed to build a Port City adjacent to the Port of Colombo at an estimated cost of US dollars 700 million. This will consist of a range of facilities such as luxury hotels, apartment complexes and shopping malls.

SLPA took measures to improve productivity and efficiency of container and cargo handling to maintain its competitiveness. In the face of the slow growth in the global trade and competition from regional ports, Sri Lanka needs to take timely measures to improve productivity and efficiency in

the port sector. With a view to improve productivity, in 2011, both the Jaya Container Terminal (JCT) and South Asia Gateway Terminals Limited (SAGT) have installed new equipment to reduce turnaround time. Further, SLPA recognised the need for capacity building among existing employees to help improve competitiveness of its port operations. The staff was provided with required training to help improve their soft skills, human resource management and technical skills.

### Water Supply and Irrigation

The water supply and drainage sector has shown its proactive commitment to meeting the targets set out by the “Mahinda Chintana: Vision for the Future” and the United Nations Millennium Development Goal on drinking water with a target to halve the proportion of people without uninterrupted access to safe drinking water by 2015. Action has been taken to formulate national policies on drinking water, sanitation and location of industries with due regard given to pollution. The ultimate target of this effort is to provide safe drinking water for all by the year 2025. In accordance with this objective, the “Rain Water Harvesting Programme” continued in 2011, to encourage collection of rain water as an alternative source in order to increase water availability. Erratic weather patterns in the country have made it necessary to identify alternative water resources to improve water availability and reduce the financial burden of providing pipe borne water presently placed on the government. Several Divisional Secretariats and Pradeshiya Sabhas have engaged in construction of rain water harvesting tanks while conducting various capacity building programmes to help residents to design and construct rain water harvesting tanks.

The NWS&DB implemented several major water supply projects during 2011. Some of the major water supply projects that were implemented in 2011 were the Greater Kandy Water Supply Project Phase I Stage II, Towns South of Kandy Water Supply Project, Towns North of Colombo Water Supply Project Stage II, Greater Colombo Water Rehabilitation Project, Kalu Ganga Water

Supply Project Phase I Stage II, Augmentation of Negombo Water Supply Project, Rehabilitation and Augmentation of Kirindi Oya Water Supply Project, Ruhunupura Water Supply Development Project – Stage I, Providing Water Supply & Sewerage Facilities to Internally Displaced Persons’ Welfare Centres at Vavuniya & Jaffna Districts, Integrated Water Supply Schemes for Unserved Area of Ampara District – Phase III, Secondary Towns Rural Community Based Water Supply & Sanitation projects. Meanwhile, over 4,000 small scale rural water supply schemes were carried out throughout the country to provide water to 3 million people.

As a result of rapid urbanisation, the demand for pipe borne water has increased over the last few years. The NWS&DB provided 95,728 new water connections in 2011. The total number of connections managed by NWS&DB reached a total of 1.4 million, reflecting a 7.1 per cent increase. In 2011, the proportion of non-revenue water decreased to 31.3 per cent from 31.5 per cent in the Greater Colombo area and to 25.1 per cent from 26.6 per cent in other regions. High level of losses has been a result of decayed pipelines, consumption of water by families of underserved settlements through public water outlets, illegal water users through tampering of meters and operational shortcomings. In the short term, non-revenue water is expected to reduce by strengthening maintenance services, replacement of corroded pipes, establishment of a call centre, provision of individual connections in underserved settlements and the establishment of a comprehensive measuring, monitoring and reviewing process.

The financial position of the NWS&DB improved in 2011. The total revenue increased by 11 per cent to Rs. 13.8 billion mainly due to the increased number of connections provided during the year while operational and maintenance cost declined by 9 per cent to Rs. 11.9 billion. Compared to the revised financial data of 2010 excluding the revaluation deficit NWS&DB reported an operational profit of Rs. 1.9 billion in 2011. This improvement has been achieved due to success in reduction of non-revenue water usage and improved provision of water to the public through newly completed projects.

Table 3.7

## Water Supply by National Water Supply &amp; Drainage Board

Item	2010	2011 (a)	Growth Rate (%)	
			2010	2011 (a)
Total Number of Water Supply Schemes (b)	315	323	1.0	2.5
Total Number of New Connections				
Given during the Period	87,245	95,728	9.9	9.7
Total Number of Connections (b)	1,353,573	1,449,301	6.9	7.1
Total Water Production (Mn. Cu. Mtr.)	469	490	4.5	4.5
Unaccounted Water (%)				
Greater Colombo	31.5	31.3	0.6	-0.6
Regions	26.6	25.1	6.0	-5.6

(a) Provisional  
(b) As at year end

Source: National Water Supply and Drainage Board

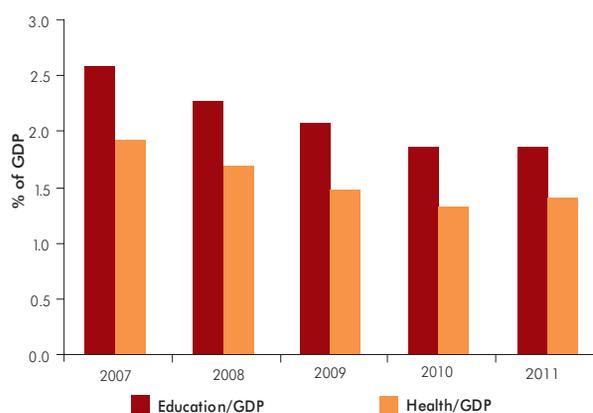
**Construction work of several major irrigation projects was in progress in 2011.** The Rambukkan Oya Reservoir project, Kirampunchennai -Minipe Main Canal and Kekirioboda Reservoir project were completed in 2011. The Karavahu Drainage Scheme, Rugam Scheme and Allai scheme were progressing under the Neganahira Navodaya Programme in the Ampara, Batticaloa and Trincomalee districts, respectively. These projects are expected to benefit 12,700 families and create irrigable extent of 12,820 hectares at an estimated cost of Rs. 965 million. Also, under the Uthuru Wasanthaya programme, construction work of the Pawat Kulam and Muhunthankulam schemes was also in progress and when completed, 3,200 families will be benefitted while continuous water will be available for 3,552 hectares.

### 3.3 Social Infrastructure Policies, Institutional Framework and Performance

**Welfare oriented socio-economic policies including free education and health services implemented since independence has resulted in achieving a comparatively high level of socio-economic development in the country.** Such policies have been remarkably successful in balancing access to those services for all throughout the country. Although, the coverage of the institutional network of the public health and education system is commendable, the qualitative improvement of these services across regions still remain as a challenge. As the quality of health and education affects human capital endowment and potential productivity improvements, which are

Chart 3.5

## Government Expenditure on Health and Education



critical for sustained high economic growth in the country, the need for significant quality, relevance and efficiency improvement of these services has become important.

#### Health

**A comprehensive annual health plan has been developed in line with the Health Master Plan (2006-2016) to prioritise the strategies of health care service delivery.** The health policy focuses on further increasing life expectancy, by reducing preventable deaths that occur due to communicable and non-communicable diseases. It also emphasises the need to improve the quality of life of the public by reducing the prevalence of preventable diseases. In order to achieve the stipulated goals, a strategic health development framework has been established. The five main areas identified under this are; the strengthening of individual households and community actions for health; improving health service delivery; improving stewardship and management functions; improving human resources management; and improving health financing including resource allocation and utilization.

**Several measures have also been taken to improve the human resource and physical infrastructure base of the health sector.** There were 592 government hospitals with 69,731 beds in the country, which amounts to 3 beds per 1,000 persons by end 2011. There were 16,384 qualified doctors in the state health sector, a doctor for every

1,274 persons and 29,101 qualified nurses, a nurse for every 717 persons, by end 2011. The training capacity was improved through the setting up of 6 new regional training centres in Badulla, Panadura, Homagama, Moratuwa, Anuradhapura and Ratnapura districts to train health workers. Around 2,000 nursing officers were recruited to the service while the paramedical service was strengthened with new recruits. Several physical infrastructure development projects were under way to improve the service delivery of the public health system in 2011. Several health projects were carried out in the Northern Province at an estimated cost of Rs. 4.5 billion in 2011 to improve the health infrastructure in this province.

**The health sector faces new challenges due to the epidemiological and demographic transition.** A significant increase in Non - Communicable Diseases (NCDs) and re-emergence of some communicable diseases were witnessed in recent years. High degree of urbanization, as well as life style changes, have led to the high incidence of NCDs such as heart disease, diabetes, high blood pressure, mental diseases, cancer, kidney failure, accidents and injuries. Since the probability of developing NCDs is relatively high among middle-aged persons, and life expectancy in Sri Lanka is

on the increase, the incidence of registered NCDs has significantly increased, leading to an increase in the cost of provisioning of health care facilities. The National Policy on NCDs was developed in 2009, and recognizing the importance of preventing NCDs, the Budget 2011 of the government allocated Rs. 308 million for NCD prevention in the country. However, it should be noted that the importance placed on preventive care for NCDs is still inadequate and the resultant number of deaths have also increased rapidly in recent years. At the same time, the high prevalence of communicable diseases is worrisome, while the number of deaths occurring due to dengue has risen sharply in 2011. A significant increase in the number of deaths from dengue calls for an effective mechanism to eradicate the disease. This emphasises the need for raising adequate resources, including human resources to enhance preventive care services at the national level.

**The government's heavy involvement in improving the public health sector has resulted in significant expansion of both the human and physical capital base in the health sector over the years.** However, continuous high reliance on tax based financing for the health sector would not be sustainable due to tighter budgetary constraints and the increasing cost of providing quality healthcare services. Hence, alternative financing mechanisms to fund rising healthcare financing needs have to be explored as it is evident that Sri Lanka will have to shoulder a larger financial burden in healthcare financing in the years ahead. At present, alternative sources such as health insurance play a negligible role in healthcare financing in Sri Lanka. Therefore, it is important to design a new financing strategy for the health sector coupled with the necessary regulatory mechanism to raise additional financing while continuing the commitment of the government to provide free healthcare services for the needy people in the society.

**The private sector also plays a significant role in health care service delivery in Sri Lanka.** Around 50 per cent of out-patient services are provided by private medical institutions and 5-10 per cent of in-patients obtain services from the private

Table 3.8

Salient Features of Health Services

Item	2010	2011 (a)
<b>Government</b>		
Hospitals (Practicing Western Medicine) (No.)	568	592 (b)
Beds (No.)	69,501	69,731
Primary Health Care Units (No.)	476	475
Doctors (No.) (c)	14,125	16,384
Assistant Medical Practitioners (No.)	1,158	970
Nurses (No.)	27,494	29,101
Attendants (No.)	8,189	7,477
<b>Ayurvedic</b>		
Ayurvedic Physicians (No.) (d)	20,004	20,353
<b>Total Government Expenditure on Health (Rs. billion)</b>		
Current Expenditure	73.8	89.2
Capital Expenditure	60.5	74.4
	13.3	14.8

(a) Provisional

Sources: Ministry of Health

(b) This includes 12 estate hospitals taken over by the government, 4 new hospitals repaired and made functional in Mullaitivu District and 8 Primary Health Care units upgraded as divisional hospitals

Department of Ayurveda  
Ministry of Finance and Planning  
Central Bank of Sri Lanka

(c) Including Intern Medical Officers

(d) Registered with the Department of Ayurvedic Commissioner

sector. The number of registered private hospitals stands at 186 by end 2011 with a bed capacity of 4,784. The pace at which the demand for private health services is growing in the country highlights the importance of private health service regulations and accreditation. Towards this objective an initiative has been taken to amend the existing Private Medical Institutions (Registration) Act to ensure increased quality and reliability of health services provided by the private sector. Implementation of appropriate accreditation policies to accredit private healthcare service providers, is also likely to attract even foreign demand for health services.

## Education

A high quality education system can lay the foundation to create a sound human capital base which can effectively contribute to the sustained high economic growth in the context of a knowledge based economy. The consistent commitment of the government to provide free education has helped Sri Lanka to stay ahead of many of its regional peers in educational attainment. Despite its high performance, there is a growing need for the education system to be more dynamic to cater to the rapidly changing needs of the economy. Hence, recognizing the importance of re-shaping education at all levels, the government has taken many initiatives to uplift the education standards of primary and secondary schools. At the same time, appropriate changes in the higher education and technical and vocational education sectors are also needed in line with changing labour market trends.

Several initiatives have been introduced in the recent years to ensure equal opportunities in education while ensuring efficient resource utilization. Some schools in centres gained popularity with the concentration of resources both human and physical leading to the system's inability to provide equal opportunities to students and teachers at the periphery and made underutilization of existing resources affecting the quality of education. The "1,000 Secondary Schools" programme was initiated to address regional disparities in education. It has been noted that

there are 1,552 schools with less than 50 students in each school. While the student-teacher ratio is 5:1 in such schools, at the national level, this ratio is at the level of 18:1. This shows that there is a need to rationalise schools to optimise use of existing resources while providing quality education for all students. Therefore, a school mapping exercise is to be carried out to redistribute 1,000 secondary schools based on the needs of the population and to ensure that each Divisional Secretariat has at least 3 1AB schools. This will also help to reduce the high percentage of students who are pursuing the Arts stream especially in rural areas.

Steps have been taken to improve emerging core areas such as Information and Communication Technology (ICT), Maths and English to match with the emerging labour market trends. Public Private Partnerships have

**Table 3.9**

**Salient Features of General and University Education**

Item	2010	2011 (a)
<b>1. General Education</b>		
a. Schools (No.)	10,502	10,527
Government Schools	9,685	9,714
o/w National Schools	340	342
Other Schools	817	813
Private (b)	98	97
Privvna	719	716
b. Students (No.) ('000)	4,120	4,150
c. New Admissions (No.) ('000) (c)	333	330
d. Teachers (No.) ('000)	225	229
e. Student/Teacher Ratio (Government Schools)	18	18
f. Total Govt. Expenditure on Education (Rs. billion)(d)	104.2	121.3
Current Expenditure	85.2	99.0
Capital Expenditure	19.0	22.3
<b>2. University Education</b>		
a. Universities (No.)	15	15
b. Students (No.) (e)	70,477	73,828
c. Lecturers (No.)	4,984	5,050
d. Number Graduating (e)	13,042	n.a.
Arts and Oriental Studies	4,432	n.a.
Commerce & Management Studies	2,704	n.a.
Law	392	n.a.
Engineering	1,307	n.a.
Medicine	797	n.a.
Science	2,028	n.a.
Other	1,382	n.a.
e. New Admissions for Basic Degrees (No.) (e)	21,547	22,016

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

been established for the empowerment of ICT in the education sector such as the “Partners in Learning” and “Intel World Ahead” programmes. These programmes are aimed at strengthening the use of computer and software to ensure the adoption of best practices while opening up new ways for school communities to keep themselves up-to-date with cutting edge technologies. These programmes also enable professional development of teachers to utilise technology to enhance student learning. The government has also actively encouraged the development of English competency among students and teachers by launching the “English as a Life Skill” and “English for All” programme. These programmes conducted at the provincial level, include a ten day teacher training programme, the designing of a teaching kit with productive activities and establishing centres of excellence for the teaching of English.

**The university education system is undergoing reforms to meet the changing domestic and global labour market requirements.** For Sri Lanka to emerge as a knowledge hub, which is capable of creating higher education opportunities for both local and foreign students, the public university system of Sri Lanka has to be elevated to world class status. For this transformation, the government allocated Rs. 3,000 million as per the Budget 2011 to transform the Peradeniya, Moratuwa, Colombo, Sri Jayawardenapura, Kelaniya and Ruhuna universities into world class institutions. However, considering the budgetary constraints, it is essential to take a holistic perspective on the development of the higher education system where private sector investment in higher education also has a vital role to play. While characteristics of world class universities such as teaching in English have been adapted by local universities, these institutions still require increased autonomy, high quality of research and funding.

**In 2011, the University Grants Commission (UGC) continued its programmes to improve the existing university system and to cater to the needs of a dynamic labour market.** UGC granted approval for 5 new undergraduate courses and 23 new postgraduate courses. The UGC had also

approved local research grants for PhD Research degrees for academic staff to invigorate a research culture among academia. Internal Quality Assurance units are also to be established in universities to create and inculcate a “quality oriented” culture. To improve the quality and standards of all public and private higher education institutes and their programmes in Sri Lanka, the UGC is embarking on an accreditation programme to be implemented from mid-2012.

#### **Technical and vocational education training continued to expand during the year.**

The development of competencies of middle level technical officers is the key objective of the Technical and Vocational Education and Training (TVET) programme of the government. There were 725 institutions operate by the public, private and NGO sectors providing technical and vocational education in the country by end 2011. Under the National Vocational Qualification (NVQ) system, 16,572 NVQ certificates were issued to students by the Tertiary and Vocational Education Commission (TVEC) during the year. The TVEC has started to provide information on the labour market through its Labour Market Information Bulletin and Labour Market Information Website to enable the effective design of TVET programmes to cater to the emerging labour market needs of the economy.

#### **Housing and Urban Development**

##### **In 2011, the government implemented several housing development programmes.**

The National Housing Development Authority (NHDA) initiated several housing development programmes targeting low income groups. Such programmes include the Jana Sevana Upahara Loan Programme for permanent income earners in low income categories, Deyata Kirula Housing Programme for homeless families in Monaragala, Housing programme for flood victims in Batticaloa and Polonnaruwa and the Sevana Grant Programme. The Nagamu Purawara programme was also continued in 2011 to uplift the facilities and infrastructure of the condominium properties which were built twenty years ago and have deteriorated due to lack of regular maintenance. The total

disbursements of the NHDA increased significantly from Rs. 523.7 million in 2010 to Rs. 3.4 billion in 2011 and the number of housing units completed increased from 3,974 units in 2010 to 14,278 units in 2011.

**The development of the housing finance market is vital for the successful implementation of the government's initiatives to provide better housing facilities to all.** A large segment of the low and middle income groups still do not benefit from the formal housing finance market due to several reasons such as lack of transparency in land ownership, registration and titling processes, lack of information on property prices and real estate data and liquidity and risk of term mismatches. Although the government plays a leading role in the provision of low-cost housing schemes to the lower income groups, private sector participation is also necessary to cope with the urbanisation pattern of middle-income groups. In 2011, the average rate of interest charged on housing loans fell significantly by 6.7 per cent and 15.4 per cent for fixed and floating rates, respectively. The reduced cost of borrowing for housing was reflected in the increase in the number of housing loans granted by the banking sector by 10.3 per cent and an increase of 31.7 per cent in the total loan amounts granted from Rs. 71.2 billion in 2010 to Rs. 93.7 billion in 2011. The average housing loan recovery rate had also improved from 82.4 per cent in 2010 to 84.2 per cent in 2011.

**It is important to have a well-planned urban infrastructure to facilitate the growing demand for such services and also continuously changing lifestyles of the urban masses.** Urban planning has been identified as a vital tool in combating not only urban poverty but also social inequality and negative environmental implications. To sustain the current high pace of growth, it is essential to focus on creating sustainable urbanisation or "harmonious cities" i.e., cities which simultaneously generate economic growth, reduce the ecological footprint and address urban poverty. Unless changing demand for urban infrastructure is dealt with in a timely manner, it would lead to difficulties in providing public services and create significant adverse environmental consequences.

**In 2011, the Urban Development Authority (UDA) implemented several urban development projects.** As a country emerging as a commercial hub in the region and a key tourist destination, development of well planned town centres is important. The UDA has made several initiatives to develop the city of Colombo into an attractive tourist destination while uplifting the quality of urban services and preserving and enhancing historical architecture. Such projects include the Shopping Precinct at the former Dutch Hospital Building, Commercial and Recreational Center at the former marketing building, redevelopment, and landscaping of the Fort area, development of Independence Square and surrounding areas. UDA implemented other urban development projects at several places such as the Balangoda Town Development Project, Warakapola Land Development Project, Sellakatharagama Sacred Area and Malabe Information Technology Park. The UDA also implemented various projects in the Northern and Eastern provinces and made available lands in these areas for commercial developments. Measures are also being taken to implement the Metro Colombo Urban Development Project which will facilitate the resettlement of dwellings located in flood-prone and hazardous areas and control floods and improve the drainage system in the city.

### **Safety Nets and Poverty Alleviation**

**The incidence of poverty declined significantly in Sri Lanka during the last few years.** According to the Household Income and Expenditure Survey 2009/2010, the Poverty Head Count Index (percentage of population below the poverty line) has fallen to 8.9 per cent from 15.2 per cent in 2006/2007. Poverty in the estate sector declined significantly from 32 per cent to 11.4 per cent and in the rural sector from 15.7 per cent to 9.4 per cent, with a moderate decline in poverty in the urban sector to 5.3 per cent. The government's policy to ensure improving basic infrastructure at the regional level has had a positive impact on low income households helping them to cross the poverty line. At the same time, the high growth registered in the agriculture sector and the development of infrastructure that integrates rural

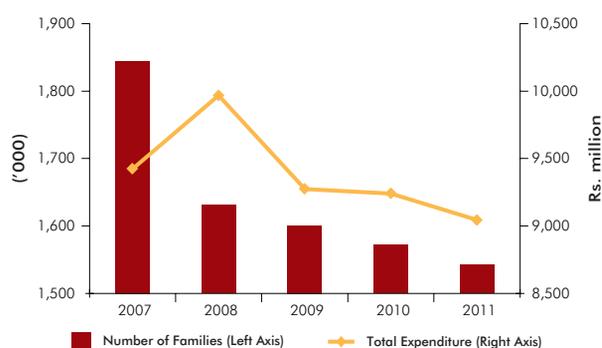
and urban markets contributed to the significant decline in rural poverty. However, specific policy interventions may be needed in areas where the incidence of poverty is consistently high.

**Various poverty alleviation programmes were continued under the Department of Commissioner General of Samurdhi during 2011.** Some of the major programmes were the Samurdhi subsidy programme, the nutrition allowance programme and the Samurdhi social security programme. A total number of 1.5 million families benefitted from the Samurdhi Subsidy Programme in 2011. The total expenditure amounted to Rs. 9,043 million during this period.

**The Samurdhi Authority of Sri Lanka has introduced various income generation programmes, community development programmes as well as capacity building programmes during 2011 to enable the Samurdhi beneficiaries to come out of poverty.** The Samurdhi social security programme was continued with a view to preventing poor families from falling into the lowest depths of poverty due to unforeseen events such as, deaths, hospitalisation and childbirth. These disbursements amounted to Rs. 233.7 million during the year. The “Divi Neguma” Livelihood Development programme to set up one million household economic units as a holistic community uplifting programme launched by the Ministry of Economic Development will also help to reduce poverty in rural areas. This programme promotes community participation in the development process incentivizing people to work on the development of various means of livelihood. When compared to cash grants, programmes like

Chart 3.6

## Number of Samurdhi Beneficiary Families and Expenditure



Divi Neguma would be more effective in addressing poverty as they serve as safety ropes than safety nets.

## Environment

**Maintaining a balance between the environment and economic growth is critical to achieve a sustainable growth.** Although, Sri Lanka is a signatory to a number of Multilateral Environment Agreements (MEAs), and has taken many proactive measures for environmental conservation, the country continues to encounter several challenges in conserving the environment amidst high economic growth. Air pollution, forest cover depletion, climate change, depletion of bio-diversity, land degradation, hazards related to waste management, depletion of natural resources and pollution of inland, coastal and marine water resources have become issues in environmental protection. Since Sri Lanka is on an accelerated economic growth path, being cautious of the potential for environmental degradation is important to avoid undue pressure on the natural environment.

Table 3.10

### Samurdhi Welfare Programme Number of Beneficiary Families and Value of Grants (a)

Year	Income Supplementary Programme		Dry Ration Programme		Nutrition Programme	
	Number of Families (b)	Value (Rs. million)	Number of Families (b)	Value (Rs. million)	Number of Families (b)	Value (Rs. million)
2006	1,916,594	10,570	122,269	1,359	186,211	576
2007	1,844,660	9,423	105,105	1,234	102,020	594
2008	1,631,133	9,967 (c)	102,662	1,457	86,480	386
2009	1,600,786	9,274 (c)	173,450	2,860	71,762	505
2010	1,572,129	9,241 (c)	30,320	1,016	61,495	388
2011	1,541,575	9,043 (c)	n.a.	199	44,739	360

(a) Number of families decreased in 2008, 2009, 2010 and 2011 due to improvement in targeting and increase in income levels

(b) As at year end

(c) Including the kerosene subsidy

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

**Many preventive steps have also been taken to maintain the balance between the environment and economic activities.** The national action plan for the “Haritha Lanka” programme that includes short-term, medium term, and long-term targets spanning from 2009 to 2016, continued in 2011 with the participation of 36 Ministries and 70 government and non-governmental organizations. At the same time, steps have been taken to formulate a National Climate Change Policy with the assistance from the UN-Habitat whilst cabinet approval has been obtained to implement national obligations under the South Asian Association for Regional Cooperation (SAARC) action plan on climate change in collaboration with the relevant line ministries and other agencies. Furthermore, the Ministry of Environment has taken action to establish an adaptation knowledge platform to strengthen adaptive capacity and to facilitate climate change adaptation. It focuses on three pillars viz., establishing a regional system for knowledge sharing on climate change adaptation, generating new knowledge on adaptation and promoting the application of new and existing knowledge. Sri Lanka entered into the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, in 2011, with a view to conserve the limited genetic resources of the country. In addition to the above, the ‘Pavithra Ganga Programme’ which was initiated in 1998 to keep water bodies clean in the country, Vehicle Emission Testing (VET) which was launched in 2008 to control the air pollution and the planning activities for

comprehensive national action plan for Basel Convention and Stockholm Convention for E-waste management were continued with enhanced commitment during 2011. Several environmental education and awareness programmes were also executed during 2011 targeting different segments of the society.

**The Central Environmental Authority (CEA) implemented several measures to protect the environment.** CEA took steps to integrate environmental considerations in the development process of the country through the administration of the National Environmental Act and undertaking surveys, investigations and research and maintaining standards, norms and criteria for the beneficial use of the environment. Several regulations were issued in 2011 to control the discharge of effluents, emissions and disposal of waste from industries under the provisions of the National Environmental Act (NEA). These included the development of stationary source emission standards, reorganization of the data collection in relation to Environment Protection Licences (EPL), and identification and provision of strategic solutions to the emerging e-waste problem. In addition, as a regulatory function, CEA issued Environmental Impact Assessments (EIA) for all prescribed projects with the intention of mitigating environmental damage from such projects. The CEA continued to execute the National Green Award Scheme and was actively involved in Eco labelling, a system of providing an Environmental Excellence Certificate.